OCTOBER
GREETING TO STUDENTS, by Dean Mann. page 47
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On the Campus
CONTENTS
OCTOBER, 1919

Frontispiece, Theodore Roosevelt ........................................... 6
Credit Rating the Farmer—Ivan Wright ...................................... 7
Why the Dairymen Organized—E. R. Eastman ................................ 9
Some Difficulties with the Central Packing Plan—Deane Phillips ........ 10
Farming a la Francaise—R. L. ................................................. 12
Tractor Lubrication—F. L. Fairbanks ....................................... 14
Horses vs. Tractors—Wayne Dinsmore ...................................... 16
One Sunday—A. P. N. ......................................................... 18
Standards in the College of Agriculture .................................... 19
The Farm Home .......................................................................... 21
Editorials .................................................................................. 22
Campus Notes ........................................................................... 23
Former Student Notes ................................................................. 24
Greeting to Students—A. R. Mann ............................................ 47
Student Section .......................................................................... 47

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THE CORNELL COUNTRYMAN is for all who study agriculture in schools or on
the land—more than a “college paper” in that its field is beyond the campus; more than a
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to report these developments truthfully and to interpret them in terms of their probable
permanence, the degree to which they should contribute to the economic uplift and future
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He lived greatly, and became a great friend to all of a people. Perhaps no man ever died with so many friends among those whom he had never seen. Everybody misses him, almost daily.

Particularly was he a friend of country people. His ruggedness of purpose, his passion for essentials, his courage, his very hard-headedness—these carried him close to our thoughts and interests. He understood what we were, and what we wanted to be. The Country Life Commission, organized at his instance, was his way of declaring to the world our right to lead the larger life which he preached and himself lived.

To the present generation, whom he so greatly befriended, falls the privilege of erecting his memorial, and country-minded people should yield place to none in paying such tribute. The Roosevelt Memorial Association, One Madison Avenue, New York City, is collecting funds to erect a Roosevelt Monument in Washington; to maintain Oyster Bay and possibly Sagamore Hill as personal landmarks of the man; and to forward an association which will seek to keep alive the things he stood for. The Countryman deems it right and appropriate to give this space to such announcement. Contributions should be sent direct to the New York office of the Memorial Association.
Credit Rating the Farmer

The Connecting Link of Agriculture, Commerce and Industry

BY IVAN WRIGHT

Instructor of Rural Economics at Cornell University

Farmers need a business credit rating. A simple system for credit rating farmers is demanded at this stage of development in farm organization and farm accounting. Other business men, such as merchants and manufacturers, have their credit rating in Dun and Bradstreet. It will be the purpose of the following to show the need of a credit rating for farmers; make suggestions for an organization to credit rate farmers; point out some of the benefits to be derived, and some of the criticisms to be faced.

The Need. It would be superfluous to go into detail explaining the need of a credit rating of the American farmers. The need for the credit rating of men who are parties in business transactions has been well proven by the tested benefits of Dun and Bradstreet's credit-rating agencies, and the work of the National Association of Credit Men. That the average farmer does not get ample credit for carrying on the productive operations of his trade is common knowledge to any student of finance and agriculture. The evidence that agriculture is held in check for want of legitimate credit is: the growing requests for both long and short-term credit by farmers, the limited amount of credit working in this field, and the abundance of safe security which farmers can offer for credit.

But why is credit not granted to farmers as freely as to other entrepreneurs? There are many answers given to this question. Among the well-advertised answers are: "The slow turnover in capital invested in farm operation," "failure in promptness on the part of the farmer," "uncertainty of farm operations," and so forth. All these objections to allowing the credit stream to flow freely to farmers have their justification. But the chief objection we hear little about. That objection is: We do not know, in an accurate and definite business way, anything about this man called a "farmer." What sort of man is he? What is he worth as a credit risk? Where are his book accounts and the records of his operations? Where is his profit and loss statement and his balance sheet? These are the acute reasons why farmers have difficulty in securing adequate credit. What merchant without any business records to show could get credit? Certainly very few could. Then has the farmer really been unfairly treated in the matter of credit? I think, according to commercial requirements, he has received a square deal considering customary business transactions in credit. Those

* Reprinted from the Bulletin of the National Association of Credit Men, for July, 1919.
farmers who have been able to show beyond doubt their credit ability have generally found adequate credit accommodations. In fact, many instances can be cited where farmers have been accommodated too freely and as a result business losses among farmers are common. For these reasons other farmers have been discriminated against who were deserving of credit. But if they had been able to show records and accounts substantiating their credit ability they would have been served with the proper credit.

Organization. An organization similar to the present farm bureau organization would be adequate for credit rating farmers. Such an organization could be a part of the farm bureau plan, and if not a part of the farm bureau organization they should be co-workers. The credit rating operations strike so parallel with farm bureau work that it might seem to be a part of the farm bureau manager's business. But most farm bureau men are not prepared to do this sort of economic work, and even if the farm bureau men could handle it, the task would be entirely too much to add to the present endless duties of a farm bureau manager.

A local bureau by itself or acting independently would be too much of a restriction for the farmers it served. Farmers' business transactions are by no means confined to their own county or even their own state. Then obviously there should be a central state bureau to direct the work of all the local credit bureaus uniformly in the same broad general principles, leaving room, of course, for local initiative. This central bureau of the state could be a part of the extension department of the State College of Agriculture in conjunction with the Economic Department. Then, like the farm bureau organization, there could be a national office at Washington. The chief duty of this office would be to supervise the credit rating service throughout the country. Of course details would be left for the adjustment of each state or community according to its needs. This central organization would be necessary in order to standardize the work so that the reports of a bureau in New York would be perfectly understandable to a man in Texas who had familiarized himself with the plan anywhere.

Work. The first duty of the local bureau would be to install a system of records and accounting for farmers who are interested. This would be done upon the payment of a nominal fee and membership dues. These records and accounts can be made so simple and plain that any farmer who can read and write will have no difficulty in filling them out. For each applicant an inventory would be made and a classification of the accounts for bookkeeping and record purposes. Along with these primary accounting essentials the credit manager would investigate the validity of each applicant's report, and with the inventory prepare a debit and credit statement with a balance sheet showing the farmer's financial and business standing. Duplicate copies of all these should be left with the farmer. The farmer would make weekly or bi-weekly reports to the local credit bureau of the changes in his operations. These reports would be made on printed forms supplied by the local bureau. The local bureau would check up the farmer's permanent record with each report. Then monthly a statement would be drawn from the farmer's own records and mailed to him. At the close of the fiscal year a second inventory will be taken; the books closed and a complete analysis made of the farmer's business for the year. A copy of the final report would be mailed to the farmer, a copy retained in the local office, and possibly a copy filed in the central office of the state.

With these records the credit manager could indicate to the farmer at any time just how he stood in a business way or even as to his profit and loss. Certainly no one could doubt the value of such records to county agents, extension workers, and the farmer himself.

Benefits. The credit rating plan would enable the farmer to know by

(Continued on page 30)
Why the Dairymen Organized

"The Farmer Has Become a Business Man and Demands Recognition as Such"

BY E. R. EASTMAN

Editor, Dairymen's League News

IN this, the first of two papers, Mr. Eastman shows the inevitability of some such organization as the one of which he is now a leader, and against which such sheets as the Hearst papers run thrilling scare heads, "crying War when there is no War". Next month, he will tell how organization was effected, and what it is accomplishing.

DURING the last three years American agriculture has undergone the greatest economic change in its history, a change the importance of which few have recognized or appreciated. The farmer has at last recognized the importance of his own occupation, and has decided that other folks must also recognize that he is no longer a "hick" or a "hayseed," and that farming is the great fundamental business of the country, on the success of which depends the success of all other occupations and individuals. In other words, the farmer has become a business man and demands that he be recognized as such.

The medium through which this, perhaps the most far reaching change in agricultural history has taken place, is that of cooperation and organization. In three short years literally hundreds of farm organizations extending thruout the entire country into practically every farm community, and covering every branch of farming, have been organized and have already secured results which have made them permanent institutions in the business of farming. Perhaps one reason why organization of farmers came so quickly after it once was well started was because it was so long in coming in the first place.

For years, because of the nature of his business and his so-called independence, the farmer put up with a system of distribution whereby the dealer dictated the prices of farm products to the consumer on one end, and to the farmer on the other. Occasionally when some enterprising leaders tried to get a few farmers together for organization, they were so independent and so unused to working with one another, perhaps because they did not thoroughly know one another, that they would not stick. At other times when as individuals or as a small organization farmers appealed to the middlemen for better prices, they were told that selling their products was none of their business and to go home and "slop their hogs." Conditions during the latter part of the nineteenth and the beginning of the twentieth century were becoming so discouraging that farms thruout the East were abandoned, land was very cheap, and most of the young people left the country for the city. Some farmers that they still had some independence, but it was hard to see where there was any independence about being ordered to a milk station on a certain date twice a year to sign a contract for the sale of their milk, the conditions of which contract were all made by the dealer and the prices offered nearly always less than the real cost of production. There was also not very much independence after selling their products at the prices that the dealers wanted to offer, to have to go to another set of dealers and pay the prices for their supplies that these dealers wanted to ask.

The only possible way that the dairy farm was kept going during all those lean years was by the unpaid labor of the women and children, and by throwing in free of charge the fertility of the farm land. For these conditions the farmer himself was largely to blame. He had failed to recognize that to a modern farm business there are two distinct sides—production and marketing, one as important as the other. As far as the production side was concerned he had done pretty well, for notwithstanding-
Some Difficulties with the Central Packing Plan

BY DEANE PHILLIPS
New York State Department of Farms and Markets

FOR improvement in marketing many fruits and vegetables, frequent recourse is had to the central packing plan, in which the grading and packing are intrusted to an impartial central agency instead of being done by each farmer on his own farm. This plan has been used successfully in many different regions and with many different kinds of farm products, but the best known examples are in the orange regions of California and in the apple districts of Oregon and Washington. However, no single scheme is a panacea for all marketing ills. The central packing plan, in spite of its great success in so many different fields, has still some very real disadvantages which limit its application under certain conditions. This fact is often overlooked in current discussions of the plan and deserves to be more fully understood than it has been in the past. Neglect to recognize these limitations has resulted in some costly failures when the plan has been attempted with some products to which it is not well suited.

Conditions Favorable To Central Packing

The feasibility of the central packing plan in any given situation depends quite largely on the character of the crop which is to be marketed. With some products like apples or potatoes, which are of fairly good size and which are not readily damaged by rolling about and being rehandled, mechanical devices can be made use of—and one of the great advantages of the plan results from the possibility of applying mechanical methods of sorting and grading. In such cases central packing is both cheaper and better than the method of packing on each individual farm. With some fruits and vegetables, like berries or lettuce or grapes, however, the nature of the product makes it impossible to use these machine methods of sorting. Any re-sorting or repacking which takes place must necessarily be done by hand. As a result, central packing with such a crop requires fully as much labor as does the individual farm pack method and hence the usual saving in cost is not brought about. Certain other products, moreover, are seriously injured by any sort of rehandling. Many also detoriate very rapidly after being picked. To these classes belong most of the small fruits. With these the only feasible place to do any sorting and grading is in the field, while they are being harvested. The thing above all others to be desired is to get them to market as quickly as possible and with a minimum of handling. In this achievement the farm pack, in spite of its disadvantages in other ways, is still superior in the long run to any plan of central packing.

To establish a central packing house large enough and well enough equipped to handle any considerable volume of product at a low cost requires considerable capital. If the crop to be handled is one which continues to ripen over a considerable period, like oranges, the plant may be used for a sufficient time each season to justify the expense. If, on the other hand, the season of harvest is a short one it may happen that the plant must stand idle for a large part of each year, with the result that the interest on the investment is out of all proportion to the use which can be made of the building. Of course one way to overcome this disadvantage is to combine in one building the handling of a sequence of crops such as early peaches,
grapes, and apples. But so far this solution does not seem to have been tried on any large scale.

There is one variation of the central packing plan which does not depend on the erection of any building or packing-house, namely the establishment of some central organization which furnishes gangs of workers who move from one farm to another to do the work. Even this method, however, does not avoid the difficulty in handling the short season crops. In order to harvest the crop at the proper time such gangs must be sent out at the same time and there is introduced a serious labor problem.

Efficient operation, in short, is peculiarly dependent on the presence of a steady and regular supply of the product which is being handled. If the supply is irregular there is great difficulty in so adjusting the plant that it can always be prepared to handle adequately the full volume of product when it is presented and at the same time not suffer from excessive over-head cost when the volume is small.

The most notable examples of this difficulty are to be found in the handling of such crops as peaches and native grapes. With these there is always danger that a sudden period of warm weather during the shipping season will cause the fruit to be rushed to market in great quantities thru fear of over-ripeness. At such times the facilities of a central-packing plant usually prove entirely inadequate and it becomes swamped with fruit which it cannot handle. Nor is it easy at such a time.

(Continued on page 34)
Farming a la Francaise

JULY a year ago, when the Germans threatened Paris, and when advance guard of the American Army rushed in auto trucks to Chateau-Thierry and saved civilization, a certain regiment of artillery was billeted around Poitiers, France. They had no horses, these artillerymen, and only one broken down “seventy-five” for the whole regiment. All they could do was hike and take gas drill and read the daily bulletins of great fighting which a sergeant who thought he could read French translated and typed from Paris papers, three days old. The regiment was restless and spoke venemously, even for soldiers.

It is a beautiful country around old Poitiers, almost parked in its perfect state of civilization. Formerly it had specialized in grapes to be shipped to Bordeaux and made into wine, but now there was a war on, and the government had asked the farmers to raise wheat. So they raised wheat, grumbling about how they would find hands to harvest it, just like American farmers. It was wheat harvest time now, and they were really up against it.

So the Colonel of our Regiment, a wise man in the ways of soldiers, decided to save wheat due to rot in August rains unless somebody helped the people get it in, and at the same time gave his men something real to keep their minds off the front. He put out an order saying they could work on farms.

A friend of mine knew a miller in town, who spoke largely of many openings. But at six the next morning when we routed him out of bed, he had either forgotten all his promises, or had misunderstood us. The best he could do for us was a sleepy Bon Jour and a loaf of bread. The loaf of bread we were not allowed to take, so Duke hid it under his blouse until we were well out of town, when we breakfasted.

We worked out a speech which I was to recite. Word for word, it went, “Our Colonel to us has given the permission to work on the farms of the farmers French, free. Wish you that we for you work”. Those French phrase books were great things.

Duke was a typesetter, with a habit of starting everything by “G-awsh!” “G-awsh” he said, “These farms are so darn small, all the cows are goats except when they’re oxen.”

It appeared that the French farmers did not get to work as early as those back home, war or no war. Before eight o’clock we succeeded in arousing no one, and even then the old man that listened to our speech from the window seemed too sleepy to understand.

Finally, at nine o’clock we found an old gentleman in a red sash weeding potatoes, and he referred us to “the most great proprietor” of the community, whom he called M’sieu Ba-reek-o. We found M’sieu on his forty acre farm, a little ways down the road, and he took us before we had a chance to finish our speech. Talk about your progressive farmers! He was putting yokes on his strapping, jersey-colored oxen, but invited us to go in and get breakfast. This we declined and joined the other laborers—a whiskered veteran, a boy of fifteen, another of eight, and a husky maiden around twenty. I was to pitch to the soldier’s cart, Duke to the larger boy, and the girl to smaller one.

The carts were two-wheeled with hay-carriages about the size of our two-horse affairs. A pair of oxen yanked them along about as well as horses, except when they showed a disposition to go in the roadside bushes and brush off the flies. On the way out to the field my veteran showed me all his wounds, almost disrobing in the process, and let me look at his croix de guerre, carried in the pocket with the loose change. He then
produced a water jug with wine in it, and I got out those rare American cigarets, and we swore eternal friendship after the manner of those strange, tense days. He told me that the proprietor had a son killed in the war. "But only one," he added with a shrug. Once out in the field, how we worked! Duke and I tried to get on our load ahead of the girl, but couldn't. The wheat was well conditioned and the heaviest I had ever handled. If my French and arithmetic are not at fault, the translation of what they said they would get from that field approached forty bushels to the acre. They shock in a loose, open shock, shaped like a Maltese cross, capping with another sheaf if the weather threatens. It makes, I think, a tighter water-shed than our system, and is certainly a lot easier to pitch from. The old veteran surely knew how to put on a high square load. I bet him it would stall the team, but they didn't seem to mind it. We tied the load down with rope and roller, just as we do at home, and brought it in. Then it was time for lunch.

Starving France! Well, not out here, anyhow. Chicken, omelet, bread, butter, preserves, wine and cider. We gave our so-called French full rope and made them understand our answers to the usual questions. We were single and unengaged; our father's position was such; our mothers were living; our grandparents were dead or alive, as the case might be. We had so many sisters and so many brothers of such-and-such an age; I was a student and Duke a journalist (the nearest we could get to typesetter); wine costs six francs a liter in America; the United States had two million men in arms and more coming. Then came more difficult converse but, spurred on by something in the wine, we make clear various differences in French and American agriculture. I tried to describe the great harvesting and threshing machines of our wheatlands. I thought they would doubt it, but they kept nodding with the most perfect politeness, as if they understood each labored word and accepted it as gospel. Then, "We have the same thing!"', cried our host triumphantly and dragging me out into the yard, showed me an old Farmer's Friend mowing machine, made in 1903. All I could say was, "Oui!"

From one until three, during the heat of the day, we slept on clean straw in the barn, and then stacked the wheat we had hauled in in the morning. They did it very slowly and carefully, building a beautiful honeycomb stack so high that they had us on ladders taking them from the man on the wagon and passing them fork-length to the stacker overhead. Another trip to the field and back, then supper in the same, low white-

"A muscular maiden around twenty."

washed room. All cooking was done in pots swung over the open-fire, and well done. For supper there were fried snails, which we didn't eat, tho why a man who eats oysters won't eat snails is beyond me. More to our taste were the lettuce and endive, the whole wheat

(Continued on page 36)
Tractor Lubrication
Three Ways of Oiling Three Parts, and the Thing That Counts
BY F. L. FAIRBANKS
Instructor in Rural Engineering at Cornell University

The critical time in the life of a tractor is during its first days—it is of use. At this period it must be very carefully watched. The bearings are tight and inclined to heat if they are not flooded with oil. The pores of the cylinder wall have not been completely filled with oil, and the walls are dry. Dirt and grit left in the engine from machining and assembling will be washed down into the oil pump, thus necessitating frequent changing of the oil.

Another and probably most important item is the fact that the tractor is usually given a maximum load for its first work, whereas a light load, close attention, and plenty of good lubricant in the right place are absolute necessities, if it is to run properly.

The parts of the tractor to be lubricated are power plant, transmission, and truck. The lubrication of the power plant requires closer attention than the other parts of the tractor. This is because of the higher shaft speeds, and the heat from the burning fuel which raises the temperature of the bearings. The non-vaporized or condensed fuel may also work past the piston into the lubricant, thinning it.

There are three general types of lubricating systems in use on tractors at present, namely, the force feed, the circulating splash, and the mechanical oiler systems.

In the force feed system oil is pumped under pressure to the main and crank pin bearings. The pistons and wrist pins are oiled by the spray or mist of oil which flies off the crank shaft in the crank case. This system insures a flood of oil under pressure to the principal bearings. It also has the advantage that the position of the engine, whether on a level field or steep hill, does not affect the operation of the lubricating system.

In the circulating splash system oil is pumped into troughs or pockets in an oil pan. The connecting rods dip into these troughs, thus oiling the crank pins and throwing oil up on to the walls of the cylinder to lubricate the piston, wrist pin and main bearings. Usually with this system, if one end of the engine is very much higher than the other, the oil will run in excess to the low end, and the high cylinder will suffer shortage. This sometimes is a cause of very serious trouble.

The mechanical oiler system pumps fresh oil, a few drops at a time, to each bearing and to the piston. This system, like the first, is not affected by the position of the motor. It will be noted that in the first and second systems the oil is used over and over, while in the third, fresh oil is supplied to the bearing continuously. So far as the amount of oil used is concerned there does not seem to be very much choice. The mechanical oiler has the advantage of being the most convenient. It is only necessary to fill it, whereas in the first two systems the oil must be changed in the oil pump periodically, and the pump must be washed. Moreover, there is the danger of heavy fuel diluting the oil.

Each system has its advantages and disadvantages. The important point with any of the standard outfits now on the market is to properly care for the particular system you happen to have.

Lubrication of the transmission probably gives the least trouble and requires the least care of any of the parts of the tractor. It is usually enclosed and oil tight; roller or ball bearings are used; shaft speeds are not high; and it is not exposed to heat. The proper lubricant for the transmission is a heavy fluid or semi-fluid grease, either graphite or non-graphite.

The truck is the part which will go longest without proper attention and is
Charge ninety-five per cent of your lubrication troubles to the man at the wheel. The rest may be in the oil or the oiling system.

usually the most abused in respect to lubrication. Even now quite a number of manufacturers use numerous grease cups for lubricating the various parts of the truck. It is a tedious job to fill and screw down properly ten to twenty grease cups several times a day. It usually happens that they are filled and turned down only when the bearings which they are to lubricate show very pronounced indications of lack of lubrication. The general neglect of this part of the tractor is highly important. Friction in the truck reduces the draw bar horse power, and actually results in waste of fuel and unnecessary wear on the whole tractor.

There has been and still is considerable discussion as to the kind of oils and greases best to use, but, as a matter of fact, the tractor manufacturer has decided this point for the tractor owner. All that is necessary in selecting an oil

(Continued on page 38)
Horses Vs. Tractors
Their Relative Merits as Seen by a Man Who Likes Horses Better
BY WAYNE DINSMORE
Secretary, the Percheron Society of America

POWER on the farm is the basis of agricultural production. This power may be horse, man, or machine power. European countries formerly able to employ labor at a cost of six cents per man per day, have relied largely upon hand labor, whereas the United States in the past has relied almost wholly upon horse power. The use of horses of powerful structure and great strength in large units on large machinery has enabled the American farmers to produce more per capita than the farmers in any other portion of the world. Within recent years tractors have been introduced with the idea of rendering still more effective labor utilized on the farm. In the judgment of certain well-informed agricultural authorities, the tractor power situation has been overdone. Many men have bought them who did not need them, and could not afford to own them. Power on the farm is, after all, an economic problem, and the utilization of power units which merely result in increasing the cost of production is not desirable.

The farmer desires power that will enable him to do his work promptly so as to be well ahead of seasonal requirements in planting his crops; well, in order to insure maximum production; cheaply, in order that he may secure a low cost of production; and he is especially interested in using power that will leave him the largest possible bank balance at the end of a five or ten year period.

Horses have certain manifest advan-
tages over tractor power in filling these power requirements, although it must be frankly stated at this point that tractors have their place on farms of a certain type where they can be effectively and profitably used. On farms such as are usually found in New York State, horses furnish the most satisfactory type of power, and only a limited number of the farms in this portion of the United States can profitably employ tractors in addition to horse power.

Professor Handschin, head of the department of farm organization and management of the University of Illinois, in a recent address gave the results of several years’ cost studies carried out under his personal direction on representative farms in Illinois. In the course of these studies trained cost accountants visited the farms under observation every other day through the year, for five years, and kept the books and cost records of the farmers who are cooperating in this work. The result was a most comprehensive and accurate piece of cost accounting on farm production. Man labor and horse labor were found to be two of the chief elements in crop costs, and extremely wide variations were found to exist in the cost of both man labor and horse labor on the different farms which were being studied.

As a result of this exceedingly comprehensive study of farm production costs, Professor Handschin, in an extended address which is altogether too complete for reproduction here, states in substance that on all farms under two hundred and sixty acres, horses furnish the most efficient and most economical source of farm power, and that on farms over two hundred and sixty acres where tractors may be used, horses will still do seventy-five per cent of the work efficiently and more economically. Professor Peck, of the University of Minnesota, who carried out similar cost studies in that state agrees therewith with Professor Handschin in his conclusions.

It must not be forgotten that no matter how much tractor power is used, some horses must be kept on every farm, and the reduction in number of horses even where tractors have been most effectively used amounts to less than twenty per cent. This reduction is too slight to justify any man in shifting from horse power to tractor power for crop production.

Horse power intelligently handled, will enable New York farmers, or those in any other section, to secure their farm power at an exceedingly low cost. This simply means that farmers should use good draft mares, grade or pure bred, for farm work. They should start with three or four year old mares weighing not less than sixteen hundred pounds in working condition, of draft type, conformation, and soundness. These mares, if handled with good judgment, will do all the work on the farm and will at the same time rear colts which coming on can be put into harness as two year olds, worked steadily as three year olds, in this way supplementing the work of the mares themselves, and enabling the farmer to give the mares some rest at foaling time and immediately thereafter. The geldings can be sold as four year olds at the top price no matter what the market on horses may be, for there has not been a time in the past forty years when good, big, well built draft horses would not sell at a price that left a fair profit when proper allowance was made for the work done while they were growing into maturity. The mares themselves should be disposed of when coming seven or eight, and their places filled with the daughters, which, if sired by the right kind of stallions and grown out as they should be, will be better than the dams themselves.

Power on the farm handled thus is provided more cheaply than in any other possible way, for the farmer is accomplishing his work, is selling his power units before depreciation sets in, and by having one or two surplus teams to turn off each spring, has a source of cash revenue which will bring in from $800 to $1,000 each season, instead of paying out vast sums for repairs, which

(Continued on page 38)
When I was home, I went with them to Church,
The same old Church, the same old vested hall
Wherein, a child, I used to sit and time
The tedious sermons on my Ingersoll,
And count the painted angels on the wall.

The choir still tittered, and the Richest Man
Still held his corner and his cuspidor;
A few gray heads in piety inclined
Still held the foremost rows, but back of these
The emptiness seemed greater than before.

With halting step, the ancient minister
Approached the pulpit; in his gnarled hand
Trembled a manuscript. I know the sign:
A written sermon! No sir! not for mine!
—I rose and tip-toed out as he began.

Outside it was a perfect day; the trees
Moved lightly to the beckon of the breeze,
And running ripples crossed the fields of grass,
And leaped the meadows, and appeared again
In further golden fields where wheat was ripe.
—I sat me on a tomb and lit my pipe.

Perhaps the living in a grave yard borrow
A little of that peace and quietude
Of "undiscovered country from whose bourne
No traveller returns"; perhaps their soul
Is touched by other souls which gently mourn
Man's smallness and his great ingratitude—

For little hopes and prides were swept away
And lost, and all the wonder of that day,
And all it meant, and all it ought to mean
To all the folk who rise and toil and glean,
And rise and sow and fall and fade away—
Stood forth as plain and wondrous as the day.

For man can never live and never grow
By bread alone, I thot; when sudden, Lo!
From out the Church, exalted and enthroned,
Blended with organ music, slow intoned,
My thot returned, and rose and swelled and trod
The silenty scape—"from out the mouth of God!"

And there where once was but a thing of wood,
Ancient and drab, attend by the Good,
Stood forth The Church, arrayed in noble pride,
Glad in its task, complete, and beautiful!
"Enthrone thy soul within thee; let it reign!"
—I bowed my head and entered in again.

A. P.N. '20
Standards in the College of Agriculture
Resume of the Report of J. L. Russell, Dean of the Teachers' College, Columbia University. "Asked to Criticize the Courses Here"

On the occasion of Cornell's semi-centennial, the College took stock of itself. The returns have just become available.

Alumni committees were invited in to make critical report on work now being carried on, and the individual alumnus was sent a questionnaire calculated to elicit personal criticisms, drawn from experience in making a life and a living with what the College teaches.

Individual criticisms took a wide range, but all point inevitably to the same weakness uncovered by Dean Russell in his report, the lack of fixed professional standards for the instruction given throughout the four year course. It is felt that the first two years of work now of a general nature and mainly taken in other colleges, suffer from a conflict of the cultural and the pre-professional points of view, and lead the student neither to agriculture nor to anything else in particular. And it is further felt that the two years of agricultural subjects, made available toward the end of the course, are often taught too theoretically, too technically, too much like the subjects of the first two years.

Stated in this sweeping manner, (the reviewer's, not the investigator's) it has the sound of a sweeping condemnation of everything the College has done. It is unfortunate that the investigator's well-rounded report can not be here presented verbatim, for it clearly shows how splendidly the college has succeeded in its field work, and how the criticisms raised against it apply equally to all agricultural institutions in their present experimental stage.

He opens his paper by reducing the task of the College, under the terms of the bill which authorizes it, to that of vocational teaching, which, he shows, may range from apprentice training to "the highest professional training, which aims to give technical skill directed by specialized knowledge to the highest ideals of public service."

Idealism is a distinguishing feature between the trade school and the professional institution, and "higher ideals could scarcely be set than those laid down in the statutes establishing this College." As to specialized knowledge, the second consideration, the College offers three hundred courses by one hundred and fifty teachers, a hundred of them of professional rank.

"The third factor in professional training—technical skill—is best shown in the vocations pursued by the graduates of the College. The first four hundred and eighty five graduates responding to the questionnaire show **about eighty eight per cent of the entire number making direct use of their training in agriculture—a record which any professional school might envy as an evidence of its ability to meet the public need for which it was created."

But, "a school may be acceptable in general and yet be weak in one or more of the essentials. **Technical skill may be purchased at too great a cost, or neglected to the point of leaving graduates helpless on entering their vocational employment. Right proportion in the adjustment of these essentials is the crux of administration in every type of professional school."

At this point the report passes to a consideration of professional schools as a whole, showing how some, such as law or medicine, can graduate a man with knowledge, leaving him to gain skill by later practice under a master; and how others, like schools of teaching or journalism, must equip their students to make good or to fail almost the first day on the job. In the investigator's opinion, the College of Agriculture falls
with this second class and "can not therefore avoid giving sufficient tech-
nical skill to start the novice in the right way. **I maintain that success in teaching the principles of agriculture is conditioned by actual experience in agricultural practice. ***The ideal balance is obtained when enough prac-
tice is given to check up the theory, and enough of the theory to direct the prac-
tice aright. Disturb this balance by teaching theory as an end in itself, and you have an academic institution. Teach theory as reasons for practice, and you have the makings of a profes-
sional school." The investigator thoroughly realizes the difficulties in the way of arriving at such a balanced, professional standard in the agricultural college, inasmuch as, "the modern agricultural college is not a professional school like law or medicine; it is a collection of professional schools, some of them as dissimiliar as law and medicine." But he indicates a strong belief that the "ideal balance" can be more nearly ap-
proached thruout by a tightening of the "farm practice" requirement, or by the adoption of some other means that would give the student a better check on his theory and a stronger confidence in his ability to stand alone when he goes out into the world with his diploma.

The report then refers to the present impossibility of an agricultural student getting all the professional courses he needs in the two years allowed, and be-
lieves that, "if time should be econo-
mized for the student that he may get a broader culture and a better profes-
sional training within the collegiate per-
dio of four years, then, it seems to me, the easier point of attack is on the intro-
dutory science courses of the first two years. **It would not appreciably increase the cost of instruction in most of the science departments of this Uni-
versity to give special introductory courses to students in Agriculture. If that were done intelligently, the selection of topics could be restricted to prin-
ciples needed by students of agriculture and all the illustrations might have a direct bearing on the professional course. **The result would surely be a better preparation for professional work and a saving of the students' time. Other-
wise, I see no escape from an overcrowd-
ed curriculum, with the inevitable con-
sequence of narrow specialization and bad teaching." The possibility of ex-
tending the course to five years is also advanced.

"In conclusion, I wish to express my appreciation of the splendid development in this College in the past fifteen years. And what excites my admiration is not merely the accession of material equipment in land and buildings, but above all else, it is the spirit which pervades the institution that commands my highest respect. The devotion to re-
search of such scholars as Comstock and Gage, the contributions to professional training of such teachers as Wing, Rice, and Stocking, the public service of such leaders as Warren, Works, Van Renn-
selaer and Rose, fully justify the con-
fidence of the people in making this a State institution.**

"***There is only one unpardonable sin that this College is likely to commit, and that is the failure to recognize farming as a profession with its own professional standards which should be cultivated in this College without fear or favor of academic tradition."
Sometimes it seems that departments like this might well be headed with decorative representations of the human stomach and the human epidermis, they deal so exclusively with things to eat and to wear. No doubt such things are the main consideration in the country home, as in all homes, particularly during these days of high prices. They are not mean and petty, as some poets would have us believe; they are the very fundamentals of all civilization, all joy, all beauty,—provided people can conquer the problems they represent and occasionally get beyond and above them. Food and raiment are the things that keep the race alive, but the escapes from them are what carry it ahead and justify its existence.

And so it is that as in the past this department will deal with things to eat and things to wear—but with conscious attempt at occasional escapades into the realms of things to read, things to think about; music, too, and pictures and furniture, and such other things as the home finds good. Certainly, the farm home is more than kitchen and bedrooms. We intend to wander al over the house, and even go outside if we feel like it.

Did you “just live on that porch this summer?”

Next Year’s Porch Nothing gives such an impression from the road as a good, wide front porch, with lots of shade around it. If you haven’t one, there may be a message for you in the Government’s slogan, “Build Now: Make America a Better Place To Live In.” Go into the city on a hot summer evening and see the people sitting on sofa cushions along their hard, stone steps; then you’ll know your luck in being a countryman, with a real place to sit on summer nights and watch the moon come up. If you haven’t a porch now and are going to build one, build it wide; most country houses have them much too narrow. Make a real one while you’re about it, and then furnish it as you would a room. A handy man about the house can make a fine set of rustic furniture during the winter out of trimmings from the woodlot. You might make a table too; you have no idea how good it looks to see a front porch well furnished with, perhaps, some wild flowers in a vase on a table. Not everybody can do this, of course, but it’s fine if you can.

Another thing about that porch: perhaps you have already fixed it up, with flowered cretonne cushions and everything. Then perhaps one of those summer rains has swept obliquely under the porch roof and left your porch upholstery all messed up. Well, science has outwitted Jupiter. Powder plants, turning from war to peace needs, have been experimenting, and one has evolved a leather-like material which can be artistically embossed or painted and which is absolutely waterproof. Rain rolls off it like a rubber boot, and if it gets dirty it can be scrubbed with soap and water. This material is now on sale at stores.

Milk is Liquid Meat

Much has been done of late to encourage city people to drink more milk. It is the cheapest food and one of the best. High meat prices make its introduction into the diet a matter of good sense, and almost of necessity. The farmer gets his milk at production price and often has to pay city prices for his meat. To a considerable extent milk can be made to serve the place of meat in diet; profitably, palatably, and healthfully. Write to the College here and ask for information. They wel-

(Continued on page 42)
NOW, we realize that you are naturally and properly much more interested in The Countryman than you are in us and our ideas, and we will not try to push forward anything except The Countryman. Neither have we any thought of setting the rural world afire; that is being thoroughly attended to by people in town. All we ask is the interest you would naturally take in anybody working hard for you, the subscriber, and for The Countryman, your paper.

WE ask no alms, but if you know somebody who has failed to get back in touch with our subscription desk since we recommenced publication, tell him we are putting out again. Again, we may win back some of those bygone pages if you or someone you know has something extra good to sell to a special market. The Countryman has always been a good business proposition for that sort of thing, and each additional page of advertising means another page of reading matter.

AN editorial from our own hand in that same issue decries the good old Countryman habit of "bothering friends and customers with plans, and expressing confidence in our own future." How old we were getting! Youth generally makes no bones about telling the world what it expects to do, and here we were getting ready to retire to the splendid isolation of the editorial We and tell the world what we expected of it.

JUST because we had grown up to the extent of eighty pages! Maybe the War has taught us to count with a keener eye, less abashed by bigness; maybe the Army has showed us the smallness of that sort of dignity and author-

(Continued on page 42)
Campus Notes

The Victory Special demonstration train toured the State again this summer under the direction of the department of home economics and the United States Railroad Administration, cooperating. From April until October, specialists from the College, under the direction of Miss Lucille Brewer gave demonstrations and lectures on every phase of house-keeping in nearly every town in the State. The train is made up of two cars, one for demonstrations, and the other for exhibits. The demonstrations covered subjects ranging from "how to keep well" to "making over old clothes", and the exhibits showed all kinds of canned and dried foods, labor saving devices for the farm home, house-plans, and homemade clothing and millinery.

At a luncheon held at the Ithaca Hotel September 15, the Cornell Club was formed among the business men of Ithaca. "Speedy" Rush, the new coach, and Romeyn Berry, the new graduate manager of athletics, gave short talks outlining the plans for the coming athletic season, and Charles E. Treman spoke for the Ithaca business men. At this meeting a new form of season ticket was announced. It is to be known as a "resident ticket" and is to be sold to members of the faculty and other residents of Ithaca. The resident ticket admits the holder with his or her husband or wife to all Major Sport games in Ithaca. They also admit to all games at which there are no reserved seats the children of the holder who are under fifteen years of age. The resident tickets are ten dollars, and the businessmen have pledged their support to their sale throughout the city. Committees have been appointed to canvas the city, and it is expected that the new plan will prove of great benefit to both the holders of resident tickets, and to the Athletic Association.

The prospects for a good Cornell year in athletics are exceedingly bright this fall. The football squad, which reported the middle of September, includes many Varsity stars of the past two years, and with "Speedy" Rush, "Gib" Cool and "Ray" Van Orman on the coaching staff, an unusual amount of "pep" has already been displayed.

Two new courses in the extension department are offered this year. Extension five is a two hour course in agricultural journalism, given the first term, and Extension six is a one hour course in agricultural news writing given the second term. The former course is intended to give the principles of news writing for use in connection with county agent and home demonstration work, or for those who wish to undertake the writing of agricultural bulletins. The latter course will consist of practical news writing for publication in agricultural journals. It will also include criticisms, discussions, and consultations on actual problems in agricultural journalism. Both courses are given by Professor Bristow Adams.
'84 B. S.—C. Fred Boshart has been farming at Lowville since his days on the Hill way back in '84.

'91 ex—James M. Drew, after farming for five years, turned to teaching and at present is in the crop extension division at the University farm, St. Paul, Minn.

'00 ex—Arthur L. Richards is the owner of a ninety acre fruit and truck farm at Riverton, N. J. In a communication he states: "I have been crossing and selecting for better sugar corn. My 'Double Barrelled Best' was introduced by the Stokes Seed Company six years ago. My extra early sugar corn 'Sunny Slope Special' has been perfected about four years, but has been sold only privately." On his farm he makes use of a tractor, a two and a half ton truck, and two automobiles.

'00 B. S.—Carl F. Pilab has been practicing as a landscape architect since graduation. His office is 32 Broadway, New York City.

'01 D. H.—James A. Reburn since graduating has been engaged in sanitary dairy work and general farm and country estate management. He is now living on a private estate at Mount Kisco.

'04 M. C. C.—J. Lels is manager and part owner of a 5150 acre farm at Vorden, Sacramento County, Cal. The farm is of river bottom and peat types of soil bearing fruit and general truck. He writes: "Crops are uniformly good and expenses of farming very high, weed growth very prolific and continuous, drainage as well as irrigation systems used, entirely surrounded by levees thirty feet high having a 250 foot base." He is conducting extensive investigations in the growing of seeds.

'66 B. S.—Charles Frederic Shaw, since bidding farewell to the Hill, has been teaching and carrying on soil investigations. He was successively an assistant in the Bureau of Soils, an instructor and later professor in agronomy in the Penn State College of Agriculture and in 1913 went to the University of California where he now holds the chair of soil technology. He is also in charge of the state soil survey and drainage and a consulting engineer in the reclamation service. His address is 320 Hilgard Hall, U. of C., Berkely, Cal.

'07 B. S., '08 M. S.—Norman H. Grubb is now an assistant at the Wye College Fruit Experiment Station, East Malling, England. He spent five years with the U. S. D. A. at Washington and for the past five years has been working a fruit farm in England. "My work is confined entirely to the study of the problems faced by the commercial fruit growers and the larger part is an investigation of fruit tree stocks, particularly apple" he writes.

'08 B. S.—Clarence Lounsbery has been employed by the Bureau of Soils, U. S. D. A. since leaving Cornell and lately has been doing soil survey work in Simpson County, Mississippi. His home address is Barton, N. Y.

'08—Earl F. Fowler has two hundred acres devoted to dairy, swine and general farming, at Baldwinsville.
'08 B. S. A.—Andrew W. McKay is in charge of refrigerator car equipment and service for the U. S. Bureau of Markets in the southeastern territory.

'09 B. S.—F. E. Robertson since graduation has been engaged in teaching, investigation, and farm bureau work.

'11 B. S.—A. K. Rotheberger is county agent of Montgomery County, Pa. He is also running his own farm of one hundred and five acres.

'10-'11 Sp.—R. E. Clark has been running a farm in cooperation with his father at Peru for the past five years. They have a general farm of two hundred and eighty acres bearing crops of apples, potatoes, oats and corn. The farm is stocked with thirty head of Holsteins, five horses, and twenty hogs.

'13-'14 Sp.—Frank McCorley, jr., of 817 East 223 Street, New York, writes: “Since leaving Cornell I have been busy at my trade as a painter.”

'11 B. S. A.—Lloyd R. Simons is agriculturalist in charge of county agricultural agent work in the Central States for the U. S. D. A. Hans Hochbaum, B. S. A., '05, Henry Gilbertson, M. S. A., '11 and Meredith C. Wilson, B. S. '14 are in the same office in charge of county agent work.

'11 M. S. A.—C. Shannon Wright is in charge of extension work at the Farmingdale School of applied agriculture. He was for a number of years at the Campbell Soup Company Farm in New Jersey.

'12 B. S.—Claude C. Cornue is the owner of a two hundred acre farm at Avoca.

'12 B. S.—William L. Cavert has been in charge of farm management demonstrations at the University of Minnesota since 1914. His address is University Farm, St. Paul, Minn.

'11 B. S., '12 B. S.—Mr. and Mrs. W. O. Strong (Ada Dunn '12 B. S.) announce the birth of a daughter, Mary

Back to Explosives After the War

FROM Wilmington, Delaware, comes this picture of three ex-members of Countryman boards back from widely separated branches of service and now united in the employ of the Hercules Power Company, working for a safer and saner use of high explosives, on the farm.

On the left is J. A. Vanderslice, '16, who went from the Editorship here to the Managing Editorship of The Field. During the war he was a sergeant in the Chemical Warfare Service, overseas. His present field of work centers at Pittsburgh and covers Western New York and Ohio.

In the center is Arthur W. Wilson, '15, Business Manager the year previous. After six months a second lieutenant with an artillery outfit overseas, he was ordered back to the States to instruct a division destined for Siberia. Now he is managing the Agricultural Department for his firm.

Lawrence E. Gubb, '16, was on the advertising staff of The Countryman when Vanderslice was Editor. He returns from a lieutenancy in the Motor Transport Corps to agricultural service work in eastern New York and New Jersey.
Elizabeth, on October 24, 1918. Mr. and Mrs. Strong are living in Williamsburg, Va., where Mr. Strong is the owner of the Williamsburg Dairy.

'12 B. S.—Hawley B. Rogers is farm bureau manager of Chautauqua County. He has held this position since graduation.

'13 B. S.—Dorothea Elizabeth Kieland '13 was married on January 24, 1919, to Mr. Robert K. Brueckner in Dublin, Natal, South Africa. Mr. Brueckner is an architect in charge of the industrial department of the Amanzi.

'13 B. S.—Herbert L. Lautz has a one hundred and fourteen acre farm at Newfane largely devoted to fruit and poultry.

'14 B. S.—Richard T. Cotton is engaged in research work for the U. S. Bureau of Entomology. His address is Box 259, Orlando, Fla.

'15 B. S.—James M. Frayer is senior chemist at the Fort Covington condensed milk plant of the Nestle Food Company.

'15 B. S.—L. S. Phillips is living at 151 Manheim street, Philadelphia, Pa. After graduation he taught farm management in the Morrisville School. He saw two years service overseas and after the armistice was a student at the Rothamsted Experimental Station in England.

'15 B. S.—J. D. Scofield has a one hundred and eighty-five acre general farm at Candor. He is doing some work with corn and potato seed selection.

'15 B. S.—F. E. Rogers is farm bureau manager at Sodus.

'15, B. S.—Mr. and Mrs. Isaac Spang of Reading, Pa., have announced the engagement of their daughter, Helen, to Miles B. Hamen, who is engaged in prospecting work in South America for the Aluminium Co. of America.

'15, B. S.—Lieutenant H. J. Brooks and R. G. Bird rowed on the crew that represented America in the international regatta on the Seine on April 27. Lieutenant Brooks stroked the junior varsity in his senior year, and stroked the American crew in the big race. Bird rowed as No. 2. He was a member of the famous Varsity Eight which defeated Leland Stanford at Poughkeepsie in 1915.

'15 B. S.—Shepard E. Church has entered the retail grocery business. His address is 219 South Warren St., Syracuse.

'15 B. S.—Jesse S. Brown is in charge of the Chicago office of the U. S. Bureau of Markets. His address is 139 North Clark St.

'15 B. S.—Theodore O. Gavitt is successfully running a business in New York City and a seventy-five acre farm at Plainfield, N. J.

'15 B. S.—Harvey McChesney has a general farm of two hundred and seventy acres at Hyde Park in Dutchess county. He has been experimenting with corn and oats, and reports yields of fifty and forty bushels respectively.

'16 Grad.—Harold A. Severy is teaching biology in Milwaukee High School, and reports that he has a four hundred acre pecan orchard in Mississippi which is doing well.

'16 B. S.—Harwood Martin has about two hundred acres under cultivation at Honeoye Falls and reports yields of one hundred and seventy-five bushels of potatoes and eighty bushels of oats to the acre.

'16 B. S.—Seymour W. Davenport, jr., is now manager of the Fairland Farms at Kinderhook, having about two hundred acres in cultivation.

'16 B. S.—Lacey H. Woodward is teaching agriculture in the high school at Sherman.

'16 B. S., '17 M. S.—Albert Hartzell was recently married to Miss Anna Ineck of Ames, Iowa. He is instructing in entomology at the Iowa State College.

'16 B. S.—George A. Haskins is running a fruit and dairy farm at Lincoln Park, a suburb of Rochester.

'16 B. S.—John Troup Moir, jr., is division overseer for the Hawaiian Commercial and Sugar Company at Puunene, Maui, T. H.

'16 D. V. M.—Russell C. Cutan is a practicing veterinarian at Goshen.
Dependability of the DE LAVAL

Dependability in a cream separator is especially necessary in the warm weather when the milk should be taken care of in the shortest possible time.

The De Laval Cream Separator is dependable, and with ordinary care it will easily last a lifetime.

The DeLaval capacity rating is dependable. Each size exceeds its advertised capacity under ordinary, and even under unfavorable, conditions.

DeLaval service is dependable. Fifty thousand agents the world over see to it that DeLaval Separators are properly set up, operated and taken care of. And, above all, the DeLaval Company is dependable—the oldest and by far the largest cream separator manufacturers in the world.

More De Lavals in use than of all other makes combined

See the local De Laval agent or, if you don't know him, write to the nearest DeLaval office as below.

THE DE LAVAL SEPARATOR CO.

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Tell Advertisers Who Introduced You
HANSEN'S
Dairy Preparations

For cheese and butter making on the farm as well as in largest creameries and cheese factories, Hansen's preparations are standard. They are pure, concentrated and simple to use.

Use Hansen's Rennet Tablets, Rennet Extract or Lactic Ferment Culture for cheese making (in the small dairy Junket Brand Buttermilk Tablets are used to advantage for cheese making.)

Hansen's Danish Butter Color, and Hansen's Cheese Color are used in the finest creameries and cheese factories. Hansen's products are on sale at drug or dairy supply stores or sent direct.

"The Story of Cheese Making" by J. D. Frederiksen, free on request.

Chr. Hansen's Laboratory, Inc. Ithaca, N. Y.

'16 B. S.—James Tansley Hohmann was married recently to Miss Marguerite Howitt, of White Plains.

'16 B. S.—Clarence W. Bailey was recently married to Miss Edith Bevington of Lakewood, Ohio. Bailey is secretary and organizer of the Farm Sales and Service Company of Cleveland.

'16, B. S.—D. S. Dilts has returned from Camp Grant, Illinois, where he was regimental sergeant major.

'16, B. S., '18, A. B.—Miss Mildred F. Hills and Miss Frieda H. Schoeffler are teachers in the instruction department of the American Telephone and Telegraph Co. of New York. They are living at 333 South Third Ave., Mt. Vernon, N. Y.

'16, B. S.—J. C. Corwith has a dairy and poultry farm at Water Mill, Long Island.

'16 B. S.—A. I. Covell is with the Continental Paper Bag Company of New York and lives at 927 Home St., Bronx, New York.

The Practical Collar

Horses Like 'Em

Horses work best when the collars they wear fit snug and firm. Such collars are sure to keep horses' necks and shoulders in tip top condition. Here's a collar that fits perfectly all the time, no matter how the horse changes flesh.

FitZall Adjustable Collars

Instantly Adjusted to Fit Any Horse, Fat or Thin

This collar is no freak. It's simply the standard collar vastly improved. Four sets of holes in the bands in the top fit over pegs in the collar exp, giving four perfect-fitting sizes in each collar. It puts the pressure only where it is needed, nowhere else.

Change it from one horse to fit another perfectly, as quickly as buckling an ordinary collar.

Sold by dealers at the same prices as for ordinary collars of the same grade. Guaranteed. Money back if you're not pleased. If your dealer can't supply you we will. Write for full description and prices.

John C. Nichols Co. 119 Erie St., Sheboygan, Wis.

Manufacturers and Distributors

Makers of the Famous Master-Brand Harness—America's Best

Say Where You Saw It When You Write
Farmers Who are Leaders Know the Use of DYNAMITE

A Ditch Dug with HERCULES DYNAMITE

$72.65 for dynamite and caps reclaimed $1,000 worth of land for one agricultural college graduate.

Are you taking advantage of every opportunity to improve your farm and make your idle acres pay?

High prices and increased land values demand the use of every acre. If you are unfamiliar with the economy and labor-saving advantages of Hercules Explosives, let our New York State agricultural experts, L. E. Gubb '16 and J. A. Vanderslice '16, show you and your help how to dig ditches, remove stumps and boulders, subsoil, and plant trees with dynamite.

State your problems to our Agricultural Department, and ask for a copy of "Progressive Cultivation," a 68-page booklet that explains the economical and safe way to use dynamite.

HERCULES POWDER CO.
(Agricultural Dept.)
Wilmington Delaware

Please send me a copy of “Progressive Cultivation”. I need dynamite for

Removing -------------------------------------- stumps from -------------------------------------- acres.
Digging -------------------------------------- rod. of ditch.
Removing -------------------------------------- boulders from -------------------------------------- acres.
Planting -------------------------------------- trees. Subsoiling -------------------------------------- acres.
Name -------------------------------------- P. O. -------------------------------------- State

"THE FARMER" Monthly, 50 cents a year. ADDRESS: HERCULES POWDER CO., Wilmington, Delaware.
Credit Rating the Farmer
(Continued from page 3)
actual figures what he is doing financially, his successes, failures, actual worth, and business standing. Besides the immediate benefits to the farmer in knowing these facts and directing his work accordingly, it would enable business men and bankers to know just what the men they are buying and selling or loaning to are worth as a risk. This in itself would just about solve the farmers' credit problems.

It would teach the farmers how to keep accounts and records, and check up their own business. Farmers will take pains to do this when they are taught that it is to their immediate financial interests to do so.

Farmers want to pay their income taxes. No class of men are more patriotic. But farmers who have not a financial rating and accounting records over a period of years are having no end of trouble in figuring their income taxes. Some will pay more than they should, some less, and many will never know whether or not they owe a tax. The trouble this plan would save the farmers and the additional income secured for the government would, alone, more than pay for credit rating farmers.

The farmer, when borrowing or buying, would be relieved of the present almost insurmountable difficulty of proving his worth as a credit risk by simply referring to his credit rating bureau. If a farmer or organization of farmers desire to make a purchase from a distant company, the company would not need to send their agent and go to unwarranted expense in order to determine the security back of the risk. For only a few cents the company could write, telephone, or telegraph the local credit bureau. For example, suppose the Armour Fertilizer Works of Chicago has been requested by a farmer or a Farmers' Cooperative Association to ship a carload of acid phosphate to

---

"PIETERTJE ORMSBY MERCEDES"
OWNED BY
C. C. Schroder
Moorhead
Minn.

Would you like to see a portrait of your favorite Cow, Bull, Sheep, Horse or Dog on this page? If so, send photos with name of Animal and Owner and other interesting data. We want to run an interesting stock picture each Month and need your assistance. All photos will be carefully returned.

Ithaca Engraving Co., Ithaca, N. Y.
Photo Engravings for all Printing Purposes

Say Where You Saw It When You Write
His Neighbors Laughed at Tom Christensen When He Bought His Milker. Now There Are 50 In His Neighborhood

Three years ago no one in Tom Christensen's neighborhood had ever used a milking machine. Mr. Christensen wanted to make more money out of his farm. But he did not have hands enough and there weren't enough hours in the day.

It took nerve to resist the scoffs of his neighbors and to try something new.

"When I first put in my milker," says Mr. Christensen, "everyone around here said, 'There's another boob who's going broke on machinery. He will ruin his cows and he will lose a lot of money.'

"But my hired men were going to leave and I had to do something. Today the Perfection Milker has changed this farm. We have an electric light plant, an electric washing machine, an electric vacuum cleaner and other improvements, but I was saying to my wife the other day that while all these things help us a great deal, it was the Perfection Milker that started us."

THE COWS LICK THE PERFECTION

"Instead of my cows being hurt by the milker, they like it. When I start the milker, I have often heard my cows bellow for it just like for their own calves and then turn around and lick the pail. You never heard of a cow licking the hand of a MAN who was doing the milking, did you?

"And the Perfection is better for my cows than hand milking. When a hired man thinks it's quitting time, he hurries and doesn't milk clean. This cuts down the amount of milk for weeks and makes no end of trouble. But my Perfection milks each cow just the same every night and it never gets mad no matter what happens.

"My wife and I both had to milk before we had the Perfection. Now my two little boys often do the milking alone and it only takes them 40 minutes."

THE NEIGHBORS OWN PERFECTIONS, TOO

"When my neighbors found out that my milk check was averaging over $500 a month, they began to have a new idea about the Perfection Milker. Today there are 50 Perfections within a few miles of my place and everybody is satisfied with them."

Mr. Christensen's story is the experience of one of thousands of practical dairymen.

SEND for NAMES, ADDRESSES and CATALOGS

We will gladly send you his address together with the names and addresses of many other Perfection owners to whom you can write. We will also send FREE, "What the Dairyman Wants to Know,"—the book that answers every question about milking machines. Write today.

Perfection Manufacturing Company

2142 E. Hennepin Avenue
MINNEAPOLIS, MINNESOTA

PERFECTION MILKER

The Perfection is the Milker with the DOWNWARD Squeeze Like the Calf
Ad. No. 60
There is a Greater Need

Keeping the milk pail covered during and after milking, as well as thoroughly washing the udder of the cow before milking are essential to high quality milk. These precautionary measures are very good and should always be practiced, but the cleanliness of the dairy apparatus and milk house should not be neglected.

When

Wyandotte
Dairyman's Cleaner and Cleanser

is used to maintain cleanliness there will be no cause for worry as to sanitary conditions existing throughout the dairy. Neither will there be any possibility of contamination from churns, separators, and other dairy utensils, because this cleaner removes all impurities and cleans clean.

As an economy, order a barrel from your supply house. It cleans clean.

Indian in circle

in every package

The J. B. Ford Co.
Sole Mnfrs.
Wyandotte, Mich.

Ithaca, N. Y. How does the fertilizer works know the security back of this risk? They do not know and must go to considerable expense to find out, and what is worse, all that can be found out with the present unofficial records of farm business must be a mere estimate based upon a guess. The same credit risk presents itself to the livestock commissioner who would deliver to farmers cattle to feed through the winter; the lumber dealer who would sell the farmer a barn pattern; the implement dealer who would sell the farmer a plow or a tractor; the feed dealer who would sell the farmer feed for his cows, and the banker who would loan the farmer money.

The expenses of bankers and business men as dealers in implements, fertilizers, feeds, lumber and livestock, in ascertaining the farmer customer's credit ability, would far more than pay the cost of credit rating farmers.

A credit rating would elevate farming to its rightful position relative to commerce and industry by providing equal business facilities.

The records and balance sheets would be suggestive for improvements not only to farmers but to all those who work in the field of agriculture.

Suggestions for state and national policies of agriculture would be indicative on the face of these records.

Criticisms. I am aware that many persons interested in agriculture will say that this would be an endless task and very expensive.

The farmer, like all men who aspire to ownership, is in business for profits. A credit rating would improve his prospects materially. The work, if properly managed, could be carried on successfully with an organization not any more complex than that of the farm bureaus. But as long as agriculturists hold back on progressive practices just because they are difficult, just that long agriculture will lag behind and we will be followers of progress rather than leaders.
The O. K. That Counts

The best recommendation for farm implements is the reputation they have established for especially satisfactory work in the hands of the users who have invested their money in them.

The user is the court of last resort. The possibilities in an implement go to him for judgment in the light of actual practice. His O. K. is what counts.

John Deere Implements have been in the hands of users for more than eighty years. The verdict of these users has established a world-wide John Deere reputation for good work and long wear.

To maintain and increase that reputation is the constant aim in the manufacture of John Deere Implements to-day.

John Deere, Moline, Illinois
Another objection which will be registered against a credit rating for farmers is that farmers will not want to make their financial worth a matter of public information. This is obvious. But the farmer is like any other business man. He is willing to make his business known to officials who ought to know and this information would be properly safeguarded and confidential for business transactions just the same as the credit rating of the local merchant, manufacturer, or other business man.

Some will say that character and capacity are the principal security back of credit, and not capital. Certainly these human elements are the best of security but most loans of any size are made on the basis of known capital. Nevertheless, the credit rating and records of a farmer over a period of years would indicate the principal facts regarding a farmer's character and capacity as well as his financial ability.

Such a plan, of course, cannot be worked out in a year, or even five years. It will take time, patience, leadership, and education. But is not the business ability and ingenuity of our present agricultural organizations capable of carrying through this fundamental plan?

Why the Dairymen Organized

(Continued from page 9)

ing our city brethren, there are no more efficient farmers in the world than there are in America. Fifty years ago the average dairy cow in New York State gave less than twenty-five hundred pounds of milk per year. The average production at the present time is better than five thousand pounds. In other words the so-called "inefficient" dairymen has doubled the production of the average dairy cow in this state in fifty years. Similar improvement has been made in the production side of farming all the way along the line. The farmer has made two blades of grass grow where one grew before. But when it came to marketing, he was a mighty poor salesman and it is only recently that he has begun to realize that it pro-

fits him little to grow two blades where one grew before, if both of them are grown for less than it costs him to produce them.

When the war began it brought to a climax the wrongs that had been accumulating in the marketing of farm products for half a century. The world was confronted with the necessity of increased production. It was the farmer's duty to grow the food, but he could not do it on conditions as they had existed. Thus he was driven to organization.

Some Difficulties with the Central Packing Plan

(Continued from page 11)

for it is expand its activities rapidly enough to aid the situation. In such an emergency the method of packing on the individual farms has a considerable advantage. If need be, labor can be withdrawn from other farm work during the rush, or the farmer's wife and children can be impressed into service. Also the problem of adequate packing space may be solved by using barns or sheds which are always to be found on a farm.

The central-packing plan applied to native grapes

The difficulties inherent in the central-packing plan under certain conditions are well illustrated by the experience of the grape growers of New York State. The native American grape is a fruit which suffers from all the hindrances to the central packing plan mentioned above. Because it consists of a cluster of thin-skinned berries it is not susceptible to mechanical grading. It is extremely subject to injury thru being rehandled in any fashion. Its shipping season is short; in the Chappaqua-Erie district where practically all the grapes are of one variety, the Concord, the bulk of the crop is marketed during a single month's time. The grape is often harvested during very cold weather so that any building designed for central packing must be of solid construction for the protection of the workers and hence is especially
Fresh Water Pays for Itself In One Year

Fresh running water is not a farm luxury. It is an investment which often pays for itself in a year by increasing profits from dairy cows and other livestock.

Take the typical example of Clem Taylor, Whitewater, Wis., who has been using a National System for several years. Mr. Taylor says his cows, when drinking fresh water, increased their milk yield 6 lbs. daily or 2190 lbs. a year. Figure this at the current price and multiply it by the number of cows in your herd. You'll agree with us that it's easy to make increased profits pay for your

NATIONAL
Fresh From The Well
Water System

The one system that delivers water fresh from the well or spring by compressed air operating a pump located in the well itself. No water storage tank. Water can't become stale and is of even temperature the year round.

Livestock drink it more freely than they would tank water. Besides you have the great convenience of running water in bath, kitchen and laundry.

See the National in operation at the New York State College of Agriculture. Or write for catalog.

United Pump & Power Co.,
326 Belleview Place
Milwaukee, Wis.
Motor Back to Football Games at Ithaca

Through the Beautiful Scenery of Finger Lake Region

A new form of Alumni and non-resident ticket admits you to all football and baseball games and track meets held in Ithaca during the season of 1919–1920. It gives you convenient parking space under guard for your car. It insures you due notice of all events and enables you to secure reserved seats at all games and on observation trains, both in Ithaca and abroad, before the same are placed on public sale. The price of these tickets is $10.00.

Address and make checks payable to

Cornell University Athletic Association

ITHACA, NEW YORK

Oberlin, Oct. 4th; Williams, Oct. 11th; Colgate, Oct. 18th; Lafayette, Nov. 1st; Carnegie Tech., Nov. 8th; Penn State, Nov. 15th.

The BACKGROUND BOOKS

By LIBERTY HYDE BAILEY

These books should be read and studied by every agricultural worker; every community leader; every one interested in the future welfare of the world.

The Holy Earth - - $1.00

It expounds the philosophy that bases society on the earth; in this teaching, the naturalist and the farmer find their proper place.

Universal Service - - $1.00

The hope of the world’s society lies in Universal service, Universal Fellowship. This book discusses practical constructive suggestions for the remodelling of the social fabric toward a true democracy.

What is Democracy - $1.00

The question of the hour and its answer by a clear-thinking student of mankind. It gives special attention to the rural situation as a world problem.

Wind and Weather - $1.00

A book of verse. One comes forth from delving in this book with a clean, refreshed, and inspired spirit; a new love and comprehension of Mother Earth.

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The Cornell Countryman

costly to erect, while at the same time it must stand idle for a large portion of each year. Lastly, the grape is extremely susceptible to periods of warm weather which frequently occur during the shipping season, and at the same time there is the ever present danger of early frosts during the latter part of the season. The result is the frequent swamping of all marketing facilities when the fruit is rushed off the vines for one or the other of these causes.

The result of these various peculiarities of the grape, as experience has proved, is to make the plan of central packing far less feasible for this fruit than for many other kinds of farm products. The benefits to be gained from the plan in the way of establishing uniform packing are as obvious in the case of grapes as with any other product, but if it is ever to be successfully operated with this particular fruit it must be in spite of these very clear limitations of its usefulness. One way in which the difficulty inherent in the short shipping season may be somewhat obviated is in cutting down the high over-head expense of a building idle for part of the year by using the same building for packing peaches, grapes and apples. This has been tried with good results in the Ontario district, but here the grapes are only a minor part of the fruit handled. Whether this variation of the plan can be adopted on any large scale remains to be seen. In any case there still remain the other numerous difficulties to contend with, any one of which seriously lessens the value of the central packing plan when used with native grapes.

Farming a la Francaise

(Continued from page 13)

bread and the apple butter, the inevitable wine and cider.

"You have a nice little place here," I said to our host. That started him off, and when a French peasant speaks of the land and his place on it, he speaks beautifully; it comes from the heart. I can see him yet, a fine old figure there
PERFORMANCE

The "Caterpillar" has always been a continuous performer—dependable for any work at any time.

Yesterday it did things that made world war history.

Today's "Caterpillar" is an exact duplicate of those sturdy engines that moved guns, food, ammunition and supplies ever forward—the final tractor achievement of Holt and Allied army engineers.

The record of the "Caterpillar" is your positive proof that it will do your work—bend and draw bar—when, and as you want it done. Plow as deep as you like—faster than you ever plowed before; disc, harrow and seed your land—all with a "Caterpillar". Each job will be done right and on time.

If you should make a bad or mud it can't stop the "Caterpillar". Turns in its own length, making close fence corner work simple. Equipped with three speeds and reverse. Travels on the road or in five miles per hour.

You will be interested in receiving free literature describing each feature of "Caterpillar" supremacy. Write

the HOLT Manufacturing Co., Inc.
There is but one "Caterpillar"—HOLT builds it.
Peoria, Illinois

Factories, Peoria, Ill. and Stockton, Cal.
Branches and Distributors

Atlanta, Ga.
Fargo, N. D.
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Memphis, Tenn.
New York, N. Y.
Oklahoma, Okla.
San Francisco, Cal.

Saskatoon, Wash.
Vancouver, B. C.
Calgary, Alberta
London, E. C.
The 14-year-old boy, Warren Burt, milks 25 cows morning and night with the aid of two double Burrell B-L-K Milkers—milks four cows at a time and does a better job than could be done by hand. The cows let down their milk freely and the milkers get it all.

There's no drudgery in milking with the Burrell—makes milking light, pleasant, interesting work for man or boy, and the cows like it, too.

Labor is scarce, and good hand milkers are hard to get at ANY price. You can solve the whole problem quickly, economically and permanently with the Burrell. Let us tell you more about it.

"The Burrell (B-L-K) Milkers are a part of the 'SIMPLEX' line of dairy and milk plant equipment. There is a 'SIMPLEX' machine for the dairy or milk plant no matter how large or small.

Descriptive literature will gladly be forwarded to those interested."

D. H. BURRELL & CO.

Little Falls New York

at the head of his humble board, playing the host and head of the family with dignity and simplicity.

"M'sieu!" he said. "I do not know how it is with you, but I, I love my calling. These are my fields, and I love them. I love my family and my good oxen and all that I grow here. They are mine, M'sieu; not by purchase, not by cleverness, as in cities, but because I work for them and they work for me, and we are almost one. Moi, je ne suis pas riche, mais je suis proprieteire, moi!"

I have put the last sentence in French because the word proprieteire has no exact equivalent in our language, not as he used it. The nearest we get to it is, "There's no money in farming, but you're your own boss."

We worked in the wheat until nine o'clock, and then walked back to billets thru the bright moonlight, with all the family calling us "mes enfants," and bidding us come back soon. The regiment moved before we had the chance, but some day Duke and I are going back to Poitiers and see M'Ba-reek-o and his family.

R. L.

Tractor Lubrication

(Continued from page 15)

is to follow the manufacturer's recommendation.

The point in the subject of tractor lubrication which has not had sufficient emphasis is the personal element in the care of the machine. It is undoubtedly safe to say that ninety-five per cent of the lubricating troubles are due to neglect on the part of the operator and five per cent to oils and oiling systems.

Horses vs. Tractors

(Continued from page 17)

is the inevitable consequence of tractor ownership and operation.

When all is said and done horsemen must realize that the horse will survive as a power unit so long as equine power can be furnished more cheaply, more efficiently and more satisfactorily than
Why Cane Mola is Fed by Scientific Farmers

Because this 100 per cent pure sugar cane molasses, imported direct from the West Indies, is the cheapest feed you can buy today, Prof. Savage of Cornell has recently compiled a table published in the Dairyman's League News showing that cane molasses containing not less than 53 per cent sugar supplies more digestible nutrient per dollar expended than any known feed. An analysis of

**Cane-Mola**

proves that it meets this test. It practically equals corn in feed value: costs just about half as much. The Department of Agriculture has compiled two bulletins on cane molasses as a feed. One proves that it makes a hay and grain ration 14 per cent more digestible, the other that its energy value is tremendously greater than that of any other feed. See Bulletins 117 and 125.

Cows give from 10 per cent to 20 per cent more milk on Cane Mola: hogs gain weight quickly: horses and mules show more pep. Analysis on every barrel. Write Department H, for literature; it's free.

**Pure Cane Molasses Corp.**

16 Exchange Place, New Yotk

Say Where You Saw It When You Write.
in some other form. Horses today furnish the greatest proportion of the power needed in producing crops, and there is no reason to believe that the supremacy of good draft horses on farms ever will be threatened seriously; but inefficient horses, and their owners, will be slowly but surely eliminated.

The advantage to the farmer of producing his own power units is very great, for then he is independent. Tractor manufacture requires labor in the iron and coal mines, steel mills and tractor factories, and much of this is high-priced labor. Strikes or wage increases may within a very brief time double the cost of power to the farmer who is dependent on the factory, and he is subject to the arbitrary action of manufacturers in the prices he must pay for repairs and the time when he shall receive them. The cost of fuel is also beyond his control. The man who uses draft mares and rears his own power units is free from such problems. He knows that the cost of his power units can not be suddenly and arbitrarily increased by the action of a manufacturer or labor union. He knows that he has no need to fret about repairs, for if one horse gives out another can be substituted in thirty minutes or less; and he is raising his own fuel in roughage and grains and can tell the Standard Oil Company where to go when the price of internal combustion oils is increased.

We must not forget, also, that while the horse in ordinary work exerts a pull equal to one-tenth his weight, he can in an emergency pull a load five or six times as great, while mechanical power at best can pull only a one hundred percent overload. This reserve of power available in horse power units is invaluable on the farm or anywhere else when thoroughly dependable power that can work in soft footing is needed.

The good draft horse still reigns supreme on farms, and will continue to do so; but the inefficient horse is doomed.

---

J. B. Lang Engine & Garage Co.
117-129 East Green Street
Let's Get Acquainted

HERE ARE A FEW OF THE THINGS WE CAN DO FOR YOU

WE CAN store your car in FIRE-PROOF Quarters.
(A Private Stall if you want it)

WE CAN make repairs in our completely equipped Machine Shop, Foundry and Forge Shop which are not attempted in the average garage.

WE CAN rent you a Cadillac Touring Car or Limousine for the dance, game or trip.

Don't Forget the Place---LANG'S GARAGE

Tell Advertisers Who Introduced You.
SCIENCE is the modern Aladdin. It changes the face of the world almost over night. Steam was discovered—and life at once began to change for every man, woman and child then alive. For them and their descendants life could never again be the same.

Union Carbide was discovered; and already its miraculous power is lightening and brightening the life of every one living to-day. Such world forces are irresistible. The results they make possible are so helpful that barriers fall by the wayside as the wave of progress rushes on.

Union Carbide made from selected coke and lime and fused in electric furnaces at a heat of 6,000 degrees Fahrenheit (twice the heat necessary to melt steel), looks like ordinary crushed stone. Add water to it, and there is straightway produced the most wonderful gas in the world—Carbide Gas.

Carbide Gas is mending machinery in factories, railroad and ship-building plants all over the earth. Broken parts are heated in a few minutes, and then stick together as if they had never been parted.

Carbide Gas lights the entrances to the Panama Canal, Government Barracks, light-houses, buoys and school houses. It supplied light to the contractors who built the New York Subways, and the great Catskill aqueduct tunnel under the Hudson River at Storm King.

It already lights quarter of a million farm houses and barns, hospitals, fields for night ploughing, and is used for loading and unloading of all kinds. Over 700,000 miners depend on Carbide Gas to work by.

If you would like to read more about this miracle worker, that is changing the habits of millions, write us for a free booklet.

UNION CARBIDE SALES COMPANY
30 East 42nd Street, New York
Peoples Gas Building, Chicago Kohl Building, San Francisco
come such requests. And at the same time, you might ask for literature on small fruits in the farm garden, another thing which the College is pushing, in the behalf that they’re not much trouble and might help keep household health up and household expenses down.

The Reading Lamp

Once in a while the city magazines get hold of a really good story of country life. We know of three such that have come out this year: Farmer in the Dell in Colliers Weekly of September 6, Golden Fruit in the August Scribner’s, and Pollen in Harper’s for May. All three tell powerful stories of men raised out where houses don’t hide the sky; they are good tales about things all countrymen will recognize.

For those who like reading for its own sake and are willing to try an extremely long work during the lengthening evenings of autumn, Jean Christophe is to be recommended. Written by Romain Rolland, translated from the French by Gilbert Cannan, and put into three volumes, of five hundred pages each, by Henry Holt ($6), it has been hailed as the outstanding literary work of the century. Six dollars is a lot of money and fifteen hundred pages quite a lot of reading, but this is certainly the most mercilessly powerful novel of the time, and a real treat for the thinking reader. Perhaps your local library has it.

Of particular worth among records released during September are Caruso’s Chimes of San Giusto, Louise Homer’s Hard Times, Come Again No More, a Civil War song by the author of Swannee River; Fritz Kreisler’s Beautiful Ohio, a violin solo; and Barbara Maurel’s Kathleen Mavourneen and Love’s Old Sweet Song...The Maurel record is a Columbia double-disc and costs $1.50, as do all the others except Kriesler’s and Homer’s which are a dollar. The other records mentioned are put out by the Victor people.

Editorials

MOST of all, you can help us by criticism, by keeping us in touch with your ideas. When you read something in the paper that you like, or something that you disbelieve and dislike, write us about it before the feeling wears away to indifference. If, by next June, we have not put The Countryman into closer human touch with its subscribers, we shall have made little or no progress, and shall be little proud of any number of extra pages we may have picked up in the process.

ALTHO the name of the present editor has been at the head of the “box” for the past two issues they were in reality the excellent work of H. A. Stevenson, Managing Editor. He got back from the wars at Christmas and had much to do with the successful revivication of the paper. This year, he continues as Managing Editor and will share greatly in any success which may attend the present volume.

The Blessings of Progress.

“The automobile is the direct cause of the one-step, fox-trot and even the ‘shimmie’ penetrating the innermost corners of the agricultural districts,” says S. W. Marcus of the Monumental Motor Company. A five-piece orchestra which has used a five-passerger to dish out dizzy jazz music in country towns for four years has just purchased a seven-passenger car.

“Automobile Page” of a Great City Journal, August 17.
"READ THE TAG DAIRY FEED"

has taken a strong hold with Dairymen in the territories where it has been introduced. The tag tells everything that the dealer and dairymen want to know, and the feed contains what the cow needs for big milk yield and maintenance. It is indeed a radical idea that The H-O Company has developed by printing on their analysis tag the formula for this really remarkable feed. Circular on request.

THE H-O COMPANY
Feed Department, BUFFALO, N. Y.

THE H-O COMPANY
48 State Street, ALBANY, N. Y

Members U. S. Food Administration—License No. G, 12996
United States Wheat Director License No. 001158 E M

John J. Campbell, Eastern Sales Agt., Hartford, Conn.

More Milk
At Less Cost Per Gallon

Feed a ration that costs you less but makes more milk. That is the secret of success in modern dairying. And such a ration is International Special Dairy Feed. It is a right ration—scientifically formulated—accurately prepared.

International Special Dairy Feed saves bushels of your home grown grain. This alone will bring you a profit. But in addition, you will get from one to two quarts more milk daily from each cow if you feed International Special Dairy Feed. Try it! We will supply you if your dealer can't.

INTERNATIONAL Sugar Feed Co.
Minneapolis, Minnesota

Apollo
Roofing Products
Full weight—Galvanized
Metal makes the most satisfactory roofing for farm buildings or city construction.

APOLLO-KEYSTONE Copper Steel Galvanized Sheets are unsurpassed for Culverts, Tanks, Silos, Roofing, Siding and all exposed sheet metal work. Look for the Keystone added to brand. Sold by leading dealers. KEYSTONE Copper Steel is also superior for Roofing Tin Plates. Send for "Better Buildings" booklet.

AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh, Pa.
Every Moline-Universal Tractor Must Give Satisfactory Service

When you buy a Moline-Universal Tractor the transaction does not end there. In addition you buy Moline Service—which is service that satisfies. This means that with intelligent operation you will be able to keep your tractor working to full capacity during its entire life.

Moline Service means exactly what it says—and we have perfected an organization which enables us to furnish Moline Service that satisfies. We can do this because:

1. Twenty-three Moline factory branches in all parts of the United States carry stocks of repairs and complete machines—in charge of an expert service department.
2. Factory branch territories are sub-divided into service territories each in charge of a resident Moline Service Supervisor—whose sole duty is to see that Moline Service is properly and promptly furnished in his territory.
3. Every Moline Tractor Dealer is required to carry Moline-Universal Tractor repairs in stock and have a competent service department to provide prompt and efficient service.
4. Tractor schools of short duration in charge of expert instructors are being held in co-operation with Moline Tractor Dealers, to instruct farmers in the care and operation of Moline-Universal Tractors. These schools will continue to be held as long as there is a demand for them.
5. With every Moline-Universal Tractor we furnish a complete instruction book, giving full information on care and operation of the tractor.
6. Moline-Universal Tractors are simple in construction, have the best materials and workmanship money can buy, and all working parts are quickly accessible.

Therefore we are prepared to back Moline Service to the limit and you are sure of getting constant and satisfactory work from your Moline-Universal Tractor.

If any Moline-Universal Tractor is not giving its owner satisfactory service we want to know about it immediately.

The Moline Plow Company leads the Tractor industry—first in developing and perfecting the original two-wheel, one-man tractor which does all farm work including cultivating, and again in announcing a service plan which makes a “booster” of every Moline Tractor owner.

Join the throng of “Moline Boosters.” You will be able to do twice the farm work at half the expense. See your Moline Dealer now or write us for full information.

Moline Plow Company, Moline, Illinois

Service That Satisfies
Cut Down Milking Costs

Like a hole in the milk pail, the cost of hand milking is a big drain on dairy profits.

"I have had a great deal of trouble in the past in keeping competent hired men, particularly during the winter," writes Clarence Vose, Kenosha, Wis. "Last fall I purchased a Success Milking Machine and let my man go in the fall. Milked 22 cows all winter with the Success and am highly pleased with it. It has made money for me."

SUCCESS Open Valve MILKER

is the greatest time and labor saver on the dairy farm. In every herd from 8 cows up, a Success Outfit will quickly pay for itself. and make your cows pay you extra profits for many years.

The Success has so few parts that it is easy to operate and the upkeep cost is next to nothing. No pulsators or other complicated contrivances—No big expensive vacuum tank or pipe line to install or bother with. The teat cups are the simplest made—fit perfectly, yet have no rubber linings to wear out.

The simple and durable construction of the Success Milker accounts for its long, trustworthy service.

The Open Valve accounts for the steady, uniform action, which means contented cows and better milk yields.

Let us tell you how a Success Milker will make bigger dairy money for you.

Anderson Sales Company

1041 Winnebago Street
Milwaukee, Wisconsin
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No other feeds in the world so well supply the maintenance and milk production requirements of the dairy cow as SCHUMACHER FEED and BIG "Q" DAIRY RATION. This is proven by the fact that they have helped 35 World's Champion Dairy Cows to make their world's records, and by the further fact that the foremost dairy men in the country feed and endorse SCHUMACHER FEED and BIG "Q" DAIRY RATION enthusiastically. These well known, widely used and dependable feeds are not an expense—they are big profit makers. Your dealer can supply you.

WARNING! Don't burn out your cows from feeding too much protein. Excessive protein in ration greatly increases cost and does not give the maximum milk production throughout lactation period.
Student Section

Feeling the need of some place where student affairs of the College of Agriculture may be recorded and made permanent, The Countryman begins in this issue the STUDENT SECTION. It will be reserved for matter primarily of interest to students in the College of Agriculture, and its columns are open to announcements of student organizations, announcements and reports of competitions, reports of student activities, and in fact, to anything of general interest to other students in the College. It is hoped that officers of student organizations and others who may have something worth-while to present to their fellow students will avail themselves of the opportunity The Countryman presents to them. Closing dates for each issue may be obtained by application to the Editor of the Student Section, at The Countryman office, east of Roberts Hall.

Greeting to Students

BY A. R. MANN

Dean, New York State College of Agriculture

SOME one has facetiously said that a university must be a very wise place indeed—the freshmen bring such a lot of knowledge and the seniors take so little away. I presume this is one reason why it has become traditional to welcome freshmen, because they come bearing gifts which the institution very much desires. Some of the gifts are matters of knowledge. Some are ambitions, enthusiasms, freshness of mind and of spirit, eagerness to lay hold on the wealth of opportunity and privilege which a college or university experience affords,—the very gifts which the institution most highly prizes in its incoming and returning students. It is these qualities, expressed anew with every reopening of college, which give to the university the peculiar charm and inspiration and zest which characterize the beginning of every new college year, and which we all feel but seldom try to describe. The customary word of welcome which is called out every fall is probably an attempt to get some one else to give expression to these very real feelings.

A word may be in order about the value of the gifts which the student brings as part of his equipment. The qualities and capacities and virtues which the young person brings with him are the materials with which the teachers must do their work. The university is not a storehouse whence a student can load up with a new supply of qualities and capacities and virtues. The possibilities of each person are conditioned in a large way by what he bears in himself. The variations in the individual resources of students account in no small degree for the varying success of different students in college. The university's best contribution is to refine the qualities, enlarge the capacities, and strengthen the virtues which the student already possesses. And this is an intensely cooperative process, in which both parties, students and teachers, must each do their full part. It is also the most interesting and momentous enterprise in which men can engage. So it is good to have college under way again.

We must admit there is occasionally a student who gives evidence of having determined not to carry any knowledge away with him. But in truth he seldom attains the senior year. The faculty has a way with such students. Neither the claims of sociability nor the desire for numbers persuades the faculty to lower its standards in any detail. It is not regarded as in the students' interest that it should. But we need not dwell on this at the beginning of the term. Such students hold the attention at the end of the term.

Special interest attaches to the open-
ing this year because of the return of large numbers who spontaneously and loyally left their work to enter the national service in the great struggle. Many are coming, both new and old students, who have faced squarely the deepest issues and tasks of life and liberty. These experiences have given them a new scale of values of the things that are worth time and energy and devotion. Broadened sympathies, larger horizons, clearer convictions, and deeper purposes have come. With these have also come a new spirit which will be evident among college men in the days we are now entering upon.

It is not an easy task to readjust one's self again to the habit of study and the routine of educational discipline after one has lived in war. The application demanded by the classroom will call for a considerable exercise of self-propulsion until the old "habit of study", as we say, has come back. A look into the future and a realization of the place and need of the higher education, general and special, in order to meet the new works of peace should help to steady one when the work seems irksome and the temptation to abandon it comes on.

The opportunity for the trained man is constantly enlarging—in agriculture as in all other ranges of activity. The war has revealed that the nation's reserve of men of superior technical and professional training is very limited. It has also made so clear the value of such training in every form of public and private enterprise that new fields are opening. The dearth of men properly qualified for the responsibilities that the nations of the world are facing was aptly implied in the title of an article by a writer recently in an English magazine who wrote under the caption, "First-rate events, second-rate men." Living as we are in days when events of the first magnitude are taking place in every range, national and international, social and economic, agricultural, industrial, and commercial, the assurance of personal and national security and progress must be found in the enlistment and training of men equal to the demands of our present day. The reserve supply of second-rate men is ample; the opportunity for first-rate men was never so great. It is the function of this College of Agriculture to help supply first-rate men for the varied fields of agriculture. We doubly welcome all students who come to cooperate fully with us in this undertaking.

A new interest attaches to the beginning of work this fall also because we are now starting on the second half-century of the life of Cornell University and of the teaching of agriculture at this institution. Last June the University celebrated its fiftieth commencement (an occasion not to be forgotten by any who were there). These fifty years past have been the pioneer years in agricultural education. They have been filled with all the vicissitudes that are inseparable from pioneering in an unexplored and uncharted field. But their accomplishments have been immeasurable, and they have given us most of what we have today in the way of achievement in agricultural education and research.

When, by an Act of Congress in 1862, extensive grants of public lands were made to the states for the purposes of establishing and endowing institutions for the teaching of agriculture and the mechanic arts and the sciences relating thereto, a new effort of education and research in agriculture was suddenly founded on an extensive scale among a people largely unprepared to maintain it efficiently. The colleges of agriculture brought into being by the Land-Grant Act of 1862, largely without form or pattern, have in the brief half-century of their existence been forced to face the difficult problems of the determination and organization of their subject matter, the discovering and training of teachers, the preparation of text-books, and the organization of programs of work, and, most important of all, they have had to determine the character and the scope of and organize the methods and the means for the application of science to the problems of agriculture.
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Say Where You Saw It When You Write.
It has been no easy task to develop a new science, put it into pedagogic form, and work out its applications to the art of farming. Our debt to the teachers and investigators of these fifty years, high up in the lists of whom stand the names of Roberts, Bailey, Comstock, and others of Cornell, is great. Because of their painstaking, wise, and successful work we are now able to enter upon the second half-century on a relatively high plane of achievement from which to project our future educational work.

The students, thirty in number, who came seeking education in agriculture when Cornell opened its doors in 1868, came to a meager and somewhat uncertain course. Those who enter the College of Agriculture at the beginning of this second half-century will find waiting for them extensive buildings and equipments, a large and specially trained faculty, and an almost elaborate array of courses from which they may choose. The field of agriculture, once a single subject to be presented by one man, is now departmentalized into many specialties, each of which represents a business or vocation by itself somewhere in the rapidly developing field of agriculture. Agriculture was once farming. It is now farming and a great many related professional and specialized activities. A recent inquiry addressed to the graduates of this College of Agriculture brought the interesting facts that the four hundred and eighty-five who replied were engaged in seventy-six more or less distinct agricultural occupations. A greater number of replies would undoubtedly have brought additional specialized activities in the field of agriculture calling for men with technical training. In addition to farming, which must always be the great central interest there are now innumerable accessory lines.

The large number of departments which a student finds in such an institution as this is a reflection of the specialization in training which the agricultural industry is today calling for. Every department not only makes its direct contribution to the preparation of the man who desires to go on the farm, which is the common meeting ground of all the departments, but also makes possible specialization in its own technical field. It is important that students shall understand the purpose of each department and the common purpose of them all.

As an institution becomes large and departmentalized, there is danger that its complete purpose shall be lost sight of. This College exists to help meet, by means of education, the highest needs of the people who live in the open country today. The advancement of country life as a whole, through help rendered by means of education to its several parts, is the complete purpose for which it is maintained. It is desired that it shall grow out of the life of the farm people whom it exists to serve; that it shall express their highest aspirations, respond to their endeavors and experiences, and adequately match their needs. It seeks, according to its best ability, to supply a program of guidance for agricultural and country life affairs.

At the opening of the University a half-century ago, Andrew D. White, its President, expressed the complete purpose of the University for its students in clear and comprehensive terms when he said that the “permeating or crowning ideas” of the new university should be “the need of labor and sacrifice in developing the individual man, in all his nature, in all his powers, as a being intellectual, moral, and religious,” and then “bringing the powers of the man, thus developed, to bear upon society.” It is for the realization of this complete purpose for its students that the College of Agriculture and the University welcome the returning students today.

Cashing In On the Consequences.

Stockman—I never saw such a poor farmer. And yet he always makes money.

Dairyman—Sure. Whenever he makes a mistake he writes about it and sells it to a magazine. Life, August 7.
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The high cost of clothes is not the price you pay for them; it's what you get for your money.
If the clothes don't wear, don't give you good service, they're expensive at any price. You can reduce the cost of clothes by being particular about what you get for what you spend. Money back if you're not satisfied—good business, isn't it?

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"If not, we make it right"

Tell Advertisers Who Introduced You.
Student Organizations

HELIOS AND HEBSA

Honorary senior societies in the College of Agriculture. Men students of the College who show reasonable scholarship and an active interest in the affairs of the College and the University are eligible to membership. Elections are held twice a year: of juniors in the spring term for the following year, and of seniors in the fall term.

CORNELL FORESTERS.

The Cornell Foresters is the departmental club in forestry. Students registered in the department and students in the College of Agriculture who are interested in forestry are eligible for membership. Meetings are held bi-weekly, and consist of a short business meeting followed by a lecture on any topic of interest to the members. The aims of the organization are to foster the interest of forestry students in their profession, to enable them to know each other and the faculty better, and to keep alive the "forestry spirit".

THE CORNELL COUNTRYMAN

A monthly magazine published by students of the College. The editorial work: securing and arranging the material, making up the issues, reading proof, and arranging and classifying the Former Student and Campus Notes, is done by the Editorial Staff which consists of the editor, managing editor, home economics editor, and their assistants.

The securing, arranging, and proof-reading of the advertising matter is done by the manager and his assistants, and the removal and securing of subscriptions is under the direction of the circulation manager.

The necessary office work in filing, clipping, and correspondence is taken care of by the various departments.

Students are elected to The Countryman Board as the result of competitions for the various staffs. Competitors are required to do the work of the department in which they are competing, and opportunity is thus offered for valuable training in either editorial, advertising, circulation, or general office work.

Competitions in all these departments for men and women of the freshmen and sophomore classes will open with a meeting in The Countryman office Thursday, October 2, at 4:30 p.m. At this meeting the work of the various departments will be explained, and schedules will be made out for all who are interested. Attendance at this meeting does not obligate one to enter the competitions, but all who are interested in any phase of journalistic work should be on hand. The Countryman offers the only opportunity in the College of Agriculture for this kind of training, and those who make the competition, which ends December 1, will be elected to The Countryman Board, making them eligible for editor, manager, circulation manager, or home economics editor in their senior years.

"SPORTS AND PASTIMES"

The purpose of this organization is to promote the welfare of women's athletic activities. The officers for the 1919 season are:

President—Agnes Kobuski '20.
Vice-President—Dorothy Cushman '21.
Secretary—Bertha Funnell '22.
Treasurer—Elizabeth Garnar '21.
Senior Representative—Eloise Shepard '20 Ag.
Junior Representative—Elizabeth Cooper '21 Ag.
Sophomore Representative—Katherine Blauvelt '22 Ag.

AGASSIZ CLUB

The Agassiz Club is open to all university men and women interested in natural science. Meetings are held every two weeks. The yearly program consists of field trips, talks by a few well known speakers and a final trip and picnic to Buttermilk Falls for lampreys. Officers for 1919 are:

President—Eric Simpson.
Secretary and Treasurer—Venia L. Tarris '21.

FRIGGAE FYLGAE.

Frigga Flygaae is an organization of all girls in the College of Agriculture to draw them closer together and to make them realize the common aims of the different courses. Officers for 1919:

If you should need anything in the jewelry line we would like to see you. If not, come in anyway and get correct time.

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Modern Method Laundry

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Say Where You Saw It When You Write.
President—Mary Moore '20.
Vice-President—Hazel Andrews '21.
Secretary—Sarah Merritt '22.
Treasurer—Dorothy Guernsey '21.

AG. GIRLS’ GLEE CLUB.
The successful beginning last year of a girls’ glee club in the College of Agriculture justifies continuing the Club this year.

Director—C. W. Whitney.
President—Naomi Jones '20.
Secretary—Mary Moore '20.
Librarian—Helen Acomb '20.

SEDOWA.
The girls’ honorary society of the College of Agriculture. Membership in Sedowa depends on scholarship and enthusiasm in support of college activities.

Eight girls from the junior class are elected each year by the faculty and home economics students. The following girls were elected to membership last spring for 1919-1920:

Helen Acomb.
Cora Cooke.
Naomi Jones.
Mildred La Mont.
Mary Moore.
Ruth Nye.
Sarah Van Wagenen.
Lois Zimmerman.

The Ring Memorial Fund became available for use July 1, 1919. Under the provisions of the will of Charles H. Ring, of Newfane, a first prize of thirty dollars and a second prize of twenty dollars will be awarded to the undergraduate students of the College of Agriculture who, in essays reviewing literature on problems in floriculture, vegetable gardening, or pomology, show the greatest ability to evaluate scientific evidence.

WHERE DO YOU BUY?
Before long you'll be needing some new articles of clothing. In this issue E. B. Baxter, Butterick & Clines, W. J. Reed, and the Herron Shoe Store advertise. Here are the places to stock up.

For films and all photographic work Van Buren downtown on State street or the University Stationery Store on Eddy street, for laundry the Modern Method on Seneca street, and for typewriters J. E. Van Natta, on State street, the Co-op, and the Corner Book Stores.

These are not all the advertisers, however. Form the habit of looking thru the local ads each month to see who recognizes The Countryman as a good advertising medium. Then go one step further. When you deal with one of these advertisers, tell him that you saw his ad in The Countryman. It’ll help him and us, too, and “it’s a good thing to be identified with.”

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Announcements

The College of Agriculture is waiving the usual residence requirements for graduation where such action is necessary in the case of students who have been in war service.

A leeway of six hours credit toward graduation is being given by the faculty of the College to students who have been in war service. This six hours extra credit is not given to all such men, but only to those to whom it is necessary or advantageous in hastening the time of their graduation. Those who have been in the service and desire the extra credit must present their case to the faculty by petition.

Beginning with this term, the requirements for the degree of Bachelor of Science are made more flexible than they have ever been before. In place of the group requirements and special courses, candidates for a degree are now required to have six hours of English, six hours of botany, biology, or zoology; six hours of chemistry or physics; three hours of physiology, either animal, human or plant; six hours of political science; and eighteen hours of botany, zoology, bacteriology, chemistry, physics, geology, physical geography, mathematics, and drawing. Not less than twenty-four hours of the required work is to be taken in the Freshman year, and there are other restrictions and requirements which may be found in the Announcement of the College of Agriculture for 1919-1920. Students of other classes than the one entering this fall may, at their own request, be placed under this new classification.

Many departments in the College are offering new courses beginning this term, and others have reorganized their courses materially. The department of agricultural chemistry is offering a greater variety of courses than ever before, under Professors Cavanaugh, and Cross and Assistant Professor Rice. The courses in drawing are transferred to the departments of rural engineering and landscape art.

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Mr. R. P. Walden,
Corn Products Refining Co.,
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Dear Sirs:

Yours of May 2nd at hand. I would state that as usual in her former tests, Sophie 11th of Hood Farm consumed a large proportion of Buffalo Corn Gluten Feed, ranging from three to four pounds per day during the entire year. She is now at fifteen years of age in perfect physical condition and is due to calve in August, and we look for another large record from her, showing that the feed she has consumed in past years has done her no harm. It is safe to say she has consumed while making her eight yearly records over six tons of Gluten Feed.

Yours truly,
Hood Farm,
The Fixed-Feed Separator Has Been Tried and Found GUILTY!

Every year thousands of dairymen and farmers discover that the fixed-feed separator is wasteful. They refuse to accept the alibis put forth by the fixed-feed separator, such as speedometers, speed bells, and other contraptions that merely warn the operator when he turns below speed and do not really prevent butterfat loss.

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SKIMS CLEAN AT ANY SPEED

Get the evidence. We will send you reports of actual tests made by dairy experts, testing associations, creameries all over the country. These reports show in dollars and cents how wasteful separators are that fail to skim clean all the time.

There is only one way to make a separator fully efficient, and that is to use a Sharples. It is the pioneer American separator—having behind it the oldest and largest separator factory in America, with 100% American ownership.

Write for interesting booklet, addressing nearest branch.

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DC 97

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The electric generating plant, totaling 28,000 horsepower, and the propulsion equipment of the great super-dreadnought were built by the General Electric Company. Their operation has demonstrated the superiority of electric propulsion over old-time methods and a wider application of this principle in the merchant marine is fast making progress.

Six auxiliary General Electric Turbine-Generators of 400 horsepower each, supply power for nearly 500 motors, driving pumps, fans, shop machinery, and kitchen and laundry appliances, etc.

Utilizing electricity to propel ships at sea marks the advancement of another phase of the electrical industry in which the General Electric Company is the pioneer. Of equal importance has been its part in perfecting electric transportation on land, transforming the potential energy of waterfalls for use in electric motors, developing the possibilities of electric lighting and many other similar achievements.

As a result, so general are the applications of electricity to the needs of mankind that scarcely a home or individual today need be without the benefits of General Electric products and service.


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THAT the New York State College of Agriculture has a Winter Course for any folks with a good common-school education, eighteen years of age or older

THAT the College offers courses in many branches of agriculture, and home economics

THAT the College has the best of equipment for this work and an adequate teaching force

THAT tuition is free to residents of New York State and that living expenses are not high

THAT this institution has a beautiful campus and that there are opportunities for sports and for social life

THAT the Winter Course opens November 5, 1919, and closes February 13, 1920

THAT application should be made at once for a circular giving full particulars, by addressing

Dr. Cornelius Betten, Secretary
College of Agriculture
Ithaca, New York
The Co-op. Dividend

NOVEMBER 1-22

The Co-op. has paid dividends to students regularly for the past fifteen years. From November first to the twenty-second we will pay on registered purchases of the college year 1918-19. Those in Ithaca must claim their dividend at the store.

Former Students

NOT IN ITHACA

Send us your address. On November twenty-fifth we begin the job of making out checks and money orders. If we have your address we send a money order and save for you the charges for collection made by the bank.

Cornell

Co-operative Society

ITHACA, N. Y.
Cover—Courtesy of the Eastman Kodak Company
Frontispiece—Fall—A. P. N.
Crop Insurance by Drainage—Henry E. Cox....67
The Pro-Potash "Revolution" Called to Quest-
on ............................................................. 69
The College and the Country Paper—Bristow
Adams ......................................................... 70
Selling Agriculture to Fertilizer Salesmen—
E. G. McCloskey ........................................... 72
Doctor Bailey's New Book: "What Is Demo-
ocracy?"—R. L. ............................................... 74
Neighborly Dramatics—G. A. Everett .......... 76
Book Reviews .............................................. 78
Bertha Yerke, Obituary ............................... 79
Editorials, The Old Order Passes ................. 80
Thanksgiving Rondeau .................................. 81
The Farm Home ........................................... 82
Campus Notes ............................................. 83
Former Student Notes ................................. 86

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Fall

AD I skill, a song I'd sing
Of the Fall as of the Spring,
Of its wailing winds and rain.

OW that leaves come drifting down
And the trees stand bare and brown
Somberly in field and lane,—

ON'T you think some poet should deign
To poetically exclaim,
That they're coming back again?

A. P. N.
Crop Insurance By Drainage
Provision Against Wet Years on Low Lands as a Business Proposition

BY HENRY E. COX
Secretary-Treasurer, New York State Bean Growers' Association

Many farms have fields that produce good crops during normally dry seasons, but which when a wet season occurs are cropped at a loss. Drainage of such fields acts as crop insurance, not only for current years, but for generations to come. Considered in the light of the many years covered, such insurance is the cheapest and surest obtainable, insofar as natural hazards incident to variations of rainfall are concerned. The present world need of food, and the upward trend of food prices has made this type of crop insurance a good business proposition for the American farmer.

When a man has gone to the expense of erecting a new building, or has just stored a grain crop, he hastens to insure his new property. Why? He has had no fire losses as yet, and may never have any. But the insurance makes the investment safe. Thus it follows that there are fields which have never yet failed to produce returns on account of too much water but which appear liable to such disaster, and which, theoretically, might come under the category of fields to be insured by drainage. No doubt, this practice will come in time. Right now, however, the practice will apply particularly to fields which have been known to "miss out" within the experience of the owner.

There is another aspect of the proposition which will grow as the general idea of insurance by drainage looms larger in the public eye. This is the ethical aspect, the proprietary point of view that takes into account not only present prospects, but an obligation, a stewardship, to the land itself and to the generations that will till it in the future. The heads of farm families who have been long on the land and who expect to pass on their particular portion of it to sons and descendants understand this aspect. It will come to be more generally recognized as the rela-
tion of all humanity to the earth comes to be better understood. Already, a sentiment against the soil-robber has become well-defined, the country over.

Drainage is not among those forms of insurance that can be acquired by signing on a dotted line. It is one of the most permanent and lasting improvements that can be entered into on any farm, but it is important that the work be entered into with understanding. The novice in drainage is inclined to say, "Why all this talk about ditching? All there is to do is to dig a ditch and lay tile in it." This conception has been too often followed out and as a consequence a good deal of money has been buried. Many fields that are full of tiles never discharge water, simply because somebody just dug a ditch and laid tile in it. Drainage should be in the charge of drainage experts, if success is to be assured. The state realizes this and the agricultural colleges through the country are always willing to respond to the call of the landowner and give expert assistance. A civil engineer is sent to lay out the system, establish grades, state the sizes of the tiles required for different grades or different soil conditions, and to supervise many such difficult details of the work.

Not all of the former methods of getting tile properly laid are now available. For example, when labor was cheap it was often the practice to contract for experienced men to lay the drains at so much a rod. This method is now out of question, but accomplished excellent work while in vogue.

Another time-tried system, still pos-

Everybody knows swampiness demands drainage, but how about lands subject to wet-season swampiness?

(Continued on page 92)
The Pro-Potash "Revolution" Called to Question

To the left below is what W. J. Spillman thinks of the Ross article published in the October Farm Journal; to the right what E. L. Worthen of the department of soils writes farm bureau agents about it. Doctor Spillman was formerly head of federal farm management investigations. Next month, Professor Cavanaugh will comment more fully on the article.

In this article Mr. Ross sets forth discoveries that will revolutionize the use of commercial fertilizers. They spell the doom of commercial nitrogen in rotation farming—triple or quadruple the demand for potash, and stand the whole fertilizer situation on its head. Millions and millions of dollars have been wasted by farmers in following the principles of fertilization laid down by Liebig in 1842. The Liebig theory proposed to supply the elements in which the soil is deficient. Chemists adhered to this theory for half a century, and fertilizer practise is still largely based on it. The Ross plan makes the needs of the plant the basic formula, the object of field experiments being to find out how much of these needs the soil itself may be depended on to supply. Mr. Ross further points out that the excessive use of phosphorus is wasteful, and that soil fertility can be maintained, and worn-out soil built up, without the use of stable manure. He shows that nitrogen is the thief which has been robbing farmers unawares for many decades.

We regard this article of Ross's as the most important thing we have ever seen on the subject of commercial fertilizers, and The Farm Journal may well be proud of having printed it first.

We will no doubt be jumped on hard for this. It throws a firebrand into the camp of the chemist, and plays hob with the phosphate people as well as with the nitrate people. It also plays into the hands of the potash people, unless we take steps to develop our own almost exhaustless potash deposits. It makes it more important than ever that we get from under the German potash monopoly.

W. J. SPILLMAN

Your attention has undoubtedly been called to the somewhat sensational article in the October issue of The Farm Journal entitled "Old Fertilizer Theories All Scrapped." Unless you are very familiar with the Pennsylvania, Ohio, and Rothamsted results, you may be led astray by this article.

Ross's conclusions from the Pennsylvania results relative to the great importance of potash are unwarranted. His statements belittling the importance of soil improvement could hardly be credited to one interested in the future of American agriculture. He has grounds for some of his criticisms relative to the methods used in arriving at the profit resulting from the use of fertilizer. He is also justified in his statement that experimental results show little profit from the use of commercial nitrogen on field crops but this fact has been emphasized by our better authorities, and recently has been acknowledged by the organization representing the fertilizer manufacturers.

Remember, that our present plan for the economic utilization and improvement of New York soils thru the intelligent use of lime, phosphorus, and manure, along with a rotation in which legumes enter frequently has been based on these same results secured by the Rothamsted, Pennsylvania, and Ohio stations. The interpretations of the results that have led to this system of soil treatment have been made by such men as Hall, Russell, Thorne, Hopkins and Hunt.

I am sure that you will agree that we should use every effort to prevent New York farmers being led astray by this type of articles.

E. L. WORTHEN
FOR a great many years in the history of agricultural development in the United States, the chief dependence, and almost the only dependence upon the printed word, was placed in government or state bulletins which were distributed free to the farmer. The hope was that he would read them and profit from the reading. Only in comparatively recent years have the various agricultural agencies, state and national, come to a realization that the publications already in the field and being read by farmers furnish the best means for bringing agricultural news to their attention.

This recognition came about from two causes: first, that the bulletins issued by governmental institutions are likely to be dry and uninteresting; and second, that their intelligent distribution is almost an impossibility. Yet, the farmer reads regularly his agricultural and his local paper, and for a long time these papers were almost wholly without agricultural news. Nowadays it is a backward college, indeed, which does not make use of the columns of the local papers to reach the agricultural public.

However, much depends upon the manner in which these papers are used. For a long time they were not so much used as abused. It was expected that they would print bald "publicity" about the institution and the good work that it was able to do for the farmer. It is fair to Cornell to say that it never looked for such publicity. True, the College of Agriculture did not do a great deal through the established periodicals until recent years, but when it started it started right. The prime objects which it kept in mind at all times were that the matter sent out should benefit the reader, and that it should contain helpful and timely information; and further, that it should contain no publicity, either for the institution or for any individuals connected with it.

At the present time the rural and agricultural papers of New York State are using this news matter to an almost unbelievable extent, and in the first nine months of the current year they have given a circulation of more than sixty-three million to the items issued by the College, or an average of more than seven million a month. This circulation is not an estimate, but is based upon printings which persons at the College have actually seen.

Recently a further development has grown out of this news service, and by a careful study of the field the College has come to the conclusion that the newspapers themselves should receive the benefit of an extension service just as the farmers and the home makers receive a similar benefit in their respective fields. In other words, the newspaper is not less an agency for the development of rural community than are the rural school, the grange, the farm bureau, the country church, and other similar institutions. Without the newspaper, records of achievement, notices of meetings, and other similar matter could be made known only at the expense of considerable time and trouble, and then much less adequately than through the columns of the local press.

For this reason the College of Agriculture has developed a definite extension service to country weeklies; it now publishes what it calls the "Service Sheet," which gives news concerning the country weekly field, and helpful information for the conducting of rural newspaper enterprises. Publishers of rural papers are writing to the College intimate and personal letters asking for help in the solution of local problems, and these problems cover many subjects, from questions of editorial policy to matters of typographical dress. The work is carried on under a definite project and
The Service Sheet

Published Monthly by the New York State College of Agriculture at Cornell University in the interest of the country newspapers of the state

The Service Man, Editor

NOTICE OF ENTRY
Acceptance for mailing at special rate provided for in Sec. 110 Act of October 3, 1917. Effective September 6, 1919


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The Service Sheet

What do you think of the follow that is always asking for a "free" copy? The Service Man is in that class this month. Don't be alarmed, he's not asking for a free subscription but merely for a single copy of your paper if you haven't already sent him one. He is starting a file which he hopes in time will contain a copy of every weekly newspaper published in New York. He is making a study of these papers and hopes to have something to offer which may be of a little help to the publishers.

Among those who accepted the invitation of the Service Man to visit him at his home in Syracuse were C. K. Williams of the Phoenix Register; R. E. Fenton of the Cayuga County News, who was accompanied by Mr. Walker, his former; and Thomas E. Mowry, who has five papers, including the Marcellus Observer and the Camillus Enterprise.

Has your editor doubled the subscription and advertising rate of your newspaper? If not, he needs to.


Some notable special editions in honor of the centennial of the state have been issued by the weekly papers of the state. Among these the Service Man has seen those of the Carthage Republican, the Union News-Dispatch, the Seneca County News, and the Oswego Times.

Speaking of the Oswego Times, while it has always been one of the new and prosperous newspapers of the state, until lately it has not made much use of display heads on the front page. The Service Man has been interested to see how much the appearance of the front page recently has been improved by the use of three-deck heads. The top deck is usually an 8-point condensed Cheltenham in the second is a single line of 12-point
caps, and the third a 5-line hanging of 12-point caps and lower case. For the inside pages, use made of the 18-point lap line and the hanging indent only.

Another paper which, in the opinion of the Service Man, has improved the typography of the front page is the Cortland Democrat. Its chief merit is that the use now being made on the front page of boxes for freak and feature stories has also in the case of a two-column 24-point head.

The Salem Press man, Louis H. Barton, took the story sent out from the college concerning the exhibit at the state fair in the interest of the country newspapers and developed it into a column and story for his front page. The story was in the form of an interview with a Salem druggist who brought back word of the exhibit and how it set him to thinking about the local paper and its value as an advertising medium. It was a good ad for the druggist and even a better one for The Press.

Whenever an editor has a ready-print or similar proposition put up to him he should ask himself whether in the long run he will gain or lose. A free ready-print carrying ads may save him some cost in white paper. But if it banishes from his columns—or from his fellow publishers' columns—advertising which he could otherwise get, the saving is a dubious one.

Willard C. Wheeler of the Tully Times in a recent editorial invites the farmers among his readers to use the newspaper as an open forum for the discussion of problems of peculiar interest to agriculture.

It's Worth Having

Every weekly newspaper publisher of New York state ought to subscribe for the American Press. The Press is a champion of the country papers. The full page ad which the American Press Association has been publishing in the New York Times will do more to make the big advertisers think seriously about the country field than anything which has been done in the history of country weekly in America. If you haven't already done so, get in touch with the American Press, 232 West 39th Street, New York City.

The Radii Suspends

The Canajoharie Radii suspended publication in January for a continu- ous existence of almost a century. It was established in 1836. Warren Pitt, the publisher of the paper and who has been the editorial and business head of the paper since its founding, was unable to reconcile the expenses of paper with the scant sale of the paper.

During the past four years 125 country newspapers went out of business in New York. What's a town without a newspaper? For those of a community enterprise, and the country editor will be successful largely in proportion to the extent to which he is able to develop a realization of this fact among his constituents.

Was Soldier; Now Editor

The portable house, formerly owned and published by Joseph K. Brown, has been purchased by Charles L. Ryder who returned from service in France this past summer. Mr. Ryder when he entered military service was editor and publisher of the Sharon Springs Record.

is thoroly approved at the College and in Washington. According to a statement made at a recent meeting of agricultural college editors, the State Agricultural College of Oregon is the only other institution which has included in its state and federal projects a similar type of work. This does not mean, however, that other institutions are not giving help to the country weeklies, but it is likely that the New York State College

(Continued on page 94)
Selling Agriculture to Fertilizer Salesmen
An Intimate Account of Give and Take Between the College and Big Business
BY E. G. McCLOSKEY

O N E standing in the lobby of the “Ithaca” on the morning of June ninth last might well have wondered at the host which suddenly swarmed into it. It seemed almost like registration day except that assuredly the one hundred or so men who hopped off the morning sleepers were not “studes” or “Frosh.” Neither were they a visiting baseball team. No, that was easy to see.

If we had followed the footsteps of these men for a week, it would have led us first to Caldwell Hall and later to the experimental fields, back and forth every day for a week. The average professor or student in Cornell was probably not aware of their presence, unless he happened to bump into them or glance into the lecture room at the east end of Caldwell. Yet they were there—one hundred salesmen, executives, and company presidents of a well known agricultural industry, come to Cornell to get first hand information which only an agricultural college could give them.

As Dean Mann said in his address of welcome to these men whom the Soil Improvement Committee of the National Fertilizer Association had brought together for conference, it was probably the first instance where an agricultural industry had gone to school to an agricultural college. Dean Mann also expressed the belief that it would not be the last instance, and in this he was correct. Already the Cornell meeting has inspired the Southern Fertilizer Association to hold three similar meetings at southern points this Fall.

The faculty at Cornell would hardly consider themselves salesmen, perhaps would not even enjoy the term, yet assuredly never was there made a more complete “sale” than this one at Cornell. Lyon, Mann, Cavanaugh, Fippin, Buckman, Knudson, and the rest of the staff proved themselves past masters at salesmanship. Often during the week we might have found a man, well past middle age, rolling out of a comfortable bed at the “Ithaca,” getting a hurried breakfast at a “dog,” and making a “seven o’clock” out at the experiment field in order to study them—a little over and above the regular programme. Students who hark back to the agonies of an “eight o’clock” know that here indeed was a sale well made.

But what had the college to sell? Information—gained through long years of application to a job of service. Information of a highly specialized nature—just the information which these fertilizer men needed in their business—to make fertilizers of the best kind—to sell fertilizers which return to the user the biggest profit—to know which crops can profitably receive more fertilizer than they usually get—to develop new fields and new uses for fertilizer. This was information of great value to the men in attendance and because they realized the market value of it they “bought” freely and enthusiastically.

It is to be hoped that schools and conferences of this type may be held more often in the future than they have in the past. The farmer, the agricultural college men, and the agricultural industries—fertilizer manufacturers, lime manufacturers, machinery men—are all driving at the same point—a bigger farm production and a more profitable agriculture. They must all drive at this point—it is suicidal to do otherwise. Neither can succeed without the others and failure or lessened prosperity of the one must ultimately reflect seriously on the prosperity of the others. For altogether too long a time each of these groups of men have stood aloof
one from the other, and as a result there has been suspicion, superciliousness, and decided lack of cooperation between all three. Put two men or groups of men on opposite sides of a high board fence and it is not long before they are throwing bricks at each other. One cannot see what the other is doing; therefore he must be doing something bad. Cut a hole in the fence and let the crowd filter through and soon they begin to make friends, borrow matches, and learn that the other fellow is human and just as

(Continued on page 106)
Doctor Bailey's New Book: "What is Democracy?"

AFTER reading The Holy Earth, a certain student of Dean Bailey's time here at Cornell, and who is now one of the most brilliant and most active agriculturists in this country, said something like this:

"Doctor Bailey has written this book by the fireside, with his boots off. There are many who will prefer the books he wrote when he still had his boots on."

What is Democracy?, recently issued by The Comstock Company as the fourth of Doctor Bailey's series of Background Books, is quite as abstract as The Holy Earth, Wind and Weather, and Universal Service. It is avowedly a "progression" of the same ideas which gave us these books. Not a war book in the usual sense of that phrase, it represents war ideas of the author on man and his relations to The Holy Earth, ideas crystallized by the "stress and fury" of wartime, and by its attendant economic and philosophic growths and inflations. It speaks not in general, but for the farming population.

In style as in subject matter, this fourth Background Book is a logical development from the other three. Simple, direct, terse; almost tensely abstract, and shot thru with those mannerisms which work their way naturally into anything Doctor Bailey writes and become an integral part of it; such is What Is Democracy?. Those who still reread the other Background Books will read this one quite as often, and with as good profit. Those who found in the first three books of the series no more than queer dreams, quaintly expressed, may also wish to reread this, the fourth. It will go against their grain, in style quite as much as in subject matter. The intense individualism of Doctor Bailey's style often leads him to remarkable lucidity, but as often attracts attention to the writer and away from what the writer is saying. For example, when he speaks of scheming politicians, "who love to ride in the public eye," none can question but that he said it all in less than ten words. But such phrases as "mental posture" or such sentences as, "I mistrust there are other imperfect fruits still to gather" will beget wicked chuckles from the Doubting Thomases. They will call them "typical," which they most certainly are not, other than that they may be said to typify a philosophical abstraction from all personalities, both of the author and of his audience. Doctor Bailey does not appear to particularly care what his reader thinks, or even what he himself thinks at the moment; his concern is that his reader join him in an effort to deal with present affairs on a plane above present considerations, and in this manner seek to separate the true from the apparent. He is ever the philosopher, considering current affairs alertly and practically, but always in the light of where they are going. Toward such of these as do not appear to possess ultimate usefulness he turns a detached paragraph and leaves them inside out. Fallacies found at the heart of the most respectable schemes, "paper plans," "projects," "movements," and "programs" he leaves on the outside for the reader to grasp and reckon with. He, himself, has no program to offer, other than straight thinking from higher planes; in short, philosophy. The whole book is in protest against programs, but one does not close it with the feeling that the attack has been altogether destructive.

The argument opens in negation, reducing forty-five general programs and catch-words, (freedom, equal rights, socialism, the rule of the average man, and so on), from place in the democratic social structure to mere scaffolding. They may or may not be accessory to democracy, but they are not the real thing. The forty-sixth paragraph states the inevitable conclusion, "Democracy
is not a form of government, any more than religion is a form of worship.”

The second chapter builds positively from the conclusion of the first. “Democracy is primarily a sentiment, a sentiment of personality... Its motive is individualism on the one hand and voluntary public service on the other... Responsibility, not freedom, is the key word... Coöperation, not competition, the password... The basis of democracy is Service.” And then the positive conclusion, “Real democracy is the perfect expression of religion, and a perfected religion is the destination of man.”

Still speaking of democracy in general, the third chapter discusses hindrances, which tie to one thing, selfishness. It touches upon the present “triviality of the life of women... a staggering burden for a democracy to carry,” and the tendency of efficiency to destroy individuality. “The machine dominates our philosophy... it runs the men.”

This note of protest is carried into the rural field and, while no names are called, apparently is directed against the farm bureau and kindred movements, this in the last of the twelve “main considerations” of the next chapter. The protest takes two grounds: first, that standardization is utterly impractical in respect to the business of farming, a matter of biological adaptation of man to his environment; and, second, that the current attempt at such standardization “represents a powerful impersonal and anti-democratic drift... I know very well the effort everywhere to keep it democratic: this is evidence of its danger. I know no reason why projects of rural community work in New York and California should be approved by the Secretary of Agriculture.” All such efforts, thinks the author, “rest on the idea of a perfect scheme, devised by superior intelligence and controlled arbitrarily as a matter of form. They do not allow of the free play of local needs and personal variations on which democracy, as distinguished from government, must rest.”

Chapter Five has largely to do with the author’s conceptions of anti-democratic influences being brought to bear upon the countryside from without. He shows how the present war between labor and capital is in prospect of developing a like antipathy between producer and consumer, and how fallacious, from the standpoint of democracy, is the towns’ demand for cheap food. Cheap food makes for a lowered standard of living on the land, at a time when the standard of living in all other walks of life is being encouraged to expand. This is not only an unethical creation of a higher and lower class, the higher class being the consumer, but a conception disastrous to democracy as a whole, striking at its very fundamentals, which rest on the land. China, which is said to have achieved a “permanent agriculture” by some such double standard, is shown merely to have arrived at a stationary agriculture, with “no prospect of advancement and progress for the race as a whole, and no real democracy.”

The next chapter pleads for a philosophical agricultural policy, on a world-scale, and the next, and last, advances a point of view on Chinese civilization, somewhat dissociated from the trend of the argument, but interesting.

Doctor Bailey may have written this book without his boots on, but his feet touch the earth—his “holy earth”—at all times. His work is admirable not only in poise, but in philosophic practicality. After all, before he came to sit by the fire, no man’s boots went further along the rural road than did his own. He comes to his fireside from prodigious activities, and seems to examine these as scrupulously as he examines the current efforts of other men.

Many ardent rural workers who still have their boots on, who exult in activity, and who are achieving measurable advances within and among the present rural generation will not fancy some of the findings in What Is Democracy? But the book will not fail to meet the challenge with which they open it. And perhaps when they have finished reading, they, too, may wish to sit by the fire for a while and think. It is that sort of book.

R. L.
Neighborly Dramatics
The University Undertakes Something New and Gets Results
BY G. A. EVERETT
Professor of Rural Extension at Cornell University

It was Commissioner of Agriculture Charles S. Wilson who originated the idea of presenting at the State Fair a practical demonstration of the staging and acting of several one act plays suitable to country communities. Accordingly he applied to Professor Sanderson of the rural organization department to find out what the College could do in the way of assisting the project. A local committee of Professor Sanderson, C. W. Whitney, and the present writer, all of the College, and A. M. Drummond, director of the Cornell Dramatic Club, took the matter up and it was decided that the enterprise be placed in charge of Professor Drummond. To him is due the marked success of the experiment, as it was an experiment.

A stage was erected in one of the old exhibition buildings; a rough, barn-like structure with white-washed walls. The hall has a seating capacity of three hundred and fifty, with standing room for about fifty more. The extra space was used at almost every performance. The decorations, scenery, lighting and entire arrangement of the stage were designed and constructed by members of the Cornell Dramatic Club, the purpose of the demonstration being to show how easily and yet effectively the same thing can be managed in any rural community. It is not boasting to say that in attractiveness and artistic merit The Country Theater was second to no exhibition at the Fair.

The plays presented were The Neighbors by Zona Gale, The Pot o' Broth by W. B. Yates, The Workhouse Ward by Lady Gregory, and The Bracelet by Alfred Sutro. These plays were all of a superior, one might even say "highbrow," quality, and yet with the human interest that makes them "go" with any audience. They "went" with the crowds at the fair. After the first day it was necessary to repeat the performance to accommodate overflow crowds. Shows were given both forenoon and afternoon. During the week, audiences totalling six thousand persons witnessed them. Several hundred written applications were made for a booklet, which is in course of preparation, on the choice and presentation of plays.

There was most favorable comment in the press, notably in the Syracuse papers, the American Agriculturist, The Rural New Yorker, and The New York Times. In part the Rural New Yorker says, "There are many new features, and one of the most interesting of these, to the rural workers and residents, is the Little Country Theater. One act plays depicting rural life, easily staged, are given daily, illustrating the type of work that may be done in any rural community. The rapidity with which the hall fills for each session, and the large percentage of the audience who sign slips and leave them with the attendants asking for literature acquainting them with this work, shows the response of the people to help along this line. This may be said to be the most popular of any new movements demonstrated at the great exposition." The Theatre Magazine and the Drama also commented favorably on the venture.

Earnest approval of the movement is announced by Percival Chubb, of the Drama League of America. Professor G. P. Baker of Harvard dramatic school, has written Mr. Drummond, "If you demonstrate to the people of the countryside how relatively easy it is to give good plays well, and that it is just as easy, or easier to give good plays rather than poor ones, you will have done a real service, both to your community and the bettering of appreciation for drama in the country."

Zona Gale, author of The Neighbors, the favorite play at the Fair, writes,
"The use of The Neighbors is offered free to any country theater which will use a part of the funds so raised to plant one long-lived shade tree, or a fruit tree, by the roadside, or a spruce or a balsam to be used as a community Christmas tree. One tree for every performance of the play. And if the producers wish to give really good measure for the use of the play, it is recommended that they conclude the evening with a community gathering, with community singing and dancing, and a discussion of the things their community needs. Furthermore it is understood that the producers, the cast, and the audience at such performances shall all be neighbors to everyone, as long as they live."
Book Reviews


In the words of the author, the principal aim of this book is to interest the reader in the point of view of farm management rather than to give specific technical information. It is intended primarily for use by farmers. The book contains few tables and treats in a rather elementary way some of the principles underlying successful farm management. After a preliminary discussion of what a farm is and of the historical development of farms in the United States, the book takes up the most important types of farming in this country and some of the factors that have influenced their development. The advantages secured by location, including soil, climate, and access to markets, are discussed and the importance of these factors in farm organization is considered. The book also discusses the control of natural factors of location by irrigation, drainage, or other means, the problems of farm organization, measures of efficiency of farm organization, business methods in farming, farm administration, and the relation of the farm to the State. The book contains little that is new, and the manner of presentation is often confusing rather than enlightening. The effort to avoid the technical has led, in some cases, to inaccuracy.

W. I. M.


Another of the Rural Manuals series, edited by Dr. L. H. Bailey. Mr. Rankin has given the first comprehensive survey of diseases affecting both fruit, lumber, and ornamental trees. The book treats of the three general types of tree diseases, and describes the specific causes of these types. Then the diseases of each particular genus of tree are described under the common name of the trees, as to symptoms, causes, and control. All the common trees of North America are included in the manual, and a special division relates to tree surgery. An appendix contains tables of synonyms for scientific nomenclature and a glossary of words used in a technical sense. A full index makes the book especially adaptable as a reference manual.


In this volume Mr. Frederiksen has made a valuable contribution to the educational propaganda for the popular esteem of milk and dairy products. Since understanding is prerequisite to correct appreciation of a food, we feel that such a book has a real function among the great body of consumers. The work, the untechnical in expression, is expository in style and thorough in treatment. Each phase of manufacturing milk-products is taken up separately, and adequate illustrations throughout clarify the text. By no means the least valuable portion of the book is the chapter of receipts pertaining to milk cookery.


The author gives a concise statement of the relative amounts of food energy in the various crude forms of food. Inasmuch as the basis for comparison is only the total energy, not the proportion of available utility, the work seems to neglect an opportunity to contribute really useful information to the public. One point that is especially indicated is that it is efficient to feed stock only such forage crops as are inedible by man, since a loss of total food energy results from feeding grain to animals with a view to utilizing their flesh for food.

(Continued on page 104)
The death of Bertha Yerke, '16, came as a shock to her classmates and associates in county agent work. Miss Yerke was ill for some time with influenza and this was followed by tuberculosis which resulted in her death, May 25, at her home in Amsterdam.

During her entire college course Miss Yerke was a member of the advanced choir, was secretary of her class during the junior year, and a member of Risley House Committee during her senior year.

Following graduation she was a member of the staff of the home economics department as assistant manager of the cafeteria. From 1918 until her death she was home demonstration agent in the Niagara County Farm Bureau.

The following resolutions and message were sent to Miss Yerke's family from the department of home economics:

"During her college course Bertha Yerke was excellent in scholarship, enthusiastic in her work; with rare social and musical talents she was a leader in college activities; with a radiant personality she enriched all who came within her influence and was beloved as student, classmate, and friend. Be it, therefore,

Resolved: that altho in the passing of this blithe spirit to "the choir invisible" the Home Economics Staff, the Home Bureau managers, and her classmates suffer an irreparable loss, she will forever live in their hearts and memories; and also

Resolved: that a tangible evidence of their continuing love be embodied by re-binding in a choice and individual cover a volume of the Cornell Songs inseparably associated with her memory, to be placed in the Department home; that her picture be mounted and this little record of her life be printed on the fore leaves of the book; and further

Resolved: that a copy of these resolutions be sent to her family and friends with an expression of the deepest sympathy of staff and students."
THE CORNELL COUNTRYMAN

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ITHACA, N. Y., NOVEMBER, 1919

Then came somewhat higher prices and—slowly as we saw it, but with lightning rapidity in respect to centuries of urban indifference—the towns became tremendously concerned about the man on the land. Population was increasing faster than the food supply; new land was about used up; unless something was immediately done to the farmer to make him grow more stuff per acre, the country was headed toward hunger. Excited appeals for more efficient farmers were heard in the land, and the country life movement got under way, propelled by urban excitation and dominated by that rather fanciful aspiration of "two blades of grass where one grew before."

It was duly predicted and had to come some time, so now that it has come it need not greatly surprise us. As a matter of fact, it doesn't. The rural world is taking it quite calmly with a certain measure of delight. The rural reaction, if we choose to call it such, is, in itself, quiet

The reaction, as we see it, is against that naive idea (so beautifully demolished in Doctor Bailey's What Is Democracy) that the man who produces the food is there for the sole benefit of his more fortunate city brother, who has merely to eat it. As long as the food came out of that mysterious "space between cities" at low prices the towns simply took it and ate it, without so much as thank you, nor any great worry as to what manner of man produced it, nor of how things were with him. Only politicians bothered much about the farmer in those days, and even they not long after elections.

It was all right as far it went, but the one thing which most needed complete turn-about in city minds did not even stir. It is a hard thing to say, but the city's brief interest in rural affairs has been and is as completely selfish as was its long disinterest. The idea that country people are born for the convenience of city people still stands; one does not have to even read the headlines in the Hearst papers to find that out.

But for that, another time. It is not particularly the economic rebellion of the farmer that we speak of now; this is part, not the whole, of a wider reaction demanding not only "a full and comfortable living on the land," but recognition as human beings, with inherent rights to "a rural civilization that will be as complete and satisfying as other civilizations." This latter phrase Doctor Bailey penned as a prophecy; today it has become a common conception in the minds of plain country people who have never heard the phrase, as such.
THE great development of rural affairs during the present century was given start by the cities' sudden interest in more food, and has been more or less sustained by this interest. However selfish their motive, we have them to thank for the start. The thing which we have not appreciated, and need not, is their eternal insistence on the "two blades of grass," "where one grew before" (and at the same price), and the virtual exclusion of anything human and neighbourly in their attempts to "help" us. Efficiency, gentlemen, efficiency! That is all they would have us think and talk and dream on, in business hours and out of them. Following their lead we should, indeed, have nothing but business hours. In fact, we have to a surprising extent followed this lead, in our rural schools and colleges, in our rural papers, even in our rural churches!

SHOULD you doubt this, consider all of the papers you know that are published primarily for city people. How many of them are what we call "business" or "trade" papers? Now think of all the papers you know that are published for country people. How many of them are not "trade" or "business" papers, pure and simple? Does this mean that there is no demand for things of "outside" interest in the country? We think not; we believe it has simply been the tendency to follow town that and consider things that way. A commercial editor, whose business it is to consider all rural publications, told us the other day that he wouldn’t be surprised if The Literary Digest were not the most popular "farm paper" in the United States. Anyone in touch with country people must know that they are plainly reacting against a superabundance of advice on how to be efficient productive units, and are plainly indicating their desire to talk about something else as well.

Thanksgiving Rondeau

Let winter come, with leaden rain
Wild pounding on the window-pane,
With shriveled fields and skies of gray,
With blizzards shrouding both away;—
Blow wild, ye blust'ring winds, in vain!

When autumn winds brought cold and pain,
To those afield on far campaign,
Blood of our blood! We could not say
Let winter come!

But war is dead, in battle slain,
And true Thanksgiving comes again,
And some men pause to stoop and pray,
And some do not, but all men say
Sing ho! for autumn's hurricane,
Let winter come!

R. L.
Summer greens have given over to dullness and blazed into final magnificence before the fall of the leaves. The winds come sharper with a threat to them. Almost all the trees are bare now. The zest of autumn is settling into the chill of winter, and it's time to come indoors.

Some there are who would object to calling any season cheerless, so we will not say quite what we think in this regard, or least we'll try to say it in a little different way. To us, the most cheerful thing about winter is that there are no flies to tickle the nose, nor to soil food and house furnishings. But there are, indeed, other compensations, and among the greatest of these lie the infinite possibilities of indoor life.

Take the question of wall paper, a first consideration. Papering a room generally associates itself with the fuss and confusion of spring cleaning, and fits well at that time in the matter of making only one mess, all at the same time. But a room freshly papered in the fall has certain points to recommend it. It will be most attractive at the time of year when the family will most make use of it. A summer of sun and flies will not have taken away from its freshness, from its new and cheerful aspect. More fancifully but none the less practically, there is a certain appropriateness and good sense in making indoors blossom out warmly andbrightly at the same time that all outdoors is losing color and freezing up. This is the time of year that man most needs something of that sort.

So why wait for the spring to do that papering? Why sit thru the long winter evenings with worn, faded walls at the back of your minds, making the sitting room attractive only in the spring when you'll have to leave it for outdoors?

Do you remember, back in your grade-school days, how you used to envy the lunches that Johnnie and Sadie Smith spread to the covetous gaze of the group around the stove at noontime? Maybe you were a Johnnie or a Sadie, but again maybe you were simply like the writer, one of the many who had to wade thru a hasty mess of bread, butter, jam, bacon and paper while Johnnie and Sadie took the cake and mayonnaise sandwiches. In our Dec. issue you will find an article telling how to put your children in the Johnnie and Sadie class. Not only is it good for children's digestions and self-respect; but you don't know how a whole family may often  be judged and placed by just such things in the close community of the schoolroom.

Attached to the article on School Lunches is an extended list of readings which persons interested may want to follow out. Most of the references are to farmers' bulletins, readily obtainable.

No fiction of rural bent that has come to light during the month is particularly worth reading. But if you think you can stand a whole evening's solid laughter, get hold of The Young Visitors by nine-year-old Daisy Ashfort and sponsored with a preface by Barrie in his very best style. The humor of the book is entirely unconscious, and all the more delightful in its naiveté. If you do not find the matrimonial aspirations of Mr. Salteena, his string of "idears," and his interview with the Prince of Wales of the "small but costly crown" things to drive dull care away, then you can know, without the slightest doubt, that your funny bone is out of joint.
Speaking to his class on The Dairy Cow, Animal Husbandry 10, on October 14, and tracing the development of advanced registry testing in America, Professor H. H. Wing said that isolated cases of fraud cannot permanently shake public confidence in such tests, any more than isolated cases of crookedness as they occur in any other business can shake confidence in their integrity as a whole.

"Since 1894, when the Babcock Test came into use," said Professor Wing, "the possibilities of fraud have been reduced to a minimum. No more than in any other business undertaking can the possibility of fraud be completely eliminated, but this possibility is very slight, and isolated incidents where records may have been falsified by no means destroy the usefulness, or reflect upon the integrity of the records as a whole.

"The wide publicity which has been given to alleged fraudulent results recently unearthed in the case of certain advanced registry Holsteins has no bearing upon the records of the breed as a whole, and will have no permanent effect on the breed."

Professor Martha Van Rensselaer, of the home economics department gave an address on the subject of thrift before the state convention of the Women's Christian Temperance Union at Binghamton on Saturday, October 11.

Doctor Liberty Hyde Bailey has returned from a summer in Europe, where he was principally engaged in botanical studies and in the collection of specimens for his private collection. When seen at his Ithaca home by a Countryman representative, he stated that this trip had completed the determinations of investigations which in the past have taken him into many parts of the world.

These investigations and studies have been under way for a considerable time. Two years ago, Doctor Bailey went to China to collect herbarium plants. His work carried him far into the interior of the country, and he brought home two thousand specimens representing nine hundred species. Last winter he stayed at the Arnold Arboretum of Harvard University, getting this material into available shape.

The majority of his time on the most recent trip, he passed at the Royal Botanical Gardens, Kew, England. Later he went to Scandanavia, and it was here that the determinations were finally completed. Before returning to this country, he also spent some time in Denmark, giving special attention to country life developments there. He expects to publish certain of his findings in the near future.

Cardinal Mercier and Lieutenant Colonel Roosevelt have been invited to visit Ithaca and to speak to the Cornell student body.
"One thing which makes the short winter courses offered at the state college appeal to many persons is that in the winter courses they study what they please," said a member of the staff in speaking of the coming session, which opens November 5 and continues through February 13. "They are not required to study a lot of things which they do not want. If they are interested in livestock, they can devote all their time to livestock. If they want to raise grains or vegetables or flowers, they can devote their time to any of these.

"At the same time they can take other subjects. Girls, for instance, may learn about foods, poultry and gardening if they desire to.

"In addition to the resident teachers in the college the students have opportunities to hear special lectures and listen to good music, to attend college gatherings, to see athletic games, and to take part in many college activities. The winter course debates and oratorical contests are a striking feature of the work and the winners of these take part in the program of Farmers' Week. The students meet young men and women from all parts of the state and often form life-long friendships."

The courses are tuition-free to residents of the state. A postal card addressed to the secretary of the state college at Ithaca, N. Y., will bring full particulars.

Professor W. A. Stocking, of the department of dairy industry spent the summer making a survey, for the Bureau of Chemistry of the United States Department of Agriculture, of the conditions under which butter is manufactured. The work took him into nearly every state in the Union west of the Hudson, altho he spent the most time in the Atlantic, southern, and western states.

According to figures announced by President Schurman at the first convocation lecture for the year on Saturday, October 11, Cornell has now the largest registration in its history. At that time there were fifty one hundred and fifty-two regularly matriculated students. The largest registration at the corresponding time in previous years was in 1916, when there were forty-seven hundred and forty-six. President Schurman also stated that this increase of four hundred and six would in all probability be further increased by later registrations, and that he expected the total registration of the University to reach six thousand by the end of the year.

The College of Agriculture stands third in number of students with a total registration of eleven hundred and eighty. The College of Arts and Sciences has an enrollment of seventeen hundred and thirty two, and the combined Engineering Colleges of fifteen hundred and sixteen. Of the students in the College of Agriculture, twenty per cent are from outside the State.

Former editors and managers of The Countryman came together through co-incidence at Pittsburgh during the latter part of August. They were Birge Kinne, now with the advertising forces of the National Stockman and Farmer, John A. Vanderslice, now with the sales force of the Hercules Powder Company, and E. B. Sullivan, doing advertising work for the Associated Farm Papers.

T. E. Milliman and L. A. Toan, assistant leaders in the Farm Bureau office, have left the College, Mr. Toan temporarily, and Mr. Milliman to become manager of the organization work of the Dairymen's League. Mr. Toan is on leave of absence to study sources of farm seeds in northern Europe, particularly in Scandinavian countries.
Professor Edmund L. Worthen came to Cornell in the summer of 1919 as extension professor in soil technology. He is a native of Illinois and a graduate of the University of Illinois. After graduating he became a soil surveyor in the Bureau of Soils of the U. S. Department of Agriculture. After spending three or four years in this work, he came to Cornell for graduate study and received the M. S. A. degree from Cornell in 1909. He returned to his work in the Bureau of Soils but soon left there to take charge of a number of experiment fields in different parts of North Carolina. This was part of the experimental work conducted by the North Carolina Agricultural Experiment Station and Professor Worthen spent several years in conducting the soil fertility investigation of these fields. About five years ago he went to the Pennsylvania State College as assistant professor of agronomy. In his work there Professor Worthen conducted college classes in soil fertility and was also connected with the soil survey work in that state.

Cornell was represented at the conference of the American Association of Teachers of Journalism, held at the University of Michigan at Ann Arbor, October 16, 17 and 18. Professor Bristow Adams, who has sixty two students enrolled in agricultural journalism this term, attended and addressed the meeting.

Thirty-seven institutions sent representatives. Among the speakers were: John B. Waite, University of Michigan; J. W. Cunliffe, Pulitzer School of Journalism, Columbia University; Arthur W. Stace, Grand Rapids Press; Floyd Miller, Detroit News; Richard L. Stokes, Saint Louis Post Dispatch; H. M. Bates, University of Michigan; President H. B. Hutchins, University of Michigan; William Allen White, Emporia Gazette.

Clark Leonard Thayer, who was an instructor in floriculture, has accepted a position as head of the department of floriculture at Massachusetts State College of Agriculture, at Amherst.

Dr. J. C. Bradley of the department of entomology, left the latter part of August for an entomological expedition through South America in search of specimens for the University collection. In a letter recently received by the department of entomology he tells of how, when his vessel had cleared the coast of Cuba, fire was discovered in the hold. The fire proved so serious that after a stubborn fight, lasting nearly a week, the boat put in at Santa Lucia where, with the aid of another ship, the fire was brought under control. In the cargo were four collections of North American insects for the museum of Sao Paulo at Rio, Brazil, which Dr. Bradley is most certain were destroyed. The engines being badly damaged, the ship was unable to continue, staying for some time at Santa Lucia where Dr. Bradley obtained a few specimens which are now in the hands of the entomology department here. Dr. Forbes, of the same department, plans to join Dr. Bradley in the spring, when they will traverse the Amazon.

Over one hundred persons from each of fifteen Study Clubs in the vicinity of Ithaca picniced at the College of Agriculture, Friday, October 10. The picnic is an annual affair arranged by the department of home economics, which sends out invitations to nearby clubs to visit the State College and enjoy a picnic dinner on the grounds.

The program as arranged for the day by Miss Claribel Nye, of the home economics department, who acts as State Leader of Cornell Study Clubs, included community singing on the roof garden of the department building, after which the clubs and members of the College faculty enjoyed a picnic dinner together. Following the dinner a brief address was given by Dean A. R. Mann in which the relationship of groups whose thought is stimulated by reading and studying together to the development and progress of the home and community life was emphasized. Interesting reports were given by representatives of the different clubs. A tour of the College buildings (Continued on page 96)
'94 B. S. A.—Harry Hayward, who served as director of agriculture in the A. E. F. University at Beaune, France, has resumed his work as Dean of Agriculture at Delaware College.

'98 B. S.—Louis H. Hood is a wholesale dealer in coal at Seneca Falls.

'99 B. S.—J. Emery Ward, formerly a lieutenant in the air service, has a position with the Mercury Manufacturing Co., 4118 South Halsted Street, Chicago, Illinois.

'02 B. S.—Professor Herbert H. Whetzel published in SCIENCE for July an article on "Democratic Coordination of Scientific Efforts," based on an address delivered before the joint session of the Botanical Society of America last December.

'05 Sp.—Second Lieutenant Henri Pochet, who has been in the French army since 1914, has been cited three times for bravery. The first citation was received in October 1915, and carried with it the Cross of War. His second citation, received in January 1916, carried with it the Military Medal.

'05 M. S. A., '07 Ph.D.—J. Eliot Coit returned to Berkeley, California last August after about twenty months' service as agricultural agent in Los Angeles County. He is professor of citiculture at the University of California and writes that there are eighty-three hundred students at the University this term. Professor Coit was Editor-in-Chief of The Countryman in 1906.

'08 B. S. A.—Chester J. Hunn is with the Division of Horticultural and Pomological Investigation, Bureau of Plant Industry, United States Department of Agriculture, Washington, D. C.

'09 B. S. A.—Edward H. Thomson has been appointed president of the Federal Land Bank of Springfield, Massachusetts. He has been connected with the United States Department of Agriculture for a number of years and recently resigned as chief of the bureau of farm management to take up the management of his several farms throughout the state.

'11 B. S. A.—Waldemar H. Freis has a position with the American Agricultural Chemical Co., 879 Drexel Building, 5th Street, Philadelphia, Pennsylvania.

'11 B. S.—Clarence S. Lomax is chief engineer of the American Coke and Chemical Co., 208 South LaSalle St., Chicago, Illinois.

'11 B. S. A.—Ray E. Deuel has been appointed manager of the Onondaga County farm bureau.

'11 B. S. A.—Edward M. Tuttle was married October 2, 1919, to Viola A. Culver of Washington, D. C. They will be at home after November 1 at Resinwood Farm, East Moriches, L. I.

'12 B. S.—E. P. Smith while touring through the State stopped at the College of Agriculture the other day. He is planning to carry on a series of tests with pure bred Holstein cattle this winter on his farm at Sherburne.

'12 Ex.—George C. Salisbury is running a dairy and poultry farm at Randolph.
'12 Sp.—T. E. Milliman has gone to New York City to take charge of the organization work of the Dairyman's League.

'13 B. S.—Lee W. Crittenden, upon leaving college, taught four and a half years, and is now county agent of Middlesex County, New Jersey.

'13 B. S.—Gertrude A. Marvin has returned to her home in Wilkesbarre, Pennsylvania, after several months' war work in Europe. She has taken complete charge of her father's florist business in Wilkesbarre.

'13 B. S.—Ensign Mauris Rothstein is assistant to the Naval Inspector of Ordnance at Bedford, Ohio. His permanent address is 246 Main St., Johnstown, Pennsylvania.

'14 B. S.—Katherine Keating is a teacher of cooking, drawing and English in Camillus High School.

'14 B. S.—Claribel Nye is leader of Cornell Study Clubs and instructor in the home economics department here.

'14 B. S.—Donald B. Rice has been appointed farm supervisor of Trenton, New Jersey.

'14 B. S.—Private Leonard C. Treman, who went to France as an ambulance driver in July, 1917, has been decorated with the Croix de Guerre with star, for courageous service.

'14 B. S.—Lieutenant Robert K. Lloyd is in charge of the photo detachment at March Field, California. His address is La Verne Court, No. 1, Second and Main Streets, Riverside, California.

'14 B. S.—Stanley H. Watson was discharged from the service on June 17, 1919, and is now with the Cleveland Tractor Company. His address is Hotel Regent, Cleveland, Ohio.

'14 B. S.—Theodore B. Crippen is foreign executive of the Vacuum Oil Co., 61 Broadway, New York City.

'14 B. S., '14 M. F.—William J. McCarthy has been a forest assistant in the Jefferson National Forest since September, 1917. His mail address is in care of the Forest Service, Box 1746, Great Falls, Montana.

'14 B. S.—Dudley Allemann is doing market investigation work for the United States Department of Agriculture and is in charge of the Bureau of Markets office in Detroit, Michigan.

'14 B. S. — Edna E. Alderman is teacher of home economics at Calum Creek District High School, West Virginia.

'14 B. S.—Fannie D. Boone was married February 21, 1919, to Alber Carney.

(Continued on next page)

He Grows Those Western Apples

'05 Sp.—One of the men who grows the apples which East and West argue over is E. R. Moller of Hood River, Hood River Valley, Oregon. His home is shown in the accompanying photograph.

Mr. Moller has forty acres, eight of which, being hard to cultivate, are given over to buildings and pasturage. The other thirty-two acres are in apples, alfalfa, clover, cover crops, oats, and vetch. Two horses do the work, and two high grade Jersey cows constitute a home dairy. Mr. Moller expects to get rid of his grades and take on pure-breds during the coming year.

The house is of the bungalow type so popular on the Coast. It is equipped with running water and electric lights. In reply to our question "What kind of a car have you?", Mr. Moller has first written "Ford" and then scratched it out, writing "Dodge." We judge that business is booming.
'14 B. S.—Edna Becker is student dietitian, New Haven Hospital.

'14 B. S.—Grace Bristol was married to Roger H. Cross, '14, on November 13, 1917.

'14 B. S.—Lucia Burbank was married to Charles Bennett in June, 1918.

'14 B. S.—Agnes Keane is a teacher of domestic art in Virginia.

'15 B. S.—E. F. Hopkins has gone to Auburn, Alabama, as assistant pathologist of the State Experiment Station.

'15 Sp.—Pearle Viola Decker has a son, Roger Hicks, born August 11, 1918.

'15 B. S.—Francis D. Edwards is association manager of the City Cafeteria, Ithaca.

'15 B. S.—Helen N. Estabrook is instructor of home economics at Morrisville.

'15 B. S.—Sara Townley Jackson is teacher of homemaking and history at Avon High School, Avon.

'15 B. S.—Jane F. Montrose is teacher of homemaking at Kings Ferry.

'15 B. S.—Ethel L. Phelps is in instructor in the University of Minnesota.

'15 B. S.—Bertha Titsworth is head of home economics extension and state leader, New Hampshire College, Durham, New Hampshire.

'15 B. S.—Elon H. Preiss is now with the H. J. Heinz Co. His address is 216 Court St., Bowling Green, Ohio.

'15 B. S.—Paul Watson Wing was married June 24, 1919, to Anna Cornell Kerr, daughter of Mr. and Mrs. William Ogden Kerr of Ithaca. They are at home in Little Falls.

'15 B. S., '16 M. S.—Victor H. Ries is professor of botany at the Iowa State Teachers' College, Cedar Falls, Iowa. His address is 809 Eighteenth St.

'15 B. S.—Helen T. Blewer is teacher of cooking, sewing and chemistry, at Owego Free Academy.

'15 B. S.—Mabel Clare Copley is supervisor and teacher of sewing and cooking at Danbury, Connecticut.

'15 B. S.—Helen Comstock is emergency home demonstration agent of Delaware College, Newark, Delaware.

'16 B. S.—W. B. Cookingham has taken a position as supervisor of agricultural education in the secondary schools in the State of New Hampshire. His headquarters are at Concord. He will also give one course in rural education at the New Hampshire State College during one term of the year.

'16 B. S.—Stuart Wilson has been recently discharged from the Army and is now working for the Goodyear Tire and Rubber Company, at New York City.

'16 B. S.—Birge W. Kinne is selling advertising space for The National Stockman and Farmer, Pittsburgh, Pennsylvania.

'16 B. S., '18 M. F.—Louis A. Zimm is extension forester for the State College of Agriculture at Athens, Georgia.

'16 B. S.—Lucy Bassett is secretary of the Associated Charities at Ithaca.

'16 B. S.—Helen Van Keuren is in France engaged in recreation work directed by the Y. M. C. A.

'16 B. S.—George L. Cooper is with Neustadt and Company, 294 Ninth Ave., New York.

'16 B. S.—Bessie M. Spafford is an instructor of home economics in the State Normal School, Farmington, Maine.

'17 B. S.—R. A. Perry has been testing butter for the United States Navy during the past summer.

'17 B. S.—Jean Paul Griffith has been appointed scientific assistant in horticulture at the U. S. Experiment Station, Mayaguez, Porto Rico.

'18 B. S.—Mr. and Mrs. Edward Breen of Newark, New Jersey, have announced the engagement of their daughter, Ruth Baldwin, to Dudley Barnee Hagerman, of Southold, Long Island.

'18 B. S.—Miss H. A. Torbert is manager of the Cascadilla Cafeteria, replacing Mrs. Elliott who resigned last spring.

'18 B. S.—"Stan" Sisson was married on Saturday, September 13, to Esther M. Merritt at Trinity Church, Potsdam. Mr. and Mrs. Sisson will reside in Potsdam where Mr. Sisson will devote himself to forestry work. He was recently discharged as a lieutenant in charge of one of the newest types of destroyers in the European fleet.
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18 D. V. M.—Edwin J. Frick is now veterinarian with the New York Women’s League for Animals.

18 B. S.—Walter C. Crocco is a chemist with the Nestle’s Food Company, Chenango Forks, New York. His home address is 1186 Forty-third St., Brooklyn.

18 B. S.—Edward Monahan, Jr., has a position as herdsman with A. B. Cook, Canton, Montana.

18 B. S.—M. P. Moon is instructing in the department of dairy industry.

18 B. S.—Charles F. Gilman, who was recently discharged from the service, is working in the sales department of the International Harvester Company of New York.

18 Ph.D.—Nemesio B. Mendiola is assistant professor of agronomy in the University of the Philippines. His address is Los Banos, Laguna, Philippine Islands.

19 B. S.—T. E. Gaty is assistant horticulturist at the New York State Experiment Station at Geneva.

19 B. S.—F. C. Dietz is teaching agriculture in the high school at Geneva.

19 B. S.—H. B. Ortner has been appointed an assistant in the department of physical training here. His special work is with inter-fraternity and intermural athletics.

19—Melville Kurzman died of influenza at the Cornell Infirmary on October 19, 1918. He enlisted in the U. S. Naval Reserve Force in September 1918, and on October 13 was assigned to the Naval Unit of the Students Army Training Corps.

19 — Albert T. Coumbe returned to America last April for a furlough, after five years’ foreign service with the Standard Oil Company of New York, spent in Java, Borneo, Celebes and other islands of the Dutch East Indies. He has now returned to Java.

19 B. S.—Daniel B. Brooks is selling tractors for the General Ordnance Company, Cedar Rapids, Iowa.

19 B. S. — C. G. Welles is taking graduate work in plant pathology, bacteriology, and entomology at the University of Wisconsin. He also has an assistantship in the bacteriology department there. His address is 1717 Regent St., Madison, Wisconsin.

19 ex.—John F. Lane was discharged from the U. S. N. R. F. on July 15, at Charleston, South Carolina, and on July 21 was married to Miss Grace M. Trafford of New York City. Lane is now back in the University and expects his degree in February ’20.

19 Ex.—William Wallace Tomlinson was killed in action November 1st, 1918.

19 Grad.—H. E. Knowlton, formerly an assistant in the botany department, has been appointed assistant professor of pomology at the West Virginia College of Agriculture at Morgantown.

20 Ex.—Bentley L. Craig has decided to change from agriculture to dentistry and has entered the University of Buffalo this fall to take up that course.

19 B. S.—A. F. Lockwood at the termination of summer school, went to Ithaca, where he is teaching agriculture in the High School.

THE December number of the Cornell Countryman will be mainly devoted to animal husbandry interests. For this reason, the Editors have decided to withhold the second of Mr. Eastman’s Dairy Organization articles until this issue. It is called, “How the Dairymen Organized” and is, in our opinion, a most exceptional article, and one certain to interest anyone concerned in the present dairy situation in New York State.
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To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Company.
But now the power ditchers have largely replaced the horse-drawn or even the tractor-drawn type. The state owns a large number of such ditchers. They are under the direction of the various farm bureau agents. The state sends a civil engineer to set the grade stakes and lay out the work, and an experienced operator for the digger. This system seems to be the most satisfactory. The machine can cut as deep or as shallow as is desired in almost any hardness of soil; and the operation interferes very little with the regular farm work. The farmer has only to lay the tiles and refill the trenches. This can be done almost entirely with the team and plow.

Too often one hears the remark, “Yes, I know that land ought to be drained, but, you see, I can’t afford it.” The fact is that the poorer a man, the greater the need of bringing his land under profitable cultivation. The money he needs is right there, locked up in the soil, inert, fairly pleading to be redeemed. The author has installed many drainage systems which paid back the initial investment in the first year, but even if it required, say, a third year to get it back, no other investment can be better. In the long run, the return is certain. There is no longer any need to worry about wet years; that is all taken care of and insured against.

Another result of drainage, more often neglected than noticed, is none the less important. The reaction upon the farmer himself can not be too highly valued. A man progressive enough to drain his land takes a new and added interest in his business. He joins forces with the Progressives in agriculture. He gains self-respect, and the respect of all thoughtful and farsighted men.

The Practical Collar Gives Horses A “Fair Shake”

Here is a collar that makes work easier for horses, saves them no end of painful injury and gives them a “Fair Shake.”

FitZall Adjustable Collars

Instantly Adjusted to Fit Any Horse, Fat or Thin
It is the best protection against scabby, boils, galls, scalds and all the injuries that come from ill-fitting collars and hot, lumpy sweat pads. If the horse changes flesh you can change the FitZall Collar to suit. Change it from one horse to fit another as quickly as you can buckle the ordinary collar.

It is simply the ordinary collar with a sensible change that makes it vastly better. Try it. Every collar is absolutely guaranteed. Dealers sell FitZall Collars at the same prices as other collars of equal grades. If yours can’t supply you we will. Write for full description and prices.

John C. Nichols Co. 119 Erie St. Sheboygan, Wis.

Say Where You Saw It When You Write
November--Ditching Month

Ten Miles of Ditches Like this were Dug with HERCULES DYNAMITE

It's good farm practice right now to deepen and clean out old ditches, dig new ones, or straighten the course of that meandering stream through the back pasture. On many farms, one man with Hercules dynamite can do the work of six men with picks and shovels, and take out earth at lower cost per cubic yard. We have figures to prove this. Write our Agricultural Department and state the length, width and depth of your desired ditch, the kind and condition of the soil, etc., and let us tell you the percentage of dynamite to use. If the work warrants it, we will send an agricultural service man to your farm, after shipment of Hercules dynamite and blasting supplies has been purchased from your dealer. He will show you and your help how to use dynamite in ditching and for other purposes on the farm. Send for a copy of "Progressive Cultivation" and learn all about the use of dynamite for ditching, stump and boulder blasting, tree planting, and subsoiling.

The Agricultural Department
HERCULES POWDER CO.
Wilmington Delaware

Please send me a copy of "Progressive Cultivation." I need dynamite for
Removing stumps from acres
Digging rods of ditch
Removing boulders from acres
Planting trees Subsoiling acres
Name P. O. State

Tell Advertisers Who Introduced You.
of Agriculture in a comparatively short time has gone somewhat farther in this field than any other institution.

There are a number of advantages to the work, both for the College and for the newspapers. In the first place, the life of the country weekly is becoming more and more precarious as the large city dailies reach out into the rural districts. It is becoming more and more difficult for the country publisher to make a living. Anything that will help him to earn a livelihood, therefore, is eagerly welcomed on his part. Furthermore, practically every community needs a county paper in order that it may maintain its entity as a community, and in order that the wholesome neighborhood news which would not find a place in the larger daily from outside may keep the community in the good old-fashioned neighborhood relationships. Everything which tends to break down these relationships, and to take away from the intimacies that should exist between persons of kindred interests in the country is a serious menace to rural social life. It is for these reasons that the College thoroly believes in the country weekly and in the work which it is trying to do for the benefit of the weekly.

In the December Countryman, Professor Cavanaugh will comment on the Ross fertilizer “revolution” (see page 69).

Would you like to see a portrait of your favorite Cow, Bull, Sheep, Horse or Dog on this page? If so, send photos with name of Animal and Owner and other interesting data. We want to run an interesting stock picture each Month and need your assistance. All photos will be carefully returned.

Ithaca Engraving Co., Ithaca, N. Y.
Photo Engravings for all Printing Purposes

Say Where You Saw It When You Write
No Off Season for the Cletrac

There is no "off season" for the Cletrac. It is a year-round investment paying the farmer a steady interest from January to December.

When there is nothing for the Cletrac to do in the fields it can be kept profitably busy on hauling jobs or belt work. It knows no equal at dragging dead weight and is a master at farm belt work.

The Cletrac runs on metal tracks like a locomotive. No extra power is required to push it through the soil---it goes over the top of the ground and puts all of its power into pull, where it belongs.

And lining up for a belt job is a matter of a very few minutes. The Cletrac is rated at 20 belt horse power but under test has developed better than 24.

The Cletrac operates on a very small amount of kerosene, distillate or gasoline. It does more work, more days in the year, and does it better, cheaper and quicker than horses or mules or other types of tractors.

Our book on practical power farming will be a big help to any agricultural student. Ask for "Selecting Your Tractor." It's free.

The Cleveland Tractor Co.
Cleveland, Ohio

LARGEST MANUFACTURERS OF TANK-TYPE TRACTORS IN THE WORLD.
A Higher Ideal

There would be no advantage in devoting the most valuable years of one's life to gain knowledge and experience, if greater possibilities and achievements were not forthcoming.

It is then proper to assume that because of his exceptional scientific training the agricultural college man is progressive, well advised in the most modern dairy practices and the methods that are likely to make dairying the most profitable.

You know that profitable dairy production cannot succeed without cleanliness, and you should also know that

Wyandotte
Cleaner and Cleanser

is capable of maintaining a cleanliness that is productive of the highest quality dairy products, because it is used for thorough and sanitary cleaning by all Agricultural Colleges in the United States and Canada.

Ask your supply man to fill your order. It cleans clean.

Indian in circle

in every package

The J. B. Ford Co.
Sole Mnfrs.
Wyandotte, Mich.

Campus Notes
(Continued from page 85)

and the farms was made in cars and trucks provided by the College after which the clubs were given an opportunity to hear the University organ at a special recital given by the University organist, James T. Quares.

Cornell Study Clubs are local organizations made up of individuals who wish to get together to study scientific ways of conducting home work in order to preserve the best interests of the family. There are at present eighty-nine clubs scattered thru thirty one counties of the state. Programs for the clubs are worked out using the Reading Course bulletins as a basis for study. The subjects are food, civics, health, thrift, and community betterment.

The forty-third annual meeting of the New York State Dairymen’s Association, of which Professor H. C. Troy is president, will be held at Jordan Hall, New York Agricultural Experiment Station, Geneva, on November 18, 1919.

Many prominent alumni returned to Cornell to take part in the Endowment Fund campaign which started October 11. Thomas W. Lamont, financial adviser to the government at the Peace Conference. Congressman Daniel A. Reed, and J. DuPratt White, alternate chairman of the Endowment Campaign, were the speakers at a dinner given by President Schurman and the trustees of the University, at Prudence Risley Hall.

A conference of county agricultural agents, extension specialists, county and city home demonstration agents, and farmers’ institute workers was held October 27 to November 1. The first two days the conference met in Geneva at the State Experiment Station; the last three at the College here. The purpose of the conference was to consider, as far as possible, all the problems of the farmer in New York State. Each day
The Cornell Countryman at this time of year when a farmer is using tools, his hands get stiff and hard and no matter how much he tries to milk gently, he simply can't do it. His hands hurt the cows and the milk falls off. I've seen it happen many a time. But since we've been milking with the Perfection, our cows are milked with a gentle downward squeeze the year 'round. The cows like it better than hand milking.

Mr. Akins Says the Perfection Milks More Gently

"Our Perfection is the best milker we've ever had," said E. J. Akins when asked how he liked his milker. He held up his hands and looked at them. "You know at this time of year when a farmer is using tools, his hands get stiff and hard and no matter how much he tries to milk gently, he simply can't do it. His hands hurt the cows and the milk falls off. I've seen it happen many a time. But since we've been milking with the Perfection, our cows are milked with a gentle downward squeeze the year 'round. The cows like it better than hand milking."

The Boys Do Milking Now

"I hardly ever milk any more myself. My two boys, 12 and 14, handle the job alone with the Perfection Milker. I can tell you there's nothing more popular around this place than our Perfection. "Our Perfection Milker has been just like a catching disease in this neighborhood. As soon as I got it everybody else saw it and wanted it. There are quite a number of Perfections around here now."

Send for Names, Addresses and Catalog

It's not necessary to add anything to what Perfection owners say. Their own words are selling Perfection Milkers as fast as they can be installed. We'll gladly send you names and addresses so you can investigate for yourself. Also a free copy of "What The Dairyman Wants To Know," the great book which answers every question about milking machines. Write. Today.

Perfection Manufacturing Company

Say Where You Saw It When You Write.
For Farm Butter & Cheese Making
HANSEN’S Dairy Preparations

PURE, concentrated, ready to use, absolutely reliable. Giving uniformly best results in the country’s finest creameries and cheese factories.

For Cheese-Making: Hansen’s Rennet Tablets, Junket Tablets (for Cottage Cheese), Cheese Color Tablets.

For Butter-Making: Hansen’s Danish Butter Color (4 oz. and 1 oz. bottles,) Hansen’s Buttermilk Tablets or Lactic Ferment Culture for perfect ripening of cream for butter and milk for cheese and commercial buttermilk. Sold by drug and dairy supply stores, or direct by

Chr. Hansen’s Laboratory, Inc.
Little Falls, N. Y.

Interesting treatise “The Story of Cheese” by J. D. Frederiksen, free on request.

was given over to a special group of problems and to the reports of the committees on these problems. Addresses and reports were given by leaders in the various fields, ranging from problems in the practical improvement of plants and animals to the discussion of cooperative projects of all kinds.

Professor C. R. Crosby, of the Department of Entomology, is in Washington for a hearing before the Congressional Committee in regard to a request for appropriations to be used in controlling or exterminating the European corn-borer. This pest is becoming so formidable that efforts are being made to keep it from our large western corn fields.

At the seventh annual meeting of the American Association of Agricultural College Editors at the University of Ohio last June, this College of Agriculture was represented by Professor Bristow Adams and M. V. Atwood. Professor Adams was president of the Association during the past year. Mr. Atwood was elected secretary for the current year.

The College of Agriculture recently announced that it distributes annually three million pieces of publicity matter, including an average of seven thousand a week in answer to individual requests. During 1918, fifty-four different bulletins were distributed free of charge throughout the state.

A pamphlet giving the name and number of the various publications, has been compiled by the college and is ready for distribution. The pamphlet classifies the publications under two heads, “The Farm,” and “The Home,” each of which is subdivided into lists of interest to those connected with the different phases of the work.

There is also a list of experimental bulletins that are distributed only to libraries and persons interested in agricultural research. Professor Bristow Adams, who is in charge of this work,
Be a Business Farmer

Your school has earned fame because of the great aid that it has given in making farming a better business.

You are in school to equip yourself to make farming a better business.

When you leave to begin the active work of farming you can do full credit to your school and to yourself only by being a good business farmer right from the start.

That's when you and John Deere implements will be on common ground.

These implements are continually going out from the sixteen John Deere factories to help make farming a better business.

For 80 years they have been the choice of the majority of good business farmers—of men who want the best implements they can get.

You will find John Deere implements and machines ready for you—for practically every farming operation.

And every one of them will do the utmost to help you make good with your plans for making farming what it ought always to be—the best business in the world.

John Deere, Moline, Illinois
employes nineteen assistants in the editorial and executive branches of the extension department.

Assistant Professor L. H. McDaniels, of the department of pomology, is in Asia Minor on leave of absence. He went there to assist in agricultural reconstruction but writes that, because of the serious food shortage, most of his work thus far has been in feeding the people. He was recently sent into Armenia, where he is one hundred and fifty miles from the nearest railroad. Mr. H. A. Phillips, of the University of Missouri, is taking Mr. McDaniels’ place here until his return next year.

One of the features of the National Dairy Show which was held in Chicago on October 6, 7, 8, was the twelfth annual Student’s Cattle and Dairy Products Judging Contest. The Cornell Cattle Judging team, composed of F. J. Oates ’20, J. M. Beiermeister ’20, and M. G. Beck ’20, won the Ayrshire Cup.

The Dairy Products Judging Team, composed of L. E. Smith ’20, D. E. Morris ’20, and C. R. Keeler ’20, took sixth place in a closely contested field. The two Cornell teams were under the direction of Professors H. H. Wing and W. A. Stocking.

Harvard has asked the University Athletic Association for a dual crew race on Cayuga Lake, May 22.

I. R. Houston ’20, was unanimously elected president of the Cross Country Club at its first meeting, October 7.

A record breaking enrollment of one hundred and one freshmen, brings the total registration of students in the department of home economics to two hundred and forty two. Thirty courses are now offered by the department which is, at present, made up of nineteen members engaged in residential teaching and eleven others connected with the extension work of the department.

---

The Wiser Way
To Increase Dairy Profits

Wise dairymen have discovered that the way to increase profits is to get more milk without increasing the production cost. This method is made easier than any other by International Special Dairy Feed.

This great ration is efficiency applied to feeding. It is designed to make more milk. Has just the proper elements in the correct proportion. It cannot fail. Yet it costs no more than any other feed. In fact it will cost less than a whole grain feed besides giving you a profit from selling the grain. Order a ton for trial. Apply to the mills if your dealer cannot supply you immediately.

International Sugar Feed Co.
Minneapolis • • • Minnesota

INTERNATIONAL
Special Dairy Feed

Say Where You Saw It When You Write.
Insures Cow Health

THE insulating blanket of still air in a Natco stable wall prevents sudden temperature changes. It protects the health of your cows and keeps up the milkflow in uncertain weather. Natco Hollow Tile walls do not gather moisture as do walls of solid masonry, nor do they absorb grease, dirt or foul odors.

Natco Barns

are a permanent investment—not an expense. They need no painting and very seldom require repairs. They withstand severest windstorms and are fire-safe, being constructed of burnt clay tile. Natco walls are exceedingly strong. Masons lay up these walls very rapidly, easily handling the large-size units.

Whatever you intend to build, build it with Natco Hollow Tile. Many uses are pictured and explained in our book, "Natco on the Farm." Write for it today—free.

National Fire Proofing Company

1201 Fulton Building Pittsburgh, Pa.

23 Factories assure a wide and economical distribution

Write us what you intend to build.
We have plans for many types of farm buildings—free. Ask for them.
The faculty of the home economics department were joint hostesses with Frigga Fylgae, an association of the undergraduate women in the College of Agriculture, at an informal party given in the home economics building Saturday evening, October 4. Stunts were presented by the Senior, Junior and Sophomore classes and informal speeches were given by Mary Moore '20, president of Frigga Fylgae, Professor Van Rensselaer and Dean A. R. Mann.

On a list just sent to Washington of the workers in subjects pertaining to agriculture and home economics at the New York State College of Agriculture at Cornell University there are two hundred and nineteen names. This list is intended for the annual bulletin published by the States Relations Service of the United States Department of Agriculture.

The number includes only those who are engaged in teaching, research, or demonstration, and does not include county farm bureau agents, district agents, or student assistants, or persons in merely executive positions, or employees in routine work.

Of the institutions which are included in the publication issued from Washington, Iowa State College at Ames probably has the largest number of workers, followed closely by New York, Minnesota, and Kansas.

Thomas Bregger, formerly an assistant in the department of plant breeding, has received the Distinguished Service Cross and the Croix de Guerre for extraordinary heroism in action.

E. W. Lindstrom, formerly an assistant in the department of plant breeding, is now assistant professor of genetics at the University of Wisconsin.

E. L. Overholzer, who went last year to the University of California in exchange with A. H. Hendrickson, has resigned his position as assistant professor in the department of pomology. He will stay in California. Mr.

Tell Advertisers Who Introduced You.
The 5-Ton and 10-Ton "CATERPILLAR" Tractors were officially adopted, and designated in 1917 as "5-Ton and 10-Ton Artillery Tractors" by the Ordnance Department, U. S. Army.

Every farmer knows that the better the seed bed is prepared, the nearer the right time the crop is planted, the bigger will be the crop yield. But many farmers do not yet know that the "Caterpillar" is the one tractor that puts such work always within their power.

In the great world war the "Caterpillar" demonstrated its dependable power and endurance. On the farm you can drive it day and night if you wish—you can plow any field as deep as you want to, whenever you are ready and faster than you ever plowed before.

These "Caterpillar" Tractors are the models used by the U. S. and Allied governments. Their great strength, power and stamina, built for war's emergency, are ready now to work for you.

The 5-Ton model develops 3,100 pounds draw bar pull at a plowing speed of 3 miles per hour and easily draws four 14 inch plows at a plowing depth of 8 to 10 inches. Carries and lays its own track. Turns in its own length. Three speeds and reverse. Travels faster than 5 miles per hour on the road. Mud, soft soil or sand can not stop it. That's the kind of tractor every good farmer wants.

Get complete information about the "Caterpillar." Write Today -

The HOLT Manufacturing Co., Inc.
There is but one "CATERPILLAR"-HOLT builds it.

Peoria, Illinois.

Factories: Peoria, Ill. and Stockton, Cal.

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Atlanta, Ga.
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Memphis, Tenn.
San Francisco Cal.

Kansas City, Mo.
New York, N. Y.
Spokane, Wash.

Wichita, Kans.

Calgary, Alberta
London, E. C.

Tell Advertisers Who Introduced You
Hendrickson, who has been giving work in the department, left for California October 15, after completing his work here in pomology for a Master's degree.

K. J. Seulke, professor of animal husbandry, has been elected president of the Intercollege Athletic Association.

E. W. Jenkins, '18, and T. O. Sprague, of the University of California have been appointed assistants in the department of pomology for the current year.

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Book Reviews
(Continued from page 78)


An accurate but concise outline of the history of plant pathology. As the foremost investigator of plant pathology in America, Professor Whetzel is eminently fitted to undertake such a work. Doubtless the present work is more timely than would be a more thoro and extended treatise. The book is divided into several chapters, each dealing with a definite period in the evolution of the science.


A non-technical discussion of the history, significant experiments, and various theories of Genetics. The work is peculiar in that no new theory is propounded but rather a sensible conclusion drawn from existing theories of the various phenomena of sex-determination, inheritance and hybridization. Such a book must make for understanding and appreciation of the science,—for all lovers of the truth tend to trust and sympathize with the teacher who is big enough to be not ashamed to say, "I do not know."

---

We have planned a ration for dairy cows that meets the most exacting demands of practical dairymen and we print on the tag—facts and figures, that should answer every question.

"READ THE TAG DAIRY FEED"

In considering this Feed, keep these figures in mind: Total Digestible Protein 17.90% Total Carbohydrates 56.75%; and Total Digestible Nutrients 74%.

THE H-O COMPANY  THE H-O COMPANY
Feed Department, BUFFALO, N. Y.  48 State Street, ALBANY, N. Y.
Members U. S. Food Administration—License No. G. 12996
United States Wheat Director License No. 001185 E M
John J. Campbell, Eastern Sales Agt., Hartford, Conn.

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Apollo Roofing Products
Why build to burn? Use Galvanized Roofing for farm buildings—Tin Roofs for residences.

Apollo-Galvanized Sheets not only excel for Roofing and Siding purposes, but are specially adapted for Culverts, Tanks, Spouting, and all exposed sheet metal work. Apollo Copper Steel Roofing Tin Plates are unequaled. Sold by leading dealers. Look for the Keystone added below regular brands. Shall we send our "Better Buildings' booklet? For address.

AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.
Say Where You Saw It When You Write.
EVERY man who tries Avalon Farms HOG-TONE may have his money back by telling his dealer or us that he’s not satisfied with results.

Yet, since the beginning of HOG-TONE sales, a little over three years ago, approximately 10,000,000 hogs have been treated with this conditioner, tonic and vermifuge.

Avalon Farms HOG-TONE is not a universal “cure-all” or panacea. The direction sheet states as definitely the things HOG-TONE will not do as the things it will do.

For its intended purposes, Avalon Farms HOG-TONE has shown such remarkable results in so many thousand instances that it’s worth while to try it.

Easy to use—very low in price—and it costs you nothing unless you’re satisfied that your hogs show big returns in freedom from disease and more fat from the same feed.

AVALON FARMS CO., 339 West Ohio St., Chicago

Try HOG-TONE on your home farm. Send no money. Pay only if satisfied.

I DON'T WANT YOU TO SEND A CENT WITH THIS COUPON

W. O. Gandy, President
AVALON FARMS CO., 339 W. Ohio St., Chicago, Ill.

I have ____________ hogs. Ship me immediately enough Avalon Farms HOG-TONE to treat them for 60 days. I am to pay nothing now except transportation charges. I agree to report results to you at end of 60 days and pay for the HOG-TONE at that time if it has done all that you claim. If it does not, I will return the labels to you and you agree to cancel the charge.

Name
P. O. R.R. No. State

Shipping Point
Name and Address of My Druggist
Selling Agriculture to Fertilizer Salesmen
(Continued from page 72)

honest and energetic and intelligent as they themselves.

"Farmers' Week" and extension schools brought the farmer close to the college with mutual benefit to both. Now Cornell has taken the lead to bring in commercial industries which do business with farmers. The educational advantages from such meetings will be immense.

Salesmen must pass out information. It is in the nature of their business to do so. The colleges should see to it that they have access to the information which ought to be passed out. They are missing a wire direct to the farm if they fail to use the line.

More than all there is the value gained by cooperation. Men cannot meet together without discussing the problems which confront them daily, and they cannot discuss problems which are mutual without giving and taking in points of view. And when men or groups of men progress to that point it is not long before they iron out minor misunderstandings and begin to drive at their common point from exactly the same angle—toward the accomplishment of a bigger and better agriculture.

Ethereal and Utopian? Yes, it does sound so. But every fertilizer man who attended the conference at Cornell, and I venture to guess the soils and chemistry men of the New York State College as well, feel just that way about their first "Fertilizer Short Course." They feel that failure to carry on and expand this work would be failure to avail themselves of the biggest opportunity for progressive educational cooperation that has appeared in many a day.

DAIRYMEN

Ensilage

Good corn in your silo means dollars in your pocket. West Branch Sweepstakes and West Branch White Cap have given the best of satisfaction. Now is the time to plan for next year's seed. Write us at once.

Seed Corn

West Branch Seed Corn Growers' Association

Williamsport  Pa.

Say Where You Saw It When You Write.
It's Carbide Gas that Lights the Panama Canal

PRECIOUS millions of shipping pass through the Panama Canal. Every possible safeguard protects it. And the light that makes passage risk-free is Carbide Gas—simple, dependable, brilliant.

These same wonderful qualities have made Carbide Gas the lighting standard for over a quarter of a million country homes. They make their own gas from Union Carbide and water—use it to light their houses and barns, to cook their meals.

The story of Union Carbide reads like magic—the white magic of the brightest and softest light known.

We will gladly send you an interesting new booklet if you will say the word.

UNION CARBIDE SALES COMPANY
30 East 42nd Street, New York

Peoples Gas Building, Chicago    Kohl Building, San Francisco
MORE EGGS OR MONEY BACK

The money paid for Purina Chicken Chowder will be refunded if hens, when fed Purina Chicken Chowder with Purina Scratch Feed as directed, do not lay more eggs than when fed other rations. This unusual guarantee is based upon the demonstrated egg-producing qualities of this correctly balanced ration. The reason why this broad guarantee is possible is that

PURINA CHICKEN CHOWDER AND PURINA SCRATCH FEED

when fed as directed, supply a perfect balance of yolk and white elements above the requirements for body maintenance. Based on the statements of one of the most prominent State Experiment Stations, it is shown that:

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<td>50 lbs. of Purina Scratch Feed are capable of producing</td>
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<td>A 100-lb. ration (50 lbs. of each) is capable of producing</td>
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Ask your dealer to supply you
Write us if he does not sell the Purina "Checkerboard" line

1920 Poultry Book Free

PURINA MILLS

Ralston Purina Co., Prop.
St. Louis, Mo.
Buffalo, N. Y.
Sold in Checkerboard Bags Only
EVERY man who lives by Agriculture knows the importance of nitrogen as a plant food.
The most important source of nitrogen for fertilization in this country is Sulphate of Ammonia. It is a home product—American made—and is one of our greatest natural resources. Specially prepared under the name of

Arcadian Sulphate of Ammonia

It is also the best nitrogen carrier for use by itself. ARCADIAN spreads easily and evenly by hand or machine, does not cake, and can be relied on to do its work promptly, steadily and satisfactorily.

The Great American Ammoniate

ARCADIAN Sulphate of Ammonia is the well-known standard article that has done you good service in your mixed fertilizers for years past. Especially kiln-dried and ground to make it fine and dry. Ammonia 25 1/4 % guaranteed. Made in U.S.A. If you would like to become better acquainted with ARCADIAN Sulphate of Ammonia, write for our booklets.

The Barrett Company

AGRICULTURAL DEPARTMENT, NEW YORK
Two Words That Spell PROFIT For Dairymen

Do you know that 90% of the dairy cows of America are underfed?
Do you know that nine out of every ten dairy cows would be BETTER producers if they were fed the proper ration to the limit of their capacity? Try this experiment and see for yourself the increased milk production you will get—begin feeding SCHUMACHER FEED and BIG "Q" DAIRY RATION to your milking herd, two parts Schumacher and one part Big "Q," in the same amount you usually feed, together with ensilage or other roughage. After three or four days, begin increasing the amount 1 pound per cow at each feeding and keep increasing as long as each cow increases her milk production, until she has reached her maximum flow. Some of your cows will handle more feed than others. Watch the results on each individual cow and feed each cow to the limit—the increased milk production will repay you many times the cost of the additional feed. Mr. Fred Lehman, of Carlisle, Pa., proved that maximum feeding increased his profits $85.30 during April from 4 cows.

SCHUMACHER FEED and BIG "Q" Dairy Ration fed in combination will solve your feeding problem, and if fed as directed will insure maximum production and profits.

These feeds make feeding easy, economical and accurate. SCHUMACHER FEED (the carbohydrate ration) and BIG "Q" (the high quality protein ration) have unusual palatability, high digestibility and nutrition. Thirty-five World's Champion Dairy Cows have made their World's Records with these feeds—undeniable proof that they are the greatest dairy feeds in the world. Your dealer can supply you.

Write for FREE Folder, "Long Time Milk Production and How to Get it"—also tells how to feed dairy cows during entire lactation periods for best results.

The Quaker Oats Company

Address: CHICAGO, U. S. A.
Mr. R. P. Walden,
Corn Products Refining Co.,
17 Battery Place,
New York, N. Y.

Dear Sir:

Yours of May 2nd at hand. I would state that as usual in her former tests, Sophie 19th of Hood Farm consumed a large proportion of Buffalo Corn Gluten Feed, ranging from three to four pounds per day during the entire year. She is now at fifteen years of age in perfect physical condition and is due to calve in August, and we look for another large record from her, showing that the feed she has consumed in past years has done her no harm. It is safe to say she has consumed while making her eight yearly records over six tons of Gluten Feed.

Yours truly,

Hood Farm,

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Morrill Hall
Ithaca, N. Y.
Editorial emphasis in this issue is placed on Animal Husbandry, not as an end in itself but as part of the program for a complete rural civilization.

Frontispiece—W. Prindle Alexander ............................................. 130
A Letter to Agricultural Students—Andrew D. White .......................... 131
The College Needs More Room—A. R. Mann .................................. 132
Cornell at the National Conventions at Chicago—D. J. Crosby ................ 133
Advanced Registry for the Business Dairyman—H. L. Stafford ............... 134
Twenty Miles to the Pasture—E. L. Moody .................................... 136
The American Farm Bureau Federation—M. C. Burritt ......................... 138
Some Aspects of the Holstein Situation—M. S. Prescott ....................... 139
How the Dairymen Organized—E. R. Eastman ................................ 141
Hog Killin' Days—K. J. Seulke .................................................. 144
The School Lunch ........................................................................... 147
Book Reviews ................................................................................. 148
Farm Home .................................................................................... 149
Editorials ....................................................................................... 150
Campus Notes ................................................................................ 151
Former Student Notes ................................................................. 154

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Song of Late Autumn

Where have they gone?
The thrush, the rose, the gleam,
And the flickering flakes that fly light;
The flush of early dawn
Athwart the eastern hill,
Where have they gone?
Where have they fled,
The robin and the rose,
We ask at summer's end
Of golden sunlight on the singing stream?
In the short, late autumn twilight
Seem to answer, Ah! who knows?
They are gone, but we have come,
White and light and frolicsome,
Winter snows!

W. Prindle Alexander.
A Letter to Agricultural Students

BY ANDREW D. WHITE

YOUR letter of May 7 is received and has given me great pleasure. It is of the sort which adds a new value to life; one of those things, in fact, that blot out many disappointments and cares and reveal the real uses and rewards of existence.

Looking back, as I do, over a long life, this seems to me one of those things that come at times in full repayment of days and nights of doubt. Though I do not personally know many of you, your most kind communication makes me feel that we are acquainted, and, more than that, that we are friends, and that our aims and ambitions have brought us to a more full understanding of our real brotherhood than ever before.

A letter like yours is one of the rewards which cause one to feel that, in spite of the misgivings which old age brings at times, the compensations for them are great and ought to make us rejoice in the knowledge that there are young hearts beating with noble ambitions to make the world better than at times it may have seemed to be, and to renew our best and highest hopes for our beloved country and for those who are to make it worthy of the sacrifices for it which are so evidently demanded.

With most earnest hopes that a noble future is awaiting each and every one of you, and with renewed thanks for your kindness toward an old man who looks on the world with hopes that the clouds which now darken it will yet break and reveal to you a brighter day, I remain,

Most sincerely and gratefully yours,

Andrew D. White

May 13, 1918.
The College Needs More Room
A Statement by Dean Mann

SOME years ago the College of Agriculture prepared a plan showing its building requirements and the State has provided a little more than half of it. In connection with a request presented to the State Legislature last winter for an appropriation for a plant industry building, the chairman of the Legislative Budget Committees asked the dean of the college to bring in a revised plan for substantial completion of the college so far as it is possible at this time to determine reasonable completion. The building needs of the college, which are very acute, have been the subject of careful consideration by the staff for many months. In order to see as clearly as possible the future demands on the college, we have invited two hundred and eighty-five farmers, farm women, and persons engaged in allied agricultural businesses to come to the college in small groups to study the work of the several departments in detail.

Our purpose in inviting farmers to make a thorough study of the work of the college is not alone to arrive at a clear understanding of the physical equipment necessary to do the work adequately, but also to obtain their judgment on the character and content of our courses of instruction and on the lines of research and extension activity which are maintained. This review of our work is proving very helpful. It is revealing also a number of lines of activity in teaching, research, and extension, which the farmers feel the college should be prepared to take up, but which it is prevented from entering upon at the present time by reason of lack either of men or of facilities.

The farmers of the State have been responsible in a large way for the establishment and development of the college and it must justify their confidence in order to warrant their support in its further growth. Since the present buildings were erected there have been some changes in the character of the work to be undertaken and there has been large expansion of the demands made on the college. Our work at present is very seriously handicapped by reason of extreme congestion and lack of adaptation of the buildings in which many of the departments are now housed. If the college is fairly to render the service which the farmers want of it, and which it is capable of rendering, there must be large additions to the buildings and equipment and some additions to the faculty.

A. R. MANN.
The week beginning November 8 was one of national agricultural conventions in Chicago. There were societies dealing with agronomy, farm economics, and rural social science; associations of state university presidents, of college presidents, and of teachers of agriculture; and meetings which brought into existence two noteworthy organizations—the American Country Life Association and the American Federation of Farm Bureaus.

While each group had a more or less distinct organization and membership, all were closely related to the parent organization of them all, the Association of American Agricultural Colleges and Experiment Stations, which held its thirty-third annual convention at the Auditorium Hotel November 12, 13, and 14.

At this convention there were nearly two thousand official delegates, including university and college presidents, deans of colleges of agriculture, engineering, and home economics, directors of agricultural and of engineering experiment stations, directors of extension, and representatives of the United States Department of Agriculture and of the United States Bureau of Education.

Cornell was represented by Dean Dexter S. Kimball of Sibley College and by the following from the College of Agriculture: Dean A. R. Mann, Professor M. G. Montgomery, representing the experiment station, Professor M. C. Burritt, representing the extension service, and Professors G. A. Works and D. J. Crosby.

Dean Mann took an active part in the work of the American Country Life Association, as did Professor Dwight Sanderson, secretary of the temporary organization. Professor Works read a paper at the meeting of the American Association for the Advancement of Agricultural Teaching. Professor Warren spoke at the meeting of the State Commissioners of Agriculture and the American Farm Economics Association, and Professor Montgomery at the American Society of Agronomy. State Leader H. E. Babcock took part in the organization of the American Farm Bureau Association.

The annual presidential address by C. A. Lory, president of Colorado Agricultural College included recommendations for the appointment of state development commissions. In other papers there was considerable discussion of plans for obtaining increased federal support for extension work in agricultural and home economics, for agricultural experiment stations, and for the establishment of engineering experiment stations.

Questions relating to research were much discussed all thru the convention. Dr. James R. Angell, president of the National Research Council, gave a notable address on "The Resuscitation of Research," and this was discussed by Dean Thatcher of Minnesota and President Woods of Maryland.

From various expressions in formal papers and in informal discussions it was clearly the opinion of many college officials that the land-grant colleges need to do much more than they have in the past to get in touch with and promote the interests of the trades and industries, to conduct more fundamental researches in agriculture, engineering, and home economics, and to lay greater emphasis on work in rural engineering, rural social and economic problems, and the preparation of teachers of vocational subjects in the high schools.

As a final step in rounding out the first third-century of its existence, the association revised its constitution, changed its name to the Association of Land-Grant Colleges, and provided for sections in agriculture, engineering, and home economics to care for the three principal interests of the institutions in its membership. Dean Mann was made a member of the executive committee and the committee on projects and correlation of research.
I. Advanced Registry for the Business Dairyman

How a Farmer and His Wife Built up a High Producing Pedigree Herd

BY HARVEY L. STAFFORD

Peru, New York

So much is said these days about the enormous prices paid for some pure-bred animals that many feel that the raising of pure-breds is a rich man's hobby rather than a practical business for a poor man. It is in the hope of convincing some that pure-bred stock is the only stock one can afford to own, and that a small investment will bring the practical farmer a large return, that I am writing my own experience.

My senior partner is my wife's uncle, for whom I manage the farm. We had a superior herd of grades, but wished to own pure-breds. We learned that a herd of Holstein-Friesians (the breed I consider the very best dairy type) was for sale, but for a price greater than I felt I could afford to pay. It was quite a venture for a poor man, but my wife said that we could swing it, so the deal was closed May 28, 1914. For three cows, three heifers, and a bull calf we paid $1200. The first three years we had nine bull calves which we almost gave away, the prices ranging from $12 to $55.

We are credited with having had only the best of luck, but we realize that all has not been good fortune. One cow became barren and was sold for beef prices; one reacted to the tuberculin test; calves have died; the foundation cow twice had milk fever; and a valuable heifer nearly died of indigestion. But one year every calf was a splendid heifer, and last year we had but three bulls, for which we found a ready market at good prices. It has been our constant aim to improve our herd by care, by breeding, by selection and judging, and by culling out. If one were faulting our foundation cows the criticism would be too great a tendency toward a swing udder. Therefore, in the selection of sires we are careful to insist that the dam of the bull shall have a perfect udder as well as individuality and productiveness. The reward has come in the beautiful udders of our young stock. We have paid for pure bred animals a total of $1540, have received $2870.50 for animals sold, and have remaining twenty-three head of very good animals, of which seventeen will be of milking age this winter. We consider the herd worth quite a sum. We have the old foundation cow, four of her daughters, and the rest are mainly her granddaughters and great-granddaughters. I feel that such an investment as we made is one of the best that one could make.

As for milk production, I can say that the pure-breds give very much more milk than the good grade herd we had. During the past year we have had from eight to eleven cows of milking age, six of these being heifers. These have produced, besides feeding ourselves and the calves, 104,409 pounds of milk, which sold for $3166.52.

Last spring we did our first A. R. O. work. The foundation cow, ten years old, made 29.12 pounds of butter from 583.5 pounds of milk. Two granddaughters, both senior three-year-olds, made 22.936 and 23.266 pounds of but-
ter, respectively, from 595 and 607 pounds of milk. Another granddaughter, as senior two-year-old, made 18.728 pounds of butter from 438 pounds of milk in seven days. These break no world's records, but are very satisfactory for a first attempt, and we have the satisfaction of knowing that they are honest records. We believe that it pays a practical farmer to test by Advanced Registry.

To anyone about to start in the purebred business I would say:

1. Get good individuals, not pedigreed scraps. If your judgment is not trained, benefit by the advice of some one whose judgment is good.

2. Obtain and study the pedigrees of your animals. This helps you to breed more intelligently. When we studied the pedigree of our "old cow" we realized that it was right that she should be a superior animal, as her ancestors were the show animals and heavy producers of their time.

3. Always have your sire a little better than your cows.

4. By the use of the scale, the Babcock test, and the test of individuality, eliminate your poorer animals, thus constantly raising the average of the herd.

5. Keep your herd as free as possible from contagious diseases such as abortion and tuberculosis.

6. Feed and water regularly, milk regularly, keep records of receipts and expenditures, study feeds and learn the kinds of feed best suited to the particular cows you have. Read your breed papers, be on the lookout for a better method, and,—study! I feel that today a dairyman should study as much as a lawyer or other professional man. I have studied feeds and feeding as a man would if he were trying for an examination on the subject.

I wish I might say something that would lead more young men of the right kind into raising pure-breds. If I can help such a young man, I will be glad to answer any questions. I do not wish to give the idea that it is all pleasure in caring for a pure-bred herd, for one has to deny oneself a great many pleasures. I have been away from home but one night in four years, but nevertheless I enjoy it and I expect to keep right at it. My good wife is always ready to help. She keeps the records and does the pedigree work and whatever she can
in the house. I do not think it a woman's place to milk and feed cattle, but she does make a splendid record-keeper.

To make a success with your cattle you must like your cows. Treat your cattle kindly and study their individual likes and dislikes in feeds, and they will repay you a hundredfold. Our cattle follow us about and crowd around us in the pasture to such an extent that it is hard to take a picture of them.

We have been "advertised by our loving friends," and are greatly indebted to our Farm Bureau agent, C. B. Tillson, for his kindly interest and helpful advice. We feel that we have made a real success in a small way, and that others can do just as well as we have done.

II. Twenty Miles to the Pasture
A Good Way to Cut Production Cost on Spring Lambs
BY E. L. MOODY
Rushville, New York

To such a one as the writer, looking back over many years of practical experience in sheep raising, it is interesting to consider how quickly and how completely practices have changed. I shall briefly outline these changes, so that we may arrive at some understanding of conditions today, and then shall as briefly indicate a method which I have tried under present conditions and found good.

When I began to work with sheep, the Spanish Merino breed and its crosses were standard, not only in western New York, but very largely throughout the country. They were kept for wool and the surplus stock was marketed as yearlings or two-year-old wethers. The present day methods are in marked contrast. Mutton from yearlings and wethers has lost favor with the consumer so that the lamb crop is marketed at a much earlier age. The spring lambs are disposed of at fourteen to eighteen weeks, while the fall lambs are usually fed intensively and sold as "hot-house" lambs, weighing forty to fifty pounds at an age of eight to fourteen weeks.

The system of sheep husbandry that seems most advantageous for this section of the State is to produce spring lambs and then, after lambing time, to move the ewes to the hill pastures that we read so much about in the city papers. These pastures are the abandoned, or semi-abandoned farms that are so abundant in the southern tier of counties as well as in other parts of the State. Some are really good farming lands; others are lands that should have remained in forests, but when seeded to bluegrass make the finest of sheep pasture. These pastures are usually well watered and generally have an abundance of shade,—a factor a good shepherd ought never to overlook. Pastures such as these are considered accessible if they are within twenty miles of the home farm. Most farmers have an automobile, and for one who loves sheep, it is a pleasure, rather than work, to crank the "jitney" and go see the flock every ten days or two weeks, an interval which is generally sufficient.

I have found it advisable to purchase yearling western ewes carrying a large percentage of Merino blood. These ewes make good mothers; are excellent rustlers, and, if well cared for and bred to strong vigorous rams, will raise a lamb crop considerably over one hundred per cent. Even tho this system costs more in the beginning, it is well for the novice to start with a uniform flock of the same type, weight, and age. The returns will always justify the outlay if the caretaker pays strict attention to those little details that are so essential to success in the sheep business.
It seems to me that the most popular and profitable crosses for producing prime early lambs from these western ewes are with Dorset rams. They sire the most active lambs at birth that I have ever had, and that activity often means the difference between life and death, especially in cold weather. If the ewe fails to produce a living lamb, the expense of keeping her is a loss, not to mention the loss of the lamb.

After lambing, from about May twentieth to June first, I move the ewes and lambs to the hill pasture, where the ewes remain until fall. The lambs are brought to the home farm at weaning time and, if they are in prime condition, are sold immediately; otherwise they are placed on feed and finished off for a later market. Of late years, the tendency has been to market them as early as possible, for the trade demands a lamb of light weight.

The ewes must be brought back to the home farm in the fall before the pastures become so short as to cause them to run down in condition. I then let them clean up cabbage patches and other good pastures that may be available on the farm until yarding time.

The system has much to commend itself to the farmer living where these cheap pastures are available. It enables him to use for more remunerative purposes his farm land which he formerly used for pasture. He will be able to maintain more breeding ewes; the danger to the lambs from stomach worms and dogs will be escaped; and it will help to distribute his work over the slack season when the hired help might otherwise be idle. I believe that this plan can be followed profitably by many farmers who can utilize these cheap pastures. To me, it seems deserving of more attention than it has received.
The American Farm Bureau Federation
A Report on the Chicago Meeting Which Made it a Reality
BY M. C. BURRITT
Vice-Director of Extension Work at Cornell University

WHAT is likely to prove to be an important chapter in our agricultural history was written on November 12-14 at Chicago, Illinois, when representatives and delegates of thirty-three states from Massachusetts to California and from Minnesota to Georgia organized the "American Farm Bureau Federation." This organization gives promise of becoming really and effectively national because it is based upon similar community, county, and state units and because it stands for a common purpose which is primarily educational. It is therefore significant.

Its primary object is "to correlate and strengthen the state farm bureaus" but also it expects "to promote, protect, and represent the business, economic, social, and educational interests of farmers" and "to develop agriculture." This primary purpose is further clarified and the public reassured by a strong resolution adopted later declaring that "this organization recognizes that the strength of the A. F. B. F. has been achieved through cooperation with State and Federal Departments of Agriculture, upon a sound educational program of local work" and reaffirming its "purpose to continue such cooperation in the future and that neither business enterprise or legislative activity should diminish such cooperative educational activities."

Any State Federation of Farm Bureau Associations or "associations based on the farm bureau or similar plan" is eligible for membership in the new national federation. The governing body consists of a board of directors composed of one from each member state, and one additional director for each twenty thousand paid-up members in the state association. This board elects an executive committee composed of the president and vice-president and twelve regional directors, three each from the four groups of states known as (1) northeastern (2) southern (3) central, and (4) far-western, nominated by each group respectively. This committee is the real governing body of the federation and appoints the secretary or manager, a treasurer, and all employees.

The American Farm Bureau Federation will be financed by a membership fee equal to ten per cent of all the individual membership dues in the county units of the member state federations, and in the case of a few states which do not have paid memberships, by a sum fixed by the executive committee between a minimum of $250 and a maximum of $1000 per state.

Aside from strengthening and promoting the work of county farm bureaus and their supporting county and state associations, in ringing resolutions the convention declared for loyalty to American institutions against any affiliation with organized labor, recognized the farmer's responsibility for the stewardship of the land and his obligation to maintain soil fertility, commended the work of the agricultural colleges and the economic, farm management, and crop estimating work of the United States Department of Agriculture, and vigorously asserted the farmer's right to the costs of production.

It was a great meeting of the representatives of real farmers. No person may be a director or officer of the Federation who is not an "actual bona fide" farmer, and any officer or director who becomes a "candidate for an elective or appointive office state or federal" is automatically dropped from his position. The group was constructive, conservative and developed a strong forward looking program.
Some Aspects of the Holstein Situation
The Cole-Cabana Fiasco Has Not and Cannot Down the Breed
BY M. S. PRESCOTT
Editor, The Holstein-Friesian World

In any review of the present situation in the Holstein industry, chief consideration must be given to the unsavory Cole-Cabana incident. We shall therefore give it some attention in this short article and endeavor to arrive at some of the results that may be considered a logical outgrowth of those startling disclosures. Briefly the premises of the case are as follows: detected circumstantially in fraud in connection with making a large official butter record, Charles Cole, who had made a great reputation for himself as the leading developer of high record cows, confessed that almost without exception the high records that were credited to him were accomplished by the direct addition of cream and water to the actual production of the cow. This confession of course implicated all of the high records made for his former employer, Oliver Cabana, Jr. A searching investigation was instituted by the officials of the Holstein-Friesian Association of America for the purpose of finding out exactly which records were fraudulent and taking such drastic action as the facts might warrant. During the progress of the investigation, Cole suddenly repudiated his first sworn confession and made another, denying that fraudulent work had been practiced at Mr. Cabana’s farm. Coincident with this change on the part of Cole came the withdrawal of cooperation in the investigation previously promised by Cabana and the institution of a lawsuit against the Association, which was enjoined by court order from taking any further action in the matter until the case was settled in court. And that is right where it stands today, with no action possible in relation to these records until the litigation is completed and the injunction dissolved.

At first thought it might be expected that such disclosures, affecting so vitally a man who had occupied a high place in the Holstein industry, who had been one of the largest and best known breeders, whose cattle had been in demand and sold at record-breaking prices almost from coast to coast, would have the effect of shaking confidence in the breed; causing a collapse in Holstein values and a general period of depression. It was in fact predicted that the disclosures, by destroying public confidence in the integrity of Holstein records, would cause breeders millions and millions of dollars of loss through depreciation in the value of their holdings. Such pessimistic predictions, however, were the result of the first shock of the disclosures and did not come from mature consideration or careful study of actual conditions. True, the individual breeders who had animals whose value was based on the Cabana-Cole records were bound to suffer a very serious decline in the valuation of their holdings, but we are considering this proposition from the standpoint of the breed as a whole and, extensive though the operations at Pine Grove Farms were, only a very small proportion of the great body of Holstein men were directly interested through the ownership of cows or direct descendants of the cows whose records were called into question. It is safe to assume therefore that the reaction of the case and the attitude of mind taken by this great body of breeders, outside of those directly interested in the Cabana lines, would determine the effect which the disclosures would have upon the industry as a whole. If there had been a general scramble to unload, to get out from under on their Holstein investments, we would indeed have had a grand smash of Holstein values; but fortunately the great rank and file of breeders kept their
heads. They realized that the Holstein industry was too big and upon too broad a foundation to be even stirred by the crooked operations of any one individual. The men who had been making their living from the Holstein cow kept the faith. They knew from actual experience she was the most efficient and economical producer in the dairy, that with the awakening demand for dairy products and the growing shortage of dairy cows, the Holstein business was bound to grow and prosper. It was felt very generally that these disclosures had resulted in the elimination of unfair competition of the most discouraging sort, and the immediate result was a greater appreciation for the cows who alone and unaided had made normal, creditable records that seemingly looked small in comparison with the forty-five to fifty pound phenomenons. This condition has been reflected in a number of ways during the fall months, but most strikingly in the public sales which have been uniformly very successful, with perhaps a stronger and better sustained demand than ever before. In the sale at Chicago in connection with the National Dairy Show, with only one cow in the sale having a record as high as thirty pounds, but with careful selection all the way through in the matter of individuality, 100 out of 112 head offered exceeded the $500 mark and made a general average of practically $900 a head. This was especially remarkable in view of the fact that the top price for the sale was only $6,000. The dispersal of one of the good small breeders’ herds in Michigan recently resulted in an average of $800, while other sales, from California to Massachusetts, throughout the Midwest and the South, all tell the same story of a constantly increasing demand for desirable, healthy Holsteins of good type.

There are other important lessons from this affair which deserve more extensive consideration than we shall have space to give here. One of them relates to the matter of the supervision of these records and particularly to the attitude of mind of the supervisors themselves. There is no disposition to blame or censure the New York State College of Agriculture for the trouble at Pine Grove Farms nor to impugn the honesty and integrity of the supervisors themselves. If Cole’s original statement is to be believed, it is simply a case where a clever crook was, for a time, successful in getting away with his game. It is nevertheless true that far too many young men go out as supervisors with a lack of appreciation for the responsibility that devolves upon them in developing a great industry and perhaps with too much faith in the honesty of purpose of the men with whom they are dealing. By this we do not mean to imply that the Holstein breed is especially infested with scoundrels and crooks; in fact we are satisfied that the breeders of Holsteins measure up with the breeders of any other kind of cattle in every way, shape, and manner, but we may as well face the fact that among such a large body of men there will be some who cannot resist the temptation to put something over if they believe they can profit therefrom and get away with it undetected. Thus it is important for all concerned that supervisors do their work with a keen regard for the obligations they are assuming when they undertake it.

Our conclusion from a careful study of the present Holstein situation, embracing actual observation by members of our organization and covering every Holstein state in the North from California to the Atlantic seaboard, is that the future is brighter and filled with bigger opportunities for the breeder of Holsteins than it ever has been in the past. There is no tendency to minimize the seriousness of the Cole-Cabana case in relation to the Holstein business, nor to allow those who are guilty to escape punishment, but there is a widespread optimism and faith in the breed that cannot be shaken as long as the Holstein cow herself delivers the goods. And those of us who know her can judge how long that will be.
Way back in 1907, some of the far-sighted dairymen of the State had seen the great need of dairy organization and a few of them organized and incorporated the Dairymen's League. During its early years it was only kept alive by the faith and sacrificing work of a few leaders. Early in 1916 it had about thirteen thousand members scattered over New York and other states that furnish the metropolitan milk supply.

During the spring of 1918, an organization of dairymen in Chicago found that it was either a question of doing something regarding milk prices or quitting the business. They did something. They told the dealers of Chicago that they were to have certain prices or the dealers would not have the milk. The dealers refused to pay the prices and—did not get the milk. The Chicago dairymen stood loyally by their organization and finally won their demands. This was an incentive to eastern dairymen, for it was the first time in the history of agriculture that farmers had been able to stick together.

The directors of the Dairymen's League met in the summer of 1916; served notice on the dealers that after October first, 1916, the prices of milk would have to be somewhere in accord with the costs of production; and told the dealers what those prices for the next six months after

**How the Dairymen Organized**

Disproving the Old Idea that Farmers Can't Get Together and Disputing the New Idea That They Shouldn't

BY E. R. EASTMAN

Editor, Dairymen's League News
October first should be. The dealers of course refused to pay them. There followed the most remarkable demonstration that has ever taken place in farm history. The dairymen were determined that they would either put their business on a new foundation or give it up. The strike lasted for about two weeks. The longer it lasted the more determined the farmers became. The dealers received less and less milk, and the organization grew by leaps and bounds. At the end of the two weeks the dealers gave in, the farmers winning a complete victory. This date marked the beginning of a different day in American farming. In less than three years the organization has grown from thirteen thousand half-discouraged and wavering farmers to seventy-six thousand loyal and steadfast members.

No millennium has been brought about in the milk business in three years. Not all of the evils that have been collecting for generations can be corrected in three years, but the farmers, not only in the League but in all of the other farm organizations thorough the country, have been able, thru the demonstrated principle of collective bargaining to sell their farm products for much better prices. They have been able to acquire some real independence, since at last they have something to say about the prices they shall receive for the products they grow and the conditions of their sale. Best of all they have learned the real fundamental principle of cooperation and organization, that of confidence in one another. They have found out that the neighbor who lives next to them is a pretty good sort of chap, that he will stand shoulder to shoulder just as long as the next fellow, and that he has the same hopes, the same aspirations, and the same ideals as they themselves have.

Mechanical aids have also helped to make possible the new day which has dawned for the farmer. Organization came first in the city because it was easy for the city men to come together at meetings, where all public business must be transacted. It was and still is to some extent difficult for farmers to get together, but the Rural Free Delivery mail routes, the telephone, and especially the automobile, have helped to put the farm on a business-like basis.

But with all the wonderful progress that has been made through cooperation in the last three years, it is after all only the start, and the farmer himself is still responsible as to whether farming as a business will take the right or the wrong road at the crossing. As yet he has only demonstrated his ability to refuse to sell to dealers who do not pay him properly for his products. The next step is to convince the public of his right to collective bargaining. Dairymen are at present being prosecuted in several states for daring to cooperate. The right to organize is fully conceded by courts and public opinion to labor unions, but is denied to farmers. This opposition is largely caused by demagogues and yellow journals who try to mislead the public. When the public learns that farm organizations justly managed are of benefit to all concerned, the opposition will disappear.

The second step is for the farmer to handle at least a part of his public business through his own agencies. The Dairymen’s League already has a plan under way for buying, or building and equipping manufacturing and shipping stations to handle and sell all of its members’ milk and milk products. Both the farmer and the consumer are still cursed with an awkward and expensive system of marketing by which both suffer. The next job is to simplify and make shorter if possible the route from the producer to the consumer.

If this progress is made and the American farmer maintains the place that he has lately carved for himself in the political, social, and economic life of the nation, he must recognize that progress is only made through local and individual initiative and much sacrifice. He must attend his local meetings regularly and see that they are conducted in a business-like way. He must develop the right kind of leaders and stay loyally back of
Farm meetings are necessary to transact the public business of farmers.

them. He must expect to properly finance his organizations, and he must at all times be fair, recognizing that the consumer has his rights and that it is only by exact justice to all concerned that any organization or any great principle can endure.

BECAUSE of the pressure of other things, Professor Cavanaugh was unable to complete his article of comment on the Ross Fertilizer "Revolution" in time for this issue.
In the old days when our grandfathers were busy winning a livelihood from their newly cleared land the farmer was more independent of the village merchant than he is now. In fact he had to be, as settlements were many miles apart, roads were poor, and travel slow. In those days practically all the necessities of life came from the farm, and most of the produce of the farm was consumed by the farm family and livestock.

It was in those days that the term "hog killin' days" was coined, and it will bring to the minds of many of the older generation a host of pleasant memories. Hog killing was a sort of annual holiday for the country folk; it was a part of their annual harvest and a preparation for the cold days of winter that were to follow.

As soon as the snappy, frosty days of late autumn arrived the word was passed about the neighborhood that on a certain day the hog killing or butchering would take place. Usually the work was done on the same farm year after year, and the various implements necessary, with the exception, perhaps, of the smaller tools, were left there from year to year.

The day before the appointed date the farmer on whose farm the work was to be done arranged the heavy tables for scraping, swung several long poles between convenient trees, and hauled a load of good dry wood to the place where a large iron or copper kettle was swung between two trees.

The next morning everything was bustle and hurry, and hardly were the chores completed before a line of wagons began to pour in at the barn-yard gate. These were the high-wheeled, narrow-tired farm wagons of the time, carrying three sets of side-boards with the owner's barn-yard gate or other convenient planking over the top to keep in the fat pigs they contained. On the top of the wagon were various pans, tubs, and other paraphernalia for carrying home the meat, and, most important of all, several well-filled baskets carefully covered with the housewife's highly prized red-checked tablecloth.

The horses were unhitched and stabled, and the men of the party were tolled off for various duties, usually those at which they had proven most proficient in previous years. In fact they often took their places without being told, each doing the special part of the work he preferred. The man who did the sticking stood at the head of the line, and as the boys removed the pigs from the wagon one by one, he bled them. If one occasionally got away all hands stopped work to watch the fun or urge on the chase. When the pig was taken from the wagon the boys threw him on his back, and while one held the hind legs the other sat on his abdomen, well back toward the hams, and held the front legs of the pig down to his side. The man doing the sticking pressed down the lower jaw of the pig, and making a slit in the skin on the middle of the neck, he stuck back toward the opening in the chest, severing the large artery at this point.

After the pig was bled two other men, after removing the tongue, loosened the tendons on the back of the hind legs and placed him on a strong table upon which they also climbed. At the end of this table was a barrel half full of hot water from the kettle nearby to which had been added lye, leached from hard-wood ashes during the summer. A rope was passed thru the lower jaw of the hog and the hind quarters were slid into the barrel of water. After a short time the hog was removed and a scraper made from an old hoe without a handle, or perhaps grandmother's pewter candle stick, was used to scrape the hair from
the scalded part. A gambrel was then placed in the hind legs and the fore-quarters were scalded in a similar manner, after which the hog was hung on one of the long poles suspended between trees by passing this pole between the hind legs so that the gambrel rested upon the pole.

Then several of the women doused the carcass with hot water and scraped off all the hair and scurf that remained, using sharp knives. After the first scraping they poured cold water over the carcass to make it white and then repeated the scraping operation.

Next came a man whose duty it was to open the carcass, remove the internal organs, split it down the center of the back, and loosen the joint between head and neck with a knife, leaving it attached to the head.

This completed the work on the carcass itself for this day. Several of the women who were not busy preparing a feast for the hungry workers, however, were occupied in stripping the fat from the internal organs and hanging the plucks (organs of the thorax) so that they would cool readily. The kidney fats were also removed, carefully cooled, and saved, since it was from these that the leaf lard was to be made.

In this way many hogs were dressed in a day. Each man’s hogs were killed and hung separately, so that they could be easily distinguished from those of his neighbor. There was none of the hustle and hurry of our modern packing plant, and at proper intervals there were wonderful meals such as only our grandmothers could prepare from the wealth of good things to be found on a farm. A keg of sweet cider sat conveniently near; often entertainment was added in the form of a turkey-shoot or greased pig race; and of course there were babies to be fished from the duck pond and boys to be spanked for tying cans to the dog’s tail and other diversions without end.

The following day the hogs were cut up, and here again there was a special job for each one of the party. The men did the heavier work, the women the part that required nimble fingers and knowledge of seasoning, while the youngsters made themselves generally useful and ate considerably more than was good for them.

Two men severed the head from the carcass and carried the two halves to a table where others removed the hams and shoulders. Another man removed the bacon strips and layers of fat to be used for lard, while still another trimmed out the spare-ribs.

The women of the party trimmed out all parts that were not to be either cured or used fresh. The lean and fat were separated, the former to be used for sausage, the latter for lard. The heads and feet were carefully cleaned.
and later used for head-cheese and pickled pig's feet.

The actual salting and curing was done at home, altho often a number of families used a common smoke-house for smoking their meats after they were cured. There was always a great deal of rivalry as to the quality of cured meats produced. Many of the old formulas used by our grandmothers are still used in large packing plants of the present time, and are kept as secret by their present owners as they were by the original users fifty or a hundred years ago.

One of these old formulas that was originally brought to this country by settlers in Virginia, and which has been handed down from generation to generation and is still highly prized, is as follows:

For each one hundred pounds of bacon or hams to be cured, weigh out eight pounds of salt, two pounds of brown sugar, or two quarts of molasses, and two ounces of saltpeter. Mix this in four gallons of boiling water, and allow it to cool thoroughly before pouring it over the meat to be cured. Place the jars of meat in a cool place where they will not freeze, and when the meat is cured, smoke it with green hickory wood. Bacon requires four weeks to cure by this method, while hams and shoulders require from four to eight weeks, according to weight.

The old custom of making a holiday of the harvest season has gradually passed away, and with it many of the good times for both young and old on the farm. The old husking bees, hog killin' days, and other celebrations of the harvest time are almost unknown in the eastern states. At first each farmer began to kill his own hogs on his own farm with the ordinary farm help. Later as the older generation passed away, the knowledge of how to do this work properly passed with them, so that now the farmer either hauls his hogs to market and carries home pork, paying the profits of six middlemen in the process, or he hires a man to come to the farm and slaughter his animals for him.

At the present time there is a tendency among the younger farmers to do this work themselves. It is possible for it to be properly and economically done on the farm. There is no question that an old time 'hog killin' day,' with all the attendant festivities and good things to eat, would bring the members of a farm community closer together, and that the fun accompanying the event, as well as others of a similar nature such as husking bees, would go a long way toward affording the entertainment necessary to keep the young folks on the farm.

Just to See How Many Friends We Have

As things stand today, The Countryman and the two-cent stamp are about the only things which haven't gone up in price. By putting everything right back into the paper we have been able to keep the subscription price at a dollar a year. We will keep it there as long as we can, but we believe that we have a right to ask our subscribers to help in this laudable effort.

This issue has been raised to a size approximating those of before the war. We want to keep it there. To do so we must boost our circulation back to where it was before the paper had to stop publishing that half-year. The Countryman has always had a number of particularly strong friends among its readers, and ventures to hope that it is making more every day. It is to these friends that we make this proposition:

Send us five subscriptions from people you know who ought to have The Countryman and, just to keep all the gratitude from accumulating on one side, we will extend your subscription to the paper for two years, free of charge. Or better still, send it to five of your friends for Christmas this year.
The School Lunch

OTHERS in rural school districts are faced with the problem of packing nourishing and appetizing lunches for the children five days a week. It is not easy to prepare food which will taste good and be appetizing by noon. Unless there is variety from day to day the child soon becomes tired of the cold lunch which is carried to school.

Sandwiches are the customary foundation of the lunch and for this reason variety in the kind of bread used and the filling is pleasing. White, brown, raisin, and graham breads are all good. For filling, meats sliced or chopped and softened with cream or salad dressing; eggs, prepared in various ways, and mixtures of soft cheese with pimento or olives, all add variety to the box luncheon. Other good fillings are vegetables such as lettuce, beans, pepper relish, and tomatoes; fruits such as jellies, marmalades, preserves, fig, and raisin fillings. Potato chips or potato salad occasionally prove appetizing. Such fruits as oranges, apples, pears, figs, dates, and bananas should be used when available. Eggs boiled or deviled can also be added. Wrapping each article in wax paper keeps the different kinds of food separated and gives the lunch an attractive appearance.

PREPARED AT SCHOOL

Cocoa (made with milk)

Creamed potatoes

Potato soup

Creamed vegetable soup

Boiled rice and milk

In many schools in the State today a hot dish is served to supplement the lunch brought from home. Whether the lunch is to be brought from home or furnished at the school it should contain the kinds of food necessary for the active and rapidly growing child. He needs food which will provide material for growth, energy, and regulation. The protein, or body-building and energy-giving material may be obtained from such foods as milk, eggs, cheese, meat, or nuts. Carbohydrates, or energy-producing material, is secured from starchy foods such as breads, rice, macaroni, and potatoes, and such sweets as cake, cookies, jellies, figs, dates, and raisins. Among the body regulating foods are fruits, vegetables, and beverages. In planning the lunch consideration should be given to these different classes of food.

The teacher may cooperate with the parents by preparing a hot dish at the school which will furnish an ideal lunch. Although the school may consist of only one room, if teacher, parents and children will each help, this may be accomplished with little difficulty. By sending the week's menu of hot dishes to the mother the cold lunch brought from home can be intelligently planned. For example, good combinations are as follows:

BROUGHT FROM HOME

Bread and butter
Bean sandwich
Cookies and apples
Bread and butter
Egg sandwich
Pears
Bread and crackers
Cottage cheese and jelly sandwiches
Apples
Bread and butter
Raisin cookies
Baked custard
Nut sandwich of brown bread
Cookies
Apples

(Continued on page 168)

The most thorough and sincere book on this important subject that has yet come to our attention. It is so completely scientific in tone that we suspect that it is not quite human enough to be entirely effective. The method of offering particular subjects by different observers is perhaps responsible for the rather "diffused emphasis" that characterizes such a collection of chapters. However, as always, the truth is valuable and we therefore welcome the book. The more the facts about rural life and its deficiencies are understood, the greater will be the sympathy and cooperation of all concerned in its improvement.


The book indicates that Mr. Roberts possesses that rare combination of talents required in a practical designer of farm structures. Isometric drawings and plan and elevation diagrams illustrate the text of every chapter. No farmer need now be without the advice of an experienced builder. The fact that most farmers need to be more or less adept with tools makes the book all the more useful as it enables the farmer who can use tools to do so to the best advantage for permanent and well-planned construction.


A great deal of book for the money. Mr. Roberts has here presented largely the result of his many years of successful poultry production. The application of good judgment and of common business sense in poultry production is the keynote of the book. The work includes minute details of practical technique in apparatus as well as the thorough scientific discussion of feed and methods of handling. We are pleased to see such a treatise of commercial poultry husbandry reckon in pigeons, turkeys, geese and guineas fowl. A chapter on ailments and diseases offers in concise form tried remedies for the many ailments to which the birds are susceptible.


The use of foods for the preservation of vitality and health is the author's own explanation of the title, and the keynote of this book. He says that faulty nutrition is probably the cause of scurvy, beri-beri, rickets, and the rapidly increasing pellagra. Professor McCollum discredits the practice of regarding calories as the factor of prime importance in the planning of the diet. He says consideration of the biological values of proteins, fats, and carbohydrates from different sources should have a place in the making of every dietary. He speaks much of the former disregard of two very important but unidentified substances, called for convenience, fat-soluble A and water-soluble B. Dr. McCollum bases his conclusions on feeding experiments with eighteen hundred white rats.


This book is valuable for the person contemplating home making or interested in home economics. It divides the subject into the following parts: The House and Its Furnishings, Household Management, Clothing, and Foods and Nutrition. The first chapter deals with the modern house, with special reference to the farm home. It suggests types, proportions, and expenses. The next chapter, on home furnishing, is by Annette J. Warner. It has numerous illustrations and gives useful suggestions concerning types of furniture and hangings for every style of room with speci-
We meant to say something about open fires, too, but space prevents. Some years ago, The Countryman summed up one aspect of the flaming hearth like this: "Wood fires on the hearth are expensive, messy, and, as compared to modern heating devices, inefficient. Therefore, their persistence in American farmsteads appeals to us as an inspiring thing, bearing witness to an abiding endeavor for those things of life which are to be desired, even above efficiency."

Something very like tragedy comes to the household on that Christmas when its "youngest" is finally judged to be "too old for a Christmas tree."

Nobody is likely to object openly, particularly the "youngest," proud of his promotion to the ranks of grown-up people, but if you watch closely, you will see all of the family, from youngest to oldest, glance rather wistfully at that worn place in the old carpet where the Christmas-tree holder used to be screwed down in those happy "witching hours" of Christmas Eve, when youngsters are all in bed, and when Santa Clause is supposed to be soaring over the sleeping housetops in his wonderful sleigh. No, it isn't only the youngest that miss the Christmas tree when the family gives it up and leaves the old holder to take on dust in the attic.

If the truth be known and acknowledged, there need never be such a vaguely regretful and backward-looking holiday season in any home. The truth is that nobody ever really gets too old for Christmas trees. We shall not try to prove this by any logical process, but let our readers ask themselves at this point if it really wouldn't be more like Christmas with a tree in the house, and if so, if there is any real reason why they shouldn't have one.

We think there isn't. We think there should be a Christmas tree in every farm home in New York during the coming holiday season. Surely the Christmas spirit is worth keeping up, and nothing helps so much as a tree.

Gift books come into consideration at this time, particularly gift books for children. It has come to be recognized that children's books, read at the impressionable age, may do much good if they are good or may do tremendous harm if they are the silly, distorted twaddle so often sold under this name. From consultation with one thoroughly familiar with juvenile literature, The Countryman is able to recommend the following:

For children between five and seven, Joan of Arc by Boutet de Monvel, Century Company, $3.00. Mother Goose edited and illustrated by Arthur Rackham, Century $2.50. For children between eight and nine, Kipling's Just So Stories, Doubleday-Page $1.50 net, and for children between ten and twelve, Kipling's Jungle Book, Century, $1.50; King Arthur and His Knights by Howard Pyle, Scribners, $2.50; and T. N. Page's Two Little Confederates, Scribners, $1.50.

In an early issue we hope to publish books selected for children from twelve to fifteen. The school lunch article with its list of recommended readings, which we mentioned on this page last month, will be found on page 147 of this issue.
THE CORNELL COUNTRYMAN

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ITHACA, N. Y., DECEMBER, 1919

Our desk is unfortunately placed for the Agricultural purpose of radical editorials. Whenever we glance up from our copy, we look out of a window, and there is Roberts Hall, solid and serviceable, certain of ultimate truth and steady in following it.

The effect is imposing. We think of older men who have labored long to bring ideas which were new ten years ago to such tangible, serviceable form. We consider the fact that these men have spent, and are spending, years of that on subjects to which, relatively, we have given but a moment’s speculation. And we wonder whether we ought to write what we have in mind.

Last month we did so write, saying something of a general reaction against too much “practicality” in rural affairs, and of too little attention to what might be called the “rural humanities.” Since that time we have had the chance to talk the thing out with several older men whose opinion we greatly respect—men who have done much to make this College the successful, living, working thing we see from our office windows.

In the minds of these men we have found something of the same doubt as to the final form which agricultural education must take and not a little of that tendency which, we believe, is turning America as a whole toward something not unlike the old cultural ideal in education. For the first time in the century Arts registration at Cornell is increasing faster than registration in Agriculture. The students in agriculture are taking more work outside of their college than ever before.

It seems that the War has brought about a more general demand for teaching that will give a man something profitable to think on in his spare time, as well as salable facts for business hours. We believe that the College is already working along a line that will in time make it unnecessary for a man to go to Arts for this sort of thing. In its own field and in its own way, it is turning to touch the human imagination. Sometimes, looking out of another window, we see Bailey Hall, the most beautiful of all the agricultural buildings, and the one devoted to those things in life which are useful because they are beautiful. It appeals to us almost as a prophecy.

His State as well as his College has reason to be proud of Dean Mann’s, appointment to the executive committee of the Association of Land Grant Colleges. It is an honor usually reserved for older men, and the election speaks well for what the Dean has done for his College and for his State during the three years that he has been a member of the Association.
Campus Notes

The College of Agriculture has announced that the week of February 9 to 13, 1920, has been set aside as the annual Farmers' Week. It is probable that the keynote of the week will have to do with marketing and rural economics, not only as they affect the farmer, but also as they affect the householder. At the present time, arrangements are being made to secure speakers of national prominence on subjects of interest to farmers and home economists.

A new plan will be introduced this year whereby the program of the conference will be printed and distributed to prospective visitors well in advance of Farmers' Week. By this method, those who expect to attend the conference, but who may not have the opportunity to spend a full week at Ithaca, will be able to select the days when the subjects in which they are particularly interested are to be presented.

A joint session of the American Farm Bureau Federation and the American Association of Agricultural Colleges and Experiment Stations, was held at Chicago, November 10 to 14. Professor M. C. Burritt, vice director of extension in the College of Agriculture, delivered the principal address on, "What Should Be the Relation of the County Agent to the Farm Bureau, and of the College to the State Farm Bureau Federation?" Dean A. R. Mann and Professors D. J. Crosby, H. E. Babcock and G. F. Warren also attended the meetings.

Sodbusters Get Going

During the extension conference there was organized the New York State Sodbusters' Association. This is an informal organization of all the county agents and former county agents, the chief purpose of which is to bring them together more closely and create among them a spirit of goodfellowship. One means adopted for promoting this fellowship was the agreement that every one will be addressed by his first or pet name. "Chaplain Charley" Taylor, agent of Herkimer County, was elected president. "Shorty" Greene of Orange County was made treasurer and "Keeper of the Pail." R. C. Parker received the job of "Gate Keeper," and F. E. Rogers was made the secretarial "Pen Pusher." Dean Mann was made an honorary member by special dispensation. The next annual meeting will be held the evening of the first day of the next annual conference of the county agents.

The department of animal husbandry made an important addition to its Ayreshire herd when it purchased a young bull for a herd sire last summer. Born September 16, 1918, Iroquois Cock-A-Bendie is the son of Netherland Keystone and Burnside Spottie 2nd. He is of excellent breed type, with a good straight top-line and a frame indicating vigor and strong constitution. In color he is white with a small percentage of brown.

Dr. Lawrence Palmer is replacing E. M. Tuttle in entomology and rural education.

The Student Honor Committee which was chosen at the same time includes the following: G. E. Durham, M. E. Moore, S. L. Van Wagenen, W. D. Warren, J. M. Watt, E. M. George, Russell Lord, J. McConnell, O. C. Potter, and G. P. Young.

Gladys Smith, formerly of the home economics department, is taking work at Teachers’ College, Columbia University. Her place is filled by Miss Margaret Noble, a graduate of Iowa State College.

Mrs. Jessie Boys, Frances Kelly, and Gladys Smith of the department of home economics took advanced work in foods at Teachers’ College, Columbia University, during the summer.

Professors, R. S. Hosmer, A. B. Recknagel, John Bentley, Jr., B. A. Chandler, G. H. Collingwood, and Bristow Adams, of the forestry department, went to Syracuse on November 11 to attend a joint meeting of forestry interests. The leading speaker was Colonel H. S. Graves, chief forester of the United States Forest Service, who outlined a new national forest policy.

The College of Agriculture now has sixteen students registered in the regular course and eleven in the winter course, who are taking advantage of the government provision whereby all disabled soldiers will be paid eighty dollars a month and furnished with books and medical attention while attending an agricultural college. Most of the disabled soldiers are being sent to the secondary colleges, where the work is more practical than scientific. In order to qualify for this training here, the applicants must satisfy the regular entrance requirements.

Miss Caroline Morton, who was formerly home bureau agent in Saratoga County, has recently joined the staff of the department of home economics as an assistant state leader in home bureau work. The department sponsors this work in twenty-five counties of the state.

The large registration for the short course in agriculture which opened on November 5, indicates a return to pre-war basis following a sharp decline in the number of students in the past two years. A total registration to date of three hundred and thirty students indicates that the number for the coming winter will greatly exceed the registration of the past three years, but it is not likely to compare with the number that attended the course previous to 1915-16. Instruction will continue from November 5 until February 13, the end of Farmers Week. More of the women are registered in general agriculture, floriculture, animal husbandry, and poultry than in the home economics course. A steady decline has taken place in the attendance at the short course since 1913-14 when 555 students were registered. The sharp decline of the past two years is ascribed to the scarcity of farm labor during the war, and to the fact that many high schools throughout the state have introduced courses in agriculture.
The Stone Club, made up entirely of Winter Course students taking general agricultural work, held its second meeting of the year in Roberts Assembly Hall, Friday evening, November 14, 1919. Sixty-four students were present. They elected the following members for the officers for 1919: Mr. E. D. Ames, president; Miss M. L. Decker, vice-president; and Miss A. Rouse, secretary and treasurer. Their meetings are to be held weekly on Friday evenings in Roberts Assembly at 7:30 p.m.

After the business of the club had been attended to, Professor Everitt gave an interesting talk about the founding of Cornell University and the part which Andrew D. White took as the first president of the University. In speaking of the benefits which are derived from public speaking and debates, Professor Everitt gave several instances from the life of Doctor White. He said that the sole purposes of the Stone Club were to provide amusement for the Winter Course students and to give them training, to a small extent, in speaking before the public.

The club expects to have a debate team and a basketball team which will compete with the other clubs of the Winter Course students for the Morrison trophy, given each year to the best team.

Professor G. W. Cavanaugh of the department of agricultural chemistry is chairman of the Tompkins County Red Cross Chapter. He addressed a meeting of the local Red Cross which was held the last week of October.

During the past twelve months Professor Recknagel of the department of forestry has served as secretary and forester of the Empire State Forest Products Association.

Royal Glista, the son of Glista Ernestine and Model King Segis Konigen, has been leased for a year to Alfred University.

At the meeting of the Round Up Club on October 27, the members of the Cornell Judging Team, F. J. Oates, J. M. Beiermeister and M. R. Beck, talked on their trip to the National Dairy Show at Chicago. After the speeches a constitution was accepted and the following officers were elected for the year 1919-1920: L. S. Huntington '19, president; J. M. Beiermeister '20, vice-president; F. J. Oates '20, secretary, and C. C. Taylor '20, treasurer.

During the extension conference held October 27 to November 1, the department of rural education placed a booth in the main corridor of Roberts Hall, in which were exhibited some of the results of the junior project work of the state for the past season. There were exhibits of vegetables, apples, potatoes, fancy work and canned goods, all produced by the boys and girls of the state. These projects are financed by state, national, and county funds, and are under the supervision of the bureaus of the various counties. The department of rural education also prepared some circulars and leaflets, the purpose of which was to show county agents whose counties had no such organizations, what could be accomplished.

Miss Claribel Nye of the domestic science department, lectured before the Housewives' League of New Orleans on October 17, and after her talk acted as chairman of a committee of judges in a bread baking contest in which some sixteen hundred women took part.

Professor Livermore of the department of farm management is on sabbatic leave for this term. He is spending his time in travel and in the preparation of material for two new textbooks.

Major D. H. Udall addressed the Veterinary College Forum on October 20 on "Experiences in the Army Veterinary Corps." Major Udall entered the army in February, 1918, and went to France in August of the same year.

(Continued on page 169)
'73 B. S. A.—Benjamin F. Hallock is garden farming on the old homestead at Lake Grove, L. I.

'91 B. S. A.—Charles G. French is practising landscape art. His office is at 50 Church St., New York.

'98, B. S. A., '06 M. S.—John W. Gilmore is professor of agronomy at the University of California.

'05 B. S.—Walter G. Brown is pomologist of the experiment station and professor of pomology at the Oregon Agricultural College.

'05 B. S. A., '09 M. S. A.—Herbert R. Cox is county agent of Camden County, New Jersey.

'05—'08 Sp.—Arthur D. Hoose is running a dairy farm at Port Leyden.

'06 B. S. A.—Wilfrid G. Brierley is associate professor of horticulture at the University of Minnesota.

'07, '08 W. C.—H. K. Crofort, formerly county agent in Cattaraugus County, is now operating a large dairy farm at Dresserville, near Moravia.

'07 B. S.—Lynn F. Ayer is farm manager of the agricultural school at Angola.

'08 B. S. A.—Thomas H. Desmond is practising landscape architecture at Simsbury, Connecticut.

'08 B. S. A., '09 M. S. A.—E. C. Ewing is manager of the experimental department of the Mississippi Delta Planting Company, Scott, Mississippi.

'08 B. S. A.—Ethel Gowans is at the Specialist School of Home Gardening at the United States Bureau of Education, Washington, D. C.

'09 B. S. A.—Alice Catherine Evans is sanitary bacteriologist in the United States Public Health Service at Washington, D. C.

'09 B. S., '11 M. S.—Lee Briggs Cook is market milk specialist in the United States Department of Agriculture at Grove City, Pennsylvania.

'09 B. S. A.—Daniel W. Hallock is vice-president of the M. S. Hallock company, an operating company for family holdings.

'10 B. S.—George Grover Becker is professor of entomology at the University of Kansas.

'10 B. S. A.—Philip H. Elwood, after two years of military service, has resumed his duties as professor of horticulture at Ohio State University. Elwood served as a captain of field artillery, and after the armistice was detailed to supervise the engineering, construction, and landscape gardening of the Argonne Cemetery, said to be the largest of its kind in France.

'11 Sp.—F. E. Newlander is now in charge of a dairy plant in Williston, Alabama.

'11 B. S. A.—G. B. Birkhahn recently resigned as superintendent of the Baron de Hirsch Agricultural School to become president of the Farmers' Service Company of Middletown.

'11 B. S.—Thomas Bradler is director of the agricultural extension service at the University of Vermont and State Agricultural College.

'12 B. S.—Mrs. Clara Goodman, nee Browning, and her husband have re-
turned to Ithaca. Mr. Goodman is connected with the extension work of the rural engineering department.

'12 B. S.—Myrtle Bascom Boice is a teacher of nature study at the Ethical Culture School, New York.

'12 B. S.—Margaret W. Aherne is a teacher of nature study at Asheville, North Carolina. Her address is 25 N. French Broad Ave.

'12 B. S.—C. E. Newlander is in government service in the Dairy Division at Washington, D. C.

'12 B. S.—Moe Spiegel, formerly of the vegetable gardening department here, has resigned his position as assistant county agent of Sullivan and Ulster counties to become vice-president and treasurer of the Farmers' Service Company, Inc., of Middletown.

'12 B. S., '13 M. S. A.—Roy D. Anthony is professor of pomology in the department of horticulture, Penn State College of Agriculture.

'12 B. S.—Alden Forest Barss is associate professor of horticulture at the University of British Columbia, Vancouver, Canada.

'12 Sp.—Allan C. Curtis is engaged in the coal business at Syracuse. His engagement to Miss R. Perkins of Washington, D. C., has been announced.

'13 B. S.—Albert B. Genung is farm management demonstrator of the State of New Hampshire. He also operates a farm of his own.

'13 B. S.—Clarence A. Bell is farming at Attica.

'13—George B. Hiscock is farming at Skaneateles.

'13 B. S.—Earl S. Brown gave up his position as county agricultural agent for Hartford County, Connecticut, on June 15 and has purchased a four-hundred-and-fifty-acre farm at Sparks, Maryland.

'13 B. S.—H. Enol Coffin is senior member of the firm of Coffin & Coffin, 1123 Broadway, New York. They are architects and landscape architects.

'13 B. S.—Hermann William Hagemann is general manager of the Wallenstein Plantations, Inc., Cocoanut Grove, Florida.

'13 B. S.—R. H. Hewitt is an assistant farm bureau agent in Delaware County. He is located at Walton.

'13 B. S.—Arthur Besemer is chemist at the California Central Creameries. His address is Eureka, California.

'14 B. S.—First Lieutenant Francis Harper received his discharge last July and has now resumed his duties on the staff of the United States Biological Survey. His address is 3101 24th St., N. E., Washington, D. C.

'14 W. C.—G. O. Clark is now part owner of the Abbot and Clark Holstein Farms of Cortland. The firm has made a number of world's records, including that of Katie Paul Burke, who made a forty-four pound record as a four-year-old.

'14 W. C.—C. L. Boni is employed by Abbot and Clark of Cortland.

'14 B. S. A.—Edward M. Carman is president of the Meadow Brook Nurseries, Inc., nurserymen and florists, of Englewood, New Jersey.

'14 B. S., '17 B. S.—Mr. and Mrs. Glenn J. Wright (Helen Flint) are living at 195 Park St., Canandaigua. They have a daughter, Edna Isabella, born December 9, 1918.

'14 W. C.—Henry Hagen is running a farm near Philadelphia.

'14 B. S.—Max F. Abell is an assistant professor of farm management at the Connecticut Agricultural College.

'14 B. S.—Harry D. Bandler is teaching at the State School of Agriculture at Cobleskill.

'14 B. S.—Joseph E. Godfrey is principal of a high school at Wyoming, Delaware.

'14 W. C.—Fred Hack is running a farm near Ticonderoga.

'14 B. S., '18 M. S.—Archie Byron Dann is assistant professor of poultry husbandry at the Ohio State University.

'14 Ph.D.—Lex R. Hesler, for some time assistant professor of plant pathology here, has been appointed head professor of botany in the University of Tennessee.

'15 B. S.—Benton E. Barringer is an instructor in the agricultural high school at Caneadea.
'15 B. S.—F. W. Furst is doing forestry work in Oregon. His address is Bend, Oregon, care Forest Supervision Service.

'15 B. S.—Nina Shepard (Mrs. Byron S. Proper) is bacteriologist in the pathological laboratory of the State Institute for the Study of Malignant Diseases in Buffalo. Mrs. Proper has recently written a leaflet on "Malignant Leiomyomata" in collaboration with Burton T. Simpson, M. D.

'15 B. S.—William A. Artman is farming at Leroy. He is also teaching science at the Leroy high school.

'15 B. S.—Drue N. Allman is instructing in horticulture at the National Farm School, Farm School, Bucks County, Pennsylvania.

'15 B. S.—Milo Ogden Frank is distributor and field manager for the Steinhardt and Kelly Company. He manages the growing of crops on contracted land in California and Colorado and also the distribution of the crops. During the winter months he is buyer and salesman on the docks in New York.

'15—Earl A. Flansburgh is agricultural agent for Livingston County.

'15 B. S.—G. W. Knowles, who was a pilot in Naval Aviation and stationed at Porto Corsini, Italy, has been released from service, and is now at his home in Honolulu.

'15 B. S.—Luther Banta is head of the department of poultry husbandry at the State School of Agriculture at Alfred University.

'15 B. S.—Gertrude L. Blodgett is engaged in home economics extension work. She is state leader of the home demonstration agents at Newark, Delaware.

'16 B. S.—Helen Van Keuren has just returned from doing recreational work in France, and is now at 100 Lincoln Ave., Syracuse.

'16 B. S.—Richard T. Muller is an assistant professor of horticulture in the University of Maine. His address is 40 Forest Ave., Orono, Maine.

'16 B. S.—Captain George H. Bradley was discharged from the army at Douglas, Arizona, in September, and has accepted a position as scientific assistant with the United States Bureau of Entomology at Mount, Louisiana. His home address is 22 Collier St., Hornell.

'16 B. S.—Miles W. Bryant was married to Miss Ruth Amanda Kaar, daughter of Mr. and Mrs. Jacob Kaar, on August 30. They are at home at 1506 South Main St., Princeton, Illinois. For the last three years Bryant has been with Arthur Bryant & Son, nurserymen, and last summer was taken into the firm.

'16 B. S.—Hester Austin was married on March 22, 1919, to Charles Raymis Botsford of the 158th Aero Squadron, who had been overseas for thirteen months. Mrs. Botsford is bacteriologist with the United States Health Service, Albany.

'16 B. S.—Edward M. Belden is farming at Berkshire. He is specializing in poultry and bee-keeping.

'16 B. S.—Cheuk Kwan Cheung is engaged in investigation work in the culture of citrus and other tropical fruits. His address is P. O. Box 1155, Miami, Florida.

'16 M. S. A.—Benjamin Brickman is supervisor of agriculture in the Smith Hughes School, Blue Earth, Minnesota.

'16 B. S.—F. R. Perry has returned to the University to do graduate work in plant pathology and entomology.

'16 B. S.—W. A. McKiernan is at Manhasset, L. I. He is assistant superintendent of the Brady estate.

'16 B. S.—Paul Carter, ensign in U. S. Naval Aviation, was recently decorated with the Order of Leopold.

'16 B. S.—Archer P. Crosley is acting supervisor of the Philadelphia and Reading Railroad. His address is 1012 Stratford Ave., Oak Lane, Pennsylvania.

'16 B. S.—Lewis R. Hart, since graduation, has been a teacher of agriculture in the Hammondsport high school, and secretary-treasurer of the Hammondsport Grape Growers’ Co-operative Association, Inc.

'16 B. S.—Albert Hoefer is director of agriculture at the Troy high school.

'16 B. S.—Wilbur S. Oles is conducting an insurance business at Delhi.
DE LAVAL EFFICIENCY

The De Laval Cream Separator is the most efficient means of separating cream from milk. It skims to a trace, not only under ideal conditions, but under ordinary farm conditions.

The De Laval is efficient because over forty years’ experience in manufacturing cream separators has brought out the best construction in every detail. That is why the De Laval skims close, turns easy and handles the milk and cream quickly.

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THE DE LAVAL SEPARATOR CO.

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'16 B. S.—Frank H. Thomas resigned his temporary commission in the United States Navy on June 13, and has resumed his former position as office manager of the National City Company of New York, with offices in the Miners Bank Building, Wilkes-Barre, Pennsylvania.

'17 B. S.—Norma De Vancy was married to Mr. Kenneth F. Coffin, October 25, at Ellenville.

'17 B. S., '18 B. S.—Ella D. Zurbrick of Clarence Centre is engaged to Robert A. Browning of Buffalo.

'17 B. S.—L. H. Schwartz has returned to the University for graduate work.

'17 B. S.—Stuart Ward Frost is an instructor in Penn State College.

'17 B. S. A.—Robert S. M. Fraser is superintendent of a milk condensary at Burlington, Vermont.

'17 B. S.—Wayland Patterson Frost is county agent of Windham County, Vermont.

'17 M. S. A.—Leon Emory Cook is professor of vocational education and head of that department at the North Carolina State College, West Raleigh, North Carolina.

'17 B. S.—Walter G. Cowan is a salesman for the Certain-teed Products Corporation of Boston, Massachusetts.

'17 B. S.—J. T. Owens is a first lieutenant in the cavalry and is stationed at Casa Blanca, Texas.

'17 B. S.—Ensign Philip G. Drabelle has been released from the Navy, and is now with Martin-Seymour Company of Chicago, manufacturers of paints and varnishes.

'17 B. S.—Douglas S. Dilts is assistant county agent of Wyoming County, New Jersey. His address is 12 Delaware Ave., Lambertsville, New Jersey.

'17 B. S.—B. A. Allen and Miss Claraa L. Davis were married on August 26, 1919, at Fonda. Mr. Allen is now manager of the Montgomery Hay Growers' Association. His headquarters are at Amsterdam.

'17 B. S.—Harry Spencer Bole is manager of a Holstein stock farm at Lexington, Massachusetts.

WRITE for souvenir—giving photos and plan of Sioux City's new $4,000,000.00 Alfalfa and Cereal Milling Company's Plant—no cost to you.

Alfalfa and Cereal Milling Company
Grange Exchange Building
Sioux City, Iowa
After doing much of the market hauling of thirty-two farmers around Eden Prairie, Minnesota, with a motor truck on Goodyear Cord Pneumatic Truck Tires, Mr. C. P. Page states: "I would not use solid tires again under any consideration. Hills, mud and storms don't stop the big, tractive Goodyear Cords. Their cushioning is saving truck repairs and depreciation. They also are saving gasoline and oil. I now haul more milk and other loads in less time, find the work far easier, and note that the pneumatics save our roads. Several people have adopted them as a result of my experience with Goodyear Cords."

The experience described above affords an excellent example of what pneumatic truck tires are accomplishing for farmers. Every limitation hitherto placed on the farm use of motor trucks by solid tires has been removed with the perfected pneumatic tire. For this reason, Goodyear's pioneer work in developing cord pneumatic truck tires has been extremely opportune; it has led to the more extensive use of farm trucks during a serious scarcity of farm labor. Now, farmers are finding it extremely advantageous to employ Goodyear-Cord-equipped trucks with other time-saving motor units and, thus, to motorize their work quite completely. Special information concerning the use of pneumatic-tired trucks on farms may be obtained from the Motorize-The-Farm Department of this company, at Akron.

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Made in U.S.A.
'17 B. S.—William C. Cook is assistant State Entomologist. He is working toward his Ph.D. degree in conjunction with this work.

'17 B. S.—Carrie King is assistant home bureau director in Oneida County.

'17 B. S.—Walter C. Bartsch is chemist and bacteriologist for the Horton Ice Cream Company of New York. His address is 3 Cambridge Ave., Jersey City, New Jersey.

'18 B. S.—William C. Cook is assistant State Entomologist. He is working toward his Ph.D. degree in conjunction with this work.

'18 B. S.—Carrie King is assistant home bureau director in Oneida County.

'18 B. S.—Walter C. Bartsch is chemist and bacteriologist for the Horton Ice Cream Company of New York. His address is 3 Cambridge Ave., Jersey City, New Jersey.

'18 B. S.—Girard Hammond is in the Dairymen’s League office in New York. He is living at 961 St. Nicholas Ave. with his wife and infant son, Girard Jr., who was born July 5, 1919.

'18 B. S.—J. A. Phillips is home bureau agent of Tioga County.

'18 ex.—Paul Schlein is in charge of a poultry farm of several thousand hens, near Yaphank.

'18 B. S.—Raymond B. Bush is chemist and inspector of condensed and evaporated milk for the Nestle’s Food Company. His address is Kennedy.

'18 B. S.—Philip Douglas Flanner is working on a farm of the Flanner-Steger Land and Lumber Company. His address is Blackwell, Wisconsin.

'18 B. S.—Wilbur K. Butts is a laboratory aid in the United States Bureau of Fisheries at Washington, D. C.

'18 B. S.—F. E. Brown is assistant superintendent of the Nestle’s Food plant at Unadilla.

'18 B. S.—Alice Ambler is in charge of the home bureau in Broome County.

'18 B. S.—C. Rutherford Inglee is doing Y. M. C. A. work on Long Island. His address is Riverhead.

'18 B. S.—Benjamin Aborn is investigating land development in California. He may be reached at 653 Park Ave., East Orange, New Jersey.

'18 B. S.—Stephen R. Farley is assistant county agent for St. Lawrence County, with headquarters at Canton.

'18 B. S.—George Dawson is assistant superintendent of the Nestle’s Food plant at Walton.

'18 B. S.—Erwin Jenkins, after spending a year with the United States Department of Agriculture, is instructing in the pomology department here.

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**Multiplied Milk Profits**

Pay less for feed. Yet get more milk. **There is a two way profit!** You can have it as well as the thousands who are now getting it. Get it by the same method.

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Sulphate of Ammonia is the well-known standard article that has done you good service in your mixed fertilizers for years past.

ARCADIAN is the kiln-dried and screened grade, made fine and dry for top dressing purposes. Ammonia 25¾% guaranteed. Made in U. S. A.

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Atlanta, Ga. Medina, O.
'18 B. S.—George Linton Dawson is assistant superintendent of the Hires Condensed Milk Company of Troy, Pennsylvania.

'18 B. S.—Isabell Hoag was married in September to Mr. Ray Van Tyne of Syracuse.

'18 D. V. M.—Soloman N. Blackberg is an assistant professor of physiology, pharmacology, and taxicology at the A. and M. College, of Texas. His address is College Station, Texas.

'18 B. S.—Gertrude Bower is home bureau agent of Onondaga County.

'18 B. S.—Alexander J. Gilbert is dairy chemist and bacteriologist for the Ticking Creamery Co., of Newark.

'18 B. S.—L. M. Cooper is senior chemist for the Nestle's Food Company at Oneonta.

'18 B. S.—Paulino J. Gonzalez is a chemist in the Hires Condensed Milk Company of Cass City.

'18 B. S.—Elna Becker is assistant dietition at the Hotel Pennsylvania, New York.

'19 B. S.—Myers P. Rasmussen has left the National Agricultural Leader's Magazine and is now with the Soil Improvement Committee, Stock Exchange Building, Baltimore, Maryland.

'19 B. S.—Frank L. Manning is running his father's farm at Otisville.

'19 B. S.—Mabel Lamoreaux is teaching domestic science in the high school at Machias where she is also recreational director.

'19 B. S.—Virginia Phipps and Dr. C. F. Howe, a dentist of Ithaca, were married early in October.

'19 B. S.—J. R. Minier is in the employ of Armour and Company with headquarters at Waco, Texas. He was recently injured in an automobile accident while in the performance of his duties. At last reports he was doing nicely.

'19 B. S.—E. B. Sullivan is working in the advertising department of the Associated Farm Papers at 200 Fifth Avenue, New York. His home address is 810 Elsmere Place, Brooklyn.

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**HOLSTEIN - FRIESIANS**

**Westside Stock Farm**

**Sherburne, N. Y.**

**JOHN M. HOWARD, Prop.**

**Offers Two Calves**

1. Heifer calf, born October 26, 1919, a fine individual, and from a good producing cow of real dairy type.

2. Bull calf, born October 30, 1919; first class individual. Sire—Westside King Vale, a 31-lb. son of King Korndyke Sadie Vale. Dam—Westside Spot Pontiac, a heifer that made an official record of 20.3 lbs. butter and 359 lbs. milk at 2 years, 3 months of age, and her dam is also a 20-lb. Jr. 2-year-old.

Price for two is $150, F. O. B. Sherburne, all papers furnished.

If interested in calves otherwise than the above, write us, as we have a herd of over 100 head and can supply calves, either sex and almost any age, nearly all from A. R. O. dams with records up to 31 lbs.
This 17 Year Old Girl Milks 27 Holsteins with the Perfection

Twenty-seven cows, especially when some of them give as much as 100 pounds in a day, is quite a bunch for a girl to milk. When Theodore Gillis' 17 year old daughter can handle them all alone with the Perfection, it's not hard to understand why Mr. Gillis thinks his milker is a wonderful machine.

Mr. Gillis has labor problems just like everybody else. And sometimes he's right up against the wall for hired help. But since he has a Perfection, his daughter can always help him out. "The Perfection Milker was rightly named," he says, "for it is a perfect milker and so easy to operate that my daughter, 17 years old, has milked my whole herd of 27 Holstein cows every night during the summer when we were short of help."

THE PERFECTION GETS MORE MILK

"The Perfection gets more milk than any hand milker can get from my cows. One of my cows, 5 years old, gave as high as 102 pounds of milk in a day. A heifer gave 64 pounds in a day. One of my cows, which had been milked nearly two years without freshening we could not dry up without taking the machine off her."

JUST ASK YOUR NEIGHBORS

"We have several other kinds of milking machines in this neighborhood but everyone seems to think the Perfection gives the best results and is the most reliable machine."

NAMES, ADDRESSES AND CATALOG WAITING FOR YOU

How much would it be worth to you to have your milking problem solved? Find out about the Perfection Milker. We'll gladly send you names and addresses of owners so you can investigate for yourself. Just ask the men who own Perfections what they think of them. We will also send without charge a copy of "What The Dairyman Wants to Know," the book that answers every question about milking machines. Write.

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Man who understands the care of poultry. State qualifications and experience and salary expected.

Man to take charge of piggery and vegetable garden. Must understand the care and handling of pigs and the raising of vegetables. State qualifications and experience and salary expected.

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98 Delaware Ave.

Buffalo, N. Y.

'19 B. S.—Margaret Steer is assistant manager of "The Bandbox Cafeteria," at 125 Dryden Road.

'19 B. S.—W. C. Eldridge is an assistant in the Bureau of Plant Industry, U. S. D. A. His work has to do with the eastern wheat investigation, including selection and breeding.

'19 B. S.—John L. Buys is an instructor in the department of entomology.

'19 B. S.—P. C. Arosemena, of the Republic of Panama, is operating his home ranch and considering the importation of breeding stock from the United States.

'19 B. S.—C. C. Chen is working at the Maryland Experiment Station as a research assistant in botany and plant pathology.

'19 B. S.—Dana G. Card is assisting in the farm management department of the College.

'19 B. S.—Harold B. Fuller is located at Cooperstown and is assistant farm bureau manager of Otsego County.

'19 B. S.—Miss M. H. Quinby is teaching homemaking and millinery in a state school at Gainesville, Texas.

'19 B. S.—Edna Dean is assistant home demonstration agent in Onondaga County. Her headquarters are at Syracuse.

'19 B. S.—Esther Rice is managing a state farm at Gainesville, Tex.

'19 Ex.—Carl Schaefer was married to Miss Edith L. Bey, in August, at Bradley Beach, N. J. They are at home at 746 Van Duzen Street, Stapleton, Staten Island.

'19 B. S.—Arthur Simpson is in charge of the raw milk department of the Dry Milk Company's plant at Bainbridge.

'19 B. S.—Lyman W. Bole of Hardwick, Vermont, is managing a Holstein-Friesian farm in Chester County, Pennsylvania.

'19 B. S.—Helen Bool is assistant home demonstration agent in Steuben County. Her headquarters are at Bath.

'19 B. S.—Ray Hoskins is principal of the high school at Machias.
Why You Should Choose Machinery Built by the J. I. Case Threshing Machine Company, Bearing the Famous Old Trade Mark of the Eagle on the Globe.

If you could be here in Racine, and could spend a week going through our great shops, you would learn some things that would open your eyes to the superiority of the entire line of machinery we manufacture.

Because of our great output, we are able to buy better quality of steel for the same price that lower grades of steel would cost in smaller quantities. This means greater strength and longer service to you.

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Holes for bearings in Case Kerosene Tractor main frames are bored and reamed in one operation by a special machine. Bearings can never shift from their proper positions. The frame can never twist or warp.

Case machinery, bearing the trade mark of the Eagle on the Globe has many other advantages. Ask the nearest Case dealer to point them out to you on:

Kerosene Tractors  Steam Tractors  Threshers  Steam Rollers  Baling Presses  Silo Fillers  Rock Crushers  Road Graders  Grand Detour Plows

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Look for the EAGLE. Our Trade Mark

To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.
'19 B. S.—Maynard C. Hammond is assistant farm bureau manager in Orange County. His headquarters are at Middletown.

'19 B. S.—C. J. Seelbach is in the fur business with his father in Buffalo.

'19 B. S.—Elizabeth Cook is at Ames, Iowa, where she is taking her master's degree. She is working on the self-feeding of calves.

'19 B. S.—Edith Messenger is teaching domestic science at Greene.

'19 B. S.—J. A. Newlander is assistant in the dairy department of the Vermont College of Agriculture at Burlington.

'19 B. S.—Russell Drake is an Advanced Registry supervisor near Genoa.

'19 B. S.—H. H. Luning is in the employ of Swift and Company as an assistant to H. Swift in the educational department at the main offices in Chicago.

'19 B. S.—Florence Coupe is teaching domestic science at Crosby, North Dakota.

'19 B. S.—J. Larson is doing research work for the Dry Milk Company at Mexico.

'19 B. S.—E. V. Sullivan is in the employ of a produce commission house in New York.

'19 B. S.—Helen Langdon is teaching home economics at Pelican Rapids, Minnesota.

'19 B. S.—Helen Clark is supervisor of home making at Coneautville, Pennsylvania.

'19 B. S.—Madeline Berls was married to Mr. James S. Moore on October 11. Their address is Apartment 5D, 1343 Merriam Avenue, New York.

'21 ex.—Charles A. Ballou is working in his father's printing office in New York.

'22 ex.—Martin J. Bennett is working on his father's farm near Amsterdam.

'23 ex.—Johnson S. Henderson of Ogdensburg died at the Cornell Infirmary on October 14. Death resulted from a sore on his throat which became infected.
Would You Buy a $25,000 Bull?

This bull won’t cost you $25,000—but only $1,200.

Although he carries 82½ per cent the same breeding as Potentate that sold in June 1918 for $25,000.

The bull we are offering is now about 1 year old, a very handsome fellow, sired by Cornucopia Korndyke Pontiac that now has five 30-lb. daughters, he being by Pontiac Korndyke from a 33-lb. dam. The dam of the bull is Queen Anne Pietertje 3d with a record of 31.51 lbs. butter from 627.3 lbs. milk. She is by the same sire as Leafy Veeman De Kol (dam of Potentate) with a record of 40.10 lbs. and is from a 17-lb. sister to the dams of both Pauline De Kol Ophelia, 44.52, and Leafy Dawn De Kol, 43.19.

Here is a youngster with a rare combination of breeding, coming from one of the greatest producing families ever developed by the Holstein breed, sired by a bull that certainly will have a long list of 30-lb. daughters in the near future.

If you want to head your herd with a sire that will grow in value every day you own him, here is the bull. Send today for his pedigree and photograph.

Abbott & Clark
Cortland New York
The School Lunch  
(Continued from page 147)
Very little equipment is necessary to prepare these simple dishes and it can be obtained at a very small cost. For a rural school the following equipment is sufficient:

- Double boiler, sauce pans, vegetable knives, strainer, measuring cups, ladle, fork, mixing bowl, teaspoons, dishpans, garbage pail, can opener, dish cloths, dish towels, bread knife, vegetable brush, and milk pail.

Any teacher who is enthusiastic and interested enough to start will soon find that the parents will gladly offer suggestions and donate the necessary utensils.

The teachers will feel repaid for this extra work by improvements in the scholarship and health of the children. To be truly successful there must be cooperation between teachers, parents, and children.

References:
- Good Housekeeping, Oct. 1919.
- The Rural School lunch, (U. of Ill., College of Agriculture).
- Rural School lunches. (U. of Idaho).
- The Box Luncheon. (Cornell Reading Course for the Farm Home).
- School Lunches. (Farmers Bulletin 712 U. S. Dept. of Agr.)

Book Reviews  
(Continued from page 148)
 fic directions for making and arranging them. There is a chapter by Helen B. Young on planning the home kitchen, which includes directions for making and caring for fireless cookers and iceless refrigerators. Some important facts are given concerning table setting, the laundry, stain removing, textiles, and the making of clothing and millinery. Lastly, the book deals with foods, including the planning of daily meals, marketing, food for the sick, cooking cereals, and the preparation of vegetables, sauces, salads, and beverages, giving numerous recipes. This book is a useful manual for the home maker.
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Chr. Hansen’s Laboratory, Inc.
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Interesting treatise “The Story of Cheese” by J. D. Frederiksen, free on request.

Campus Notes

(Continued from page 153)

In his report for 1918-1919, President Schurman set forth the need of new buildings and funds for campus improvement. He cited the need of a new central heating plant, a fire-proof addition to the already overcrowded Library building, a new gymnasium, several new residential halls with a central dining hall, and a building to be used as a social center for the University, as well as a number of other buildings for the various colleges.

The Cornell branch of the Consumers’ League has been reorganized among the women of the University. This is an organization for the purpose of improving the conditions of women in industries. The first meeting was held in Risley Hall, Friday, November 1, when Professor Blanche Hazzard of the home economics department addressed the meeting. A membership drive has been made which has proved very successful.

A Frigga Fylgae meeting was held Tuesday evening, November 11, in the Home Economics assembly room. A large number were present at the meeting and many plans were made for the coming year. Miss Rose spoke about what Frigga Fylgae has done in the past and also told about the work some of last year’s graduates are doing at present. Plans were also made for a Thanksgiving party for the children at the Settlement.

Major Leonard A. Maynard has resumed his duties as assistant professor of animal husbandry. He was discharged on July 21, after twenty months in the Chemical Warfare Service, principally as gas officer in the Twenty-ninth Division. Major Maynard was married in France on June 3, 1919, to Miss Helen Jackson of Tama, Iowa, who was there with the Y. W. C. A.
No Off Season for the Cletrac

THERE is no "off season" for the Cletrac. It is a year-'round investment paying the farmer a steady interest from January to December.

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The Cleveland Tractor Co.
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LARGEST MANUFACTURERS OF TANK-TYPE TRACTORS IN THE WORLD.
Miss Lulu Graves, who taught classes in nutrition and dietotherapy last year, will work in connection with the home economics extension schools in foods and nutrition this year.

Dr. E. W. Benjamin recently spoke before the State Federation of Women's Clubs at Elmira. The topic was "The Food Value of Storage Eggs." On October 14 he addressed the poultry, butter, and egg dealers of Cleveland, Ohio, upon the results of his recent investigation of marketing problems.

The annual poultry market trip for farmers of New York State will be held during the week of January 19. Those who go on the trip will visit the poultry market centers of New York City. The trip is open to farmers of the State.

During the past year two hundred and forty pheasants were turned over to the state conservation commission for distribution to the state game farms by the local farm operated here in connection with the college of agriculture. The total number of pheasants reared was five hundred and twenty-five.

Dr. E. P. Felt, State Entomologist at Albany, gave an illustrated lecture October 29 before the faculty and students of the entomological department on the European corn borer.

The department of home economics has lately added to its other activities, a laundry for the patronage of students and faculty. The work rooms are located in the basement of Roberts Hall.

During the summer Professor Blanche Hazard gave two addresses before an industrial conference at Silver Bay. Her plea was that conditions affecting family and community life be improved along with the improvement of working conditions.

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COLANTHA JOHANNA
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SEMI-SOLID BUTTERMILK in its condensed form, with the water eliminated, saves freight, and may be used any time by adding two gallons of water to each pound Semi-Solid. Did you know when you get buttermilk at the creamery, you are hauling 92 per cent water, and that the acidity in the buttermilk changes hourly, and if it gets too sour, it is a very unsafe feed to use? Let us furnish you SEMI-SOLID BUTTERMILK and you add the water when ready to use.

IT'S A SAFE FEED.

GAIN AN AVERAGE OF 2 1-4 POUNDS PER DAY

Kansas State Agricultural College fattened their hogs for the Chicago Live Stock Show with our product, and found that as long as they were kept on this feed, they gained an average of 2 1-2 pounds per day.

SAVE SIXTY-TWO DAYS TIME IN FEEDING

Also the Agricultural College of Iowa, took a litter of pigs and divided them into two pens. These pens were fed exactly the same, except that one pen had all the buttermilk they would drink and the other had none. The buttermilk fed pigs consumed one-third the grain, and were ready for market sixty-two days before the others were.

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Distributed in Western New York by Sunnycrest Poultry Farm, East Aurora, N. Y.
Professor Troy of the department of dairy industry is on his sabbatic leave. He is engaged in research work in dairy chemistry for Mojannier Bros., milk engineers of Chicago, Illinois.

Professor J. L. Stone, who is on the retired list, is recovering from an illness which at one time threatened to develop into a severe case of pneumonia. During the past year he has been connected with the Red Cross work in this locality.

Professor and Mrs. J. E. Rice spent the summer on a tour thru the noted poultry centers of California, Oregon, and British Columbia.

The department of farm management and rural economy have been combined into the department of agricultural economics and farm management.

The department of pomology is planning an extension fruit show for Farmers' Week. The plates will be collected by members of the class in judging. H. A. Phillips is in charge.

Professor R. W. Rees attended the Northeastern Fruit Show at Providence, Rhode Island.

Miss Edith Ranney, a graduate of Columbia, is a new clothing specialist in the department of home economics. She arrived October 1, and has since been occupied with extension schools, in which she is teaching the possibilities of having good clothes, correct in selection, design, and construction, on a limited income.

At the first meeting of the Cornell Foresters the following officers were elected for the first term of 1919-1920: president, R. M. Volkert; vice-president, G. B. Gordon; secretary, T. T. Buckley, Jr., and treasurer, H. B. Bosworth.

Professor P. A. Fish of the Veterinary College, who entered the service in July, 1918, received his discharge in September and has resumed his duties here. While connected with the office of the Surgeon General of the Veterinary
Sherburne Stock Farm

Has for Sale

Sons, daughters, grandsons and granddaughters of cows with records of 85 to 125 lbs. milk in a day. 2500 to 3300 lbs. milk in 30 days.

SHERBURNE STOCK FARM

Sherburne New York
Corps, he received the rank of Major and was in charge of the Mortality branch, one of the duties of which was to receive and formulate the animal mortality reports from the A. E. F., both in France and in Siberia.

As a result of recent advanced registry testing, Model King Segis Konigen, the senior Holstein herd sire of the college herd, now has twenty-three A. R. O. daughters which average 16.30 pounds of butter in seven days. Twenty of these records were made by junior two-year-olds. He has three twenty-pound, two-year-old daughters and eight eighteen-pound two-year-olds. Glista Gentian, a junior four-year-old, has just completed a seven-day record of 28.76 pounds of butter and milked eighty to eighty-five pounds per day.

Great John Lyons, the young Holstein bull at the University barns, is developing into an exceptionally fine animal. His individuality is equalled in every way by his pedigree. He has King John for his sire and Betty Lyons for his dam—the latter a thirty-pound daughter of King Lyons. Her dam is Bertha Lyons Netherland, with a record of thirty-four pounds of butter for seven days. She is out of Blanche Lyons Netherland who also has a thirty-four pound record. The bull is used as a junior herd sire to breed to the daughters of Model King Segis Konigen.

At the invitation of the College of Agriculture, three members of the State Finance Committee inspected the buildings and grounds of the college to determine its building needs. The party was accompanied by President Schuman, Dean Mann, and Superintendent Curtis of the buildings and grounds department. They had an opportunity to see the congested conditions and the lack of adaptability of some of the buildings to present requirements. The committee was entertained at luncheon at the Home Economics Cafeteria.

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The John Deere line is like a complete force of reliable farm hands. It is comprised of an implement for practically every farm operation. It has been a leader in quality for over three-quarters of a century. The success of the whole line is due to the high quality for each unit in the line.

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Results!
The Cost per pound of pork produced shows true economy in feeding

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Such results are possible only because Purina Pig Chow is scientifically mixed to include the right proportions of food elements for quick growth of bone and flesh and for fattening. It fattens while the pigs grow, thereby putting them on the market fully thirty days earlier than other feeds. Put it to the test. Ask for our Hog and Steer Book. See your dealer. If he can't supply you, write

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Direct service is given to the people of New York State thru the county farm and home bureaus, demonstration schools, institutes, boys and girls clubs, rural organizations, personal visits, correspondence, surveys, news service, and publications.

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The College is an institution in which men and women can be trained for a productive and satisfying life work. The College is at Ithaca, New York.

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Two Words That Spell PROFIT For Dairymen

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Do you know that nine out of every ten dairy cows would be BETTER producers if they were fed the proper ration to the limit of their capacity? Try this experiment and see for yourself the increased milk production you will get—begin feeding

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These feeds make feeding easy, economical and accurate. SCHUMACHER FEED (the carbohydrate ration) and BIG "Q" (the high quality protein ration) have unusual palatability, high digestibility and nutrition. Thirty-five World's Champion Dairy Cows have made their World's Records with these feeds—undeniable proof that they are the greatest dairy feeds in the world. Your dealer can supply you.

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Dear Sirs:

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Yours truly,
Hood Farm,

J. E. Dodge.

May 8, 1919.
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Because of current interest in all affairs of farm and home;

Because of greatly increased numbers of students in the regular courses and the winter short course;

Because of the present appreciation on the part of the farmer of his place and power in the affairs of the nation;

The New York State College of Agriculture expects and is planning for the biggest and best Farmers' Week in the history of the institution.

Of course you will be there too.

Ithaca, N. Y. February 9-13, 1920
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It took the war to teach us how to save. It takes Christmas once a year to make some of us remember our friends. Some send a greeting card but others to dearer friends send a present. Have you decided?

THE CO-OP. AS USUAL

You trade at the Co-op. why not let the Co-op. select the style of presents you buy? The Co-op. is nearly twenty-five years old and that gives some experience as to what students want. Drop in.

Cornell Co-operative Society

Morrill Hall

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CONTENTS
JANUARY, 1920

Cover and Contents—Photographs by Buck
Frontispiece—Photograph by J. L. Rothwell
War’s Aftermath in Rural France—K. A. Ryerson ........................................... 203
Cows and Crops—H. C. Ingraham ................................................................. 206
Our Neighbors Over the Way—L. A. Toan ....................................................... 207
A Fallacy in Health Propaganda—W. S. Thompson ........................................... 208
Progressive or Complacent Agriculture?—A. B. Ross ........................................ 211
The Farmer and the State Income Tax—E. M. Travis ........................................ 212
To France—R. L. .............................................................................................. 213
Book Reviews ..................................................................................................... 214
Farm Home ......................................................................................................... 215
Editorials ............................................................................................................ 216
Campus Notes .................................................................................................... 218
Former Student Notes ......................................................................................... 220
Song of Late Autumn, Second Printing—W. P. Alexander ................................. 224
A Letter on “Liberalizing Agriculture”—Daniel Dean ........................................ 230

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GERMANY'S "DEFENSIVE WARFARE" AGAINST FRENCH TREES

This picture was taken by J. L. Rothwell, '19, after the ejection of their "noble army" from the Soissons region.
War's Aftermath in Rural France
What the Huns Did to a Highly Developed Agricultural Civilization.

By K. A. Ryerson

Former Lieutenant 110th U.S. Engineers and Later Engaged in War Damage Investigations for the American Peace Commission

With our return to peace time occupations, nationally and individually, the American people are rapidly forgetting many of their war impressions and sensations, and on the whole it is well that this is so. However, there are some results of the struggle that we cannot afford to forget; we owe it to ourselves and we owe it to those nations who shared it with us. At the present time there seems to be a rather definite and determined effort being made to minimize Germany's responsibility in committing her great crime and to minimize the loss France sustained as its result. It is apparently easy for people living in an unscarred land several thousand miles from the north of France to forget the problems that face that torn and devastated region. Out of the mass of conflicting statements and charges some things stand out above challenge. One of the most outstanding of these is that the fight made by the civilized nations of the world for the right of decent living was carried out in the front yard of France and part of that of Belgium, and that, regardless of the other losses sustained by the Allies, France primarily bore the brunt of the tremendous loss through devastation, the effects of which will reach down thru many decades.

Most of the devastated area of northern France was agricultural; it is stated that one sixth the agricultural wealth of France came from this region. France is a country of limited area, few colonies and no great undeveloped sections to turn to in order to replace the fought over area. She must restore it or suffer in proportion to the area which cannot be reclaimed.

As great as is the economic loss due to the non-productiveness of much of the land in the area, and also to the immense sums necessary to be spent in restoring that part which can be restored, yet the greatest loss is social, not economic. There is no financial ap-
praisal possible of the loss to a nation of its rural community and home life or any part of it. Northern France was a region of highly developed farming communities, a region of contented, wholesome and prosperous living—the greatest antidote for the radical, anarchistic, destructive tendencies now manifesting themselves throughout the world. Indemnities can replace economic losses, there has yet been no indemnity discovered which can in any way recompense the wiping out of community life, the breaking up of family hearthstones, and the scattering of a contented rural people as wanderers on the face of the earth. Therein lies Germany's greatest crime against not only France but against civilization as we believe in it, and it is that crime that we dare not forget or for one moment lose sight of.

It is impossible in the short space of this article to give any idea of the entire fought over area, so suppose we take a "close up" of one of the great number of small rural communities within the fighting zone—not one that was completely wiped out, but an average village a few kilometers back of the lines through which the fortunes of war ebbed and flowed. The little village of Baboeuf in the Department of Oise, and located not far from Noyon, the birthplace of John Calvin, is such an example. The story is one such as any one might have gotten from the same source as the writer—the mayor of the village who had the records and Madame Paul Menget, leading spirit of hope and confidence for the people of the village in their efforts to re-establish themselves once more.

The village fell into German hands in the first months of the war and so remained until 1917 when it was retaken during the great allied offensive of that summer. It remained in French hands until March of 1918 when it was again lost during the German drive on Paris, being held until the end of the summer of 1918 when it was finally liberated for all time.

Its history is common enough for villages so situated; the inhabitants fled before the first invasion, scattering thru the south of France, returning as best they might when the town was retaken in 1917. They began restoring the village, cultivating the fields, and purchasing livestock, only to lose it all in the spring of 1918 when the Hun broke thru. With the armistice they again returned and took up the work of reconstruction and the re-establishment of their home and community life.

The commune is an average typical one embracing one thousand seven hundred and seventy-five acres of which one thousand two hundred and fifty were cultivated, two hundred and fifty in natural pasture and the remainder in woods and roads. One thousand acres of the cultivated land was embraced in twenty-eight farms in the commune, the remaining two hundred and fifty being rented out to farmers from adjacent villages. The principal crops were cereals, with wheat leading, and other field crops, with sugar beets occupying a prominent place; apples and pears for cider making were grown to a limited extent, and small fruits were raised as a sideline. In addition dairying was conducted on several of the farms. The land as farming land varied from $240 to $400 an acre in value, and rented for around $25 an acre. It will be seen that the community was fairly prosperous at the time of the outbreak of the war.

As to the physical loss to the community some figures might make the case more concrete:—in 1914-15-16 the entire harvests were taken by the Germans who farmed the land during their occupation. In 1917 it was not possible to cultivate the land. In the early spring of 1918 about two hundred acres were ploughed but the work was lost because of the second invasion. In 1914 livestock to the value of $35,360 was taken by the Germans; after the retaking the village in the summer of 1917 the refugees returned and purchased
livestock to the value of $17,340, all of which was lost in the drive of March, 1918, making a total loss of $52,700 on livestock alone. Agricultural machinery, wagons, implements, dairy equip-
ment, and small tools are a total loss, having for the most part been removed by the Germans during their occupation. No figures are available as to the loss sustained by the buildings of the village, practically every one of which was hit at least once, many of which were rendered useless thru shellfire. The farmers of this region live in villages rather than on the farms, and concentrated destruction was more widespread as a result.

The damage to the land from shell holes, trenches, mines, dugouts, and barbed wire is relatively small, yet it is estimated that it will be five years at least before the lands of the commune are restored completely to their former condition. This is a far shorter time than will be required for much of the land of the devastated region. There are five hundred acres that will require an expenditure of at least $20 an acre to restore it to cultivation, a condition far more fortunate than in some areas of the region where far larger sums will be required.

So much for concrete figures. The village is a small one, numbering not more than two hundred people. As villages go in that region it might even be considered as having got off extremely fortunately compared to the many which have been completely ob-

(Continued on page 226)
EXPERIENCE: A Series of Personal Stories by the Best People in the State of New York—Men and Women Designated by their Farm Bureau Agents as Leaders in their Home Communities.

III. Cows and Crops

With Some Conclusion on the Labor Situation and Other Things

BY H. C. INGRAHAM

Pottersville, New York

My county agent says I am a general farmer. By that I suppose he means a man who does a little of everything and not much of anything; that raises almost every kind of crop that will grow in his section; and that keeps nearly every kind of stock that is raised in his particular part of the country.

I am keeping eight cows—all grades—and have a pure-bred Guernsey bull of which I am proud, as leader of the herd. I have always had a good herd of cows, but that I might better it, so I began by buying this bull. I am now raising six heifers from him, two of them yearlings. They are large for their Guernsey blood, and I see no reason why they should not develop into good cows of paying quality. My milk is tested at least once each month by my county agent. These tests tell me which cow will make the best corned-beef.

Shortly before I bought the bull I purchased a silo. I find that it does not save me much, if any, over the old-fashioned way of keeping my cows, but the cows like the silage and do better to pay for it. I tried several varieties of corn for the silo, and of them all, Hall's Golden Nugget takes the lead. I have not tried Luce's Favorite, however, nor Leauring, because I think they are too late in ripening for this climate. I tried a home-town corn this season and found it excellent except that I think it was cut too ripe for the silo. It was so ripe that I husked fifty-two bushels of sound corn from seven-sixteenths of an acre that was left after my silo was full. From my own experience, I think that corn full of milk is better for ensilage than after it is glazed and ready to husk. Perhaps it might be well to use sunflowers for ensilage if for any reason a man could not raise corn, but I think there are times when one should let well enough alone.

In addition to the ensilage, I raised about five-hundred bushels of Half-Sugar Beets this year for my cows and young stock. I hear someone say, "What a job to cut them all by hand." Of course it would be, but if I had a cow or a calf over eight months old that could not cut its own beets, I would send it to the dentist for repairs or fill my corned-beef barrel with it. My cattle do all their own root cutting and are glad of the chance.

For early potatoes I raise Burpee's Early; good yielders, good keepers until spring, and with the best of quality always. I have tried eight other varieties of early potatoes, but none will do as well on our sandy soil as Burpee's Early. For late varieties I raise Golden Rural and Dibble's Russett. Of these, the Rurals do the best with me. It is hard to find a variety of late potatoes that are as little affected by the "curly dwarf" disease as are the Burpee's Early. I have been fighting this disease in my potatoes for about six years, and as yet I have learned no remedy except to pull out and destroy the affected hills.

My farm is too small to do much busi-
ness on because I cannot afford machinery to do the work. No, not even a Fordson! I do not exactly agree with a friend in our county who said he had adopted the eight-hour plan for his farm,—eight hours in the afternoon and eight in the afternoon; he thought he could get by with that. I say—Halt! Let city fault finders and the village and city laborers, who work eight hours and sleep and play sixteen, learn what the farmer does for the pay he gets.

Our Neighbors Over the Way
Impressions of Travel in Agricultural Norway and Sweden
BY L. A. TOAN
Assistant County Agent Leader at Cornell University

UNIFORM courtesy and consideration toward each other and to foreigners are among my strongest and most lasting impressions of Scandinavians and Englishmen, gained by two months travel among them. The Danes were especially courteous and hospitable. Many times on trains passengers tried to talk with me in German or French if their knowledge of English was too little.

The Swedes were much more reserved—more like the English. Introductions were necessary. They were always ready to explain directions, however, if they could. One man, finding I could not get a hotel accommodation, walked with me two blocks to find another place. Doffing the hat to men friends is an outward courtesy seldom seen in this country but the usual custom throughout Scandinavia.

In their farm practices the Danes are thorough; every foot of land is worked, and fences and weeds are uncommon. Crops show the effect of thorough preparation of the soil, good fertility, and excellent care during the growing season. The low, white houses with thatched or red tile roofs are usually
surrounded by vegetable and flower gardens with a neatly kept hedge around the outside. We can learn much from our Danish neighbors about making a farm home attractive. Homes in southern Sweden are much like those of the Danish farmers nearby.

Cows in Denmark and southern Sweden are usually of good quality and dairy temperament. They are staked out in long rows in the pasture, since land is too valuable to pasture them loose in large fields. The Danes keep cows called the Red Danish, a long bodied, dairy type, looking somewhat like our old-fashioned red Durhams. Holsteins are generally prevalent in southern Sweden.

In central Sweden the country is more rocky and unproductive. Cattle here are mostly Ayrshires.

But still to the north, the Norwegian farmer on his small isolated farm surrounded by barren rocky mountains presents the greatest contrast. Houses and barns are often very small and unpainted. Flowers and shrubs, if they had attempted to grow, had been killed by the long, cold winters. Their peculiarly marked cattle are shaped much like the Ayrshires but have a white strip from shoulder to tail.

While wages in Scandinavia and England are generally lower than in the States, prices are from two to three times higher than before the war. Labor conditions are just as unsettled as at home; even the men on farms are striking for higher wages. Farms may be worked more intensively abroad, yet our farmers make up for this fact by cultivating more acres less intensively.

A Fallacy in Health Propaganda

Figures Fail to Show That "The City City is Healthier Than the Country"

BY W. S. THOMPSON

Professor of Rural Organization at Cornell University

MUCH discussion has waged of late regarding the relative healthfulness of the city and the country. The conclusion generally arrived at by those speaking and writing on this subject is that the city is a healthier place to live than the country. State and city departments of health are especially likely to arrive at this conclusion. As one who believes that the country is a healthier place to live than the city I should like to call attention to some facts which seem to me to support my position and which those who maintain the opposite must explain, rather than ignore, if they are to maintain their position.

In 1916 the Bureau of the Census issued a bulletin called United States Life Tables, 1910. These tables show that the death rate of the rural population in the original registration states is lower than that of the urban population. The death rate for white females in the rural population of the original registration states was 17.44; in the urban population it was 19.46; for males it was, rural 18.16; urban 21.13. If we consider the death rates at different ages we also find that the rural population has a lower rate at practically every age than the city population. These tables are particularly valuable because they make allowances for the fact that the urban and rural population do not have the same age and sex constitution.

It is true that in Massachusetts and New York the death rate in the "rural districts" is generally higher than in the cities. In all other states the "rural districts" have a lower death rate. The explanation of the situation in New York and Massachusetts is that they have many small manufacturing cities, where sanitary conditions are bad, included with the rural population, and
The sentimental idea of the country as "the healthiest place for kids" can be backed up by hard, cold statistics.

also that the migration of young people from country to city has gone so far in these states that a great predominance of older people are left in the "rural districts". The census of 1910 shows that only 36.5 per cent of the rural population (people living in the open country and in villages of less than 2,500) of New York was twenty to forty-four years of age, while 44.5 per cent of the city population belonged in the same age groups. On the other hand 28.7 per cent of the rural population was forty-five years of age or above, while only 18.3 per cent of the urban population was forty-five or over.
Old people have a higher death rate than young people. Consequently the fact that such a large proportion of the rural population of New York is over forty-five is of itself sufficient to account for the slight difference in death rates between the urban and rural population of the State.

In the entire registration area there has never been a year in which the crude death rate of the cities was not considerably above that of the rural districts. It has never been less than fifteen per cent higher and in 1917 it was seventeen per cent higher.

It may be said by those who believe the city is healthier that even though its death rate may be higher than the rural death rate yet country people suffer more from general physical debility than city people. I have often seen data showing that country school children suffer more from defective teeth and eyes than city children. Such data are supposed to show that the health of city children is superior to that of country children. As a matter of fact what they do prove is that medical inspection of city school children is better than that of country school children or that a particular class of city school children is freer from certain defects than a particular group of country school children. Even data showing that college students from the city are physically superior to those from the country only prove that upper and middle class families represented by the city boys and girls use physicians more for preventive purposes than country people who call a physician only in case of need.

Unfortunately we have no good test of general healthfulness which has been applied to country and city people on a large scale. It is quite likely that when the full results of the physical examinations under the Selective Service Act are made public we may be able to tell more definitely than hitherto what are the general differences in physical vigor existing between country and city people. At present we must be content to make comparisons between certain states with respect to the proportion of those examined who were physically qualified. If we compare the proportion of those examined who were physically qualified for service in the typical industrial and commercial states we find the results as follows: In Connecticut 53.70 per cent of those examined were physically qualified; in Massachusetts 64.52 per cent; in New York 69.47; in Pennsylvania 53.33 per cent. In these four states the population is engaged chiefly in the non-agricultural pursuits and most of the people live under city conditions. In Iowa 77.82 per cent of those examined were physically qualified for service; in South Dakota 85.87 per cent; in Nebraska 79.85 per cent; and in Kansas 77.22 per cent. In these four states agriculture is the chief occupation of the people. In South Dakota where there is no city of any size the percentage of acceptances was highest. States which have a population fairly evenly divided between agriculture and other pursuits generally have a percentage of acceptances lower than that of the agricultural states given above but higher than that of the industrial and commercial states. In Illinois the percentage was 74.17; in Indiana 73.20; in Ohio 73.92; and in Missouri 73.19. I am well aware that the examinations by different draft boards were not of uniform rigidity but I do not see how one can seriously attempt to explain away these differences on that basis. The real explanation is that country life is more healthful than city life.

I do not overlook the fact that some diseases are more prevalent in the country than in the city. Typhoid fever, malaria, small-pox, and whooping cough generally cause more deaths in the country than in the city. These four diseases, however, cause but 1.8 per cent of all deaths. On the other hand, tuberculosis of the lungs, cancer and tumors, organic diseases of the heart, pneumonia, diarrhea, and Brights' disease cause about forty-five per cent of

(Continued on page 228)
"Progressive or Complacent Agriculture?"

The Author of "Old Fertilizer Theories All Scrapped" Has at Cornell a Professor Who Believes Otherwise

BY A. B. ROSS

My attention has been directed to a letter sent out by Professor E. L. Worthen to the field agents of Cornell University, warning them against the new theories of using fertilizer contained in my article in the October Farm Journal. So long as this letter was used for the purpose indicated I have no quarrel with it. But that letter has been (presumably with Professor Worthen's consent) published in the Cornell Countryman, in the Ohio Farmer, and other farm papers. And that brings it into the present open forum of discussion. It is no longer a privileged communication. Professor Worthen's letter is a remarkable instance of what might be called "Complacent Agriculture."

In my original fertilizer article in the Farm Journal the promise was that proofs to sustain the conclusions would be furnished in articles to follow. Progressive agriculture, after warning its students to wait, would itself have waited for those proofs, examined them with care, and rendered its verdict afterwards. But "Complacent Agriculture" needs no proofs. "Ye are the men; wisdom will die with you," is fairly descriptive of that sort. With them it is a foregone conclusion that any information which does not come from them is worthless and should be condemned without delay and before it can do any harm. Complacent Agriculture regards its mere dictum as final. Professor Worthen, for instance, says: "Ross's conclusions from the Pennsylvania results relative to the great importance of potash are unwarranted." Professor Worthen offers no proofs of his assertion; he makes the statement pragmatically; "Authority" has passed its decree,—why should it bother with proofs of its decision?

Again Professor Worthen says:—"His statements belittling the importance of soil improvement could hardly be credited to one interested in the future of American agriculture"—American agriculture apparently consisting of Professor Worthen and the other defenders of an outworn, untenable and horribly expensive theory of using fertilizer to balance the soil. Now, we had an idea that American agriculture consisted of some seven million farmers who are earnestly seeking the truth on this subject of fertilizers, who are calling on the Progressives to point the way to sane fertilizer practice even though that way leads straight past the offices and desks of some soil chemists. Of course, if my theories are right, it will mean a saving of all the millions now being wasted for fertilizers which do not pay their cost in extra crops; it will mean larger crops from the same labor outlay. If that sort of thing brands me as a traitor to American Agriculture, and Professor Worthen and the other stand-patters as its friends, count me a traitor to agriculture and a friend to truth.

But the statement in Professor Worthen's letter which this article was primarily intended to demolish is an uncandid or an unintelligent statement of the new doctrines. Professor Worthen says: "He is also justified in his statement that experimental results show lit-

(Continued on page 232)
The Farmer and the Income Tax
Explaining Who Has to Pay and How Much
BY EUGENE M. TRAVIS
Comptroller of New York State

The farmer has become an important cog in the wheel of State finances. It is therefore essential that he should understand the working of the New York State Income Tax Law, which requires returns to be filed with the State Comptroller between January 1 and March 15, 1920.

Every single man or woman or married man or woman living apart from wife or husband, who earns $1,000, or more, gross income, during 1919 and every married man living with wife, or the person who is the head of a household receiving $2,000 or more in gross income during that time, must file these reports.

The rules and regulations, the deductions, depreciations charged, and other items which enter into making up gross income, net income, and taxable income are identical with those under the income tax imposed by the Federal Government.

What is the "gross income" of the farmer? It includes profits derived from raising produce and profits derived from the exchange of property or the sale of live stock raised on the farm. Add together all income which you receive, except that income which is specifically excluded by statute from gross income, such as interest on State bonds, interest on Federal bonds, salary received from the United States Government, gifts, proceeds of life insurance, and moneys received thru workmen's compensation acts, or damages received from a law suit on account of personal injuries.

Now, from this heading of gross income, the farmer is allowed to deduct his ordinary business expenses such as labor, incidental repairs, small hand tools, taxes paid on his dwelling and farm buildings, insurance premiums paid on his barns and equipment, and such other expenses as occur in the ordinary course of business. In this manner "gross income" is reduced to "net income."

Those persons operating a farm who have filed a return with the Federal authorities will understand the depreciation allowance. Take for instance, a wooden barn, which would last about twenty-five years; its value should be taken as of January 1, 1919, and the State allows a deduction of approximately four per cent of its original cost. Similar allowances are also made to cover farm machinery.

A fine distinction exists between ordinary repairs and such repairs as materially increase the life of the equipment. Ordinary repairs are a business expense and do not materially increase the life of the equipment, while other repairs which prolong the life of the equipment are called capital investments and are not deductible. If a barn door were fixed the money paid out would be allowed as a business expense, but if the whole roof of the barn were renewed, it would not be allowed as it would be considered a capital investment.

It is well to call attention to the fact that a farmer is not allowed deduction for loss which occurs to crops by fire or storm. When a crop is destroyed, it means that the farmer has been prevented from realizing a profit and it is a well settled fact that a deduction is not allowed for prospective gains. The farmer has taken a deduction for the cost of seed and labor and therefore if the crop were destroyed, it does not
mean that he has suffered a loss. The same thing is true where a farmer holds crops for a raise in the market and as a result of such holding, a shrinkage occurs and there is a reduction in value and the crops have been sold at an apparent loss. This merely means that there has been a reduction in the prices which were to be realized, but no loss has been sustained.

After the deductions which are allowed by law have been taken from gross income, we arrive at net income and it is at this point that the taxpayer is able to determine whether or not he is required to file a return.

As shown in the first paragraph, the farmer with a net income of either $1,000 or $2,000 will have to make a return according to his personal situation. This does not mean that every farmer who makes a return is going to pay a tax because from net income, the taxpayer is allowed to deduct his personal exemption. To a single person or married person not living with husband or wife this is $1,000, and to a married person living with husband or wife, $2,000. An additional $200 exemption is allowed for each child under eighteen years of age or person who, because of mental or physical incapacity, is mainly dependent upon the taxpayer for support. An unmarried son might be supporting his mother and crippled sister in the farm house. He would be entitled to an exemption of $2400.

These returns must be made even tho personal exemptions are greater than the amount of income upon which the tax is assessed. In the last case mentioned, even tho the son earned but $1,000 he would still be required to make the return and claim the exemptions to which he was entitled. Severe penalties are recited in the law for failure to file the returns on time or for fraudulent concealment of any material facts.

It is my purpose to administer this law in an equitable and efficient manner. To this end, I seek and solicit the cooperation of all persons. When it is considered that there are seven hundred and fifty thousand potential taxpayers in the State, it will be appreciated that the imposition of this assessment will fall evenly. This assuming in common of the responsibilities of the State ought to be reflected in a deeper interest in the administration of both our State and local governments.

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TO FRANCE

Yours is our youth, and ours your singing dead!
Laughter eternal, death too deep for tears,
And all the wonder of a thousand years
Of untold glory, and of tears unshed!
Such are the things we find in you. Some day,
We hope to find the words our hearts would say.

R. L.

This book is well adapted to the use of anyone interested in milk, whether for sale as such or for manufacturing purposes. The author does not lay claim to an exhaustive treatment of the subject, nevertheless he has covered it with thoroughness not found in many books on the subject. The arrangement is excellent and the complete bibliography appended to each chapter for further study is a valuable feature. A brief consideration of the physiology and anatomy of lactation is followed by complete chapters on the physical and chemical characteristics of milk. The testing of milk and its products is treated thoroly, as are also the tests for preservatives and adulterants. Following this the author discusses in detail the bacteriology of milk together with milk sanitation, milk enzymes, toxins in abnormal milk, and the transmission of pathogenes. Further consideration is given to the production, specifications, and details relative to certified milk. The chapters dealing with the economic problems of milk production and marketing are features in themselves. This book is an excellent reference work for students and others who have a fair working knowledge of the technicalities of the dairy industry, and is comprehensive enough to be helpful to anyone engaged in any phase of the milk business.


This book may be used as a text book for students or as a reference for teachers and will prove interesting to others as well. It is divided into four parts, the first of which takes up the fundamental principles of household finance, showing how the management of the household is a profession requiring the same amount of skill and ability that a business man needs in his business. Part two treats the factors in the family budget, showing the considerations effecting all the necessities of the household. Part three takes up the other factors in the budget, such as the problems of service, insurance, savings, investments, and cultural needs. The fourth part deals with the legal and business status of the family. It shows how business principles apply to the home and the household is run more efficiently by their application.

The Right Use of Lime in Soil Improvement, by Dr. Alva Agee, Secretary of the New Jersey State Department of Agriculture. $1.25 net. Orange Judd Company, New York and London.

The book opens with a discussion of lime in soils and shows how sour soils result from irrational farming practices. Then follow chapters on the evidences of acidity and tests to determine it. Consideration is given to the various forms of lime, their relative values, and which to choose in the interests of both our soils and our pocketbooks. Methods and time of application are covered completely, as well as the amounts to apply per acre. In the words of the author, the whole story of the right use of lime on the land is so simple and reasonable when we stick to the practical side that we should easily escape the confusion of that which seems to stand in the way of action. Dr. Agee has covered his subject in an agreeably untechnical style that is well suited to student or farmer. Numerous illustrations add to the value of the book and aid in making it readable.


The author points out that the world war has practically destroyed the pou-
try industry in the devastated territory and devotes the opening chapter of his book to bringing to the farmer and poultryman the necessity of raising more and better poultry in order to meet the immense foreign demand for eggs and live fowls. Then follow chapters on incubation, brooding, and housing, all of which are fully covered. Consideration is given to the selection of breeds, sanitation, feeds, and artificial lighting. The method of presentation is simple, can be readily understood by the novice as well as the experienced poultryman.


A book primarily for beginners in beekeeping by a man whose practical experience and close association with his subject makes him a competent authority. The pleasures, possibilities, and profits of beekeeping are treated in a simple interesting way, illustrations and statistics being introduced as they are needed to support facts. Tables of various types of forage and feeding plans are introduced, and hints are given on markets and marketing as well as on care and equipment, with the approximate costs. The book also contains a glossary of terms pertaining to this science. There is a pleasant absence of technicalities in the discussion of bee habits, methods of propagation, and of bee diseases, yet the author covers the ground completely and comprehensively.

Did it ever occur to you that by keeping a budget you would find the problem of the family finances a great deal simpler than it is at present? In this way you will divide your income among the various expenses to the best advantage. Many people find this problem solved by the budget system and you may find it to your advantage to give the suggestion a trial.

During the next few months it will be impossible for most people to have fresh flowers to brighten up their homes. So why not get a few bulbs such as hyacinths, daffodils or Japanese lilies and start them in small earthen dishes. They will bloom when other flowers are gone. It is surprising how interested you will become in their progress and how eagerly you will watch each bud until it breaks into bloom. With very little trouble you can have a pretty bouquet for your table at a time when flowers are scarce and most pleasing. Just buy a few bulbs and see if you are not more than satisfied with your purchase.

Many women are interested in pressure cookers and would like to have one, especially after hearing some fortunate friend speak enthusiastically of hers. Altho it may seem extravagant to pay twenty-five or thirty dollars for a cooker which you know nothing about, you will soon find that it pays for itself in the time and energy saved. Does the farmer always consider the price when buying some modern and labor-saving piece of machinery? Then why should not his wife feel free to use the easiest and most efficient methods in her work also? With a pressure cooker foods requiring a long slow process of cooking are prepared easily, and canning is done quickly and thoroughly.

E. T. C.
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ITHACA, N. Y., JANUARY, 1920

For the first time since the landed gentry of Colonial times lost power to the townspeople, the American farmer is coming into a position where his quiet voice and steady thinking may actively help the nation through a crisis. A hopeful sign for everybody concerned, this, and for the farmer a grave responsibility. The nation is coming to count on his opinions just as, during the war, they counted on his products.

As we see it from campus windows, the war has brought into play an extreme radicalism on the one hand and, on the other, a grim reactionism. Bolsheviki get the headlines, but for every American anarchist there are probably a hundred American reactionaries. Disappointed at the results of the war, the first class want to turn everything over and start again. The reactionaries may be equally disappointed at what the war failed to do, but their program is more practical. They want simply to regard the whole war as a nasty business from which we might better have kept clear. They want to regard all the nations with whom, or against whom, we fought as tarred with the same stick, and equally unworthy of our association except in a purely business way. On a smoking car the other day, we heard a well-fed gentleman remark, that after all, Germany seemed to be the best of the boiling when it came to American ideas of getting things done, and that his firm already had agents there. He said he was a "100% American." And nobody took him up except one excited ex-soldier who was too angry to make much of an argument.

Were there nothing but extreme radicals and extreme reactionaries, the whole matter might soon be buffeted to some middle ground. The serious thing about it is that for every hundred wild-eyed dreamers and determinedbackward lookers, we have a thousand perfectly normal Americans who simply do not give a damn. They too have reacted from those disillusionments which ended when the war ended, but the reaction has been altogether negative.

ARTICLES like the one with which Mr. Ryerson opens this issue are good at this time in that they strike hard at apathy. They call attention to the fact that even Congress can not cancel allegiances made by men fighting side by side, nor wipe from their minds the memory of things which they were told they were fighting for. Particularly, they cannot obliterate the fact of friendships contracted nor of enmities incurred by any such process as ignoring both. France, for example, was our friend, and
Germany our enemy. What shall be our future attitude toward these two nations? Right now, we seem to stand nowhere. This much stands out. If France was admirable when she turned the Boche by sheer courage, she is equally admirable now. Counting her dead in silence, hiding her hurts in laughter, laying hold of new burdens, building with broken stones; that is France! Some men who were over there may have brought you back a different story. Ask them if they spoke the language well enough really to talk with the people. If they could not, their word is not to be trusted, however sincere they may be. They could not understand what they saw unless they knew the French people.

As for Germany, we do not believe that the open country holds many so anxious to get back to the days before America fought off her own island that they are willing to "forgive and forget" out of hand. During the war, Germany did many things to gain world hatred and contempt, and since the war ended we fail to see where she has done a single thing upon which to claim world forgiveness. The burden of proof of a change of heart is definitely upon her. Until this proof is forthcoming she remains, as far as we are concerned, a criminal nation. We need not hate her if we remember this, and the people of the open country will remember it, and remind the nation. Country people went slow on flag-flapping during the war, nor did they often insult the kaiser's picture. They are therefore less likely to fly to the other extreme at this time.

The thing which the Central Powers tried to do, and the splendid spirit with which the Allies met and shattered the attempt got deep beneath the skins of American country people and lives there still. We believe that their contribution to the work of American reconstruction will be in straight-thinking and in hard-bitten idealism, derived from the elemental facts and aspirations given form by the war, rather than from any futile and panicky desire to go back to the smug insularity and the purely commercial international connections of ante-bellum days.

With this issue, we arise from the editorial chair and bow ourself back to the ranks of the associates, announcing election of H. A. Stevenson, the present Managing Editor, in our place. War so broke into the old scheme of June elections that we find ourself completing the traditional year of office at midyear. With good men coming along all the time, a year is long enough for any one editor, and Mr. Stevenson has the stuff.

We take further pleasure in announcing the election of W. L. Savage as Circulation Manager, and of Carolyn Hel- ler, Helen Dates, O. C. Potter and F. R. Undritz as Associate Editors.

Anybody under eighty years and three hundred pounds, and perhaps even a few exceeding these figures in age and weight, should go out with the kids at least one night this winter and "slide" on the pasture hill. Why be old when the moon is shining and the hill is "slicker'n ice?"

A letter commenting rather caustically on our editorial of last month will be found on page 230.

Happy New Year, and many of 'em!
Campus Notes

Several gentlemen in the vicinity of Buffalo interested in the improvement of livestock, and particularly in meat production, arranged last year a fat stock show at the East Buffalo stockyards. It was held in January in connection with the annual convention of the State Breeders' Association, and proved quite successful. The second fat stock show—held also in connection with the annual convention of the State Breeders' Association, was held at the East Buffalo stockyards December 9, 10, 11 and 12. A liberal fund for prizes, subscribed by the residents of Buffalo, brought out a very creditable exhibition, largely carload lots of steers, sheep, and swine. The show was held in the covered pen in the stockyards and no admission was charged. It had not, however, been extensively locally advertised, and the attendance was small.

One of the most notable exhibits was made by the Boys' Feeding Club of Lincoln, Ontario. Finished baby beeves were shown. Herefords were most numerous represented but there were a number of very fine Angus and Short-horns. They were sold at public auction and brought very satisfactory prices. The first prize carload of swine were Poland Chinas and they were of very high quality and of remarkable uniformity in size and finish. The same could be said of a carload of grade Angus steers and a car of South Down lambs.

Naturally, the exhibits came largely from Canada and from Ohio, which regions are tributary to the Buffalo market.

The exhibit of single, fat animals was not nearly so strong as the carload lots. There were, however, several very good individuals shown.

It is to be hoped that this exhibition may be put upon a permanent footing and be given a much wider range of publicity.

H. H. Wing

Professor J. L. Stone, retired, has completely recovered from his recent illness and was able to attend the Ag Assembly on December 11.

The first Ag Assembly of the year, held in Roberts Assembly on the evening of December 11, was a definite attempt to revive the neighborhood spirit of the old days and to get the whole College together again. It succeeded notably.

Early during the previous week a "flash" poster warned the campus to look for something sensational. A second poster, done in pink and black and issued Monday, announced, "Are Professors People? A Spirited and Searching Debate on a Subintellectual Plane." Doctor C. Betten, Secretary of the College, and Professor Bristow Adams of the Department of Extension were slated to argue against two students. On Thursday, the day of the Assembly, a quarter-page advertisement appeared in The Sun.

In consequence, the hall was filled to
the doors and some hundred had to be turned away. For a half-hour the speakers slammed one another while the audience giggled and roared. The end of the debate found debaters and audience alike on common ground, and the decision was that professors and students were nothing but people, if they would just give themselves a chance to be and turn out to such affairs as the Assemblies.

Equally enjoyable was the chalk talk of Al. Herzig '21, and the stunt speech of J. E. Fuller '19. Frigga Fylgae, the woman’s society of the College, coöperated with the Assembly Committee in the matter of refreshments and entertainment afterwards. The entire affair was in the hands of a committee of five, of which Miss M. M. Hillidge '20, was chairman.

A. R. Mann, Dean of the College of Agriculture, is back at his desk after two weeks in a Rochester hospital where he was under care of a stomach specialist. Returning to his desk just before the Christmas vacation, the Dean immediately took up work. When asked for a statement of his condition he paused only long enough to say that he was, “back on the job, hale and hearty!”

Professor A. W. Gilbert, formerly professor of plant breeding in the College, has been appointed Commissioner of Agriculture of Massachusetts by Governor Coolidge of that state. He is at present connected with the Boston Chamber of Commerce and has filled many positions, such as secretary and milk administrator of the New England Federal Milk Commission, and others pertinent to the work he will now be called to do. He was born in West Brookfield. He graduated from Amherst College in 1904, and taught agriculture here for ten years, and has been with the Boston Chamber of Commerce three years.

At the invitation of the College of Agriculture, Senator W. H. Sage and Mrs. Sage, Assemblyman H. E. Machold, and M. C. Hutchins, Clerk of the State Senate Finance Committee, inspected the buildings and grounds of the College of Agriculture, with reference to its building needs. The party was accompanied by President Schurman, Dean A. R. Mann '04, Comptroller Bostwick, and Superintendent Curtis of the Buildings and Grounds Department. They had an opportunity to see the congested conditions and also the lack of adaptability of some of the buildings to the present requirements. The entire party was entertained at luncheon in the home economics department.

The competition for the fifty dollar prize for the best play to be presented in the Student Kermis for Farmers’ Week was won by Russell Lord. Four plays were submitted to the committee of judges which consisted of Professors G. W. Herrick, R. H. Wheeler, Dwight Sanderson, Blanche E. Hazzard, and A. B. Recknagel. Honorable mention was given the play written by Edith M. Rulifson, entitled “One Hundred Per Cent American.” The winning play is entitled “All Thumbs.”

Harry Whitney, of New Haven, Connecticut, capitalist, hunter, and explorer, is registered in the winter course in agriculture. He has killed every species of big game in North America and has taken
'89 B. S. A.—Hoxie Wilber Smith is superintendent of the country branches of the Borden’s Condensed Milk Co. His address is Cuba, Allegany County.

'90 B. S. A.—William Webster Root is teaching chemistry at the Chicago Manual Training School.

'91 B. S. A.—Clarence Wentworth Mathews is professor of horticulture at the Kentucky Agricultural Experiment Station, University of Kentucky. His address is 660 Limestone Street, Lexington, Kentucky.

'95 B. S. A.—G. Harold Powell is general manager of the California Fruit Growers Exchange.

'95 B. S. A.—R. H. Pettit is professor of entomology at the experiment station in Michigan.

'95-'96 Sp.—Horace J. Wells is farming at Riverhead. His address is 99 Sound Avenue.

'99, '03 Sp—C. A. Lueder is teaching in the West Virginia Agricultural College. His address is 152 North Front Street, Morgantown, West Virginia.

'99, '01 Sp.—Harry E. Crouch is manager of the Albany County Farm Bureau. His office is at the Court-house.

'99, '00 Sp—David Johnson Lybrook is treasurer and general manager of the Reynolds Lybrook Farms Co. His address is Winston-Salem, North Carolina.

'99 B. S. A.—Charles Holsted Yates is developing and running a twenty-five thousand acre wheat farm near Cocoran, California, with title of managing director. His address is Los Angeles.

'00 B. S. A.—Franklin Sherman is chief in entomology in the State Department of Agriculture and the agricultural experiment station, Raleigh, North Carolina.

'02 B. S. A.—Andrew Gilbert Lauder is partner of Nelson and Lauder, chemists. His address is 45 North St., Binghamton.

'03, '04 Sp—Adam S. Hewetson is engaged in orange growing in Riverside, California. He is manager of the Pachappa Hill Groves.

'04 B. S.—Grace Chapman was married to George Darrow in August. Mr. Darrow is in the Department of Agriculture in Washington, D. C., where they are now residing.

'04, '07 Sp—Wilmer W. Bassett is proprietor of the Florida Nurseries of Monticello, Florida.

'04, '07 Sp—Lewis J. Elwood is engaged in farming and beekeeping at Fort Plains.

'05 B. S.—Hayes C. Taylor is farming at Embreeville, Pennsylvania.

'06, '07, '09, '11 Sp.—James G. Cochran is agricultural assistant on a twelve thousand acre camphor plantation in Florida owned by the DuPont Powder Company. His address is Green Cove Springs, Florida.

'06 B. S. A.—Fred Eldred Pick is county agricultural agent for Berkshire County, Massachusetts.

'06 B. S. A.—Professor Charles F.
Shaw of the University of California left Berkeley on November 5 to attend the National Drainage Congress in St. Louis, the American Association of Agricultural Colleges and Experiment Stations in Chicago, and other meetings in Washington, D. C.

'06 B. S. A.—Edward Manfield Swiggett is teaching agriculture and science at the Stephenson Training School, Marinette, Wisconsin.

'08 B. S. A.—Andrew W. McKay is specialist in marketing in the United States Department of Agriculture.

'08 B. S.—John Vincent Jacoby is farm manager of a poultry farm near Columbus, Ohio.

'08—C. B. Tillson recently resigned his position as farm bureau manager of Clinton County to accept the position of county agent of Barnstable County, Massachusetts.

'08, '10 Sp.—William H. Chandler, Jr., is operating orchards in Delaware and Pennsylvania for the W. H. Chandler Co., Scranton, Pennsylvania. Part of his time is spent in buying and selling fruits and produce for this company.

'08, '09 Sp.—Herbert L. Seamans of Herndon, Virginia is in the lumber and timber manufacturing business. In conjunction with this work he is also developing a farm of his own.

'09 B. S. A.—Sherman Preston Hollister is assistant professor of pomology and extension horticulturist at the Connecticut Agricultural College.

'09 B. S. A.—Hart I. Seely is president and manager of the Spencer Glove Co. His address is 450 Pennsylvania Ave., Waverly.

'10 B. S. A.—Wm. H. Marcussen is director of laboratories of the Borden's Farm Products Co., New York. His address is 63 Vesey Street, New York.

'10 B. S.—Ralph Rodney Root is senior member of the firm, Root, Reeves and Harris, landscape architects. His address is 159 N. State Street, Chicago, Illinois.

'11 B. S.—Anna Eliza Jenkins is scientific assistant in the United States Department of Agriculture, Washington, D. C. She writes that during the last two years she has been working on an apparently new rose disease, the investigations of which have been published in the Journal of Agricultural Research.

'11 B. S. A.—Arthur Lee Thompson is part owner of Thompson's Dairy at 2012 11th St., Washington, D. C.

'11 B. S.—Lydia Frances Humphreys is dietitian at the university hospital of Augusta, Georgia.

'12 M. S.—Alfred Atkinson, professor of agronomy and crop soil expert of the Montana State College and United States food administrator for the state of Montana, was elected president of the College on July 7. He graduated from Iowa State College in 1904. He received a leave of absence from the Montana State College in 1911-1912 and came to Cornell where he received his master's degree in June 1912.

'12 B. S.—James Clifford Otis is county agent of Windsor County, Vermont.

'12—Albert White is with the Horace Waters Co. of New York City, makers of Waters Planos. He may be addressed at 134 Fifth Avenue.

'12, '13 Sp.—Francis L. Greene is farming at Amsterdam.

'12, '13 Sp.—Adolph Anderegg is operating a farm at Rome.

'13 B. S.—Alfred C. Hottes is assistant professor of horticulture (floriculture) at the Ohio State University.

'13 B. S.—Leonard W. Kephart is scientific assistant in clover investigations. His address is Office of Forage Crops, United States Department of Agriculture, Washington, D. C.

'13 B. S.—Orrin M. Smith is teacher of biology and chemistry at Schoharie State School of Agriculture.
'13 B. S. A.—George L. Stevenson is principal of the Vermont State School of Agriculture, Randolph Co., Vermont.

'14 D. V. M. — Harrison V. Baker who for the past two years has been with the Veterinary Corps with rank of Captain received his discharge September 2. He has resumed the practice of veterinary medicine at Hamburg.

'14 D. V. M.—A daughter was born on August 20 to Mr. and Mrs. J. Stanley Clark, 4526 South Twenty-second St., Omaha, Nebraska. Clark is engaged in virus, serum, and toxin inspection work with the Bureau of Animal Husbandry.

'14 B. S.—Dudley Alleman was married to Miss Irene Simpson, of Maryland, in June.

'14 B. S.—R. S. Walker, formerly assistant farm bureau manager of Cayuga County, is taking D. F. Putnam's place as manager of the Madison County Farm Bureau.

'15 B. S.—Mr. and Mrs. Herman C. Smith are running a new cafeteria at 61 State Street, Rochester. It is called the City Cafeteria, and is run on the same plan as the City Cafeteria at Ithaca, which they have been managing for the past few years. Their address is 1175 Highland Avenue.

'15 B. S.—Helen Comstock is in Dover, Delaware.

'15 B. S.—Gertrude Blodgett, formerly engaged in extension work in the State of Delaware, is now attending New York University and is specializing in Extension for Department Stores. She is planning to enter that work in the near future.

'16—Clare Wolston of Pittsford was recently married to Josephine Hart of Canandaigua. They are now residing at Pittsford where Wolston is operating a large fruit and potato farm.

'16 B. S.—Miss Helen E. Saunders is teaching biology at The Bishop's School, La Jolla, California.

'16 B. S.—A son was born on July 20 to Mr. and Mrs. Gilbert M. Montgomery of Glen Moore, Pennsylvania. He has been named Gilbert McKea, Jr.

'16 B. S.—Francis Grant Von M. Schleicher is chemist and director with the W. D. Wilson Printing Ink Company, Long Island City, New York. His address is 243 Nott Avenue.

'17 B. S.—Balthaser J. Koch is agricultural instructor in Alden High School, Alden.

'17 B. S.—Edward Frey is with the Firestone Tire and Rubber Company, Akron, Ohio. His address is 186 West Long street.

'17 B. S.—A. Frances Jansen is teaching home economics in Youngstown High School, Youngstown, Ohio.

'17 B. S.—Samuel H. Koslin is operating a farm in Rockland County. He is specializing in poultry.

'17 B. S.—William B. Eastman was married on July 4 to Miss Dorothy Louise McConnell, of Pierrepont Manor. They are making their home at Belle ville where Eastman is running a two hundred acre dairy and general crop farm.

'18 B. S.—Oliver Olson is managing editor of the Journal of Heredity. His address is P. O. Box 472, 11th St. Station, Washington, D. C.

'18 B. S.—Philip D. Flanner is with the Flanner-Steger Land and Lumber Company, of Blackwell, Wisconsin.

'18 Ex.—Oliver W. Holton has recently purchased the Twin Brook Farm, of one hundred and ten acres at Middletown, New Jersey. He intends to devote it to the propagation of game and ornamental land and water fowls, specializing in ring neck pheasants.

'18 B. S.—Herbert G. Steffins is in charge of the grain elevators at Funks Grove for the Funks Grove Grain Company of McLean, Illinois.

'18 Sp.—The marriage of Harvey C. Aldridge to Miss Bertha L. Bowerman took place on December 11, at Victor.

'18 B. S.—George L. Dawson and Miss Roberta Snider were married on July 5, at the home of the bride's parents in Geneva. Dawson is assistant superintendent of the Nestle's Food Company's plant at Walton.

'19 B. S.—Mrs. Chloe Curtis is managing the Forest Home Tea Room.
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DE LAVAL
Cream Separator
Early in 1920

There's no happier or better way of starting the New Year right than by making sure of a new De LAVAL, if you are either without a cream separator or are using an inferior or half-worn-out machine that should be replaced.

For three years now, thousands of those who wanted a DE LAVAL have had to wait weeks for it and many have had to buy a second grade separator. The demand has simply exceeded the possible supply, though more DE LAVALS have been made each year than ever before.

More and better DE LAVALS will be made this year than ever before—as many as available plant additions and skilled workmen can produce—but the demand gives every indication of being even greater still.

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Song of Late Autumn

Where have they gone?
The thrush, the rose, the gleam,
Of golden sunlight on the singing stream?
The flush or early dawn
Athywart the eastern hill,
Where have they gone;
Where have they fled,
The robin and the rose,
We ask at summer's end
And the flickering flakes they fly light
In the short, late autumn twilight
Seem to answer, Ah! who knows?
They are gone, but we have come,
White and light and frolicsome
Winter snows!

W. Prindle Alexander

This verse appeared in our December issue imperfectly set up, and thus impaired in beauty. It is reprinted here correctly.

WANTED!


A Two Acre Crop From One Acre!
The success of some crops depends wholly on the use of lime, other crops are greatly benefited. Just try lime on that acre you think unproductive, but be sure you get

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There's a big difference! Highest test, 95% carbonates. Finest ground—that's why it will show results this year—lunace dried—there is no waste. Get your order in early and shipped early—you don't want to be left at the last minute. Write now!

THE SOLVAY PROCESS CO.

Say Where You Saw It When You Write.
Gaining Time and Money with Goodyear Belts

The present-day trend of farming is all in favor of power equipment. Machinery is doing the work that yesterday was the portion of human brawn and animal muscle, and successful farming has become very largely a matter of economical employment of power.

Belts play an important part in the modern economics of agriculture. Time spent in breaking in a belt, in re-setting an engine, in re-hanging of belting, is money lost—for to nobody is time worth more than to the farmer. Power wasted in transmission is loss of engine efficiency and fuel value. Engine bearings burned by poor belt action are an expense in time, money and labor, all three.

Contrast the advantages of Goodyear Klingtite farm belts. They need no breaking in; they require no dressing. They conform to the pulleys, run freely, and hold with the grip of a true friction surface. Proof against rain and dew, there's no engine re-setting where there's a Goodyear Klingtite.

An example of time saving is furnished by the performance of a 100-foot, 7-inch, 4-ply Klingtite Belt in use on the Rock River Farm, the McCormick estate at Byron, Ill. The foreman credits a gain of two days in filling the four 14 x 40 silos this fall over the time it took last year to the uniform, trouble-free action of this belt.

Goodyear Klingtite Belts are standard quality construction. Unstitched, they wear evenly. There is no separation at the plies, no drying out. They last longer than ordinary belts—and they cost but little more in the first place. They are obtainable in all lengths for every power need on the farm—wood-sawing, feed-grinding, threshing, pumping and lighting.

Students and teachers of agriculture may find much of interest and profit about the function of good belting on the power-equipped farm in the Goodyear Mechanical Goods Encyclopedia. A request by letter to the nearest Goodyear Mechanical Goods Service Station or to Akron will bring you one.

The Goodyear Tire & Rubber Company
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Klingtite Belts
Hose - Packing
Goodyear
Made in U.S.A.
War's Aftermath in Rural France
(Continued from page 205)
Dame in Paris, giving the warning of an air raid.

Figures talk, but after all they are not always warm, living, and human. Dollars and cents can't picture the suffering of those who abandoned their homes in Baboef to flee from the Hun. Nor can words picture the courage they showed in returning to rebuild, only to be driven out a second time, and now they are endeavoring to reestablish a rural community. The village has had its share of men killed and maimed. Back of all the effort and courage of the peasants may be found the reason, not only why they have done what they have done, but also why France herself has held together during the struggle; it is found in the women of the country. The women of France have been given much notoriety during the war, much of it adverse, most of it biased. The real womanhood of France was too busy to be seen or heard, only here and there did it show itself as the result of its work came to the surface. And it was so in Baboef. The leading spirit of the village in its effort toward reconstruction was the wife of a French Army officer, Madam Paul Menget, mentioned above. With her own chateau in ruins and her property devastated, she spent the first three years of the war nursing in hospitals. In 1917 she returned with two other women of similar interest, to aid in the re-establishing of the village. When again driven out to flee to southern France, she spent her own time and resources journeying from place to place keeping up the spirit and hope of the villagers, finally getting them back after the armistice. In the dead of the past winter, 1918-1919, the three women devoted themselves to housing, feeding, and clothing the returning villagers, arranging for the tools, livestock, and seed for the coming season, unmindful of their own losses and the sacrifices the war had demanded of them. It is no wonder that the men of France fought

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Do you realize the enormous amount of nitrogen that is taken annually from American coal mines?

An acre of coal four feet thick contains approximately 72 tons of nitrogen. Twelve tons of this are recoverable as 48 tons of Sulphate of Ammonia. This is sufficient to top dress one acre of land at the rate of 100 lbs. Sulphate of Ammonia annually for 960 years.

Although the production of Sulphate of Ammonia has doubled in the last five years, one-half of the possible production from the coke now made is wasted every year through lack of by-product ovens. The wasteful beehive ovens now used in coking coal will be replaced with by-product ovens when there is sufficient demand for the by-products. This will be when the American farmers and agricultural workers realize the importance of conserving America's resources.

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There is no better carrier of nitrogen than Arcadian Sulphate of Ammonia. It is a low-priced ammoniate because it is a by-product of the American coke ovens.

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Sulphate of Ammonia is the well-known standard article that has done you good service in your mixed fertilizers for years past.

Arcadian is the kiln-dried and screened grade, made fine and dry for top dressing purposes. Ammonia 25½% guaranteed. Made in U. S. A.

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for their homes. And it is such as these that represent the true womanhood of France, rather than the conspicuous examples of Paris, of which the world already has heard too much and is all too ready to accept as typical of the woman of France.

If in this article the reader has gained a slight insight as to the enormity of the problem that faces rural France in her devastated regions, perhaps he will be a little less ready to forget the price France has paid for the world, a little less ready to criticize that nation because she has her own way of doing things, and it is hoped he will be a little more ready to feel a bit of the gratitude he should feel toward that nation on whose soil we made our fight together for a world in which decent living and the square deal might be possible.

The sonorous sound of the Lorelei is already abroad in the land seeking to lull us into forgetfulness as to the real criminal, upon whose shoulders the debt must fall to be paid. May the American love of the square deal and fair play keep our hearing true, our vision clear, and the issue straight!

A Fallacy in Health Propaganda
(Continued from page 219)

all deaths in our registration area and are much more prevalent in the city than in the country. These six diseases were the cause of 771.8 deaths in each one hundred thousand of the city population in 1917 but of only 588.1 in each one hundred thousand of the rural population.

In view of the facts given above I cannot understand how it is that many people persist in maintaining that the city is healthier than the country. If they mean that the city is doing more for its inhabitants thru public health agencies than the country, their contention will be granted at once. When, however, they make deductions applying to the whole population from facts applicable to only a small section of it, I protest.
CASE—The Tractor with Strength that Backs its Power

One of the outstanding features of superiority of the Case 10-18 Tractor is the rugged strength of its construction. Now, bear in mind the difference between Strength and Power.

When you think of the Tractor you have, or the Tractor you ought to have, you probably consider it in terms of power. Right!—as far as it goes. The proper proportion of power to work is an absolute essential to economy and efficiency of Tractor operation. But tractor Strength, as embodied in the Case is the factor that stands between you and repair bills and the more serious losses due to breakage or delays. For instance, the frame of the Case 10-18 Tractor is cast in a single piece. In this one casting are fitted the bearings for transmission, rear axle and motor. Obviously, bearings, shifting and gears cannot get out of line. Once in place, they are in correct alignment throughout the life of the tractor.

Other Features of the Case 10-18 Kerosene Tractor

Four cylinder motor, mounted crosswise. Eliminates bevel gears, chain or worm drive.

Simple and accessible clutch, pulley mounted on crank shaft—where it belongs. It is on the same side with the steering gears making it easy to line up with belt driven machinery.

Automatic control of motor temperature assures fuel economy.

Cut steel gears running in oil and dust-proof throughout.

Hyatt Roller Bearings.

Worm-driven fan with friction safety clutch.

Two speeds: 2½ and 3½ miles per hour.

The Case 10-18 Tractor will most economically handle such work as operating a 2-bottom plow (as illustrated); 22' shoe grain drill; two 6 ft. binders; 8 ft. double-action disc harrow; the largest manure spreader; Case 20x28 thresher with feeder and wind stacker; feed mill, or any other machinery of similar power requirement. Write for booklet illustrating complete details of Case 10-18 construction. It will acquaint you with the special advantages of the Case 10-18 and enable you to judge all tractors with a new understanding. Free, on request—a post card will bring it.

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NOTE: We want the public to understand that our plows are NOT the Case plows made by the J. I. Case Plow Works Co.
A Letter on the Subject of "Liberalizing Agriculture"

Editor Cornell Countryman:
Your editorial of the December issue is most interesting as evidence, little needed, on agricultural college tendencies of the present. As a college man who took one third of his work in Arts and nearly all in the study of the history of man with relation to his economic conditions. I have always felt that both should be combined in college work, as in every other occupation of man. This of course excepting such occupations as farming in the United States, Egypt and China, where the farmer must think only of the useful if he would survive.

Theoretically, the useful and the beautiful should be combined in every individual. As a matter of cold, hard facts we must admit that with the struggle towards aristocracy and caste system in every nation the beautiful is too often admired, not for its beauty, but because the possession is the social proof that its owner is by wealth or caste able to force a lower class to produce sufficient of the useful for both classes. The present growth of caste among agricultural college professors is nothing new. So far from being a result of the war, it is as old as the human race. The contempt of the professor of Greek for the scientist, of the "pure" scientist for the unfortunate teacher in Farm Crops and of the latter for the extension lecturer is passed on by the last to the farmer. As the farmer is now at the bottom of our caste system, as recognized by Wilson, he must have no choice except to more or less cheerfully pay the taxes necessary to support the great proportion of scientists who scorn to touch his problems because as one Cornell department head stated "That proposition is a practical one and I will not allow my department to work excepting on scientific research." He has been fired.

Daniel Dean
Dec. 16, 1919
Nichols, N. Y.
“Happy as a Lark!”—Pete Robinson

“I am happy as a lark now, since I got my Perfection Milker,” says Pete Robinson. “I have used two different kinds of milking machines but I find the Perfection superior to both. The construction of the teat cup, the manner in which it draws the milk, the small amount of vacuum required and the adjustment to suit different cows puts the Perfection in a class by itself. In my opinion there are only two classes of milking machines—The Perfection and all others.”

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Perfection MILKER

Tell Advertisers Who Introduced You
Progressive or Complacent Agriculture?
(Continued from page 211)

The profit from the use of commercial nitrogen on fields, crops, etc.” Nothing in what has appeared in the Farm Journal articles justifies such a distortion of my doctrines. My own statements were clear, unequivocal, incapable of being twisted so as to mean what is stated above. And over and over again I have stated plainly that nitrogen failed to pay its cost in every case cited in the Ohio and Pennsylvania bulletins. If that means anything it means that nitrogen never made a profit. Consequently I must decline to father this precocious bantling exhibition by Professor Worthen.

We are in a serious man-size discussion of the fertilizer question. The whole matter is being threshed out in various parts of the country. It seems to be in perfectly competent hands so far as my opponents are concerned; they play the game straight. The outcome of the discussion going to have a vital effect on our farming everywhere. There is no excuse for mis-stating the issues. The issues must be kept clean and straight; and those who cannot or will not do so had better keep to the side lines. If the discussions now running in the farm papers, or any proofs offered, develop the need to modify or abandon the whole or any part of the new doctrines, I shall not hesitate to do so publicly. But I shall strike as hard as I can against whatever befogs or misstates the issues.

Campus Notes
(Continued from page 219)

photographs of the larger animals in their own haunts. There are at present in the Bronx Zoo in New York, several species captured by Mr. Whitney. He sailed for the Arctic on the “Roosevelt” with Peary, but later left the party with a company of Eskimos and went on a hunting trip into the heart of the Arctic for the purpose of getting Northern game. He was the first sportsman to

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One dairyman who feeds International Special Dairy Feed in place of wheat feeds saves approximately $50 per month on a herd of 50 cows, and gets more milk. What would a saving like this mean to you? Don’t envy the extra profits others are making. Use International Special Dairy Feed and get 100% milk flow from your cows.

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Every day brings us letters from dairymen praising the high quality of this famous ration. These letters contain such statements as “It produces more milk at less cost,” “Won Gold Medal,” “New, found its equal,” “Got more milk than with any other feed.” Statements like these point the way to bigger profits from your herd.

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Write Home, “Sell the Horses”

Tell the folks at home to sell the extra horses now and save the feed—that when Spring comes a Cletrac will work faster, longer, and at less cost—that the Cletrac really takes the place of horses.

It isn't a tractor that shirks the unhandy jobs in tight corners and sticky places. It goes anywhere a team can work—turns short—has plenty of power left to pull a profitable load besides "making the grade" or crossing soft ground. Burns kerosene, too.

You know that any tractor runs better after it's worked in—after the operator gets used to it—and light work the next few months will fit both man and machine for fast, hard work when the rush comes.

Give the folks the benefit of your foresight. Write us for our booklet, "Selecting Your Tractor," or write them at home to ask a Cletrac dealer for it.

The Cleveland Tractor Co.

19123 Euclid Avenue, CLEVELAND, OHIO

Largest Producers of Tank-Type Tractors in the World
kill the musk oxen. This expedition was during the years of 1908 and 1909. A year later Mr. Whitney and Mr. Paul Rainey made another trip to the Arctic on which Mr. Whitney took several hundred photographs. He also has written a book, "Hunting with the Eskimos." Mr. Whitney says he expects to buy a farm after leaving here.

The Kreisler concert, one of the University Pre-Festival series, given in Bailey Hall December 10, was largely attended. A mob who claimed they represented the Ithaca post of the American Legion succeeded in cutting the light wires to the building, necessitating the rendering of part of the program in the dark. There was no confusion among the audience, however, and the intruders were dispatched down the Hill by a guard of students.

The new Cornell Advanced Registry Poultry Testing station was started December 1, and includes over three hundred birds from about forty breeders in the State.

Professor Kent of the poultry department is training a class in poultry judging to form a team to meet teams from New Jersey, Connecticut, Massachusetts and other state agricultural colleges at the New Jersey State Fair, Trenton, New Jersey. The birds will be judged for both production and exhibition.

On December 6 Agriculture won the first game in the Inter-college Basketball League. The Ag. team beat Sibley 33 to 21. The other games in the series are with Civil Engineering on December 15; Veterinary, January 10; Law, January 20; Chemistry, January 26; Architecture, February 23; and Arts, March 6.

Professor R. W. Reese of the pomology department left here December 5.

---

Here's a ration for practical dairymen with Formula printed on every tag.

"READ THE TAG DAIRY FEED"

In considering this Feed, keep these figures in mind: Total Digestible Protein 18.50%. Total Carbohydrates 56.65%; and Total Digestible Nutrients 73.65%.

THE H-O COMPANY
Feed Department, BUFFALO, N. Y.

THE H-O COMPANY
48 State Street, ALBANY, N. Y.

Members U. S. Food Administration—License No. G. 12996
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John J. Campbell, Eastern Sales Agt., Hartford, Conn.

---

GOING GOOD BUT A LITTLE THIN YET

We want more readers, so that we can afford to print more pages, and keep our subscription price as it is.

Last month we increased our campus circulation 25%. That is what we want to do throughout the State.

Send us five new subscriptions and we'll extend your subscription two years free of charge.

More Subscribers Means a Bigger "Countryman"

Say Where You Saw It When You Write.
“He’s the Best Farm Hand We Ever Had”

Haven’t you often heard your father say that about one farm hand—that “old reliable” who is always on the job, doing more and better work than any of the others?

If your father knew that he could get all the farm hands he needed, each of them as good as that “best” one, he would grab at the chance wouldn’t he?

When you begin operating your farm, after leaving school, you will hire fewer farm hands than your father does, but you will buy more farm machinery. You will have an opportunity that he didn’t have in hiring labor. You can be sure of reliability in all of your implements and machines.

The John Deere line is like a complete force of reliable farm hands. It is comprised of an implement for practically every farm operation. It has been a leader in quality for over three-quarters of a century. The success of the whole line is due to the high quality for each unit in the line.

Be sure to investigate the John Deere Full Line before you begin your career as a farmer. You will want the uniformly high quality that it insures.

John Deere
Moline, Illinois

Tell Advertisers Who Introduced You
to spend a week or two in Virginia and West Virginia, looking over the apple and peach situation. E. H. Anderson '09, Agricultural Agent for the New York Central Railroad, accompanied him.

E. E. MacLain, a graduate of the Alabama Agricultural College, is instructing in extension teaching here at the College.

T. L. Martin, who was an instructor in the department of soil technology during the past year, is now principal of schools at Hinkley, Utah. He also has charge of the drainage work in that county.

W. I. Myers and E. G. Misner, formerly assistant professors in the farm management department, have recently been appointed professors.

Professor K. J. Seulke, of the animal husbandry department, was the speaker at the second lecture of a series being given before the Veterinary Forum. He spoke in the lecture room of the James Law Hall, November 21, on "American Show Ring Practices."

Since the December issue went to press we have received the following letter from H. L. Stafford, the author of "Advanced Registry for the Business Dairyman": "Since the article was written Arnold and Stafford and H. B. Stearns (a short-course Cornell 'Aggie') have purchased a new herd sire from A. C. Hardy of Brockville, Ontario. He is a grandson of May Echo Sylvia and a truly magnificent animal. We are all very proud of him." Mr. Stearns was registered in the winter course in agriculture in 1909-1910.

W. L. McAtee of the United States Biological Survey gave the second of the series of wild life conservation lectures December 10, in Bailey Hall. His subject was, "The Food of Wild Ducks."

---

ENSILAGE CORN

Money invested in ensilage seed corn will bring greater returns than money invested in any other feed. We have Northern Grown seed that combines large yield with early maturity.

Order now

West Branch Sweepstakes West Branch White Cap

West Branch Seed Corn Growers’ Association

Williamsport Pa.

Tell Advertisers Who Introduced You
The Successful Tractor

must have provision to handle with equal advantage every drawbar and belt-power task on the farm.

The Titan 10-20 Kerosene Tractor has:

A drawbar with a wide range of adjustment both up and down and sidewise so that it will pull a plow, harrow, binder, wagon or any other machine or implement with equal advantage.

A friction-clutch pulley, so placed that the tractor can be backed into the belt quickly; so placed, too, that the belt does not drag on the ground nor rub against any part of the tractor. Pulley has a wide face and broad diameter to insure against belt slippage.

A throttle governor that regulates the fuel to the load variations — no one required to adjust fuel when engaged in belt work.

If you are interested in advanced agricultural engineering practice let us tell you more about the Titan 10-20 which is the final expression of fourteen years of continuous tractor manufacturing experience and a thorough knowledge of all farm requirements gained through almost 90 years of general farm-machine building experience.

INTERNATIONAL HARvester COMPANY
CHICAGO OF AMERICA INC. USA

Say Where You Saw It When You Write
Won't you use Avalon Farms Hog-Tone if it increases your profits?

You're farming for profit. If Avalon Farms HOG-TONE increases hog gains so that it pays for itself and shows a big profit on the investment, HOG-TONE, sooner or later, will become the standard hog treatment on your farm.

Thousands of America's leading farmers use HOG-TONE. They made the 60-day test under the guarantee, "If you're not satisfied, your money back without argument."

Starting on this basis, successful hog raisers in all parts of the country have become steady users of HOG-TONE.

Why don't you try HOG-TONE?

Easy to feed—and you pay nothing unless satisfied.

This Coupon Brings 60-Day Free Trial Treatment

W. O. Gandy, President
AVALON FARMS COMPANY
335 West Ohio Street, Chicago, Illinois

I have— hogs. Ship me immediately (State Number)

Name ........................................ (Please Print Name)
P. O. ........................................
R. R. No. .................................... State
Shipping Point ................................
Name and Address of my Druggist ........................................
The Making of a Proper Milk Ration

Uniform quality through and through is what counts in making a milk ration. The milk-making elements must be distributed evenly throughout the feed if your cows are to be properly nourished at all times.

You can insure against the dangers of improperly mixed feeds and also against off-quality grains by adopting

**Purina Cow Chow**

as your standard cow ration. Every ingredient in this perfectly balanced ration not only meets the test of quality, but is also distributed in just the right proportion to produce the best results in milk-making. Quality of ingredients, plus accurate measurement and thorough mixing, combine to produce a feed which increases a cow's milk flow and maintains it at a maximum.

Purina Cow Chow is sold in the better class of feed stores. The Purina dealer is a man in whom you can place absolute confidence. If you have difficulty in procuring Purina Cow Chow, write to

**Purina Mills**

Ralston Purina Co., Prop.
St. Louis, Mo.

Sold in Checkerboard Bags Only
EXCLUSIVE FEATURES:
1. Does all field work including cultivating and harvesting.
2. Both tractor and implement operated by one man.
3. Tractor and implement form one unit.
4. Operator sits on implement at center of all controls of tractor and implement.
5. Operator sees his work. "Foresight is better than hindsight."
6. Tractor power in front of work, operator behind it.

EXCLUSIVE RESULTS:
1. No duplication of any work by horses.
2. A saving in labor.
3. Entire outfit turns short, backs and makes fence corners produce.
4. Ease of operation.
5. Better work.
6. Power used as horses are used.

The Power of a Correct Principle

The principle of doing all field operations with one man sitting where he can watch his work is correct, or farming has always been done backward, and the operator would always have ridden or led his horses instead of driving them.

The Moline Universal Tractor places the power of nine big horses where the horses stood—is driven just like horses are driven, from the seat of the implement, and hitched up to the implement just like horses are hitched.

Note—If desired you can use the "drag behind" or horse drawn implements you now have the same as with other types of tractors.

See your Moline Dealer or write our nearest branch for full information.

Moline Plow Company, Moline, Illinois

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A Natco Silo
Costs a Little More—
Lasts a LOT Longer

It does cost more to build with everlasting Natco Hollow Tile than with materials that soon decay, but it's far cheaper in the long run. A Natco Silo will not rot, burn, burst or blow down. It has no hoops to tighten, needs no painting and seldom any repairs. You can pass a Natco Silo to your children practically as good as new. Or the farm will bring more should you wish to sell.

Farmers who figure costs closely are using Natco Hollow Tile for silos, dairy barns, hog houses, dwellings, etc. Our book "Natco on the Farm" describes and pictures many such uses. Send for it today—no charge.

Ask your building supply dealer to quote you on Natco Hollow Tile.

National Fire Proofing Company
1203 Fulton Building
Pittsburgh, Pa.

23 Factories assure a wide and economical distribution

Foundation and bottom courses of a Natco Silo. Note the still air spaces and the steel reinforcing bands.
Two Words That Spell PROFIT
For Dairymen

Do you know that 90% of the dairy cows of America are underfed?
Do you know that nine out of every ten dairy cows would be BETTER producers if they were fed the proper ration to the limit of their capacity? Try this experiment and see for yourself the increased milk production you will get—begin feeding

SCHUMACHER FEED
AND
BIG "Q" DAIRY RATION

to your milking herd, two parts Schumacher and one part Big "Q," in the same amount you usually feed, together with ensilage or other roughage. After three or four days, begin increasing the amount 1 pound per cow at each feeding and keep increasing as long as each cow increases her milk production, until she has reached her maximum flow. Some of your cows will handle more feed than others. Watch the results on each individual cow and feed each cow to the limit—the increased milk production will repay you many times the cost of the additional feed.

Mr. Fred Lehman, of Carlisle, Pa., proved that maximum feeding increased his profits $85.30 during April from 4 cows.

SCHUMACHER FEED and BIG "Q" Dairy Ration fed in combination will solve your feeding problem, and if fed as directed will insure maximum production and profits.

These feeds make feeding easy, economical and accurate. SCHUMACHER FEED (the carbohydrate ration) and BIG "Q" (the high quality protein ration) have unusual palatability, high digestibility and nutrition. Thirty-five World's Champion Dairy Cows have made their World's Records with these feeds—undeniable proof that they are the greatest dairy feeds in the world. Your dealer can supply you.

Write for FREE Folder, "Long Time Milk Production and How to Get it"—also tells how to feed dairy cows during entire lactation periods for best results.

The Quaker Oats Company
Address: CHICAGO, U. S. A.

Say Where You Saw It When You Write.
A NUMBER of the most successful dairymen testified before the Federal Milk Commission, which has been fixing the price of milk from the producer to the consumer, that they had cut down their costs of production by feeding Corn Gluten Feed and wheat bran freely in grain rations they mixed themselves.

The Commission must have been convinced by what these representative good dairymen had to say about different feeds and the economy of a man's mixing up his own rations.

For, in arriving at the price it thought the dairyman ought to get for his milk, the Commission based its calculations on home-mixed rations in which Corn Gluten Feed was a principal basic ingredient.

If you have not yet fed Buffalo Corn Gluten Feed, if you want to know more about how to feed it, and your dealer doesn't happen to have it, write us—giving his name.

Corn Products Refining Company

New York Chicago

THE FEED THAT MAKES THE YIELD
How Does Your Present Separator Compare with the SHARPLES?

Has your present separator from 20 to 40 troublesome "discs," each of which must be washed after every using? These are no discs in the Sharples tubular bowl—only one small piece—washed in a jiffy!

Has your present separator a knee-low supply tank that eliminates lifting and backstrain? Has it an automatic once-a-month oiling system? Sharples is the only separator that has.

Most important of all—

Can you, with your present separator, turn slow if you're hot and tired, or fast if you're in a hurry, and still get all the butterfat—butterfat of always-even density?

You cannot answer one or all of these questions without proving positively the mechanical superiority of the

SHARPLES SUCTION-FEED CREAM SEPARATOR

"Skims clean at any speed"

The Pioneer American Cream Separator

Write today to nearest office for catalog

Over 2,425,000 Sharples Separators in Daily Use

THE SHARPLES SEPARATOR CO., West Chester, Pa.

BRANCHES: CHICAGO SAN FRANCISCO TORONTO

There are no substitutes for dairy foods
FARMERS' WEEK
The Power of Electricity in Transportation

Electricity has leveled out the Continental Divide. The steam locomotive, marvelous as it is after a century of development, cannot meet all of the present demands for transportation facilities. Its electric rival has proved to be far superior.

On the mountain divisions of the Chicago, Milwaukee & St. Paul Railway—the world's greatest electrification—giant electric locomotives today lift an ever increasing freight tonnage over the mile-high Rockies and also make traveling clean and comfortable. They utilize the abundant energy of distant waterfalls and then, by returning some of this power to the trolley, safely brake the trains on descending grades. And their capabilities are not impaired by excessively cold weather when the steam engine is frozen and helpless.

Electricity is the power which drives the trains of New York City's subway and elevated systems. It operates the locks and tows the ships through the Panama Canal. It propels the Navy's latest super-dreadnought, the New Mexico. Electric mine locomotives have replaced the slow-moving mule and the electric automobile has also come to do an important service. Such achievements were made possible by the extensive research and manufacturing activities of the General Electric Company.

Electricity has become the universal motive power. It has contributed efficiency and comfort to every form of transportation service and in this evolution General Electric apparatus has played a large part—from mighty electric locomotives to the tiny lamp for the automobile.

General Electric Company
General Office
Schenectady, N.Y.
Sales Offices in all large cities
Farmers' Week at Cornell

Because of current interest in all affairs of farm and home;

Because of greatly increased numbers of students in the regular courses and the winter short course;

Because of the present appreciation on the part of the farmer of his place and power in the affairs of the nation;

The New York State College of Agriculture expects and is planning for the biggest and best Farmers' Week in the history of the institution.

Of course you will be there too.

Ithaca, New York  
February 9-13, 1920
What Kind of a Store Would You Run?

It is easy to be displeased or dissatisfied. A poorly cooked meal will make us that way. It is a different matter for one to make a constructive criticism. We want your criticism and the suggestion for improvement. The Co-op is your store.

GET A COPY OF AGRICULTURAL BOOKLIST

A farmer or a student in agriculture is interested in large returns from farming. Few men make money from a business about which they know little. Read books. It will help. Our Agricultural Booklist is free. It gives good books.

Cornell Co-operative Society

Morrill Hall Ithaca, N. Y.
Fruit growing as a part of a well developed farm business has received special attention on this number.

CONTENTS

FEBRUARY, 1920

Frontispiece—Isaac Phillips Roberts.................................................. 258
Why Is Farmers’ Week?—John L. Stone................................................. 259
Dwarf Fruit and Variation—Norman H. Grubb.................................... 261
Let It Blow!—A. B. Genung................................................................. 263
“What Shall It Profit a Man . . . .?”—E. M. Parrott................................. 266
Apples That Pay Dividends—F. A. Salisbury........................................ 267
Large-Scale Dehydration—E. D............................................................. 269
Tractors Versus Horses—A. F. Head.................................................... 270
How to Prune and Why—W. H. Chandler............................................ 272
Take Home the Facts... ................................................................. 274
Farm Home......................................................................................... 275
Editorials ............................................................................................. 276
Former Student Notes................................................................. 278
Campus Countryman........................................................................... 303

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Entered as second-class mail matter at the Post office, Ithaca, N. Y.
ISAAC PHILLIPS ROBERTS
(First Dean of the College of Agriculture)

Born of a farmer's faith and will
Is all that thrives on this peopled Hill.

Here is his farm and things still grow
From thoughts that he planted long ago.

Sturdy and square his buildings stand,
Their girders thrust in the good red land.

Farmers come from afar to find
Knowledge of earth and an ordered mind.

Then, with the wonder of wind and loam
Set in their hearts, they sow at home.
Why is Farmers' Week?  
Some Reasons for Its Origin and Growth  
BY JOHN LEMUEL STONE '74

THIRTEEN years ago the New York State College of Agriculture began holding the series of annual farmers' gatherings known as Farmers' Week. The ever increasing enthusiasm and, with the exception of the slight interference due to the war, the ever increasing attendance of the farmers mark this as among the most successful enterprises inaugurated by the College and make desirable the recording of a brief history of Farmers' Week from the beginning to the present date.

Not only at Cornell has the Farmers' Week idea met with favor but in all, or nearly all, the state colleges of agriculture and in many of the secondary schools of agriculture similar gatherings are provided for.

It is somewhat difficult to determine in what institution the Farmers' Week idea first took definite shape, but Iowa and Wisconsin were early in the field. Iowa traces the beginnings to 1900 and Wisconsin to 1904, but in both of these states the early meetings referred to were their Short or Winter Courses in Agriculture which afterwards assumed the character of the present day Farmers' Week. The Winter Course in Agriculture at Cornell was begun in 1893 and has continued without a break till the present
time. Its registration has run from 61 to 597 students and has always been a distinct enterprise from Farmers’ Week, which is attended by thousands.

At Cornell, Farmers’ Week is the outgrowth of the Agricultural Experimenters’ League of New York. In 1897 the extension work of the College of Agriculture was broadened, enlarged, and extended to the whole State, by legislation passed at Albany. Previous to this time it had been limited to work in horticulture and applied only to certain counties of the State. Among the lines of extension work then started were experiments, or demonstrations, with various crops, fertilizers, animals, and methods, which farmers were induced to undertake in cooperation with the College. Soon it became desirable to bring these farmers together so that the information acquired by one might, so far as possible, become the property of all. This led in 1903 to the organization of the Agricultural Experimenters’ League of New York. The meetings of this organization brought together at the College a considerable number of farmers each winter.

In 1908 the character of the meetings was broadened. Invitations were extended to all farmers irrespective of whether they were cooperative experimenters or not, and the occasion was designated as Farmers’ Week. The League continued to exist and for a time held meetings during Farmers’ Week, but the cooperative experiments decreased, owing chiefly to lack of funds to prosecute the work, and finally ceased as a college enterprise, passing into the hands of the county farm bureau agents who have greatly extended that work throughout the State.

One aim of the Experimenters’ League had been to serve as a bond between former students of the College of Agriculture who were engaged in farming throughout the State. Organization was effected with special reference to this function in 1910 under the name of the Alumni Association of New York State College of Agriculture.

At the beginning the Farmers’ Week program was chiefly made up of topics aiming at the increase of crop and animal yields. Many of the lectures were those regularly scheduled for the students in the College. A little later, group conferences led to the organization of clubs or associations of those interested in special lines and these association meetings have come to occupy a considerable portion of the program.

This year (1920) the following associations and conferences are scheduled: Alumni Association of the New York State College of Agriculture, New York Federation of Horticultural Societies and Floral Clubs, New York State Bean Growers Coöperative Association, New York State Potato Association, Cornell Dairy Students Association, Rural Education Conference, Homemakers Conference, Community Newspaper Conference, and Interchurch Conference of Village Ministers.

Very naturally the programs reflect the lines of discussion that have agitated the farmers’ minds during the years. Such themes as cooperation among farmers, marketing farm products, transportation, and selling direct rarely appeared in the earlier programs but they constitute a large part in the more recent years. During the war increasing production and conservation loomed large. The rural church, rural schools, and rural social questions have had considerable place in the programs throughout the period. Women’s work has been emphasized from the first as much as man’s.

As to methods of instruction, the lecture, of course, has always been much used, but there is a growing tendency to employ laboratory demonstrations, departmental, educational exhibits, practice periods, and round table sessions.

The interest manifested by the farmers has always been excellent and on many occasions could be described as intense. The criticisms offered have usually been wholesome and construc-
DWARF FRUIT AND VARIATION 261
tive, the enthusiasm contagious and in-
spiring. With many Farmers’ Week has become a habit.

The following statistical table gives a birdseye view of this, one of Cornell’s most successful enterprises:

GROWTH OF FARMERS’ WEEK

<table>
<thead>
<tr>
<th>Year</th>
<th>Attendance Registered</th>
<th>Estimated</th>
<th>Lectures Demonstrations and Round Tables</th>
<th>Contests speaking and Judging</th>
<th>Lab. Courses and Pract. Periods</th>
<th>Conventions and Conferences</th>
<th>Exhibits by Depts.</th>
<th>Enter- tainments banquets etc.</th>
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<td>—</td>
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</table>

Dwarf Fruit and Variation

What Our English Neighbors are Doing to Keep the One and Remove the Other

BY NORMAN H. GRUBB ’08

Fruit Experiment Station, East Malling, England

As the readers of The Cornell Countryman are doubtless aware, English fruit growers plant apples and pears very largely on dwarfing stocks, in order to secure quick returns and small, easily managed trees. The stocks used are the so-called “paradise” for apples, and the quince for pears. The chief subject of investigation at the East Malling Fruit Experiment Station has been the effect of different stocks on grafted fruit trees, and the possibility of adopting vegetative propagation in order to eliminate the variation of trees due to the use of mixed seedling stocks. When the work was started, in 1913, it was arranged that these dwarfing stocks, particularly the “paradise” types, should be studied there, while the “free,” “crab,” and pear stocks, grown from seed, should be studied at the other chief fruit research station, at Long Ashton, near Bristol.

It has long been well known that apple trees on “paradise” stocks show quite as much unevenness in their growth and fruiting as do trees on the free and crab stocks. This variation seems much more marked in English orchards than in America. One very commonly finds from twenty to thirty per cent of the trees in an apple orchard doing very badly; they generally bear heavy crops of small fruit, and fail to grow out into large, profitable trees. In the case of trees on the free and crab stocks this has naturally been ascribed to variation in the seedling stocks used. But why should the same thing be seen among trees on “paradise” stocks, which are presumably propagated vegetatively, and should therefore be uniform?

One of the first discoveries made at East Malling was the fact that there are nine types of “paradise” in more or less common use in England (besides others on the Continent), and that they are very badly mixed, few nurserymen having any clear idea of either the characteristics or the proper names of the several types. Some of the types, in fact, have no discoverable names. That these types vary in strength of growth
from the very dwarf French paradise to the strong English Broad-leaf, and that stocks as received from the raisers frequently consist of a mixture of three or four types, accounts for much of the unevenness seen in plantations on paradise stocks.

From the great difference in vigor of the various types of paradise,—some of the German types appear to be quite as vigorous as the average "free" stock,—it follows that the word "paradise" cannot strictly be applied to a dwarfing apple stock, but should be confined to those apples which root readily from stools or layers, and are, therefore, easily propagated vegetatively.

Investigation seems to show that there is no very high correlation between dwarf growth and ease of rooting from stools or vegetative propagation. One of the freest rooting of the English types of paradise, the English Broad-leaf, is also quite the most vigorous of all; and some of the very strong German types are also free enough in rooting to be very easily propagated from stools. It should, therefore be possible to find stocks strong enough for any purpose which can readily be grown from stools or layers, and in this way to eliminate the use of seedling apple stocks altogether, and thereby obtain much greater uniformity in our orchards.

The propagation of stocks true to type in quantities large enough to allow of the planting of trial orchards has taken so long that this work is still in its early stages. Already it can be said, however, that some of the stocks appear to render the trees worked on them much more liable to disease,—particularly canker,—than others. The extreme dwarfing effect of the French paradise is already very apparent, in both vigor and blossoming.

Investigation of the other stocks has not been carried so far as has that of paradise. Six or seven types of quince stocks have been identified, however, and are shortly to be tested. The various plum stocks are easily recognized, and have never been so badly mixed as paradise and quince stocks. The so-called "St. Julien" and "Black Damask" types prove to be seedlings, as are also most of the Myrobalan or cherry plum stocks. Cherry stocks of all classes are nearly always raised from seed, with great variation as a natural result. It is hoped to find types which may be propagated readily from layers or root-cuttings, and so eliminate the use of seedling stocks entirely.

In addition to the investigation of fruit stocks, a large series of double grafting experiments with apples has just been begun, with a view to studying the effect, if any, of an intermediate variety between stock and scion on growth, fertility, and character of fruit. This investigation was started several years ago, but as bought trees were used, no reliance could be placed on the kind or uniformity of the stocks, and the early work had to be abandoned and a new start made with trees known to be all on one type of stock.

Some interesting results have been obtained with black currants,—commercially one of the most important small fruits in England,—in grouping the varieties in common use, disentangling the confused nomenclature, and in the experimental use of manures and fertilizers. Work is also being started with raspberries, which are found to be often more or less mixed, with a view to raising true strains of the more important varieties for manorial experiments. With strawberries a study of strains within the variety is begun, combined with an investigation into the influence, if any, of the region or climate from which the parent plants came.

This station is devoted solely to research in fruit-growing. While this limits the field very much, the work already in hand is quite enough to engage all the resources of the station for many years to come. The problem has been, not to find questions needing solution, but to reduce the work to manageable proportions by eliminating those of less importance.
Let It Blow!

BY A. B. GENUNG '13

It certainly is a boisterous night. The snow is piled high and the telephone wires sing without a pause. The wind hisses through the spruce trees out in front of the house until we might almost fancy ourselves dwellers of some near-barren ground away up under the lonesome Arctic. A little while ago I looked at the mercury, and it was fourteen below. One look was a-plenty!

Well, let it blow. In here we are snug and tight and bright. The wood fire flames merrily. The wood is good body beech. My land grew it and my muscle cut it up. It warms and cheers me far better, I am sure, than any other fuel could. And those rosy Baldwins, and the hickory nuts from the tree in the northwest corner,—who else could relish them as I, who gathered them and stored them against such nights as this? Oh, we are snug and cozy. Isolated, perhaps, but pretty well self-sufficient.

I am primitive enough to crouch here and laugh in my cave, which defies blizzards.

I wonder if the well-springs of Romance don’t go back into such times as this? Man’s struggle to warm and clothe himself; to rear his family safely; to maintain himself strongly in the face of a stern world,—don’t these things get back toward the fundamental Romance of mankind? Anyhow, it all plays strongly upon some chord deep within most of us. Thrice blessed is the farmer whose life touches these primitive currents first-hand. Animal satisfaction, you may say, but there is more to it. Every country man or woman capable of thought or feeling knows in his or her heart that there is more to it.

What a night to sit and smoke and think! And how many thousand farmhouses there are in this land that shelter calmly-thinking men and women on nights like this.

These are boisterous times indeed. The whole world is a stormy place. What real American does not thrill that our great house is snug and our fires bright? At least, comparatively. Bad times, but we shall weather them; for we have the land, the fuel, the muscle, and the will to maintain ourselves strongly, no matter how harsh the storm.

This big home of ours is a much more enduring and substantial abode than some of the dwellers would try to make us think. America is no pasteboard and
tinsel affair; it is the stoutest, mightiest shelter that man has so far reared on this earth.

Our family is big; it is diverse. But we each have our work to do, and in the main we shall do it. Sooner or later we shall squelch mischief makers, or put them outside where they may seek other shelters professedly more to their liking. Eventually we shall clean out the house and it will be secure against every blast.

Meanwhile, during the cleaning, we must get about our work.

The farmer has his job cut out for him, and it is not all a path of roses, either. Sometimes I get good and tired of being told how much more blessed it is to produce than to consume! Patted on the head by one government official, maybe, while another around the corner damn me for a profiteer. All that sort of thing.

But, on the other hand, one big fact sticks out, and that is that I'm not a producer of foodstuffs entirely from reasons of altruism. In the long run, I'm growing things to sell because that's the way I make my bread and butter—and my Ford. I can't really quit when I get peeved at the world, any more than any other worker can, whose bread and butter depend on his labor. So, by and large, I must stand for the give-and-take of business, without indulging in any overdoses of self-pity. There's that side of it. The man who regards his farming as a business rather than a fate sleeps best nights, so far as that goes.

It is human nature—isn't it—that we should want our fair share in the family life? There is considerable doubt that our fathers and grandfathers on the farms did get their fair share. We want to sell our products for money enough to give us the vital things; a comfortable home, education for the children, and provision for old age.

When it requires organization to raise our buying or marketing efficiency—or even to impress the general community of our necessities, why then we shall have to organize. We have a case in point right here in the Dairymen's League.

We want good enough prices for our products to make farming a paying business. But profits in themselves are somewhat dependent on further factors.

In the first place, we must face the fundamental dictates of supply and demand. If we overproduce, then we must pay the piper. If we underproduce, then we must endure seeing more men enter our game until the pendulum swings. The big economic shiftings and adjustments pinch us now and then; and we shall save energy if we adapt ourselves forthwith, without reviling the rest of the family.

Then, in the second place, profit in business presupposes something. It presupposes certain efficiency in production. I must know how to handle my land, machinery, stock, fertilizer, crops, and all the rest of it. I must not only know how to do things rightly,—I must do them that way, at least a majority of the time. In the long run, the community will not pay me profits for inefficiency. The college comes in at this juncture,—and we in New York are strong for our College!

But with an even break so far as supply and demand go; with machinery unlogged by political price-fixing or corporate squeezing; and with an even chance for efficiency at our end,—we shall do our work in a way to make the family proud of us, and we will make a profit at it.

After that, what? Why, after that everything! We're just beginning in this land to work out the world's first real rural civilization. We American farmers, who sometimes feel a bit peevish, need only to take a bit of a squint back in history to feel braced right up. Or glance no farther back than the European farmer of to-day. Ask any soldier who looked over Western Europe how we fare here in contrast.

We will develop a rural life that will be the richest thing in the history of
civilization. You will say I am getting enthusiastic. No, but prophetic. Anyhow, it is quite easy to be a prophet on a night like this, by my warm fireside.

One thing we must have soon—some big leadership. It's a curious thing that out of all the vastness of this country's agriculture there has not come a great national leader. That's what we want badly, a great, big, commanding personality—a man whose feet are firmly in the soil, but whose head is well up where the broad vision is. American farmers need a single man who can strike the key note for every time. Think what strides we could take with such a man as Secretary of Agriculture, for instance. Or at the head of a great national college of agriculture. I should place that as one of agriculture's prime needs now—a strong, outstanding, human sort of man, a leader big enough to be a national figure.

But, of course, leadership is only one factor in the general onward march. In the final analysis, we must proceed individually. It is up to each of us out here in our snug houses to put through our own little part of the great family job. The time is ripe for work, and work without bickering.

And such a country, such a cause, as we have to work for! It is a pity that men like Lincoln and Roosevelt cannot come just a little oftener, just that we might have our Nation better interpreted to us. We do not appreciate America yet. Not half! For most of us do not yet understand her. We are only beginning to realize the tremendous wealth—material and otherwise—spread out here before us. Wealth wherewith to make a paradise, needing only strong, steady men and women to bring it forth.

Well, this gale will have to blow itself out. And we shall sit and think calmly, and keep our fires bright against its sharp, savage edge. For presently the sun is certain to shine; the earth will lie warm and fresh, ready for the new plowing.

Meanwhile, it is growing late. I suspect I shall have to put an oil stove down cellar for a little while to make sure my bin of potatoes doesn't freeze. One more Baldwin now. A final look at the mercury, and then a little trip out to the barn to see that things are shipshape.

Sixteen below! Good night!
EXPERIENCE: A Series of Personal Stories by the Best People in the State of New York—Men and Women Designated by their Farm Bureau Agents as Leaders in their Home Communities.

IV. "What Shall It Profit a Man...?"
A Preacher-Farmer's Lessons From His Work
BY E. M. PARROTT
Jogues Farms, Lake George, N. Y.

Farmers are dependable chaps. They have to be. A man who has fed stock and knows the imperative of milking time knows he cannot strike, no matter what his hours or his pay. If he lays in bed too long of a morning he will be vociferously reminded that his presence is demanded by hungry mouths not in the least bashful about asking for flowing troughs. While we are wondering how we will do if the coal runs short, and if steel nails cannot be had and where the next bowl of sugar is coming from, very few of us are really worried about enough American-grown food. While other industries have decreased production during the past year and all sorts of workmen will work only for a far higher wage, the farmer somehow looks cheerfully at the job that about half the human race neither can nor will tackle and buckles into it with relatively little regard for profits. We know he will get us food. He has learned from dipping in many a feed bin that he must feed not only the lower, but the higher animal life, and he has learned from many a weary supper-time the pleasure of a full day's work without counting hours. The necessity and the pleasure of work are part of the inheritance of the farmer, and they make him rich beyond computation. That is one reason why I like him, like to be with him and speak to him or for him when I am allowed.

It is what has kept me farming these fourteen years since I was given a country parish, and what makes me feel that it is in accordance with modern, as well as ancient, needs that a preacher of the gospel should get his illustrations from the soil and from the flocks and herds which have never ceased to teach the lessons of God and nature.

I began with a Jersey cow and she was a dandy. I tried Ayrshires to fit the Adirondack hills and they were fine. I liked them all and the grades I tried with them. I have had as many as forty at once. But when I began with Holsteins, big, kindly, of immense capacity and giving milk that all throw on as we never had on rich milk, I found my full joy, and in spite of all the disappointments I have had in farming, I never lose faith in what seems to me the highest development of animal life—the Holstein cow. I now have seventeen head. The best of them has averaged a little over 10,000 pounds for four years and made an A. R. O. test of 17 pounds of butter. Nothing wonderful, but I have great hope that when she refreshes in March at seven years of age she will go over 100 pounds of milk a day and 30 pounds of butter in a week. The only three cows that milked all last year with me averaged 10,331.41 pounds, in this cold climate where pasture at best is never too good.

I find that the more I do for my cattle and with them, the better I like them. This winter I am my own herdsman and have no steady help, and I am surprised to find how much more fun it is than when I had the varied experiences that come from wrestling with hired men.

The great trouble I have had is not
from help, but from something that ought to be more courageously faced than it has so far been; the dishonesty of breeders. If the Holstein cow had not been the superb animal she proves herself to be she would have been destroyed by her breeders. I have bought seven cows at first-class public sales, paying $1,755 for them in the ring. Of these, five have reacted to the tuberculin test, and the State and Federal veterinarians have confirmed my own strong conviction that at least three of them had tuberculosis when they were led into the sale. As these were all bought with veterinarians' certificates, I am convinced to my sorrow that there are a great many men who have sold sick ones knowingly and intentionally. If it had not been for the State's help I should never have had the heart to go on trying to build up an accredited, clean herd after my experience with sales. The one cow I bought from a herd privately was better than represented. It is my deliberate opinion that eighty per cent of the value of a cow is in the man back of her. Tuberculosis and abortion cannot be detected by the best of judges, and unless the man who sells tells all he knows about the cow's previous health conditions honestly, the most disastrous disappointments are possible.

Milk should be sold as near cost as possible. It is essential to life and should be within reach of everything that has life. Farmers ought not to get rich out of milk if they forever stay poor. Along with milk production we ought to take up a line of production that everybody does not have to buy and, therefore, that we can make into substantial profit. With egg production or with potatoes, both essentials, let's raise berries and sell 'em for all they can be made to bring. I'd like to cooperate with the Holstein in serving mankind; I'd like to make money selling fur.

Last year I crossed a purebred Karakul ram on twenty coarse-wooled native sheep and got twenty-three fine lambs. The skins were worth about $250. I'm trying it again this year and hope soon to show that there are some combinations that a farmer can work that it will make it possible for him to show a profit without running any risk of being called a profiteer.

V. Apples that Pay Dividends

A Summary of Business Methods in Orchard Management

BY F. A. SALISBURY

Phelps, N. Y.

FIVE or six years ago there were heavy plantings of apples, and the writer was not very optimistic over the future outlook for the apple industry. Since that time several things have occurred to change the situation. The severe winter of 1917-18 killed many trees and reduced the vitality of others. On many farms, in Western New York at least, other crops have been bringing better prices than formerly and the orchards have been neglected. Therefore, at the present time it seems to me that the apple grower who is willing to take care of his orchards need not fear over-production. There may occasionally be a year when there is over-production with resulting low prices, but in a series of years, I believe the fruit farmer will have as good financial returns as one growing other crops.

There is a good deal of satisfaction to a farmer in having good crops if they
are the result of his efforts to increase the fertility of his farm and control the diseases to which his crops are subject. The farmers of New York State who have been favorably situated for growing apples during the last fifteen years, and who have gone about it in a business-like way have, no doubt, made a greater success financially than has been made in any other line of farming.

To keep an orchard in vigorous, bearing condition it is necessary to maintain the fertility of the soil. It is very noticeable that orchards of low vitality rarely produce fruit in the unfavorable years when severe winters, late frosts, and wet weather affect the set of the fruit. Most orchards will bear fruit under favorable conditions, but what a fruit grower most desires is a crop in the unfavorable years, when the best prices are obtainable. A vigorous apple tree should hold its leaves into November. If the foliage has a yellowish cast along in August or September, the conclusion may be drawn that the drainage is poor or the fertility of the soil is low, if the trees were sprayed to keep the foliage healthy.

Our practice in newly planted orchards is to inter-crop with potatoes, cabbage, or corn for the first two or three years. We then seed to clover, cutting the clover and leaving it on the ground for soil improvement. This method is followed until the orchard is nine or ten years old, when inter-cropping is discontinued. At eight years of age most varieties begin to bear profitable crops, and it is not unusual to harvest from two to four bushels from a tree. In our orchards, after we discontinue inter-cropping, we generally cultivate one year, seed to clover, and leave it on the ground a year. We believe it is very important to maintain the supply of humus in the soil, and this is rather hard to do when the cover crop is plowed under early in the spring before it has a chance to make a good growth. When the trees indicate lack of vigor we apply stable manure, but with our cover crops we have not had to use much.

Of all orchard operations, spraying is undoubtedly the most disagreeable and the most carelessly done. In a spring like that of 1919 in this county, the amount of the crop depended on the right spray at the right time. It is in such a season that we have appreciated what the College of Agriculture means to us as fruit-growers. We have to look to the College for instruction as to the right sprays and the right time of application. In our orchards we make five applications: first, the delayed dormant with scale-strength lime-sulfur; second, "pink" spray of summer-strength lime-sulfur, nicotine, and arsenate of lead; third, after the petals fall we repeat number two; fourth, ten to fifteen days later with lime-sulfur and arsenate of lead; fifth, about August 1 with lime-sulfur and arsenate of lead for the fungus and worms that are likely to attack the apples late in the season. The success of spraying depends on the thoroughness of it.

In pruning the orchard we give our chief attention to removing cross limbs and keeping the suckers out. We do very little cutting until the trees come into bearing, and then never cut out large amounts of wood any one year. If twig blight is prevalent, it is important to break off, early in the season, any suckers that may start, as the blight attacking the suckers may follow down and get into the main branches, causing bad canker. Twenty Ounce are very subject to blight, but by following this method we are able to keep it from the bodies of the trees.

We usually pack our "A" grade fruit in barrels, and we believe that the apple-grading laws are the best measures that have been enacted for the fruit industry. The consumer can now get an honestly packed barrel of apples, and is more likely to be satisfied and consequently become a larger consumer than under the old method.
Prior to the present century, "evaporated" food products were accepted as a joke or as stern necessity. The boarding house prune was a mainstay of American humor long before Ford was born. On the other hand, dried corn, dried fish, dried apples, and "jerked" beef associated themselves with pioneer conditions where nothing better could be packed or procured. War times have always been boom-times for food-drying industries. The most recent war was no exception, but did differ in several developments which promise to keep the boom going, rather than allow the usual post-bellum relapse.

There has never been any question as to the economic desirability of drying foodstuffs so as to preserve them and to market them during the winter. It is cheaper to keep food this way than to can it; storage or shipping space is cut from fifty to eighty per cent and weight is reduced from seventy-five to ninety-five per cent. Again, properly dehydrated foodstuffs keep indefinitely. It is related that during the Boer War, England laid by an excess of some thousands of pounds of dried soup vegetables, and that these same vegetables were fed to troops on the Western Front in 1914.

Certainly, then, the objections in the past have not been economic. The trouble has been palatability. Past methods broke down the cellular structure of the material being dried, and destroyed the taste beyond repair. Dried apples, even when soaked and thoroughly cooked, tasted no more like the real thing than do raisins taste like grapes. Even the dried peaches served to the American Army during the recent war reminded one of real peaches only by a suspicious fuzzy taste that reminded one of peach skins.

But the "dehydrated" vegetable of today is distinctly a new development. Foodstuffs are subjected to the action of carefully regulated currents of air in which temperature and humidity are painstakingly controlled. The result is said to be a product that has yielded up its water content gradually, without the slightest break-down of its cellular structure, and without the least loss in color, flavor or aroma. Kept covered from dust and insects, the dried product will maintain its natural properties indefinitely and when soaked in water, (and cooked in the same water in which it was soaked), will have the appearance, taste and odor of the freshly picked, freshly cooked original. Manufacturers of certain brands of dehydrated fruits and vegetables claim that, properly soaked and cooked, the products cannot be distinguished from the real thing when placed upon the table.

Aside from the question of palatability, the world today is in such state as regards rations that it will probably demand preservation of excess food by some such system. Long before the war Germany had thousands of drying plants in operation. For several years she annually dried twice as many potatoes as were grown for all purposes in this country. The tremendous reserve ration, thus accumulated, was a potent factor in her long endurance under blockade.

With the present world need of food and recent advances toward making dried food as good to eat as fresh food, it seems certain that dehydration will claim an important place among American industries of the near future. England, France, and Italy have already taken the matter in hand. In some communities all vegetables left in the markets at the end of a day must be taken to a drying plant. In America, the development promises to be along more natural lines, but none the less general.

It will be a rural industry. Fruits and vegetables to be dried must be picked at precisely the proper stage of maturity,
and put in process of drying the same day. The drying plant must be as near to the vegetable grower as the creamery is to the dairyman. And, if predictions of enthusiasts are to be trusted, it will not be long before the dryer is as important a part of rural communities as the creamery.

E. D.

Tractors Versus Horses
A Rejoinder to Mr. Dinsmore's Views From a Tractor Man
BY A. F. HEAD
Agricultural Advisor for the Cleveland Tractor Company

The coming of the farm tractor and the rapid development of the power farming idea have brought forth considerable investigation as to the relative merits of motor power versus horse power on the farm. Our great industries long ago recognized the prime importance of improved power machinery in the manufacture of their products. They realized that in order to keep pace with the rapidly growing demand for their product they would have to resort to a different method than that which they were following. The result was the development of improved power machinery, that not only reduced labor costs and expense of production, but enabled the manufacturer to meet his demands.

Now we come to the question of power on the farm. Is the horse the most economical and efficient unit of power for the farm? The question of course involves much discussion and analysis that space will not permit at this time. In order to arrive at some definite conclusion regarding the relative merits of tractors and horses, we must examine the available data to arrive at a definite basis for our conclusion.

The Agricultural Engineering Department of the Ohio State University recently completed a tractor survey which can be considered representative of eastern and corn belt states. The labor reduced by a tractor is difficult to list in dollars and cents, hence we must turn to what experience has shown. In this survey, it was found that labor was reduced on 87.2 per cent of the farms where tractors were owned. In several instances farmers said labor was reduced to one half on their farms, while in cases where the labor was not reduced the farmers stated that their men were doing twice the work. Several others stated that the use of the tractor had made it possible to do away with as many as two men. With such a scarcity of farm labor as we are facing today, the tractor is a very important factor in maintaining normal crops with less labor.

Does the tractor decrease the cost of operating the farm? Contrary to all the figures that have been set forth by leading horse enthusiasts, practical farmers have decreed that the tractor decreases the cost of farm operation. On 86.1 per cent of the farms where tractors were owned the farmers stated that their costs were decreased. The average size of farm for a two bottom tractor was 152.8 acres while for a three bottom tractor it was 183.4 acres.

Unreliability and high cost of repair parts have always been charges brought against the tractor. Let us see what results show. In the same survey, in which eight hundred farmers were reached, 86.4 per cent stated that their tractors could be depended on. The average yearly cost for repairs were $22.42, which corresponds very closely to the results obtained in the survey conducted by the Pennsylvania State College, where the average annual repair cost was $24.36.

Are the tractor owners satisfied with their tractors and the investments they
Concentrated power "may mean the difference between success and failure."

made? Farmers who have tried both types of farming (with and without tractors) are the ones to whom we must look forward for the real facts. Of answers received from seven hundred and twenty-five farmers, six hundred and fifty-six declared it a good investment while only sixty-nine, or 9.5 per cent, wished for their money back.

It is agreed that the tractor will not replace all the horses on a farm but that it will supplant a certain number, according to the size of the farm. It usually follows, after the purchase of a tractor, that the old and poorer grade animals are let go first, allowing better grade and purebred horses to be kept for breeding purposes, the tractor taking their place on the plow, disk, harrow, binder, and in the hay field.

The farm of today is being put on a firmer business basis than at any previous time by reducing the weather factor to a minimum. The tractor owner is not at the mercy of the weather at the peak land seasons, as a few clear days enable him to plant or harvest his crops in the shortest possible time, which often means the difference between success and failure.
How to Prune and Why
The Results of Some Experiments on Apples and Peaches

BY W. H. CHANDLER
Professor of Pomology, Cornell University

The purpose of the pruning experiments being conducted at Cornell is to study, in something of a fundamental way, the responses of fruit trees to pruning, and to test different forms to which fruit trees are commonly trained. When any twig or young branch is removed from the tree, naturally buds are removed, and since these would open into leaves during the next summer, it would be assumed that the leaf surface of the tree would be reduced. On the other hand, there is always an increase in vigor of growth near the point where the pruning is done, the leaves being larger and greener, and twig growth continuing later. It could hardly be assumed without study, then, that pruning would reduce the leaf surface. In our experiments, therefore, a careful record of the leaf surface on pruned and unpruned trees has been kept, together with a record of both top and root growth. In all cases pruning has reduced the leaf surface and also the root growth; and in case of young trees it has always reduced the size of the top by more than the amount of pruning. That is, it has actually reduced the amount of growth. Some young apple trees were left unpruned, others of the same size had the lower branches removed to the height of about twenty inches, and still others, in addition to this pruning, had most of the branches except the leader shortened back. In this case the root growth of the most severely pruned trees during that summer was but fifty-two per cent of that of the unpruned trees, and the top growth fifty-seven per cent.

On some four year old peach trees, the effect of pruning was slightly different. It is well known that peach trees, rather early in their life, reach a condition in which they make very little length growth unless they are pruned rather severely, and in this condition pruning very markedly increases their vigor of growth. These trees were cut back rather severely in the spring of 1916, and again in the spring of 1917. At the end of this season, when the prunings were added to the weight of the tops, it was found that the top growth had been as great on the pruned as on the unpruned trees. The root growth, however, had been greatly reduced by the pruning, the average root weight of a pruned tree being but twenty-seven pounds as against thirty-seven pounds for the unpruned trees. It should be considered, too, that this reduction in growth had occurred during the last two years of the life of the trees, which were then six years old. The root growth on the pruned trees during those two years seems to have been only about sixty-five per cent of that on the unpruned trees. Of course the leaf surface was greatly reduced by the pruning, but it seems probable that by reducing the leaf surface and the number of growing points, it had also greatly reduced the need of the tree for water and mineral nutrients. The reduction of the root growth by pruning would come late in the season. In early summer when growth is rapid, the root system of the pruned trees would be nearly as large as that of the unpruned trees, taking approximately the same water and nutrient supply to the reduced top. This would make conditions more favorable
for top growth, since the materials formed in the leaves would be used there for growth, instead of accumulating and moving to the roots. Of course this condition is only temporary, and by the following summer the reduced root growth would reduce the vigor of top growth to about that of the unpruned trees. Thus if pruning is to be used as an invigorating process for peach trees, it must be practiced each year, and the increased vigor must always come at the expense of a reduced top.

In our training experiments we have concentrated on three forms for apples; one may be called a natural form, where very little pruning is done; the central leader form, where by pruning back the branches, the growth is directed into the central upright trunk; and an open head form, where about five branches are per-

(Continued on page 292)
Take Home the Facts and Talk for the College Building Program

"EIGHTEEN committees, numbering 109 farmers and homemakers and representing all the leading agricultural associations in the State, have visited the College at their own expense. They have studied its work, its classrooms, its laboratories and equipment, its budget and salary lists. They have reported crowded quarters everywhere, with investigators, teachers, and clerks compelled to use laboratories and offices to which the sunlight never penetrates and with no means of adequate ventilation; and salaries are too low to compete with similar institutions in other States, much less with commercial concerns that are constantly seeking the College's well-trained men and women.

"The questions to be answered are: whether the State will construct the buildings needed to provide wholesome and sanitary classrooms and laboratories for its scientific staff and for the rapidly growing enrollment of students; whether it will provide the farm buildings, animals, and equipment necessary for instruction in the practical phases of agriculture; whether it will furnish the funds necessary to pay such salaries as will enable the College to employ and retain the best teaching and research talent to be had; whether it will make such appropriations for maintenance as will enable the College in its experimental work to keep in advance of and to encourage the best agricultural practice."

The foregoing is quoted from the report of the eighteen committees. The report is called "Things Done and To Be Done" and is available in printed form here at the College.

You Farmers' Week visitors come at a time when school is not in session, but it takes little trouble and less imagination to visualize the conditions of congestion that exists when things are in full swing. You can see the situation with your own eyes and bear witness among your neighbors at home.

The natural tendency of the State legislators this year will be to retrench on appropriations, yet we believe that here is one case in which refusal of the sum asked would be the worst sort of economy. The opinion of country people all over the State must be thrown solidly behind this long-range point of view before the Legislature will feel justified in setting aside the sum necessary to allow the College to function efficiently, and to continue growing.

By familiarizing yourself with present congested conditions here, and by using your influence to spread the facts at home, you will be helping both your College and the State it serves. It cannot continue at its best with antiquated and inadequate equipment.

Get hold of the pamphlet, "Things Done and To Be Done." Read it. Check the facts that the farmer committees have unearthed. And then, when you go home, talk it up!

THE COUNTRYMAN.
The department of home economics in the College of Agriculture is hoping to be of greater service to homemakers all over the State thru more intensive activities if the bill now before the State Legislature to make it the New York State College of Home Economics is passed. Since its beginning, the department has existed not only for its students but for the women of the State. It has felt a keen interest in the women it has reached thru the extension work and it is anxious to be of service to more. It is hoping, should it be made a college, to develop more rapidly in the future than has been possible in the twelve years of its existence as an organized department.

While the first graduating class in 1911 consisted of three women, the present graduating class numbers forty-five. The Home Bureau, as a phase of the extension service, has "sprung up over night." The first county Home Bureau was established in 1914; at the present time the twenty-five county and two city Home Bureaus have a membership of over ten thousand.

Farmers' Week this year is the seventh anniversary of the opening of the present home economics building. The line in which some of The COUNTRYMAN readers passed down the counter that first year grows longer each February. Equipment and helpers have been added annually to take care of the Farmers' Week crowd but in spite of the long hall to keep as many as possible of the hungry crowd under cover, the tail of the line extends almost to Bailey Hall each noon.

An additional building with its necessary equipment would work wonders with the effectiveness of the department. For example, one phase of training which it is hoped may be developed is institution economics. Hotels and other institutions house a large number of people. Why should not Cornell train men and women as managers of such business enterprises when it already offers courses that are fundamental for this work? Hotel men who have investigated the department and studied possibilities are asking for the enlargement of this plant already equipped by the State for training in just this sort of work.

Many of the home economics graduates have majored in institution work. Of the first class that graduated one woman is at present in Washington, the owner of two cafeterias and the manager of another; a second holds a position in the University Hospital in Atlanta; and the third is a homemaker.

Good home conditions are the result largely of experiments. You may be able to make a good pie without ever having done much experimenting, but someone had to make a good many trials before directions could be passed on. There are many practices in the home which might be improved if investigators had the equipment for experimenting.

To be really happy and to enjoy life to the utmost, we must keep ourselves physically fit. Tuesday of Farmers' Week is Health Day. We've heard of organization in many lines, but health organization with a practical health clinic in rural communities is something new. This subject, together with the question of recreation and

(Continued on page 294)
WELCOME to Farmers' Week.

We hope you will find a minute between lectures to come in and see us personally, and tell us what you think of us. Altho the present editor is new, as was announced in the last issue, the staff has worked so closely together during the last three months that he feels he knows you almost as well as he would if he had been filling this page all along. If you will drop in to see us for a minute, we'll promise to have a roaring fire in the stove and to give you the chair with the good seat. During the cold weather we have had to close up the outer part of our office, move our stove in the smaller room, and shut the door. But come right thru the big room to the sanctum, and we'll turn the Business Manager out for the week and talk things over.

THIS year there are a lot of things to talk over—politics, the League of Nations, the labor situation, and a thousand others. But we won't get into an argument over those things; there is something else that concerns you and me more directly than any of them. Since early in October, groups of farmers and their wives, city people, and legislators have been looking the College over pretty carefully. They have come, a few at a time, at their own expense, and have seen the College in its working clothes, quietly going about its business of helping the farmer, present and future, and thru him, every other person in the State. These visitors have all joined now and appointed a committee of fourteen which has published its report under the title, "Things Done and To Be Done at the New York State College of Agriculture at Cornell University;" the statement on page 274 is from this report. The whole report is well worth reading; these people have come to Ithaca from all parts of the State and have seen what a work is being done. They have realized that overcrowded classrooms and offices and underpaid instructors here are a serious handicap to the farmers of the State, and they have decided to do all in their power to remedy the conditions they have found. They have realized, too, that curtailment in the work of the College will soon mean a diminishing food-supply for the people in the cities, and have made definite plans to put the situation before every person in the State, since everyone must eat. Let us, then, look around this Farmers' Week, form our conclusions, and when the time comes, use our knowledge to help ourselves.

TO those who had a sick cow or couldn't get a man to do the chores and so had to miss this Farmers' Week we send our greetings with the hope that you'll come to see us next year. In our next
issue we plan to have a résumé of some of the things that the Farmers' Week people have said and done. Of course, we can’t cover them all, but we hope to have a record that will be valuable to you and to those who couldn’t remember all the things they heard and wanted to save.

ANOTHER matter that we want to talk about while we are here together is Cornell’s Endowment Fund. Of course our College is supported by the State, but we realize that it is also dependent on Cornell for many things. All of us that have been here are sons of Cornell. Fundamental courses in science, many of them the basis of our modern agriculture, are taught outside the College of Agriculture. The College is a part of Cornell and must rise and fall with it. Some of your sons may be coming to college before long. You will want them to have the same conscientious instruction for which Cornell has long been known, even if they do not enter the College of Agriculture. But that will be impossible if present conditions continue. In common with other large universities, Cornell has started a campaign for money to pay the men who make the University—the teaching staff—enough to keep them teaching.

Cornell men all over the country are organizing to raise ten million dollars in increased endowment. The interest from the first five million is to be used to pay the instructors and professors enough to keep them with us; that from the second five million, to make improvements in the buildings and equipment of the University. Big men the country over are realizing that the best investment, for their own salvation, is in education, and are coming to its aid nobly. Cornellians are starting their work throughout the country for Cornell; will you be ready when they come to you?

TRUE to the custom of new editors, we have set forth our platform—to be of service to you so that you may do the more for our College and for Cornell. We hope that you will help us in this by using us; send us your ideas of what we can do to better serve you; if we do things you don’t like, tell us of them too,—we are glad to know you care. But there is one plank in our platform that we haven’t mentioned. Those of you who are not in Ithaca will notice this month, for the first time, way back in the “ads,” another little paper, The Campus Countryman. This miniature paper was started in the November issue as an experiment, and until now, has circulated only on the “Ag” campus. It was felt that, being only another agricultural community, we should have some sort of a newspaper, and THE COUNTRYMAN undertook to fill the need. How well we have succeeded is for you to say. Some of our out-of-town friends saw it, and thought they should have it too, so here it is, on page 303.

This completes our platform for the present, and explains the absence of the Campus Notes from their usual place. The news they covered may be found in the Campus Countryman: we hope you’ll like it.

This Farmers’ Week number is also an annual Horticulture issue. Whether you raise fruit as a business or only to eat before the fire on these wintry evenings, we hope you will find some new and useful ideas in it.

Because of an oversight, the name of E. W. Pierce did not appear in the “box” on the opposite page last month. Mr. Pierce was elected to the Business Staff of THE COUNTRYMAN in December; his name should have appeared in the January number.
'90 B. S. A.—William Webster Root is practicing medicine at Slaterville.

'01, '02, Sp.—F. T. Ransom has a position with the E. I. Du Pont De Nemours Company of Wilmington, Delaware. He is demonstrating the practical uses of dynamite in New York State.

'07 B. S. A.—Morgan W. Evans is assistant agronomist in the United States Department of Agriculture.

'08 B. S. A.—William H. Alderman is head of the department of horticulture in the College and School of Agriculture and in the Agricultural Experiment Station at the University of Minnesota. Alderman served as associate in horticulture at the New York State Experiment Station at Geneva until 1912, when he became head of the department of horticulture in the University of West Virginia. During his last year there he was acting dean of the department of agriculture and director of the experiment station. His present address is Division of Horticulture, University Farm, St. Paul, Minnesota.

'10 B. S. A.—James H. Rutherford is in the life insurance business. He may be reached at 401 Iroquois Building, Buffalo.

'11 W. C.—Frank E. Upson has a seventy-five acre poultry and sheep farm at Dundee. His address is R. D. No. 4, Dundee.

'12, '14 Sp.—Andrew H. Craig is farming at Rome.

'12 B. S.—H. K. Crofoot is running the “Threearms” Holstein Dairy and Produce farm at Moravia.

'12 B. S. A.—Wallace Henry Hook is county agricultural agent of Neosho, Missouri.

'12 B. S. A., '15 Ph D.—Carl Edwin Ladd is a specialist in agricultural education in the New York State Education Department.

'12 B. S.—Harlan Bruce Munger is head of the department of farm management at the Iowa State College, Ames, Iowa.

'12 B. S.—F. A. Cushing Smith is practicing landscape art in Chicago and Milwaukee. His address is 209 S. La Salle St., Chicago.

'12 ex.—Moe Spiegel, formerly county agricultural agent for Sullivan and Ulster Counties, is now vice-president of the Farmers' Service Company, 150 North Street, Middletown. He lives at 171 Wickham Avenue.

'12 B. S.—S. N. Stimson is manager of the Essex County Co-operative Farming Association, Topsfield, Massachusetts.

'12 B. S., '13 M. L. D.—John R. Van Kleek is general superintendent in Florida for G. D. Taylor, landscape architect of Cleveland, Ohio. At present he is engaged in laying out an eighteen-hole golf course, garden walls, courts, etc., for the Kenilworth Lodge Hotel Company, in Sebring, Florida.

'12 B. S. A.—Don D. Ward is doing county agent work for Rockingham County, New Hampshire. His home is at 68 Main St., Exeter.

'12, '13 Sp.—Henry B. Wiesner is a
partner of the W. D. Henderson & Co., dealers in hay, feed, and poultry supplies, of Fort Wayne, Indiana.

'13 M. S. A.—Charles E. Alfred has recently been appointed professor of agricultural economics at the University of Tennessee. He was formerly farm management expert with the division of extension.

'13 B. S.—Elwyn H. Dole is assistant manager of the Winnecook Ranch Company's twenty thousand acre sheep, cattle, grain, and hay ranch at Winnecook, Montana.

'13 B. S.—Mrs. Irene Brooks Funk is living in Falls Church, Washington, D. C., and has one son, Russel James, born September 20, 1918.

'13 B. S.—Francis C. Smith was married on January 15 to Miss Beatrice Tryon. They are at home at Grey Court Apartment, Ithaca.

'14 B. S.—Mr. and Mrs. Roger H. Cross of Fayetteville, announced the birth of a daughter, Martha Bristol, on September 15, 1919. Mrs. Cross was formerly Grace C. Bristol '14.

'14 B. S.—Nicholas Kopeloff is bacteriologist at the Louisiana Experiment Station.

'14 B. S.—J. D. Lamont is assistant forester of the Delaware and Hudson Company, Plattsburgh.

'14 B. S.—John Laycock is in charge of the Cost of Production Field Work of the Rochester Milk Investigation which was ordered by the Common Council of the City.

'14 B. S.—Alexander Lurie is horticulturist at the Missouri Botanical Gardens.

'14 Ph. D.—Dr. William H. Rankin, for the last five years assistant professor of plant pathology, has been appointed officer in charge of the Field Laboratory of Plant Pathology of the Canadian Department of Agriculture, with headquarters at St. Catherines, Ontario, and has entered upon his duties.

'14 B. S.—Carl W. Strauss has been engaged by the Great Western Sugar Company of Longmont, Colorado as agriculturist or "fieldman." His work in this capacity is that of a county agent on a commercial scale. He is managing the culture of three thousand acres of sugar beets, but is often called upon for advice concerning other crops of general agriculture.

'14 B. S.—J. J. Swift and his brother own and operate a one hundred and ninety acre farm at Middleport.

'15 B. S.—W. P. Brodie, until December 1 county agent at Salem, New Jersey, is now holding a similar position at Cleveland, Ohio. His office is at the Court House.

'15 B. S.—Harold Seeley Doane is assistant farm bureau agent of Steuben County.

'15 B. S.—Francis J. Freda is in charge of the agricultural department in the vocational school at Hammonton, New Jersey.

'15 B. S.—Edwin C. Heinsohn has gone to China for the Amos Bird Company. His address is in care of the company, 91 Yangtszeipoo Road, Shanghai.

'15 B. S.—Kenneth W. Hume is with the W. F. Hutton Company of New York City. He may be addressed at 60 Broadway.

'15 B. S.—Colson B. Hutchinson is now with the J. B. Rice Seed Company, Grass Lake, Michigan.

'15 B. S.—Ray F. Pollard is county agent of Schoharie County.

'15 B. S.—Harry C. Morse is county agent of Fulton County.

'15 B. S.—George Wallace Musgrove is assistant professor in agronomy at the New Jersey Agricultural College (Rutgers.)

'15 B. S.—Fred W. Ohm is county leader of junior agricultural extension and director of agriculture in Nassau County.

'15 B. S.—Benjamin G. Pratt, Jr., is office assistant and experimenter for B. G. Pratt Company, spray manufacturers.

'15 B. S.—Frank Adams Roper is economic statistician of the Central Bureau of Planning and Statistics. His address is Owego.
'15 B. S.—Austin J. McConnell is teaching agriculture in the high school at Newton, New Jersey.

'15 B. S.—Mark H. Schonorm is manager of the Board Acre Ranch, Terra Celia, North Carolina.

'15 B. S.—Walter H. Sheffield is employed by C. W. Leavitt, landscape gardener, of New York. He lives at 294 North Fourth Street, Newark, New Jersey.

'15 B. S.—Irving S. Warner is engaged in general farming at Riverhead.

'15 B. S.—Seth T. Wheat is an instructor in the newly organized department of agriculture in the high school at Salem, New Jersey.

'16 B. S.—Berten E. Ely, who was in charge of the food production work at Camp Dodge during the war, has been appointed county agent for Morris County, New Jersey. His headquarters are at Trenton.

'16 B. S.—Karl Fernow has just been awarded the industrial fellowship in plant pathology established by the Steuben County Seed Improvement Association. Diseases of potatoes and their control is to be the main line of investigation. Fernow was with this association last summer as special field assistant on pests and diseases in extension work.

'16 B. S.—F. Vernon Foster, who recently received his discharge from the air service with the rank of first lieutenant, was on November 21 admitted to the New York Stock Exchange. In September, 1918, Foster was captured by the Germans and was sent to Karlsruhe, where he remained a prisoner until the end of the war. When the armistice was signed, he was released and sent to Paris, where he served as a guard of honor to the Peace Commission. Since his return to this country he has been associated with his father in the firm of G. S. Foster and Company.

'16 B. S., '17 B. S.—Mr. and Mrs. Roy L. Gillett, nee Gertrude H. Nelson '16, announce the birth of a daughter, Mary Ellen, on August 23. They live at 304 Elmwood Avenue, Ithaca.

'16 B. S.—Henry C. Handleman is engaged in general and truck farming at Caldwell, New Jersey.

'16 B. S.—Van B. Hart is doing cost accounting work in the farm management department in connection with the United States Department of Agriculture.

'16 B. S.—Since his release from active duty as lieutenant in the U. S. N. R. F. last December, Leonard F. Hicks has been made vice-president of the Daniel M. Hicks, Inc., importers and dealers in paper mill supplies. He has assisted in organizing the firm of Hicks-Costarino Company, Inc., packers of paper mill supplies, of which he has been elected treasurer. His address is 140 Nassau Street, New York.

'16 B. S.—Albert Hoefer was appointed director of agriculture for Rensselaer County on November 1. His office is in the Court House, Troy.

'16 B. S.—Edward E. Ludwig was married on October 18 to Miss Jane McDaniel, of Wilkinsburg, Pennsylvania. They will be at home after December 1, at 75 Kennedy Avenue, N. S., Pittsburgh, Pennsylvania. Ludwig is with the E. C. Ludwig Floral Company of Pittsburgh.

'16 B. S.—Milton B. Porter is running a one hundred twenty-seven acre general farm at Ransomville.

'16 B. S.—Glen G. Row is teacher of agriculture and principal of the high school at Ellington.

'16 B. S.—Herman J. Samuelson is owner of the United Feed Co. at Toms River, New Jersey.

'16 B. S.—Paul Fitch Sanborne is employed in the sales department of the Montana Flour Mills Co., Lewistown, Montana.

'16 B. S.—Gilbert M. Taylor returned from overseas in August, receiving his discharge on September 3. He is now working on a cranberry marsh in Northern Wisconsin. His permanent address is 48 East Fourth Street, St. Paul, Minnesota.

'17 B. S.—Tracy B. Augur is a student at the Harvard Graduate School of Landscape Architecture. His ad-
Thousands of De Laval Cream Separators have been sold to young people just beginning to run a farm, because a father or friend wanted to see them start right.

The older people know from experience that the De Laval skims cleaner, runs easier and lasts longer. They also remember the service they have always received from the De Laval Company and its agents.

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Any time is a good time to buy a De Laval Cream Separator—to start saving cream, as well as time and energy.

If you want to "start right," see nearest De Laval agent. If you do not know his name, write to nearest De Laval office.
WANTED!


Feed your land as well as your cattle—it'll pay you just as well, even better. Many farmers have doubled and tripled their return after making the soil give its full strength to the crops by spreading Solvay Pulverized Limestone.

There's a big demand for Solvay because of its high test, 95% carbonates, ground so fine it gets to work right away and shows results the first harvest. You want the best!—Order Solvay. Get your supply now.

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Say Where You Saw It When You Write.
"I was doubtful about a truck, but Goodyear Cord Pneumatics have made me an enthusiast. I haul hogs, sheep, cattle, coal, ice, hardware, groceries up to 200 miles a day—save time, labor, gasoline, oil and shrinkage. Farmers here know it pays to motorize and that pneumatics save roads."—F. L. Bixler, Rural Express, Fortville, Indiana

THIS story of saving time and increasing income by hauling on pneumatics is just one of a great number now coming from the rural communities of this country.

Farmers everywhere know that the tractive pneumatics enable them to haul crops right from where they grow, to save shrinkage and other deterioration, and to top their markets.

Farmers using trucks on Goodyear Cord Tires report that these agile tires offer the typical pneumatic advantages in utmost degree because they combine with these advantages a tremendous toughness.

Special information concerning the use of pneumatic-tired trucks on farms may be obtained from The Goodyear Tire & Rubber Company, at Akron, Ohio.
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VALUABLE

TROY FARM

180 ACRES

Overlooking lake and city.
Conveniently located to College of Agriculture

J. T. NEWMAN, Owner

'17 B. S.—The engagement of Edwin C. Smith to Miss Claire Beer was recently announced by her parents.

'17 B. S.—The engagement of Miss Ruth Starr, of Homer, to Mr. Herbert G. Tanner, of St. Louis, Missouri, has been announced recently by her parents. Miss Starr is supervisor of domestic science in the Irvington, New Jersey, schools. Her address is 119 Laurel Avenue.

'17 B. S., M. S.—F. H. Milton Stults is landscape architect with Lewis and Valentine, Roslyn, Long Island.

'17 B. S.—F. R. Walkley is assistant manager of the Madison County Farm Bureau.

'17 B. S.—John Wigsten is power engineer with the L. D. Clute Motor Company, of Elmira, dealers in Fordson tractors. His mail address is R. F. D. 3, Elmira.

'18 B. S., '17 B. S.—Miss Elizabeth Alward and E. I. Kilbourne were married on September 11 at St. John's Episcopal Church, Buffalo. They are now in Santo Domingo, where Mr. Kilbourne has a position with the Consuelo Sugar Company. Their address is care of the company, San Pedro de Macori, Dominican Republic.

'18 B. S.—Miss Dorothy Ashley was married to Ralph Hersey Ross on September 26 at the Mt. Pleasant Congregational Church, Washington, D. C.

'18 B. S.—Wade L. Bascom, who was discharged from the service at Camp Sherman, Ohio, late in July, is engaged in the wholesale egg business at Youngstown, Ohio. His address is Farmdale, Ohio.

'18 B. S.—Mary K. Fennell is on the business staff of the Dairymen's League News.

'18 B. S.—John K. Herrick is in the employ of the W. Atlee Burpee Company as manager of their trial grounds at Fordhook Farms, Doylestown, Pennsylvania.

'18 B. S.—Walter A. Heulsen is assisting in horticulture at Purdue University, Layfayette, Indiana.
Top-dressing refers to the application of a fertilizer to growing crops and includes "side application," "intercultural application" and "late application."

This practice of top-dressing growing crops with a quickly available nitrogenous fertilizer is one of the comparatively recent advances in the scientific use of plant food.

Potash and phosphoric acid becomes insoluble when added to the soil and must be applied before planting the crop in order that they may be mixed throughout the feeding area. If all of the nitrogen necessary for growth were to be added at this time, large amounts would be leached away before the plant could use it. By reinforcing the complete fertilizer by top-dressing the growing plant at just the right time, more nitrogen can be used profitably and better use may be made of the potash and phosphoric acid applied in the complete fertilizer.

Arcadian
Sulphate of Ammonia

Arcadian has been prepared to meet the growing demands for a high-grade nitrogenous top-dressing of good mechanical condition. Its non-leaching property assures highest yields.

Baltimore, Md. The Barrett Company Berkeley, Cal.
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Tell Advertisers Who Introduced You.
'18 B. S.—Miss Isabelle M. Hoag was married on September 20 to Roy H. Van Tyne, of Syracuse. Mrs. Van Tyne has been a chemist with the Halcomb Steel Company since graduation. They have an apartment at 2702 South Salina Street.

'18 B. S.—Harold J. Karr is with the Allied Machinery Company of America, 51 Chambers Street, New York City.

'18 B. S.—The engagement of Bertram Y. Kinzey to Miss Gertrude S. Sampson was announced in October. Kinzey has been acting as assistant professor of military science and tactics at Princeton. He received his discharge from the Army early in October, as captain in field artillery, and has returned to Cornell to complete his course in this College.

'18 B. S.—Emil Kostal is a Plant Quarantine Inspector for the U. S. Federal Horticultural Board. His work deals with Federal plant quarantine inspection of plant material from foreign countries and the enforcement of special quarantine. He and his wife, nee Margaret Niedeck, '17, are living at 1104 Soniat Street, New Orleans, Louisiana.

'18 B. S.—Joseph H. Lay is taking graduate work in the Yale Forestry School.

'18 B. S.—Ellis H. Robison expects to leave soon for West Africa where he will engage in missionary work.

'18 B. S.—Glenn W. Sutton recently completed a twelve-thousand-mile tour thru the southern and middle western states for the Automobile Blue Book Publishing Company. He left Chicago last March, and returned on October 1, having spent several weeks in the Texas, Oklahoma, Louisiana, and Kansas oil fields, and eight weeks in the Rocky Mountain region. His address is 910 South Michigan Avenue, Chicago, Illinois.

'18 B. S.—Leland E. Weaver is a specialist in poultry extension in the college of agriculture of the University of Kentucky.

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Averaged 6,000 Lbs. Milk Per Cow
A well-known dairyman tells us his milk production for one year from 40 cows averaged 6,000 lbs. of milk per cow. During this period he fed a ration of three-fourths International Special Dairy Feed and one-fourth yellow gluten. He states further that he has never before or since found any ration to equal

International Special Dairy Feed
As a Milk Maker
If you could come to our mills at Minneapolis and Memphis and see the care with which the ingredients are mixed — the thorough tests which are made — you would not wonder at the growing popularity of this famous ration. But above all, it has proved its worth in actual use, by increasing milk production and lowering feeding costs. And that is what interests you most.
Make us prove these statements. Ask your dealer for a trial ton. If he cannot supply you, write to us. You’ll never regret this move.

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Say Where You Saw It When You Write.
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The Case 10-18 Tractor drives 20x28 Thresher with Windstacker, Feeder and Grain Handler; No. 12 Case Silo Filler with 40 ft. blower pipe; 17x22 Hay Baler; will pull 2-bottom plow, 6 to 8 inches deep, depending on soil and field conditions; 8 ft. double action Disc Harrow; 22 shoe Grain Drill; two 6 ft. Binders.

The Case 10-20 Tractor drives 22x36 Thresher and full equipment, pulls 3-bottom plow under favorable conditions; other machinery requiring similar power.

The Case 15-27 Tractor drives 26x46 Thresher with Feeder and Windstacker; three 14 in. plows in hard plowing, or four under favorable conditions; 10 ft. double-action Disc Harrow; two 7 ft. Binders, etc.

The Case 22-40 Tractor drives 32x54 Thresher with Windstacker, Feeder and Grain Handler; No. 20 Case Silo Filler with 40 ft. blower pipe; four 14 in. plows in hard ground or five under favorable conditions; battery of Grain Drills or Harrows.

The Case 20-40 Tractor will handle belt and drawbar jobs similar to 22-40.

The J. I. Case Threshing Machine Company also builds:

- Double Disc Harrows for use with tractors
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- Threshing Machines,—six sizes
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Booklets, describing and illustrating any products above mentioned, furnished on request.

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Cleaner and Cleanser

is a convincing testimonial to its unequalled ability to maintain wholesome, sweet and sanitary cleanliness in all departments of dairy production.

Wyandotte Dairymen's Cleaner and Cleanser not only cleans, but cleans thoroughly, quickly and clean. Its use applies to milking machines, separators, cans and general dairy equipment. Moreover, being free from caustic, lime or any soapy or greasy ingredient it rinses easily, leaving no film to affect the quality of the milk product.

Order this economical cleaner from your supply house.

It cleans clean

Indian in circle

in every package

The J. B. Ford Co.
Sole Mfrs.
Wyandotte, Mich.

'18 B. S.—Laura Ware is teaching home making in a Presbyterian Mission School at Santa Fe, New Mexico. She studied at Teachers College during the summer of 1919.

'19 B. S.—Hilda Louise Greenawalt was married on September 8 to Walter D. Way '17 D. V. M. at Denver, Colorado. They are making their home at Ithaca, where Way is an instructor in the Veterinary College.

'19 B. S.—Elizabeth Allis is a pupil dietitian at Pennsylvania Hospital, Philadelphia, Pennsylvania.

'19 B. S.—Harlo Beals is with the Rochester Waterworks Co. He has charge of the grounds surrounding the lakes from which the water supply is obtained.

'19 B. S.—Florence Berkeley of 245 74th Street, Brooklyn, is with the Western Electric Company laboratories.

'19 B. S.—Louisa Blauvelt has returned to Ithaca to take the position of assistant dietitian of the Risley dining room.

'19 B. S.—Miss D. L. Chapman has been placed in charge of the lunch room in the Treasury Building in Washington. The lunch room is operated by the Federal Red Cross and was started by Mrs. W. G. McAdoo and Mrs. Carter Glass in an effort to bring down the high cost of living. About a thousand Government employees are served daily.

'19—Helen S. Clark is supervisor of home making in the vocational schools of Conneautville, Pennsylvania.

'19 B. S.—Florence Coupe is teaching home economics at Crosby, North Dakota.

'19 B. S.—Lina Darling is assistant to Ruth Cleves '16 in the Munitions Building cafeteria at Washington, D. C.

'19 B. S.—Margretta Farley is teaching home making in the Junior-Senior High School at Derby, Vermont.

'19 B. S.—C. B. Frazer who was an instructor in Botany in his senior year, spent the summer in England and Scotland on business. Later he went to
Perfection Increases Milk Flow

WHEN asked what feature in the Perfection Milker he considered most valuable Mr. Charles M. Yarter, who is a well known dairyman in his State, said recently: "With the use of the Perfection we milk and strip fifty-four cows in eighty minutes, and yet I consider the greatest profit derived from using the Perfection is not so much in the time it saves as in the increased milk flow. We surely get much more milk with the machine than we could if we depended on hired help to do all the milking by hand, and we are getting a much better quality of milk too."

The Most Profitable Machine on the Farm

"I have gotten more benefit for each dollar put into my Perfection than from any other machine on my farm. We use the machine twice daily, Summer and Winter, while we only use any of our other machines a few weeks during the year. The milker helps to make all our other machinery more valuable by giving us longer days to use it.

"I believe the Perfection Milking Machine is the simplest, easiest to keep clean, less liable to get out of order and draws the milk more naturally and with more comfort to the cows than any other milking machine or hand milker I know of."

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Mr. Yarter is only one of thousands of satisfied Perfection owners. What the Perfection has done on his farm, it will do on yours. Write us and we'll gladly send you names and addresses of owners to whom you can write yourself. We'll also send a free copy of "What a Dairyman Wants to Know" the great book which answers every question about milking machines. Write today.

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The Perfection is the Milker with the Downward Squeeze Like the Calf.

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Berries
Grapes
Roses
Shrubs
Fruit Trees

Write for New Catalog

The
Van Dusen Nurseries
C. C. McKAY, Manager
Box D Geneva, N. Y.

For Cheese Factories
and Creameries
HANSEN'S
Danish
Dairy Preparations
Pure, Concentrated, Ready to use.
For uniformly best results in making finest cheese, butter and buttermilk. America's standards backed by years of specialized experience, used in the country's finest creameries and cheese factories.

Hansen's Danish Rennet Extract.
Hansen's Danish Cheese Color.
Hansen's Danish Butter Color.
Bulk, 1 gal. or larger.
To properly ripen the cream for butter, and the milk for cheese and commercial buttermilk, use Hansen's Lactic Ferment Culture.
For sale at all dairy supply stores.

Chr. Hansen’s Laboratory, Inc.
Little Falls, N. Y.

Interesting treatise "The Story of Cheese" by J. D. Frederiksen, free on request.

France to visit the grave of his brother who was killed in the war, but was not successful in finding the place of burial.

'19 B. S.—Glady's Kitchin has charge of a canteen at the Post Exchange, Washington, D. C.

'19 B. S.—Anna Leonard is an assistant manager of the War Risk Cafeteria at Washington, D. C.

'19 Ex.—Joy Hopkins is on the technical staff of the Bureau of Plant Industry at Washington and is studying at George Washington University where he ranks as a junior.

'19 B. S.—Helen Langdon is teaching home economics and physiology at the high school in Pelican Rapids, Minnesota.

'19 B. S.—Marjorie Leonard is assistant in a Y. W. C. A. cafeteria at Providence, Rhode Island.

'19 B. S.—Carrie M. Luce is dietitian at the Cottage Hospital in Santa Barbara, California.

'19 B. S.—Harold C. Luckstone is a student in the New York School of Secretaries. His address is 58 West Eighty-sixth Street.

'19 B. S.—Edith Messenger is teaching domestic science in the high school at Greene.

'19 B. S.—J. E. Parsons is teaching agriculture in the East Aurora High School. His address is East Aurora.

'19 B. S.—James G. Pritchard was married in July to Miss Edith Wilkinson. They are making their home in Interlaken, where Mr. Pritchard is running a garage and automobile salesroom.

'19 B. S.—Millicent Quinby is teaching in the Girls Training School at Gainesville, Texas.

'19 B. S.—Miss Frances Riley is teaching domestic science in the schools at Honesdale, Pennsylvania.

'19 B. S.—Arnold Campbell Shaw is in the Forest Service at Hot Springs, Arkansas.

'19 B. S.—Frances Strong is a pupil dietitian in the Memorial Hospital, Long Branch, New Jersey.
The New International Challenges Your Criticism!

Anything Missing in This List?

1. **Roller Bearings**—Roller bearings at seven points—the only spreader so equipped.
2. **Double Ratchet Drive**—Walking beam transmission from main axle eccentric and extra large ratchet wheel give easy, strong, steady feed. Box tapered to eliminate friction on box sides. Six feed speeds.
3. **Oscillating Front Axle**—Auto-type, permitting short turn. No pole whipping.
4. **Power; Both Wheels**—Power is transmitted from both ends of the rear axle—beaters and wide-spread driven from one wheel and the manure feed from the others.
5. **Wheel Track**—Rear wheels track with the front wheels, lightening draft.
6. **Tight Bottom**—There is no clogging, jamming apron, because the spreader has a tight bottom. Spreads anything.
7. **Two Beaters**—Two all-steel beaters with chisel-pointed square teeth work from both top and bottom of the load.
8. **Wide-Spread**—The spiral behind the beaters gives the manure a third beating, and spreads it finely and uniformly beyond the wheels.
9. **All-Steel Main Frame**—Wood box sides hold only the load.

For complete descriptive information address

International Harvester Company of America
(Incorporated)

Chicago

U. S. A.
'19 B. S.—Abbie Tingley is an assistant manager of the War Risk Cafeteria at Washington, D. C.


'19 B. S.—F. E. Wheeler is doing graduate work at Amherst. He is also instructor of dairy industry at the Massachusetts Agricultural College.

'20 Grad.—I. H. Vogel, graduate student in plant pathology, will be awarded the fellowship established by the North Fork Fellowship Association composed of farmers at Riverhead and Mattituck, Long Island. Diseases of cauliflower, seed cabbage, and potatoes will be the main line of investigation. A field laboratory will be established at Mattituck.

How to Prune and Why
(Continued from page 273)

mitted to grow, each being trained with a main leader, the upper branch being kept the largest. It has required more pruning to secure this last form than either of the others, the trees have been dwarfed in size, and the fruiting of the young trees has been rather markedly reduced. Of course it is possible that the latter form may give a better fruiting tree when older; as to this we have no evidence. We can only say that it costs money to get such a form since the fruiting is reduced during the early life of the tree.

Too Late to Classify

Harry Hayward '94, B. S., who has an international reputation as an agricultural expert, has joined the staff of N. W. Ayer & Son of Philadelphia. His services will be at the disposal of the agricultural clients of the Ayer advertising agency.

Mr. Hayward went to the Ayer agency from Delaware College where he was Dean of Agriculture. He served for some time as director of the College.

PUREBRED POLAND CHINA BARROW

Specially engraved halftone plates that will print well on any letterhead stock

ITHACA ENGRAVING CO. ITHACA, NEW YORK

"In the Beautiful Finger Lakes Region"

Say Where You Saw It When You Write.
He Helps Make the Wheels Go 'Round

The retail dealer is a great factor in the development of a town and the farms which surround it. "He helps make the wheels go 'round."

The progressive dealer and the modern farmer work hand in hand to increase the wealth of the community and its individuals and thereby get better roads, better schools, better civic conditions generally.

The improvement of farm land is the first step toward the development of community and individual wealth. By clearing and draining unproductive land with dynamite the way is paved to increased crop production, a rise in land values, the greater use of tractors and other modern machinery and equipment.

In many sections of the country, Hercules Agricultural Service Men are demonstrating to farmers and dealers the use of Hercules dynamite on the farm. The farmer who desires further information can secure a 68 page booklet, "Progressive Cultivation," from his dealer or by writing to the Hercules Powder Co.

HERCULES POWDER CO.
1008 Orange Street
Wilmington, Delaware

There are a few territories open for additional Hercules dealers.

Hercules Dynamite is sold by Leading Dealers
FRUIT TREES ARE SCARCE

WE have a fair supply of most standard sorts, but suggest having stock reserved NOW to avoid disappointment at planting time. Those in the market for any quantity would find it to their interest to get in touch with us while it is possible to secure the varieties desired. We also specialize in the "Grown in America" varieties of Shrubs, Ornamental Trees, Roses, Vines.

RICE BROS. CO., Geneva, N.Y.
Write—Phone—or call personally.

DAIRY EQUIPMENT

Large Stock of Supplies and Equipment for the Farm Dairy House or the Barn.
Milk Coolers Litter Carriers
Milk Cans James Drinking Cups
Milk Scales Stalls and Stantions
Refrigerating Machines for Milk Cooling.
Our Catalogue for the Asking.
Better Get a Copy Now.

GOWING-DIETRICH CO., Inc.
207-209 W. Water St., SYRACUSE, N.Y.

the Merit of Agriculture.

Mr. Hayward has filled a number of responsible positions in the agricultural world, among them that of Assistant Chief of Dairy Division, United States Department of Agriculture; Director of the Dairy Department at the Pennsylvania State College; organizer and director of the Agricultural Department of the Mt. Hermon School, Mt. Hermon, Massachusetts. He received his master's degree from Cornell in 1901 and later studied in England and Germany.

The Farm Home
(Continued from page 275)
health, will be discussed at the Homemakers' Conference during Farmers' Week. For those who cannot attend,
SIX TESTS FOR A FARM POWER-PLANT

There are many tractors, but the Moline Tractor is Universal

It is THE ONLY FARM POWER-PLANT Combining

Exclusive Features with Indispensable Results

1. Does all field work, including cultivating, harvesting and belt work
2. One man completely operates both tractor and all implements
3. A single seat in the center of all controls of tractor and implement
4. A single unit of operation—the tractor and implements form but one unit
5. Operator sees all his work—"Foresight is better than hind sight"
6. Tractive power in front of the work with operator behind the work

Means No duplication by horses
Means A large saving in labor
Means Great ease of operation
Means Can back and turn short
Means Better and faster work
Means Power like horses are used

UTILITY IS NOT SACRIFICED FOR PRICE

The Power of a Correct Principle
The principle of doing all field operations with one man sitting where he can watch his work is correct, or farming has always been done backward, and the operator would always have ridden or led his horses instead of driving them.

NOTE—If desired you can use the "drag behind" or horse drawn implements you now have with the Moline Universal the same as with other types of tractors

See your Moline Dealer or write our nearest branch for full information.

Moline Plow Company, Moline, Illinois

Branches at:

Atlanta, New Orleans, Dallas, Oklahoma City, St. Louis, Poughkeepsie, N. Y, Baltimore, Los Angeles, Stockton, Cal., Spokane, Portland, Salt Lake City, Denver, Kansas City, Omaha, Minneapolis, Minneapolis, N. D., Sioux Falls, S. D., Des Moines, Bloomington, Ill., Columbus, Ohio, Jackson, Mich.
these columns will carry a story of that day with its rich program of speakers.

Since it is believed that the community which is far-seeing will take care of the health of its children, Wednesday has been set apart as Children's Day at the Homemakers' Conference. According to Dr. Josephine Baker over twenty-one per cent of New York's school children in 1917 were seriously under-nourished, there being an increase of about six per cent each of the preceding four years. What is the per cent in your school? How many children in your school weigh as much as they should for their height? It is the right of every child to be healthy, vigorous and strong. Are you doing all you can to have your community to make them so, or are you letting them grow up with seemingly harmless little defects which may work havoc in the future?

The Child Health Organization, cooperating with the United States Bureau of Education with headquarters at 156 Fifth Avenue, New York City, and

with such men as Dr. L. Emmett Holt, Dr. Hermann M. Biggs, Dr. John H. Finley, Dr. Thomas D. Wood, and Dr. C. E. A. Winslow backing it, is a new organization with all the freedom of a newly organized group. It is preparing tools of a kind that have unfortunately been scarce when work for the health of children has been undertaken by groups of mothers or teachers; namely, printed matter which in its very style has all the vigor, life, and abandonment of healthy, happy children. This organization can help you to bring up the health standard of your community by sending you its material.

In a future issue we hope to give you something interesting about health classes for parents and children in schools. Before the next month's issue of The Countryman reaches you, read Home and Community Hygiene, by Jean Broadhurst, Ph. D. What are you doing to safeguard the health of the future citizens in your community?

R. H. N.

Burpee's Seeds Grow

BURPEE'S ANNUAL

Burpee's Annual is a complete guide to the vegetable and flower garden. It fully describes Burpee Quality Seeds with a hundred of the finest vegetables and flowers illustrated in the colors of nature. If you are interested in gardening, Burpee's Annual will be mailed to you free. Write for your copy today.

W. ATLEE BURPEE CO.
Why Have Over 10,000,000 Hogs Been Treated With HOG-TONE?

We have never claimed that Avalon Farms HOG-TONE is a universal "cure-all" or panacea.

But, for its intended purposes, HOG-TONE has shown such remarkable results in so many thousand instances that an ever-increasing number of hog raisers have tried it (at our risk) and have learned to rely on it.

We offer it to all on the same unconditional guarantee: Satisfactory results or your money back—and the user is the judge.

Write for a supply, stating the number of hogs you are feeding. No money in advance. You pay only if you are thoroughly satisfied that you got more fat from the same feed, and the HOG-TONE treatment has eliminated the minor diseases that hinder hog growth.

Always get HOG-TONE where possible from your local dealer. Or, if he is not stocked, write to us direct.

Avalon Farms Company
341 West Ohio Street
Chicago, Illinois
Natco Dairy Barns Are Warm in Winter

NATCO barns are warm in winter, yet cool in summer. They provide year-round comfort for your cows. More comfort in the stable means more milk in the pail—more money in the bank.

The hollow spaces in a glazed Natco Hollow Tile wall provide a blanket of still air through which heat, cold or dampness will not pass.

And the cost? Perhaps a little more at first, but far less in the end than for other construction. The saving in insurance and upkeep will repay the added investment within a few years. All further savings are clear profit.

Whatever you intend to build, our book, "Natco on the Farm," will offer helpful suggestions. Write for it today—no charge.

Ask your building supply dealer to quote you prices on Natco Hollow Tile.

National Fire Proofing Company
1204 Fulton Building
Pittsburgh, Pa.

Factories assure a wide and economical distribution.

Say Where You Saw It When You Write
"Wheels on a track - the Cletrac way - take less power"

WATCH THE CLETRAC

Make it a point to see a Cletrac in action somewhere.

Watch it turn the brown furrows - plowing faster - doing better work. Light-footed, but powerful, the Cletrac easily pulls a double disc and a seeder over the mellowed seed bed - never "digs in," never "wallow" - doesn't pack the soil.

Up hill and down, over wet, sticky ground or light, sandy soil, the small, compact, powerful Cletrac crawls sturdily on - riding on its own metal tracks.

Watch it in the hay field and the harvest field or running ditches, pulling stumps, sawing wood, filling silos - any hard job is a Cletrac job.

You'll want to know why progressive farmers are choosing the Cletrac.

Write for the booklet "Selecting a Tractor".

The Cleveland Tractor Co.

Largest Producers of Tank-Type Tractors in the World

19123 Euclid Ave., Cleveland, Ohio
Purina Pig Chow Keeps 'em Coming

Before they are born and after they are born Pig Chow nourishes the whole pig.

Bone-building phosphates and flesh-making protein are supplied by alfalfa and tankage.

After weaning, Pig Chow brings the pigs right on up. The cane molasses and other fattening ingredients fatten the pigs as they grow. Purina-fed pigs frequently make 250 to 285 lb. hogs at the age of six months.

Give Pig Chow a trial. If your dealer can't supply you, write us.

PURINA MILLS
St. Louis, Mo.
Ft. Worth, Texas
Nashville, Tenn.
Brooklyn, N. Y.

Say Where You Saw It When You Write
“He’s the Best Farm Hand We Ever Had”

Haven’t you often heard your father say that about one farm hand—that “old reliable” who is always on the job, doing more and better work than any of the others?

If your father knew that he could get all the farm hands he needed, each of them as good as that “best” one, he would grab at the chance wouldn’t he?

When you begin operating your farm, after leaving school, you will hire fewer farm hands than your father does, but you will buy more farm machinery. You will have an opportunity that he didn’t have in hiring labor. You can be sure of reliability in all of your implements and machines.

The John Deere line is like a complete force of reliable farm hands. It is comprised of an implement for practically every farm operation. It has been a leader in quality for over three-quarters of a century. The success of the whole line is due to the high quality for each unit in the line.

Be sure to investigate the John Deere Full Line before you begin your career as a farmer. You will want the uniformly high quality that it insures.

John Deere
Moline, Illinois

Tell Advertisers Who Introduced You
The care and feed given the sow from the time she is bred until she farrows and then, both sow and litter until weaning time, has much to do with the profits you make from your hogs. If your sows are fed and handled right, bigger, stronger litters are sure to come. The pigs will thrive better, grow vigorously right up to weaning time. Then, if given the proper growing feed, pasture and exercise, bigger frames, heavier bone and better finish, with bigger profits, will result.

SCHUMACHER FEED

and the SCHUMACHER SELF-FEEDING PLAN have proven to thousands of hog men and farmers to be an ideal way of raising hogs. First, SCHUMACHER FEED, fed in self-feeders with tankage, puts brood sows in ideal farrowing condition. Second, it gives the little pigs the right start through the mother. Third, after weaning it develops bigger bone and frames, and with the addition of corn and tankage it will put on fat quicker and cheaper than anything you ever used.

Don't feed ear corn in a snow covered feed lot—it is too expensive—too much feed is wasted. The self-feeder with compartments for corn, tankage and Schumacher affords a much cheaper and better way.

The Quaker Oats Company Address Chicago, U.S.A.
POPULAR DAIRY PROF TO RESCUE THIRSTING WORLD
Voluble Entomologist Thought Reporter Was Salesman
PROCESS WORTH MILLION
Additional Demonstration That Profs Are People

In an interview obtained by your correspondent on the smoking car of a train coming down from Rochester, two prominent professors of the New York State College of Agriculture declared that they were working on important inventions having to do with the recent advent of Dairying.

These inventions being of a personal nature, and the professors being unaware they were talking with a newspaper correspondent, it is felt that they would prefer anonymity in the matter. It can only be said, with safety, that no member of their respective departments, Entomology and Dairy, would ever suspect it of them.

How It Happened

Your correspondent, returning from a journey to Geneva and disenchanted with an elk's tooth in his watch chain, was mistaken by the two professors for a traveling salesman and thereupon admitted to conversation with them on the status of a human being. Altho he had talked courses under them, they did not recognize him as one of the children of their school. The opportunity was unique, and your correspondent at once turned the subject to tales of supposed success in beating the bone-dry game.

Results fully justified the contentions of certain optimists who state that you have only to scratch the surface of a professor to find a bad boy. They took to the topic with animation. The first narrated how, before the drought, he employed a slide rule to figure frequency factors on future snakes and bad cattle, and how he had made purchases accordingly. He was, he said, at work on a sure-fire firewater made of—but that, as he said, was his secret.

The second professor was all for popularizing the refractometer as the only sure test for wood acidiﬁcation. The position he pointed out, was obtainable in large quantities and the - (Continued on page 2)

DOC SEULKE TO LEAVE
But Will Be Neighbor Part of Time

On February 15, Prof. K. J. Seulke, of the animal husbandry department, will sever his connection with the College and assume the duties of Eastern field representative of the Aberdeen-Angus Breeders' Association. This position was recently been created and in looking around for a capable man of broad vision and wide experience, the Association decided upon Professor Seulke. Altho reluctant to leave the College, the Association had made its offer so attractive that he could do nothing but accept. His friends can find some solace in the fact that his headquarters will be in Ithaca where he will probably spend two days a week.

His work will be to cooperate with breeders in the East; to help them dispose of surplus stock; to assist beginners, and to further the interests of the breed in every way possible.

B. S. at Purdue
Professor Seulke received his B. S. at Purdue where he specialized in animal husbandry. Penn State gave him his Master's degree for his work along the lines of animal husbandry, meat production and animal nutrition. From there he came to Cornell where he received his Ph. D. Since the fall of 1914 he has had charge of the teaching and experimental work in beef cattle, sheep and swine.

His resignation will leave a gap that will be hard to bridge. He takes with him the good wishes of his colleagues and the love of his students. He has been "Doc" and "Prof" to all of us, a prince of good fellows, a ready mixer and a real "white" man.

Mr. and Mrs. William R. George of Freeville announce the engagement of their daughter, Eleanor M. George '21, to Joseph B. Kirkland of Ithaca.

Local Man Enthusiastic After Visit To West

SPUDS TO MAKE MILWAUKEE'S FAME SAYS HARDENBURG

Neighbor "Hardy" (Prof. E. V.) Hardenburg comes back from a trip to Milwaukee warmly enthusiastic about said town as a potato center. He went out there as delegate to the sixth annual meeting of the Potato Association of America and hob-nobbed with spud enthusiasts from nine states and two Canadian provinces. Measures were taken to improve inspection and safety equipment, to insure standardization and improvement of seed potatoes. Before adjourning, new association officers were elected. All of these came from the Middle West.

No Dearth of Funds

But it wasn't only the conference which pleased him. Wisconsin has made generous appropriations and the commercial concerns of the state have come in strong for the annual potato show held in the auditorium there. The Milwaukee Potato Show is now the largest single crop exhibit in the United States, and the Association met at a time which allowed the delegates to take it in.

Local Man Enthusiastic After Visit To West

POTTAETES IN HOP FIELDS
Points Out Possibilities For Farm Croppers

Neighborhood friends of Mrs. William R. George announce the engagement of their daughter, Eleanor M. George '21, to Joseph B. Kirkland of Ithaca at a sorority party given by Miss Eleanor's sorority of April 19. Announcement was also made by Kirk earlier in the evening at a dinner at the A. Z. house.


AN HUS

These are trying times for our four-legged contemporaries out in the Ag. barns. Farmers' Week is fast approaching, and the poor, dumb creatures are being pitilessly manhandled and hauled around the judging pens. Attempts are made on them stand in the approved show ring position. The gentle bovine is daily put thru her "stunts" in spite of her protesting "moo," and the younger members of the equine family are likewise tutored in the fine art of posing for the judges. Even the fowl by their marriage on January 16. The ceremony was performed at four o'clock in Sage Chapel by Rev. J. F. Fitschen.

At the Round-Up Club meeting on January 12 the animals to be shown Farmers' Week were drawn by those desirous of fitting them and caring for them up to that time. There will be rings in each class, including the weanling and yearling colts, beef cattle, sheep and swine. The dairy breeds will also be represented by rings of steers, bulls, heifers, and heifers.

Local Men burst into Fame

Behrends and Goodman Make Decided Hit in Corning Saloon

The musty mirrors of one of the erstwhile proudest emporiums of Steuben County must needs have sadly reflected upon the fleeting nature of human habits when recently the polished bar was grazed by wrenches, bolts and oil cups during a spasm of the extension service of the Rural Engineering people.

Mr. Humphreys, who manages the Farm Bureau of Steuben County, is responsible for the ingenious advertising device of opening a saloon for the purpose of public education in Corning and the surrounding farming district. The school was directed by neighbor Goodman from Caldwell Hall and took the form of three days of demonstrated lecturing and discussion and one day of actual service for the farmers, who fetched in their troubles for correction and repair by experts from the College.

It may be that this procedure has opened a legitimate field for investigation of the sociological use of the saloon. Moreover, the economic consideration that barber shops could utilize the mirrors is offset by the fact that the bars can be made ideal laboratory tables.

It will be noted in our cut that Freddie Behrends ('16) is "behind the bars" at last!

Miss J. Norma Anderson of Plant Path and Professor B. W. Rees of Pomology succeeded in giving their friends a complete surprise by their marriage on January 16. The ceremony was performed at four o'clock in Sage Chapel by Rev. J. F. Fitschen.

Northside News Gleaned By Busy Correspondents

FARM MANAGEMENT

Neighbor Warren left January 10 for Winnipeg, Manitoba, to address the first annual convention of directors of Rural Credits Societies of the Province of Manitoba. Our Canadian neighbors have set the pace in rural short-time credit legislation. In an effort to solve the problem of short-time credit for farmers the Province of Manitoba has provided by law for the limited-Hiability plan. Loans are made by local branches of Canadian banks on the recommendation of local credit societies. The trip plan is proving successful. On his return trip, Dr. Warren will stop off at the University of Minnesota to deliver an address.

Neighbor "Misty" (E. G.) Misner spent several days at Harrisburg, Pennsylvania, early in January.

Prof to Rescue Thirsty World

(Continued from page 1)

The tester so simple that even a child could use it.

"But whatcha gonna do if the stuff tests positive?" jeered the first professor with great unprofessionalism.

"That," said his learned brother, "will be taken care of by my Catalytic Corrective Scent Pin. Remove it from your tie and touch it to the surface of the solution to make it safe for man and beast. I predict that it will do away with bow ties altogether."

TESTER

This neighborhood attended almost in masse at the Rochester Faculty meeting on January 13, 15, and 16. Professor Chandler gave a talk on "Pruning" and Professor Rees was the official judge of the show. January 13 neighbor Vinson led the Lazy Club in considering Extension in Pomology. Neighbor Vinson is the Pomology extension man with Professor Rees. T. S.
Good taste, you know, is something not all of us are born with—some need help to display it. Good taste is such an evident characteristic of this store that our guidance in supplying haberdashery is highly appreciated by the best dressed men in town.

E. B. Baxter
The Quality Shop
150 East State Street, Ithaca, N. Y.

The Wisteria Garden
OPPOSITE STRAND
"Particular Food for Particular People"

Special Lunch
Noon and Night, 50 Cents

Delicious
Steaks, Chops and Salads

Visitors during Farmers' Week should step in and see
"Peacock Alley,"
one of the finest rooms in existence. Ask any student regarding our service.

IT CANNOT BE EQUALLED

THE BACKGROUND BOOKS
By Liberty Hyde Bailey

These books should be read and studied by every agricultural worker; every community leader; every one interested in the future welfare of the world.

The Holy Earth - $1.00
It expounds the philosophy that bases society on the earth in this teaching, the naturist and the farmer find their proper place.

Universal Service - $1.00
The hope of the world's society lies in Universal service, Universal Fellowship. This book discusses practical constructive suggestions for the remodelling of the social fabric toward a true democracy.

What is Democracy - $1.00
The question of the hour and its answer by a clear-thinking student of mankind. It gives special attention to the rural situation as a world problem.

Wind and Weather - $1.00
A book of verse. One comes from delving in this book with a clean, refreshed, and inspired spirit; a new love and comprehension of Mother Earth.

For sale at the bookstores or direct from
THE COMSTOCK PUBLISHING COMPANY
Ithaca, New York
Friends From Without

Welcome, people, this is our best chance at becoming acquainted and we are glad for that chance. You will take home many facts worth knowing and one of these is our special interest, namely, the fact of our neighborhood. The College, its staff and its students are real neighbors to the rest of the State, and are, with the farmers, a link in the chain of community interest which binds the complex of our national life. Agriculture in America was drawn its first full breath and with this comes a consciousness of vast power which carries the prime obligation of self-control and impassionate deliberation. The surest guarantee of wise conduct is faith in human nature demonstrated by confidence in our fellow men and in good will for them. Soon you will welcome us into the harshness of production and so it is in a prophetic sense that we utter our welcome to this Farmers’ Week fellowship. Prophetic of the unity of our aims and of the spiritual strength of our similar ideals.

We’ll Help Too!

Boasting the home weekly is to be the theme for special emphasis on Wednesday of Farmers’ Week. Many country weekly papers will be on exhibition and their editors will take part in the general conference as to how to increase the effectiveness of their service to the rural communities.

While we have been writing we’ve been watching an Italian shoveling snow. Shoveling over his shoulder, he has already covered a lady, a frog and a third passer-by of no particular species. Professor Lauman was heading right for him, but apparently remembered something and turned abruptly back. Fate has no sense of humor, say we, sadly.

When your correspondent went in to get his study card, morosely he found himself twenty years of age, he must get off next term in order to be termed B. S. and considering vain alternatives, his eagle eye caught sight of Doctor Bethlen’s desk. It said that a trained agriculturist was wanted by the Red Cross for important work in Roumania and some interested should see the Secretary.

Roumania sounding sufficiently remote from twenty-six hours on the steamer. But he saw the Secretary, as suggested. But what was wanted was a missionary, not a globe-trotter.

For many years, one of the frequenters of the Hotel Meropol, Bucharest, Roumania, is planning a great industrial school for war orphans, to rehabilitate that nation after its terrible war experiences. She wants a man to handle the agricultural department of the enterprise. She needs a man who will see the opportunity and enter the enterprise on his own initiative. He will have to work with modern equipment and against obstacles. Finally, she should speak French, a language current among the upper classes of the country, and he must in addition be willing to learn Bulgarian, the language of the people with whom he will work.

When Dean Mann read the requirements he shot at once of ‘Spence’ Hatch ’15. Anyone knowing Hatch’s present address might write him a letter or on the demand of the word at the Dean’s office. Or there may be another man, equally qualified, now in College. This item is inserted on that chance.

At Our Community House

While enjoying the comforts of Roberts assembly room, our community, or at least as many as the stove would let in, had a trip to the north pole on Tuesday evening, January 26. They visited the huts of the Eskimo, lassoed a walrus, harpooned a polar bear, killed musk ox to melt ice with the animal heat to get water to drink, and did all sorts of things not often attempted in Ithaca. They got so close to a musk ox about to charge that one jump of the ox landed him on top of the photographer, but the picture was saved. They saw a man taking sights within six miles of the North Pole. They met Ross Gilmore Marvin, Cornell A. E. 1896, who carried the Cornell flag farther north than any flag has ever been carried. He had taken the pole. The guide and photographer was neighbor Harry White. He explored and hunted, now winter course student.

The trip was made under the auspices of the Stone Club.

On January 6 the Winter Boarders were treated to a swell lecture by Neighbor Pixroy, the material for which was credited to the “Life of Ezra Cornell,” written by the son of Governor Alonzo B. Cornell.

Birds of a Feather

A man’s size snowstorm didn’t keep the country editors from accepting the College’s invitation to come and see the annual meeting and entertained by sight of what we need to have in the way of new buildings. They were taken out to look at what is on the inside and entertained at luncheon in the Domecon apartments by the faculty. Your correspondent was made an outcast in the community and the rest of the country editors or even the faculty. It was pleasant. Dick (Professor B.) Cross from the elegant offices of the Stone Club had set aside just enough time in the program and got away with his duties like the proverbial two million dollars.
"We Treat Your Linen White"

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POULTRY AGAIN

Wis Card (W. H.), poultry judge and enthusiast from New England, was a welcome visitor for a few days during the weeks of January 5 and 12. He assisted Obie (Dr.) Kent in teaching the students in the judging classes some of the fine points in judging birds both for the fancy and the utility standard.

Section B of the winter Poultry Course are now trying to master the art of hatching chickens. In keeping the individual lights burning, regulating the heat and unraveling the mysteries of embryonic development (in several cases lack of development) requires the better traits of the student.

In newly constructed pens situated near the Poultry Building can be found part of the Farmers' Week game farm exhibit. Investigate the pine bushes in the pen and you will strike a match for your wisdom.

Incidentally, we just overheard that our good neighbors, the Vegetable Gardening department, is able to maintain itself on a smaller appropriation than any other department in the college. Proof of this can be found on the bulletin board where a bright yellow placard proclaims that "A Dollar Does It."

The chicken stealing case is yet to be solved. It is alleged that certain students registered in the four-year course recently stole a few hens being cared for by one of the short course students. The evidence was so successfully covered up that it required real judges and lawyers in the mock trial to consider the case in a judicial manner on January 23. State troopers were invited for the purpose of learning methods of securing conviction for chicken thieves. Arrangements have been made to use pictures of the progress of the prosecution in publicity work for the poultry interests. A stenographic report has been incorporated into the archives of the department.

Neighbors from Kent went to Trenton with the judging team. The results of the contests were as follows: Connecticut, winner; the remaining three judging teams were, in order, North Carolina, New York, New Jersey. The men on the local team were S. A. Tompkins, E. E. Harding, R. V. Dubois. The office of the Cornell Poultry Association on the top floor of the Poultry Building is open from 12 to 1 on week days. The association recently elected the following officers for next term: President, R. H. Sawyer; vice-president, G. S. Vickers; treasurer, R. V. Dubois; secretary, E. E. Harding.

Accordingly, about seventy attended the Poultry Association meeting January 9. Wis Card gave a talk on "Poultry Generalizations" and drew four or five pictures which were auctioned off for about $7.

Professor Adams spoke on "Publicity" and Miss Cornwall's committee refreshed the thirsty with cider and doughnuts at proper intervals.

PERSONALS

Bill (Prof. W. L.) Myers suffered with a cold during the week of January 13.

Neighbor (Prof. E. O.) Fippin is now in Washington on leave from Cornell. Early in January neighbor Fippin talked at the annual meeting of county agents at the University of Texas. The local accounts are quoted: "He gave a splendid address on the conservation of organic matter of soils, in which he threw new light on an old subject."

Art (Dr. A. W.) Gilbert, who left our neighborhood in 1905, has received a post of honor and responsibility as Commissioner of Agriculture for Massachusetts.

THE "AG" STUDENT

must use his eyes as much—possibly more—than those registered in other colleges. We can help you keep them at their highest efficiency

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Frances Kelley, instructor in home practice and faculty chaperon at the Lodge practice house, leaves in February to continue work for a Master's degree at Teachers College, Columbia University.

Eleanor Hillhouse, instructor in millinery, is spending this month at her home in Connecticut, recuperating from an appendix operation. Anabella Livingston '18 has been called to the department home to take charge of the millinery work during her absence.

Dom Econ students turned out in masses for a mass meeting all their own early in January. Dom Econ, assisted by its grown-up senior daughters, has played hostess to numerous visiting committees who have been both luncheon and dinner guests during their trips to the College.

Ellen Sticklemeyer '19, assistant manager of the Dom Econ cafeteria, was married December 24 to Carroll Dunham '19. Wise ones are commenting on the value of cafeteria experience.

Professor Lulu Graves occupied her vacation days by calling a meeting of the executive committee of the American Dietetic Association of which she is president. We hear that this association has been of great value in developing a place for dietetics work in health and medical circles.

Even tho the Department of Home Economics, which has already become a School of Home Economics, soon becomes the New York State College of Home Economics at Cornell, as has been recommended to the State Legislature, it is said, it will still remain "Dom Econ" to their campus friends.

Dom Econ now has 281 four-year graduates. Your correspondent recently surveyed the fields of activity in which they are going engaged and found that 80 are married, 74 teaching, 38 engaged in vocational work which has to do with the feeding of numbers of people, 17 are in extension work in Home Economics, 11 are in secretarial service, 8 hold scientific positions, 12 are at home and the others are engaged in miscellaneous activities not readily classified.

An increase has been made in the Cornell Poultry Dining Service for Farmers' Week, to meet the increased appetites for poultry products of the increased number utilizing the service. Mrs. R. S. Sabby and S. A. Tompkins are in charge. We pick the feathers so that you may pick the bones.

"Les" Card is enjoying a three months vacation. Altho we feel sorry for him yet we are glad that experimental work requires daily visits to the Poultry Building. We would certainly miss his congenial presence if he should leave town during this period.

January 13 to 16 neighbors Collingwood, Hosmer, Spring and Bentley attended the convention of the Society of American Foresters in New York City.
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P.108
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THE CORNELL COUNTRYMAN

MARCH
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Cover—Courtesy, Eastman Kodak Co.

Frontispiece—Dawn and Dark—Norman Gale.
   Courtesy G. P. Putnam’s Sons .................................................. 322

Artificial Light to Control Egg Production—James E. Rice .......................... 323
Selecting Roosters to Increase Production—O. B. Kent ............................. 326
Catching Chicken Thieves with Science ............................................... 329
City Wages on the Farm—Charles P. Leasure ........................................ 330
Modern Conveniences From Poultry—Claude S. Smith ................................. 332
A Non-Union Day for Hens—W. A. Simmons ......................................... 333
Certified Eggs and Poultry Stock—L. M. Hurd ....................................... 335
Money From Mottled Anconas—Archie E. Vandervort ................................. 336
Book Reviews .................................................................................. 338
Farm Home ...................................................................................... 339
Editorials .......................................................................................... 340
Former Student Notes ........................................................................ 341
Campus Countryman ........................................................................... 367
DAWN AND DARK

God with his million cares
    Went to the left or right,
Leaving our world; and the day
   Grew night.

Back from a sphere He came
    Over a starry lawn,
Looked at our world; and the dark
   Grew dawn.        By Norman Gale
Artificial Light To Control Egg Production

BY JAMES E. RICE

Professor of Poultry Husbandry, Cornell University

Many years of observation and the results of nearly three years' experiments with artificial light in the control of egg production confirm our earlier belief that proper methods of illumination, the right kind of stock, and correct methods of feeding are the most satisfactory means of influencing egg production. The shift of the high peak of egg production from spring to fall on the farms where illumination is properly used is certain to have a marked influence on the seasonal supply of fresh eggs and hence, on the quality, distribution, storage, and consumption of eggs, all of which should re-act favorably upon the producer who practices the most approved methods and thereby secures the advantage which will accrue to those who are able to secure large yields during periods of highest prices. Like every other improved method of production, it will act unfavorably upon the business of the person who does not practice it. He will suffer because he will be competing on uneven terms with his more skillful competitor.

The proper use of illumination in the control of egg production creates a natural, not an artificial, condition as regards the hours of daylight. It merely restores to the domestic fowl the daylight conditions which she enjoyed in her native home near the equator. The number of hours of daylight for eating and exercise, the physical condition of the stock, the kind of rations fed, and the season of the year are all factors that must be taken into consideration if the most satisfactory results are to be secured.

Illumination is proving our most powerful means of increasing egg production when prices are highest but it must be handled with caution and judgment if the desired results are to be obtained. The more powerful the agency, the greater is the necessity for handling it wisely.

The following acrostic, spelling "it controls," "illumination," "gets more eggs," has been prepared from facts furnished by members of the departments of poultry husbandry and rural engineering to emphasize some of the more important points to be observed in the practical use of illumination in the control of egg production:
In the tropics where the domestic fowl originated, the length of the nights and days are essentially equal. As a result of this, the reproductive and digestive system of the fowl was developed to fit the environment of the twelve hour night and the twelve hour day.

The fowl, therefore, is like an alarm clock: she must be wound up about every twelve hours. In the winter time in the north her stomach strikes at about three or four o'clock in the morning. Not having the eyes of an owl to see in the dark, she has no alternative but to shiver and wait until daylight, or until the caretaker gets around to feed her.

Carrying the domestic fowl from the tropics to the north temperate zone where the nights during the fall and winter are from thirteen to fifteen hours long has changed her habits but not her nature. She merely tucks her head under her wing and hibernates until spring. She still takes her vacation when she has the least to eat and to do. She acts from necessity rather than from choice. She is an "opportunist." She lays when she has an opportunity to eat, exercise, and enjoy herself.

Overcoming the long nights by the right kind and amount of artificial light, feed, water, and exercise starts the egg-making machinery and automatically feeds it, lubricates it, and keeps it in repair.

Never "hang a monkey wrench on the safety valve." The more delicate the machinery, the greater the danger in operating it. Regulate the speed to fit the machine, and avoid disastrous results. Low vitality hens are more likely to go to pieces on account of over-lighting and over-feeding.

Time is money. "Take time by the forelock." Get eggs when the getting is good. Why board unproductive hens all winter just for the sake of their society? An early lay makes early pay. Pay the bills with high-priced eggs and save paying interest on what you owe.

"Robbing Peter to pay Paul" pays. Robbing Peter of low-priced eggs in the spring and summer, and paying Paul in high-priced eggs in the fall and winter months suits the hen and satisfies the owner, tickles the consumer, and everybody is satisfied. Correct lighting does it.

Oh, wad some power the gifts to gie us, to see oursel's as some hens see us—in the dark. Let in the light. "Have a heart" and provide illumination so that fowls may have an opportunity to lay according to their nature. The laying hen is the happy hen. Let her lay and be happy.

Let regularity in feeding and lighting be the rule. Always important, it is especially so when fowls are tuned up to a high rate of production under illumination, and sudden changes occur in care and weather.

Secure the best trade and the highest prices by producing eggs when they are the scarcest and highest. It pays.
IMITATE spring conditions; they are ideal for egg production.

ITER should be abundant, clean, and dry. It keeps the birds busy, warm, healthy, and happy.

IGHT used early in the morning permits grain feeding the night before. The hens work while the owner sleeps.

SE wet mashes only to hasten development. Too much may be too forcing.

IXED grains and ground feeds should be fed in proper proportions. Cornell Rations are balanced.

CREASE action to improve digestion. Feed small amounts of grain frequently.

IGHT grain is fed heavily about one hour before dimming. Hens fed too soon retire too early.

LL grain should be scattered in the litter. Hens like to work for their living.

ROUGHS or hoppers should be used. They keep dry mash always accessible.

IS necessary to keep pure water available at all times. (See Cornell Water Warming Device). The best layers are heaviest drinkers.

YSTER shells and grit should always be available. The hen is her own dentist.

OON is the time to provide fresh, unfrozen, green food. It aids digestion.

IVE a twelve to fourteen hour "feeding day" by supplementing normal daylight with artificial light, either morning or evening or both morning and evening, preferably more in the morning than in the evening.

IMATE artificial light very gradually in spring when the normal day becomes twelve to fifteen hours long.

URN time into money by using switches, time clocks, and dimming devices.

AVE light by adjusting height and distance between lights and walls to fit the room. (Continued on page 360)
SELECTING ROOSTERS TO INCREASE PRODUCTION

How to Find the Ones Whose Daughters Will Lay

BY O. B. KENT

Assistant Professor, Poultry Husbandry, Cornell University

THe male is half the breeding flock and it is most important that he should be the "better half." Since there are always so many males to select from, his quality depends upon our ability to save the good ones and eliminate the poor ones. We breed from so many more hens than we do males that we have a good opportunity to select males that will be of better quality than the females.

It is not possible to lay down any definite rule as to just what a male should look like or be, or to grade them all the way from poor to good. With our present knowledge it is possible to tell the very good males from the medium quality individuals and the mediocre from the poor males. Since there are always so many males to select from when growing birds it is possible to miss some of the good males and still have a number of good ones to breed from.

Why should there be any difference between males in appearance? For the same reason that there is such a difference in the rate of growth and in the intensity with which hens lay. Some hens have the organs and ability to lay an egg once in every twenty-four hours; others are not able to produce an egg oftener than once in forty-eight hours, although both have the same feed and care. If one hen can lay faster and grow faster than another, it is a pretty good indication that she is better equipped to digest large amounts of feed quickly. In order to study this problem, cockerels were killed and measurements taken of the various parts of the body. There were three different lots of cockerels killed. Two of the lots were from birds of somewhat similar pedigree; the third lot were from hens bred for low production. The first lot consisted of individuals showing good body type and the second lot exemplified poor body type. It is readily possible to pick out birds that are deep bodied, as distinct from those that are shallow bodied. The measurements show that there was a decided organic difference between the two lots. The third lot of low pedigree birds were similar in measurements to the poor type birds. The measurements show that the good birds were relatively shorter in bone with the exception of the keel bone which was relatively longer, and that they had relatively larger hearts, gizzards, and intestines. The wings and legs of the poor birds, although they were larger, were not as heavy because they were not as well fleshed. A careful comparison of the birds shows quite clearly that the second lot were poorer fleshed, longer in bone, and more shallow in body.

Unfortunately we cannot tell how large a heart, gizzard, or intesting a bird has before we kill him. If we could, it would undoubtedly simplify matters considerably. It only makes it a little more difficult and a whole lot more interesting to have to determine a male's value by looking at him.

Some body measurements that we took a year ago give an idea of the possibilities of studying males. In December, 1918, all the males that were bred from in the spring and that were still alive were measured. Along with other measurements, the length of back, the depth from back to keel bone, and the distance from the point of the keel bone to the base of the tail were measured. The distance from the keel to tail divided by the other two measurements gives a figure that shows quite a strong relationship to the production of the daughters. The five best males, as shown by this figure, had forty-four daughters that
"A good male should be friendly and courageous." The daughters of this one averaged a hundred and ninety-five eggs the first year.

averaged one hundred and eighty-six eggs from November 1 to November 1. The six males that were poorest according to the measurements had forty-eight daughters that averaged one hundred and fifty-five eggs from November 1 to November 1. To establish how close this relationship is, will require a large number of additional measurements. It is hoped that when the pullets now in the first laying year have completed it, more complete data will be available.

We will now try to describe the characters to consider in selecting a male. The best male grows most rapidly and matures first. So select at broiler age the largest, best developed, and best fleshed males to keep for breeding purposes. The best breeders are the best broilers but ought not to be sold as such. Good cockerels at that time should appear deep bodied and short legged. They should be full in breast and abdomen. A long legged, rangy, knock-
kneed, spindle necked, hump backed cockerel should not be saved with the idea that, because of his slower maturity, he will develop into a larger bird. For a chicken to be most profitable it must be fast growing and fast laying; for the longer it takes to grow, the more it costs; the slower it lays, the less it produces.

Of the males kept for breeding purposes, the best ones have large, full, prominent eyes. The eyelids form a large oval ring around the eye so that the eyeball has plenty of room to play back and forth and see everything there is to eat and anything else that may be going on. A poor bird frequently has sunken eyes and circular eyelids that closely fit the eyeball and hence hasn’t as good a range of vision. Overhanging or prominent eyebrows are frequently found on birds that tend to become broody, so that unless one is particularly anxious to develop a broody strain it is well to select males with bold or prominent eyes.

The head of a good bird is generally moderately short. A poor bird is liable to have a long crow head or a short fat head. While it is not always true, by any manner of means, the comb tends to follow the head in a good male and stick up in a poor male. The comb points have a broad base in the first and are frequently mere pencil points in the last.

The neck is quite an important section for it discloses the long boned, skinny individual. The poor bird has a long, thin neck with the feathers drawn up away from the body, while the good bird has a large full neck. The neck is so full that it blends almost imperceptibly with the body.

The back of a good bird is flat, moderately short, and wide from one end to the other. If it is narrow and humped up with the back bone forming a prominent ridge it indicates low production. The back should appear about the same width in front of the tail as it is across the hips. Width helps give the body the appearance of being flat or straight on the sides. Bulging or loose feathered sides are not at all desirable.

The breast is one of the most if not the most important section. It should be deep, round, and full,—the deeper the better. The body should be full and deep enough so that but little of the drumsticks or legs show. The abdomen should be full enough to be evenly balanced with the breast. In considering depth of body and fullness of breast, do not mistake feather length for body depth. In breeds like the Cochin, an apparent depth of body is merely loose fluffy feathers. If you will take such a bird in your hands and hold it with your thumbs on the middle of the back, the palms of your hands pressing against the sides of the bird and your fingers on the keel, you can quickly tell whether it is a really deep bodied bird or merely a camouflaged depth.

In making this measurement hold the little finger on the front of the keel and one of the others on the rear end of the keel bone. The keel should be long and unless it is curved, due to its length, it should run parallel to the back. If the bird has an especially long keel bone it will be curved,—usually a desirable characteristic.

In addition to the body characteristics described, a good male should be friendly and courageous. A male that is nervous or is a coward is rarely a good producing bird. Of course, not all good fighting or courageous birds sire good producing hens but their daughters are less liable to be frightened or affected by a change in condition and so will lay more steadily and consistently. A good male is proud of himself and by his frequent crowing calls attention to that fact.
CATCHING CHICKEN TIEVES WITH SCIENCE

How College Experts are Helping to Abolish a Serious Menace

CHICKEN stealing is not a minstrel-show matter. It is a crime which has been minimized by public mirth and indifference, and encouraged by the difficulty of getting convictions thru purely circumstantial evidence. For some years, the department of poultry husbandry here has been working to bring the more serious aspects of the situation to public consciousness, and to perfect methods by which scientific testimony could be brought to bear against alleged offenders.

The movement in this direction, which reached its high point a month ago in a poultry mock trial held in Roberts Assembly, may be said to have taken start some five years back, when the poultry department held the first mock trial of this sort. A comparison of the evidence introduced at the two trials, and of its effectiveness, serves well to show just how much progress has been made in the work.

The first trial, which was conducted by winter course students under the supervision of Professor Rice, centered around the actual theft of some particularly fine specimens from the Rice flock. This theft occurred shortly after a fresh snowfall, and it was quite easy to trace the footsteps of the thief to his home. Moreover, this thief was seen abroad by a neighbor long after the hour that honest men usually wander about other peoples' property. Other facts bearing on the suspect's habits and local reputation were established, making as excellent a chain of circumstantial evidence as could be desired—but it was all merely circumstantial and the suspect had to be acquitted.

This year's trial was different. During the intervening five years, the department had become more and more aroused to the need of definite measures. Reports of thefts kept coming in from all over the state, many of these going beyond the bounds of petty larceny, and some involving the loss of as many as two hundred birds, and the consequent cancellation of the year's profits for that particular grower. Experts of the department kept at work on methods for identifying individual fowls and, in 1917, when an important case of poultry
larceny came into the Ithaca courts, the expert testimony of Doctor O. B. Kent secured the conviction of the culprit.

In this trial of February 7, 1920, regular students in poultry conducted the defense, and winter course students the prosecution. County Judge Willard M. Kent presided, and the student lawyers on both sides were coached by Ithaca lawyers. The “mock” case was carefully worked out, following in outline the case of five years previous, but scorn ing such circumstantial features as foot prints in the snow. That was no longer necessary.

(Continued on page 354)

EXPERIENCE: A Series of Personal Stories by the Best People in the State of New York—Men and Women Designated by their Farm Bureau Agents as Leaders in their Home Communities.

VI. City Wages on the Farm

Poultry Versus Cows to Keep the Boys at Home

BY CHARLES P. LEASURE

Hillsdale Farm, Nichols, N. Y.

To keep the young men on the hill farms from going to the city, they must be assured of a labor income equal to that which they would receive in the city. Not only that, but this income must be earned with no more hours of work than would be required in the city. In addition, the farm must have as many as possible of the city conveniences.

I have learned by actual experience and close study, that the small poultry farm comes the nearest to meeting these requirements. My idea is a small farm having New York as the main market for its poultry products. There would be three or four cows to furnish skim milk for the chicks and milk, butter, and cream for the family. The farmer ought to follow some such crop rotation as corn, oats, wheat or rye, and hay. By using all the manure produced by the stock and poultry, and properly supplementing it with applications of lime and phosphate, the land ought to increase in fertility by leaps and bounds.

The necessary equipment for a profitable poultry farm must include some of the city conveniences, such as good fresh running water on tap at all necessary places, electric lights for the home and hen-houses, and a power plant to drive the labor saving machinery.

I keep about five hundred Single Comb White Leghorns, and a small dairy of six or eight cows and three or four head of young stock to replace the poorer cows. I belong to the Tioga County Dairy Improvement Association and have kept accurate account of both the dairy and poultry enterprises. My figures show that I can earn a labor income from poultry ten times greater than I can from the dairy, altho I work the same number of hours for each. Next fall I intend to sell my cows, (they are winter milkers and ought to find a ready market); then place some good pullets in the barn and compare the labor incomes.

Calories are something new to the average farmer, and altho I have not studied out the relative cost of production, still I do know from the weekly news letter of the United States Department of Agriculture that last December I received ten cents for one hundred calories in eggs and one and a third cents for the same number of calories in milk.

The poultrymen of Tioga County are starting a new sort of an organization
"We feel that there is a bright future for the poultry industry" suggested by Professor L. M. Hurd and highly recommended by E. R. Zimmer, our farm bureau manager.

Each community elects a committee of five poultrymen and the chairmen of all the community committees make up a county committee. Both the county and community committees consult with the farm bureau manager and lay out a program of work.

We feel that there is a bright future for the poultry industry. We have a live wire for a farm bureau manager and with his help we are going to put Tioga County on the map as a leader in poultry matters.
VII. Modern Conveniences from Poultry

Production Figures Prove that Electric Lighting Pays

BY CLAUDE S. SMITH

Lodi, New York

We began our poultry business some ten years ago with a few hens given us when we began farming for ourselves. I refer to we, meaning the good wife, a most necessary partner in the poultry business.

These hens were of all ages and colors, and of mixed breeding. We followed the easiest method of improving the strain, by obtaining hatching eggs from a neighbor who we knew had good stock. At first we hatched under hens and later purchased incubators and colony brooders, keeping the most promising of the old hens and increasing the flock with the pullets raised.

We used no systematic method of culling until September, 1918, when the Farm Bureau and College of Agriculture gave a culling demonstration at our farm. We have since found culling of great value in improving the flock.

On Christmas day, 1918, we installed an electric lighting plant for a thirty days' trial. The results were such that the house, barns, and poultry house are now completely lighted, and we have an electric flat-iron and washing outfit in the house. The lights in the poultry house are turned on by a time-switch at half past five in the morning, and off by a dimmer switch in the evening, allowing the hens to find the perches while it is still light.

Following is a record of hens kept, eggs laid, and the products sold for the three years 1917, 1918, and 1919. The account is incomplete because our family of three is supplied with plenty of eggs the year round, and many roosters are canned in the fall for use the following spring and summer, to say nothing of all the meat that is used fresh. In 1917, our one hundred and seventy hens laid 15,164 eggs that sold for $437.21; in 1918, one hundred and eighty-five chickens laid 18,707 eggs that sold for $638.76. In the last week of 1918, we installed our lighting plant, and in 1919 the production jumped to 21,729 eggs which sold for $990.09. Not only was there an increased production, but this production came in the winter months when eggs were at a premium. Thus in January, 1917, we gathered 449 eggs from 170 hens; in January, 1919, we gathered 3465 from 190 layers, of which 95 were pullets. Similarly, the records show that during the winter months when production is usually lowest, the hens were giving excellent accounts of themselves and the returns amply justified the installation of the lights.

About 240 pullets were raised in 1919, bringing the flock up to 349 on January 1, 1920. One of the greatest difficulties of the average farmer is in raising enough pullets to keep the flock as large as possible. As a consequence, many hens are retained in the flock long after they are profitable. We now contemplate installing an incubator large enough to supply our demand for chicks.

The flock is fed according to the Cornell method, varying it somewhat with the feed grown on the farm. Successful poultry farming requires careful attention to details, liberal feeding (not over feeding), and persistent effort, to make it a success.

The wheels of big business run smoothly because the work is systematized and planned. Winter is the time for the business farmer to systematize and plan his work. Then the wheels of his farm work will run with less friction.
VIII. A Non-Union Day for Hens
Building a High Producing Flock by Breeding and Modern Methods
BY W. A. SIMMONS
Berkshire, N. Y.

I STARTED on a seventy acre farm with a flock of two hundred White Leghorns. The farm accounts I kept showed at the end of the year that the hens returned me a much better profit than any other activity. The fact that I liked this end of it more than any other clinched matters for me, and I decided to specialize in poultry. I bought a lamp incubator, hatched and sold a few day-old chicks. By the second year the business had grown to four hundred and fifty hens that were paying excellent dividends; we decided to go into it on a larger scale. We sold the farm and rented land and buildings of my father until we could find a suitable location to build on. We bought his six hundred hens and a Candee incubator with a capacity of eighteen hundred eggs, hatching the chicks in April and selling them in May and June. Appreciating the value of the latest information in my chosen line, I began attending poultry lectures. I took in Farmers' Week at Ithaca and acquired a fund of valuable information on culling, feeding, housing, and the like. Armed with the knowledge I had gained I came home and culled out one hundred and forty birds. We penned them up for two days to see if we had made any mistakes. Not a single egg did we get, so of course we shipped the slackers to market.

The cockerels that we sold that year paid for the feed of the pullets until they were almost old enough to lay. In the early winter we had Professor Moses, of Cornell, come down to select our breeding stock for the coming spring. We had always traded breeding roosters and bought what we supposed were some of the best strains,—sometimes getting “burnt.” We decided to line-breed and found that our stock was much better than could readily be picked up. I always figure that the male is the most important factor in grading. We tried some trap-nesting, but found that it required more time than we could afford to devote to it, so we gave it up.

After a time we found a small place a mile from town that was pretty well protected from winds and just up out of the valley where we had good air drainage. The only building was a small barn. We added a seven room bungalow and started work on a hen house. This was two
hundred feet long and twenty feet wide with two stories in the middle where we stored feed on the first floor and litter on the second. This permanent hen house has capacity for one thousand layers and some colony houses that we added later have an additional capacity of twenty-five hundred chicks.

Running water has been installed in all the hen houses and main buildings and it certainly is a great help in lightening work. We breed from strong, vigorous stock of good vitality and give the chicks free range, usually developing them fast and well. We place from four to six hundred in a ten by fourteen-foot colony house and use a coal burning colony heater. We like to get them on the ground as soon as the weather permits, within two weeks of hatching if possible, and then after a week or so, give them free range.

We pick out the cockerels as soon as we can distinguish them, giving the pullets a better chance to develop. The chicks receive all the sour milk they want until they are six weeks old, when we begin hopper-feeding. We cull out drones, early moulters, and boarders whenever we find them, cutting down the feed bills and giving the workers a chance. We have enlarged our incubator to over four thousand eggs and sell several thousand day-old chicks each season. This fall we installed a Western electric plant which has proven to be of great value in increasing egg production during the winter months, since it gives the hens a thirteen-hour day. We have an alarm clock set for three a.m., and when this goes off it springs a mouse trap and starts the current.

We have been in the poultry game here for four years and feel that we have achieved a very fair degree of success. Last year we had some hens certified and we now have a pen of five hens being trapnested under the Cornell breed test. We are looking to the results of this test to reveal to us just how successful we really have been.
Certified Eggs and Poultry Stock
The Cornell Plan of Advanced Registration of Fowls
BY L. M. HURD
Extension Instructor of Poultry Husbandry at Cornell University

ON DECEMBER 1, 1919 the poultry department of the New York State College of Agriculture closed the second season of poultry certification with a season's total of 1754 males and 11,874 females certified, a total of 13,628 fowls from 164 farms in 40 different counties. The previous year only 3530 birds were certified in 23 counties. These figures show how fast this project is spreading among the breeders and, to a certain extent, what they think of it. For many years the need of improvement in breeding poultry for egg production has been evident throughout the State. Before the war a survey of about thirty farms in one of the leading poultry counties of the State showed an average production per hen of about 100 eggs a year. Poultry was one of the main issues on these farms, and nearly every flock had the reputation of being fairly well managed and profitable.

Since this survey, many poultry keepers have improved the annual egg production by culling out the low producers. The poultry department has encouraged culling by furnishing information and holding hundreds of demonstrations. The owners of over one million hens all over the State have pledged themselves to sort their flocks during the last five years. Altho this systematic culling out of low-producing birds has helped raise the annual egg production in a great many cases, and has been economical and profitable, still in itself it is not constructive breeding. It has, however, drawn more attention to the value of high-producing hens as breeders, and has led the poultry department to adopt the certification project.

Consequently, the main object of certification is to encourage the breeding of better poultry thru selection, leg-banding, and recording the pure-bred males and high producing hens on the farms of the State. Incidentally, certification tends to standardize the type of laying flock, and is of value to the buyer of breeding stock for egg production.

Certification is not complicated. Fowls of any pure-bred variety are usually submitted for certification during the months of October and November. Only males that are hatched previous to June 1 of the current year and hens hatched before June 1 of the previous year are eligible. The certification of these birds holds only until the first of October, following the date of banding. Selection is based on the Cornell system, founded on scientific information as outlined in Cornell Extension Bulletin 21 and a descriptive statement prepared by the Cornell Judging School and approved by the American Association of Instructors and Investigators in Poultry Husbandry.

Only choice breeding birds are banded and recorded. Special bands with a number and the words “Cornell Certified” are sealed on the legs of the fowls. The owner keeps one record of the numbers of the birds and their ages, and duplicate is placed on file at the office of the poultry department, open to public inspection.

Certified hens must be mated to certified males, but may run with general flocks except for a period of thirty days previous to and during the time eggs are saved for hatching. Suitable buildings, feed, and care must be provided. The number of eggs produced, at least during the breeding season, and the disposition of these eggs and chicks must be reported at the end of the breeding season on forms provided by the poultry department.

Only eggs conforming to the Cornell standard in size, shape, and color can be
incubated or sold for incubation. White eggs are disqualified if they weigh less than two ounces each and show a noticeable creamy tint. Brown eggs must be of the same weight and conform to a good even shade. No very long or round white or brown eggs are desired.

A report must be made to the poultry department before the breeding season, of the transfer of any stock and the name and address of the party to whom it has been transferred.

Any breeder who tampers with the leg bands or fails to perform all the stated obligations forfeits certification for the current year.

Certification also ceases when stock is transferred unless the purchaser, in writing, agrees to comply with the rules governing it. The owners securing the service are charged a small fee sufficient to pay the traveling expenses of the college representative to and from their farms. Last year the fee was $5.00 for any flock examined up to 250 birds; over this number it was one cent extra per bird. The person securing this service also paid a cent and a half for the bands on each bird banded.

There are five great advantages in certification. First, it checks up the breeder's selection and insures choice stock from which to draw breeding birds for the general flock. Second, it standardizes the quality of the laying stock. Third, it is more or less a protection to the public desiring to buy stock with good laying qualities. Fourth, it encourages the breeder to do better work in every way to keep pace with the efficiency of the breeding work. Lastly, the annual inspection of the flock as a whole is of great value to the breeder. It often happens that birds are not certified because the breeder has failed to do some part of his work properly. The college representative is usually able to point out such weaknesses and aid in correcting them.

Money from Mottled Anconas
How Pure Bred Stock and Proper Care Increase the Income
BY ARCHIE E. VANDERVORT
Homestead View Farm, Sidney Center, N. Y.

THE average farmer does not devote much time to his poultry, the usual plan being to get enough eggs for home use, a few to trade in at the village grocery store, and chickens for the table to cut down meat bills. From our past experiences and observations we are thoroly convinced that this way of increasing the farm income has been seriously neglected.

In this age of efficiency on the farm, there is no place for mongrel poultry; neither for hens of many different shapes and combinations of colors nor for the male heading such a flock selected because he had so many different colors and was pretty. Crosses are all right for some purposes, but today the "full blooded mongrel" is everywhere a back number.

Some twenty years ago we embarked in the poultry business with a flock of these mongrels, but as soon as we were convinced of the superiority of good stock we introduced purebred White Leghorns in their stead. Two or three years later we began with Single Comb Mottled Anconas and have bred them ever since. We have bred fourteen other varieties in the past but now we have nothing but the Anconas. Having tested them along with other breeds for such a length of time, we are thoroly convinced that they are far superior, not only as a fancier's fowl, but also as a commercial layer.
MONEY FROM MOTTLED ANCONAS

Their claim as superior layers is backed by practical demonstrations at two of the leading government egg-laying contests. In these contests Anconas not only outstripped all other breeds in the number of eggs laid, but in both contests the Ancona eggs were the heaviest of all. The fowls are easy keepers, hardy and quick to mature,—pullets beginning to lay at eighteen to twenty weeks of age. We believe that they are the farmer’s ideal fowl. They are excellent for the table, being yellow skinned, very plump, meaty, and small boned. Their beautiful glossy black plumage flaked with white makes them most attractive and their sprightly behavior and proud carriage should make them a prime favorite with any lover of fine poultry.

Our success with Anconas may be attributed to starting with the best and carefully selecting only the best layers and the finest feathered birds for breeding stock. We introduce new blood occasionally, but are very careful to get this new blood from a flock that we know fulfills our requirements. We do a moderate amount of advertising, using a small classified ad in two or three of the best poultry papers. Our best advertising medium, however, is exhibiting at the shows. We select four or five well advertised shows where we know that the competition in Anconas will be strong; we find that a long string of prizes promotes sales more than any other form of advertising.

Because of other farm work our flock is limited to about two hundred and fifty breeders from which we raise five to seven hundred chicks each season. We get a nice income from meat birds, breeders, and market and hatching eggs. In our locality, good first quality table eggs are at a premium most of the year and we get topnotch prices for all the eggs we can spare within a few minutes drive from the farm. This marketman is glad to get as many or as few as we wish to sell, which fact enables us to sell to him throughout the year except during the hatching season, when practically all the eggs are used for hatching or sold to customers. Our main income is from the sale of breeding stock, single male birds, mated pens, and laying flocks.

Our cockerels find a ready market at excellent prices and the demand for pullets is always greater than the supply. Prices are governed by the type and color of the birds. In selecting our stock we cull closely and frequently, disposing of all unlikely specimens for market purposes. Every deformed, crooked-backed, wry-tailed, or other misshapen bird is placed in the fattening yard as soon as discovered and later sent to market. When selling breeding stock we aim to send just a little better bird than the order calls for, and we seldom have a bird returned. We find that a satisfied customer is the best advertisement. He will want more goods, will tell others about your stock, and you will receive their orders.

We have no special method of feeding our stock, but give them plenty of good, wholesome feed, fresh water, grit, shells, and green food. Dry mashares are kept before them at all times, with an occasional feeding of a warm mash in the winter. Houses are kept clean, well ventilated, and free from lice and mites. We aim to have our chicks all hatched during April, hiring most of our hatching done, as we are too busy to attend to many incubators. The best method we ever employed in rearing chicks is to use coal burning brooders. Our chicks do not “just grow up,” but are given the best of care and feed, for we have learned that to raise a good layer and a show bird, a chick must be grown quickly and have lots of vitality.

These are only a few methods that may be employed by the farmer and his wife for increasing their income with poultry. With us, a few scraps giving practically no income have developed into one of our leading crops. It has the advantage of being an all-the-year-around crop, as well as contributing largely to the family table. What better or more useful foods are to be had than chickens and new laid eggs?

(Continued on page 354)
Peace in Friendship Village.

Fourteen short stories from such publications as The Ladies Home Journal, gathered together and bound in boudoir purple with gilt lettering, each story a sugar-pill sermon on simple human kindness as a cure for all the ills of civilization. It is shamelessly sentimental about it. The plot of each incident is quite obviously manipulated so as to end in what the central character, Calliope Marsh, calls 'a nice moment,' with all the folk of Friendship Village—rich and poor, black and white, Jew and Gentile—throbhing with community consciousness and with knowledge of their common humanity. Now isn't that a fine book to review in a Pullman with a whole carload of prosperous people sitting on their dignity, berating the porter, and playing the great American game of social solitaire?

Yet it stood the test. It made the reviewer forget cold, feminine eyes, wondering why in the world some people read books with purple covers; once in a while it made him gaze out of the window until the thrill should die down and until he could again crawl inside his crust and give his traveling companions haughty eye for eye. At the end it sent him wandering into the smoking department and to pick out the coldest-looking man there with tentative proffer of conversation. The gentleman's response was quite as cold as his appearance, but even that only served to show that Miss Gale is dead right in her protest against a whole world where the majority consider it bad form to be "just folks". "Life," as her book says again and again, "is something other than that which we believe it to be." Certainly Pullman cars and head waiters and strikes and wars have taken the world far away from the simple constructive neighborliness which her Friendship Village typifies. Her constant reiteration that all the world should like her village is effective, particularly when read while riding "first class" in this democratic day and age.

R. L.

The Nursery Manual

the Nursery-Book, re-written and brought up to date. It is published as one of the series of Rural Manuals edited by Dr. Bailey. The plan of the book is the same as that of the older Nursery-Book, but the material includes much that is new. There is a section on the important diseases and insects of nursery stock, by the late V. B. Stewart, specialist in nursery stock diseases. The first chapter is an introduction to the propagation of plants in nature and under cultivation; it also includes an interesting consideration of the commerce in seeds. The following chapters treat in a very simple but thorough manner the propagation of plants by seeds and spores, by separation and division, by layers and runners, by cuttings, and by budding and grafting. The first part of the book ends with a short chapter on nursery practice and management. The second half of the book deals with nursery lists, giving specific directions for the propagation of each kind of plant. In the preparation of this list the author has consulted the leading experts in each line and the result is a condensed, convenient summary of the most approved methods of plant propagation. Whether the man propagating plants be novice or expert it is safe to say that Doctor Bailey's book is invaluable to him. Because of the interesting style which characterizes all of Doctor Bailey's works, it is a book which would please any lover of nature. T. O. S.

County Administration,

This book embodies the result of a

(Continued on page 354)
We hear a great deal these days about cooperation—cooperation in buying and all sorts of schemes for saving and becoming successful in business enterprises. I wonder why we can’t cooperate in our work as well as in our play, or why not work the two together?

It is splendid for the people of a community to get together and plan methods by which they may improve their methods of work, or save expense or time working cooperatively, but why do this if it lacks some purpose beyond the everyday routine of work? A very detailed, efficient plan for saving time may bring about its purpose, but it may be brought about in quite another way.

Plan a good time ahead, a “play” time, and see if the day’s work isn’t accomplished in less time. It’s so much easier to work if there’s just a little something gay and interesting to look forward to, no matter how young or old we are. We may be amused at the anticipation with which a youngster awaits Christmas—the first glimpse of his stocking stuffed with presents—but our feeling isn’t essentially so different after all, when we have an interesting book to look forward to, or we know we’re going to have a good, lively talk with someone on an interesting topic, something that vitally affects us. Why not have more of these good times; why not get together oftener, grow to understand our neighbors better, and have some real jolly times? They are worth while after all.

Have you a Cornell Study Club in your community? A great many people are combining their good times and their “study” times by having such a club. Their meetings may consider the many and varied topics in connection with civics, a course in home nursing, methods of saving steps and strength, household furnishings, or the care and feeding of children; the rest of the time is devoted just to having a good time. Entire evenings are planned just with the purpose of being “sociable,” and these are necessary to make life really worth while. Why not organize some kind of a club in your community? The school of home economics is always glad to be of service to you in such matters.

Have “get-togethers” occasionally with a lot of singing. There are any number of good songs now and you don’t need a piano; try the organ. You can get everyone singing so loud you won’t notice the difference. When someone in the community has a birthday, take the opportunity to have a good time together—the younger and the older people.

One community in the State organized an orchestra. If you try something of the sort you’ll be surprised how easily and happily it works out. One community club writes:

“Our attainments seem small, but after all the greatest gain has been one not estimated by material things. Our club has meant much to the social life of the community. We have come nearer together in thought, in heart, and in every-day experiences. We have learned to some extent to love one another’s virtues and overlook each other’s faults. Thus we have, each member, absorbed some of the true community spirit which, in its fullest, is the true spirit of the Master. We have never been as enthusiastic as now, and are ready for greater attainments and better work next year.”

R. H. N.
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ITHACA, N. Y., MARCH, 1920

We are told that farmers are leaving the farms in increasing numbers every year. Only the other day we saw somewhere that there are about twenty-four thousand less farmers in New York now than a year ago. As we see it, there are at least three good reasons why more and more farm people go to the cities.

In the first place, the war has brought fabulous wages, and the shortage of labor has kept them up. During the war farmers didn’t make as much money as manufacturers, and the latter could outbid for help in the open market. The number of hired men on farms in this state has decreased more than seven per cent in the past year, but farmers have kept right at it and have produced more food than ever before.

The other two reasons for the march cityward depend on each other more or less and are on their way to their own solution. A recent survey of New York farms showed that about twenty per cent of the houses in the country have furnace heat and about eleven per cent bathrooms. It doesn’t seem to be exactly clear whether all these bathrooms have a real tub in them, or whether they include also the room where the wash-tub is used on Saturday night, but at least the figures furnish in a general way a comparison with city homes in what city people call necessities. The same survey showed that the number of women employed on farms to help the housekeeper was twenty per cent less than a year ago. We believe that these figures show one of the best reasons why people are leaving the farms: the ordinary conveniences of life call many of us to the city, where they are taken as a matter of course.

Then looking at the whole business of farming in a larger way, we see what is perhaps the best reason of all for the decreasing number of farmers. Every year sees the introduction of new machinery and improved methods on the farm as well as in the factory. Possibly, as in other industries, more efficient methods in farming will require fewer men for the same production. If one man can cultivate three times as much land with the improved methods now in use as he could when everything was done by hand, perhaps it is a good thing for the world if some of the neighbors who were merely “holding down the land” do go to the city and let the good farmers make the same land produce as it should.

But taking it by and large, such methods of handling and such modern equipment as are described in this poultry number of THE COUNTRYMAN are sure to have a share in helping farm people to their rightful place. Electric lights and all the other things are only a part of the improvements that will bring to farm people everywhere their share of comfort and convenience. These new practises will do more than any amount of propaganda to keep the right kind of farmers on the farm. As for the others, let them go—we believe the world will still be fed.

By an oversight, the illustrations for “Let It Blow” in the last number were not credited to Walter King Stone, the artist who made them for us. We take this opportunity to acknowledge them.
'83 B. Agr.—Harry N. Hoffman completed his third term on December 31 as mayor of the city of Elmira. Many civic improvements were carried out during Hoffman's administration.

'89 B. S.—Mrs. J. Herbert Ballantine, the wife of J. Herbert Ballantine '89, of New York, died on December 24 at Pasadena, California. Besides her husband, she leaves two sons, John Holmes '15, and Herbert Wilgus '17, of New York.

'90 B. S.—Professor James E. Rice is a member of the general committee representing the United States of the International Association of Poultry Instructors and Investigators.

'91 B. S., '98 M. S.—Horace Atwood is professor of poultry husbandry in charge of research work at the West Virginia Agricultural College and Experiment Station, Morgantown, W. Va.

'94 B. S. A., '99 M. S. A.—Raymond Allen Pearson, Jr., infant son of Dr. and Mrs. Raymond A. Pearson, of Ames, Ia., died on January 22 at the Hahnemann Hospital in Rochester.

'00 B. S. A.—Gordon M. Bentley is professor of entomology at the University of Tennessee.

'00 B. S.—Professor Thomas L. Hankinson has been named ichthyologist of the Roosevelt Wild Life Experiment Station of the New York State College of Forestry at Syracuse University.

'03 W. C.—L. E. Weaver, formerly extension instructor in poultry husbandry at Lexington, Kentucky, is now manager of a day-old chick hatchery in the same state.

Sp.—William A. Lippincott, professor of poultry husbandry at the Kansas State Agricultural College at Manhattan, Kansas, is secretary and treasurer of the International Association of Poultry Instructors and Investigators.

'06 W. C.—W. G. Krum, for eight years extension specialist and foreman of the college poultry farm, has accepted the position of manager of the Clayburgh estate at Mt. Kisco, Westchester County.

'07 B. S.—Edward W. Cleeves has left his position as farm bureau agent of Warren County to accept a similar position in Steuben County.

'08 B. S. A.—William H. Alderman, who until recently was head of the horticultural department and acting dean of the West Virginia Agricultural College and Experiment Station at Morgantown, is now head of the division of horticulture at the University of Minnesota. Alderman was a member of THE COUNTRYMAN board while in college.

'09 B. S. A.—A daughter was born to Mr. and Mrs. Charles F. Boehler of Cadillac, Michigan on January 6, 1920. Boehler specialized in landscape architecture while in college and is now in the Michigan State Highway Department as District Engineer of the Northwestern district, comprising sixteen counties.

'09 B. S. A.—A daughter, Helen Irene, was born on March 20 to Mr. and Mrs. Stephen F. Willard, Jr., 153 Oakley
Road, Belmont, Massachusetts. Willard is with the Fottler, Fiske, Rawson Company, Boston, Mass.

'10 W. C.—A. B. Hall is now proprietor of the Poplar Hill Farm, Wallingford, Conn. He had a very fine display of high producing fowls on exhibition at the recent Madison Square Poultry Show.

'10 Sp.—T. C. Murray has been elected manager of the Rockland County Farm Bureau. Last year Murray was assistant manager in Ontario County. He also managed a ninety cow dairy farm in Orange County for two years.

'11 B. S.—H. M. Humphrey resigned as farm bureau agent of Steuben County to operate a live stock farm at Bath.

'11 B. S. A.—Jackson Demary who has been teaching in Minnesota the past two years, is now instructing in agriculture and American history in the Chisago Lake High School, Lindstrom, Minn.

'11 W. C.—N. S. Beckely is poultry manager on O. H. Cutler’s farm (Boulder Farm), Suffern.

'12—Dr. Lawrence McDaniels, formerly instructor in the department of botany and recently appointed assistant professor in the department of pomology, is with the Mission for Armenian Relief. Dr. McDaniels will return to this country this coming spring.

'12 B. S.—Edward L. Bernays was manager of the national publicity campaign of the office of Assistant to the Secretary of War in an effort to seek reemployment for four million discharged men. He also managed the national publicity campaigns for Lithuanian independence, for the Women’s Non-Partisan Committee, and for the League of Nations. His address is 151 Riverside Drive, New York.

'12 B. S. A., '15 Ph.D.—Carl Edwin Ladd is director of the State School of Agriculture at Alfred.

'12 B. S.—Captain J. D. B. Lattin was married in Paris, on December 20, 1919, to Marie Therese, daughter of M. and Mme. Henri Bergier, of Lille, France, where M. Bergier is a judge of the civil court. Captain Lattin was formerly in the machine gun service, but is now an officer in the U. S. Cavalry.

'13 B. S.—A daughter, Eleanor Grossman Young, was born on December 5 to Mr. and Mrs. Spencer E. Young (Mary G. Grossman '12), 527 Chestnut Avenue, Kansas City, Missouri.

'13 B. S.—Francis C. Smith was married on December 26 to Miss Beatrice Tryon of Ithaca. They are living at Greycourt Apartments, Ithaca.

'13 W. C.—F. H. Cochell, who for many years has been superintendent of the poultry department at Amherst, Massachusetts, has now taken up a similar position at Vancouver, Col.

'13 M. S. A.—Charles E. Allred is professor of agricultural economics at the University of Tennessee.

'14 B. S.—Crawford Lasher is working a small dairy and vegetable farm near Fleischmanns.

'14 B. S.—Max F. Abell is assistant professor of farm management at the Massachusetts Agricultural College, Amherst, Mass.

'14 B. S. A.—Winfield H. Boehler, who specialized in landscape architecture, is now employed in the Michigan State Highway Department in charge of plan work at the District office, Cadillac, Mich.

'14 B. S.—Lawrence J. Benson was discharged from the army last spring as commanding officer of the 377th Aero Squadron after seven months overseas service. He is now representing the Merrill-Soule Company in Buffalo and vicinity.

'14 B. S.—S. H. Watson is district agricultural advisor for the Cleveland Tractor Company. His office is at 1780 Broadway, New York City.

'14 B. S.—Julius Smith has returned actively to farming and fruit-growing, and owns and operates in Pennsylvania, New Jersey, and Maryland, orchards aggregating three hundred and fifty acres. His address is Moores town, N. J.

'14 B. S.—Ralph W. Green has been appointed agricultural editor for the North Carolina State College of Agri-
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culture, Experiment Station and Extension Service. He is now an editor in the U. S. Bureau of Markets, Washington, D. C., and is the editor of many of the recent publications of the bureau.

'15 D. V. M.—Peter T. Peterson died in San Francisco on December 24. He was one of the leading experts on swine diseases on the Pacific Coast.

'15 B. S., '17 M. F.—L. A. Zimm is now in construction work at Athens, Ga.

'15 B. S.—Fred Furst is in the United States Forest Service with headquarters at Portland, Ore.

'15 M. S. A., '15 A. B.—The address of Mr. and Mrs. Thomas D. Hall (Helen Bennett '15) is changed to Box 181, Potchefstroom, South Africa.

'15 B. S.—George E. Cornwall is general manager of the Spring Brook Farms, Inc., West Coxsackie.

'15 B. S.—Fred A. Davis is out of the service and is working in Sunbury, Conn. His address is 85 Van Houten Avenue.

'15 B. S.—Charles M. Warren was discharged from the service last March and returned to Glendora, Cal., where he became a member of the firm of Nusbickel-Warren Nurseries.

'15 B. S.—Elton R. Wagner has been appointed farm demonstrator for Cumberland County, N. J.

'15 B. S.—Edward Chavin has been elected a director of the Jellicoe Fuel Company, and is in charge of the main office at Welch, W. Va. He is also in charge of the office of the Middle West Coal Company, and secretary of the Interstate Drygoods Stores, a corporation conducting department stores at Welch, Matoaka and Mullens, W. Va.

'15 B. S.—Colson B. Hutchinson is employed by the G. B. Rice Seed Company, on their stock seed farm at Grass Lake, Mich.

'15 B. S.—C. S. Brewster formerly instructor in poultry husbandry at Corvalis, Ore., is now manager of the poultry feed department for Kerr-Gifford & Co., Inc., Portland, Ore.

'15 B. S.—John Kruesi has been discharged from the service, and is now

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The revolving year turns a succession of tasks to the farmer's hand, and with every season re-emphasizes for him the value of time. Every limit set on the full use of his time is a limit placed on his production, with higher cost of farm operation as a direct result.

Consequently, one of the factors in the farmer's investment in a piece of machinery is its all-season, all-weather utility. The fewer days it is idle because its action is affected by cold or wet, or because its work is confined to planting time or harvest time, the more valuable its place as help on the farm.

Belts that run trouble-free in the alternating dry cold and damp cold of winter are extending the all-season use of power equipment on the American farm. Moisture-proof Goodyear Klingtite transmission belts are serving under climatic conditions that seriously crippled the efficiency of belts that by turns froze into rigid strips, and shrunk so appreciably as to compel frequent re-setting of the engine.

The qualities of Goodyear Klingtite in winter work are demonstrated, for instance, in the experience of Charles Tagge, of Seymour, Wis. Mr. Tagge has farmed the same good piece of land for 20 years—and he's had full opportunity to compare belting values. He remarks particularly on the free-swining action of his Goodyear Klingtite, however cold the day; its secure, friction-surface grip on the pulleys, regardless of the moisture content of the air; its freedom from slippage, even when the shredder clogs; and its steady record of fuel saved and full power delivered.

Items of real economy, reducing the high cost of operation, these standard qualities of Goodyear Klingtite Farm Belts are gone into in detail in the Goodyear Farm Encyclopedia. Students and teachers of agriculture are supplied with copies on request to the Mechanical Goods Dept., Goodyear Tire & Rubber Company, Akron, Ohio.
with the American Lava Company, Chattanooga, Tenn.

'16 B. S.—Lee A. Muckle resigned as manager of the Rockland County Farm Bureau to enter business with John G. Elbs, manufacturer of Starr Egg Equipment and Woodcock Macaroni Products. He may be addressed in care of the firm, Rochester.

'16 B. S.—Roy Bird is now at North Tonawanda in the employ of the Beaver Board Company.

'16 Sp.—“Buck” Davis is engaged in business with his brothers at Harrison. He is running a retail dairy product concern.

'16 B. S.—Announcement has been made of the engagement of Miss Grace Anna La Gassee of Williamson, to George A. Haskins. Haskins is managing his farm at Lincoln Park near Rochester.

'16 B. S.—C. Everett Hand who was overseas with the 26th Division for seven months, was discharged last year. He is interested in poultry and fruit growing and expects to start farming this spring in partnership with a friend.

'16 B. S., '19 B. S.—Announcement has been made of the engagement of Miss Esther Myrick Rice '19 to Frank Richard Perry '16.

'16 B. S.—L. G. Knapp is managing a two hundred-acre fruit farm at Nassau, Del. The farm is owned by some of the officials of the Pennsylvania Railroad.

'16 W. C.—Glenn Marks is running a one hundred and sixty-acre general farm near Interlaken. Marks was formerly manager of Professor Warren's farm at Forest Home.

'16 B. S.—Lloyd G. Grinnell is with Grinnell Brothers, piano manufacturers and dealers in musical instruments, of Detroit.

'17 B. S., '18 B. S.—Robert A. Browning and Miss Ella D. Burdick were married on December 30. Browning returned from overseas in October, having been in charge of transportation for the American Commission for Relief in the Near East. They will reside at Alfred

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The advantages of Arcadian Sulphate of Ammonia are:

High Production: Pound for pound of nitrogen, Arcadian Sulphate of Ammonia will produce as much crop or more than any other nitrogenous top-dressing. It’s dependable.

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AGRICULTURAL DEPARTMENT, NEW YORK

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where Browning has accepted a position as head of the department of animal husbandry at the New York State School of Agriculture at Alfred University.

'17 B. S.—Albert D. Fonda is manager of his father's farm at Fonda. He was recently elected president of the local branch of the Dairymen's League, which is starting a co-operative movement of united creameries in the Mohawk Valley, from Little Falls to Amsterdam.

'17 B. S.—T. B. Augur is taking graduate work in landscape architecture at Harvard University.

'17 B. S.—Mary Johnson was married to Russell Moore '15 on July 19, 1919.

'17 B. S.—The engagement of Helen Kirkendall to Erie Miller of Ithaca has been announced.

'17 B. S.—Mr. and Mrs. Peter F. Goehring, of Woodcliff, N. J., have announced the engagement of his sister, Miss Lee Goehring, to Henry G. Bahret. Miss Goehring is a graduate of Richmond College. Bahret is in business with his father at Poughkeepsie.

'17 B. S.—Frank A. Carroll has recently been appointed farm bureau manager and county agent in charge of all agricultural extension work in Berkshire County, Mass.

'17 B. S.—Stanley Garman is at Thorold, Ont., in the employ of the Beaver Board Company.

'17 B. S. A.—Marshall E. Farnham is head gardener at the Station for Experimental Evolution, Branch of the Washington Carnegie Institution, Cold Spring Harbor, L. I.

'17 B. S.—L. W. Steelman is now extension instructor in poultry husbandry at State College, Penn.

'17 B. S.—William A. Duckham is a member of the sales force of the Jones and Laughlin Steel Company, Pittsburgh, Penn. His address is 246 Rebecca Street.

'17 B. S.—Meyer Wigdor is attending the Cornell Medical College in New York City.

'17 Ph.D.—Dr. Roger C. Smith, of the United States Bureau of Entomology,

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All sizes of Case Threshers may be equipped with Case Self-Feeders, Wind Stackers and Grain Handlers. All are alike in ability to thresh, separate, clean and save all grains and seeds.

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Tell Advertisers Who Introduced You
has been appointed assistant professor of entomology in the Kansas State Agricultural College.

17 B. S.—Joseph Rubinger is associated with Philip Cohn in a biological supply company in New York city.

18 B. S.—George C. Sweet, Jr., is a salesman and engineer in the dry kiln department of the Cutler Desk Company, Buffalo. He lives at 429 Bryant Street.

18 B. S.—Alexander Gershoy is an instructor in the department of botany at Columbia University.

18 B. S.—Philip Cohn, who was an assistant in the department of botany in his senior year, has organized a biological supply company in New York city.

18 B. S.—Miss Marcia Grimes is with the Girard Trust Company, Philadelphia. She lives at 333 Vassar Avenue, Swarthmore, Penn.

18, '19 W. C.—Mrs. Richard Werner is managing the Carroll-cliff Poultry farm at Tarrytown.

18 B. S.—Inglee B. Dewson is engaged in sales work in W. Va., and parts of Ohio and Kentucky for the International Harvester Company. At present his headquarters are in Parkersburg, W. Va.

18 B. S.—Lyman H. Taft, Jr., is now in Manila, P. I., with the division of forest administration, bureau of forestry. He expects to be there for about two years.

18 B. S.—F. L. Knowlton is now instructor in poultry husbandry at the Oregon Agricultural College, Corvallis, Ore. He is primarily engaged in assisting Professor James Dryden in working up extensive breeding records.

18 B. S.—Miss Mildred M. Stevens is assistant home bureau manager for Erie County with offices at 45 Root Building, 70 West Chippewa Street, Buffalo.

18—James F. Carty has received the award of the Distinguished Service Cross and the Croix de Guerre with palm. The Medaille Militaire was awarded to him for valor and discipline by the Grand Chancellor of the Legion of Honor, by order of May 14, 1919. In

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Every pound of International Special Dairy Feed that leaves our factory is backed by the above guarantee—a guarantee we could not afford to make if we couldn't back it up.

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“The Perfection is the best rig ever invented.”

DROP in at Louis Mether’s Farm round about milking time some day and you’ll find him out in the barn with his neighbors around him watching his Perfection Milker do the work. Every man who knows Mr. Mether knows about the success of his Perfection and wishes he had one, too. One Perfection in a community always brings many others as soon as folks see what a labor saver it is. "I cannot say enough for the Perfection Milker. It is the best rig ever invented," says Mr. Mether.

"You can use the Perfection two times a day the year 'round, and it never balks or refuses to work on Sunday night like some hired men do. I have used my Perfection for one year now and it has never failed yet. There is some one here nearly every night that wants to see the Perfection and stay for milking time."

The Cows Like It

When it’s late at night and the cows are hot and restless, it’s mighty easy to get mad and kick a cow or milk her hastily and hurry away. The Perfection is the only hired man you can depend on to milk every cow exactly the same every day. "The cows like my Perfection better than hand milking," says Mr. Mether. "I had one cow that cut her teat all to pieces in the fence and the only way I could milk her was with the Perfection. I have one double unit but I am thinking of enlarging my dairy by Fall. With the Perfection I can milk as many cows as I can own."

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Today thousands of the most successful creameries and dairies are using

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because not only does it produce a sanitary cleanliness that protects the milk quality, but its efficient cleaning properties also minimize cleaning costs. Should not your business judgment prevail on you to profit by the experience of others and standardize this cleaner in your establishment?

Order from your regular supply house

It cleans clean

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addition to his service with the 102d Infantry, 26th Division, he was attached to the Intelligence Service for a time. Carty married Miss Anna F. Horton ’15, and they are now living at 184 Sixth Avenue, Brooklyn.

’19 Sp.—R. Wallace Smith is returning to the college this term to finish his course in forestry. He spent his first term in New England estimating timber.

’19 Sp.—K. A. Mayer and Henry Vetel are returning to the college this term after spending last term in gaining practical experience in forest products in and about New York City. They are both forestry students, formerly of the class of 1920.

’19 B. S.—Miss Caroline E. Leach is a teacher of domestic science at Dansville.

’19 B. S.—B. A. Eger is with the United States Indian Service. He has charge of the timber sales work in the west.

’19 B. S.—H. H. Lunning has been made assistant manager of the J. H. Hammond Packing Company, Chicago, Illinois.

’19 B. S.—Elizabeth Churchyard is with the Wm. Hengerer Co. in Buffalo. She has charge of employees’ dining and rest rooms.

’19 B. S.—Arnold C. Shaw is in the United States Forest Service, with headquarters at Johnson City, Tenn.

’20 B. S.—H. J. Borchers has entered the employ of Swift and Company, Chicago, Ill.

’20 B. S.—L. A. Wuest is in nursery work for the Leon Chenault Company, Orleans, France. He will spend about ten months in Holland and ten in England in the same line of work.

’20 B. S.—H. R. Miller is engaged in general and fruit farming at Yorktown.

’20 M. S.—G. K. Middleton has resigned his position as assistant in the farm crops department and has accepted the position of assistant professor of agronomy in the North Carolina Agricultural and Mechanic Arts College.
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Your school has earned fame because of the great aid that it has given in making farming a better business.

You are in school to equip yourself to make farming a better business.

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These implements are continually going out from the sixteen John Deere factories to help make farming a better business.

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You will find John Deere implements and machines ready for you—for practically every farming operation.

And every one of them will do the utmost to help you make good with your plans for making farming what it ought always to be—the best business in the world.

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PURE, concentrated, ready to use, absolutely reliable. Giving uniformly best results in the country's finest creameries and cheese factories.

For Cheese-Making: Hansen's Rennet Tablets, Junket Tablets (for Cottage Cheese), Cheese Color Tablets.
For Butter-Making: Hansen's Danish Butter Color (4 oz. and 1 oz. bottles), Hansen's Buttermilk Tablets or Lactic Ferment Culture for perfect ripening of cream for butter and milk for cheese and commercial buttermilk. Sold by drug and dairy supply stores, or direct by

Chr. Hansen's Laboratory, Inc.
Little Falls, N. Y.

Interesting treatise "The Story of Cheese" by J. D. Frederiksen, free on request

Catching Chicken Thieves with Science
(Continued from page 330)

The first witness gave a detailed description of the chicken-house on the morning of the robbery. Then three dressed chickens sold to an Ithaca merchant by one of the suspects were exhibited for identification. Professor G. F. Heuser testified that he had examined the grain in the crops and gizzards of these fowls, and that in composition the grain corresponded with that fed by the owner of the raided flock. Doctor Kent next testified that feathers and chickens' feet found on the premises of one of the defendants were those of the plucked birds found in the market. He based his testimony on long study of those breed and individual characteristics which are useful in identification.

The testimony advanced by the defense was purely circumstantial, and the jury brought verdict of guilty against one of the defendants without great delay. The other defendant was released on the ground of insufficient evidence.

Captain A. E. Butler of the State mounted police, who witnessed the trial, said, "It did more than anything else, but then, where would we have been without the raid before the State to show the possibilities of expert testimony in such cases. Such work will go far toward checking the present epidemic of chicken stealing."

Money from Mottled Anconas
(Continued from page 337)

Now just a few more words concerning our favorites, Anconas. If any reader is the least bit skeptical about any of our statements in this article, just let him try Anconas in a small way, keep careful tab on them, and compare them with any other breed you wish. The result will confirm all we have stated, and you too will become an ardent Ancona booster.

Book Reviews
(Continued from page 338)
survey of the administration of government in the State of Delaware: its

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DoYou
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Facts?

IF YOU are raising poultry for profit you want the real facts as to electric lighting and egg production.

Kenneth C. Fox, Instructor in Poultry Husbandry at the State School of Agriculture at Cobleskill, New York, has made a thorough study of this subject and has recorded his findings in the booklet shown above.

We shall be glad to mail you a copy. Write for it today.

Delco-Light is the complete electric light and power plant for the farm home. It furnishes light for all parts of the house and barns, and power for the pumping, milking, separating, churning and washing. There are 100,000 Satisfied Delco-Light Users. One of them lives near you.

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DELCO-LIGHT
three counties, and the city of Wilmington. A small state like Delaware offered a good subject for study as it was easy to view the county problem of the whole state in its entirety and because two of its counties are rural and the other urban in character, thus affording an opportunity to contrast the problems of rural and urban type.

In the first chapter the author discusses county administration as it is today, giving a clear explanation of the organization and criticising it for being unduly expensive, over elaborate, and lacking in centralized authority. The next chapter on suggestions for reorganization, advocates the adoption of the manager plan with the commission plan as an alternative. Financial procedure and highway administration are discussed and suggestions for bettering the present plan are offered. The jails, almshouses, and work houses of the different counties come up for consideration; the bad features are pointed out and the desirable ones commended. Mr. Maxey recommends the unification of governments in Wilmington and makes clear the mode of procedure necessary to bring this about. In the last chapter he draws some conclusions with the predominating thought that one properly organized and managed county administration could serve all of rural Delaware better than it is being served at present.

The book is of value to most students of government as well as to community readers, for what applies to this State applies also to most of the other states in the Union.

L. A. Z.

Essays on Wheat,
By A. H. Reginald Buller, B. Sc., Ph.D., F. R. S. C., Professor of Botany at the University of Manitoba. $2.25. The MacMillan Company, New York.

The first few "essays" of the book are an interesting account of the early history of wheat growing in the famous Red River wheat districts of Manitoba. To increase the interest the author has woven in stories of the discouraging
Added Power—No Increase in Weight
Larger output lets us lower the price
The day is here

The Cletrac’s Day Is Here

The tide has turned. The big demand today is for the small tank-type tractor—for the Cletrac—that goes further than the simple job of plowing and takes the place of horses over plowed ground and seedbed, working faster and at lower cost.

It wanted only the marvelous success of the Cletrac in 1919 to make the bulk of farmers everywhere put their “O.K.” on the small tank-type. And now, because the Cletrac is the “fashion”—because a greatly increased output means a lower manufacturing cost—we can offer a better Cletrac and still reduce the price.

With more power and improved construction, 1920 will prove to any farmer, anywhere, that Cletrac farming is profitable farming.

The Cletrac, used alone or in “fleets,” is the right size and type for almost any farm—the one tractor adapted to all conditions.

It has proved its ability to stand up to its work. And now that the public has recognized its worth, it is out in front to stay.

The Cletrac now has a larger motor, yet no added weight or increased friction to eat up power. Its track is one-third wider, which gives it a lighter tread and a stronger grip on the ground.

The Cletrac steering device, an exclusive feature, insures positive power to both tracks all the time. That means full power on the turns, as well as straightway. A new water clarifier takes out all the dust that would grind the pistons and overheat the motor.

These and other features mean even better performance than before. Back of the Cletrac is the service of over 1200 distributors and dealers, with repair stocks near you and constantly increasing. Back of that is our purpose to make every Cletrac owner a booster.

A Cletrac means more kinds of work, more days in the year, and lower costs on every job.

The booklet, “Selecting Your Tractor” tells all about the improved, lower-priced Cletrac. We’ll gladly mail you one upon receipt of the attached coupon.

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Largest producers of tank-type tractors
in the world

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P.O._________________ State_________
struggles of the nineteenth century settlers.

The next part is devoted to a comparison of the wheat production in Canada with that of the other great wheat growing countries in the world and gives a history of the wheat kernel from the time the seed is sown until it appears as flour for our daily bread. The story of Marquis wheat, three hundred million bushels of which were harvested in 1918, covers several pages.

Tho the book is rather detailed in parts which are perhaps of no real value to the wheat grower or farm crops professor, it is a desirable book for the library of any person interested in the early history and development of our greatest cereal. F. S. H.

Six Thousand Country Churches,

This book is a study of the church conditions in rural Ohio from the results of an investigation conducted by the Commission on Church and Country Life of the Federal Council of the Churches of Christ in America. It shows that the weakness of the six thousand country churches of Ohio is because of the few members and resident pastors and their lack of education. The program for bettering the country church includes a broader and more perfect understanding of the function of the church, cooperation with social forces, and better educated ministers. Many interesting examples show how successfully this program has worked in the communities where it has been tried. The relation of rural organizations to the church is shown, especially of agricultural organizations. The author emphasizes the need of organization among farmers and shows how churches may help and be helped with proper organizations.

Maps and tabular summaries give valuable data and show the location and denomination of each church in each county of Ohio. The book is interesting and valuable; it is written by men who know their subject and how to present it.

E. C.
The Banker's Opinion

The banker classes unproductive land as he does unproductive money. It is an economic waste. He sees many acres covered with stumps or badly in need of drainage, which could be made to yield larger crops and increase the wealth of the community. For this reason the banker was among the first to recognize the value of dynamite for land improvement. He will usually back the farmer who wishes to use dynamite for land clearing and drainage.

Many farmers, as well as bankers, know the value of developing idle land. Clark G. Kuney of Sunset Farm, Three Lakes, Wisconsin, cleared 1000 acres with the aid of Hercules Dynamite.

He made this new land produce 40,000 bushels of potatoes and 3,000 bushels of rye. "We have kept a careful record", Mr. Kuney wrote us, "and we figure that we can pay for the cost of removing our stumps the first year".

If you are hesitating about clearing your land, talk it over with your banker and get his advice.

HERCULES POWDER CO.

1008 Orange Street
Wilmington Delaware
MINIMIZE fire risk by safe installation and watchfulness.

OLD Sol's light is the cheapest. Save artificial light by using sunlight. Place windows where feasible in south, east, and west of poultry houses.

REFLECT light where wanted. Light the floor and mash hopper by (1) white ceiling and side walls; (2) the right kind of reflectors; and (3) clean lamps.

CONOMIZE expense of maintenance by efficient installation suited to size and location of poultry buildings. Cost of operation and up-keep are of equal or greater importance than cost of installation.

EXERCISE good judgment. A steady fifty to sixty per cent production is preferable to larger yield followed by a drop in production. "Slumps" are generally due to over-lighting or over-feeding or both.

GRADE stock into uniform flocks as to laying quality and condition. Early, medium or late-maturing pullets, or early, medium, or late-molting hens should be managed separately to secure most satisfactory results.

IVE bright lights. Fowls should see fine grain in the litter. Allow one watt to six or eight square feet of floor space, assuming that the walls are white and reflectors are used.

SEE who is boss—you or the hen.
Averys Are the Tractors with the "Draft-Horse" Motor and "Direct-Drive" Transmission

When you get an Avery, you get a tractor with a motor especially built for tractor work, and exclusively for Avery Tractors. It is built like a draft-horse for the kind of work the tractor must do. Powerful, heavy-duty, low-speed—does not race under light loads or stall under heavy pulls.

It is built with five-ring pistons, thermosiphon cooling system, valves-in-the-head, renewable inner cylinder walls, and gasifiers that turn the kerosene or distillate into gas and burn it all.

Because of its low speed, the power of the Avery "Draft-Horse" Motor is delivered through the Avery Patented Sliding Frame Transmission giving "Direct-Drive" in high, low, reverse, or in the belt. The belt pulley is mounted right on the motor crankshaft. You get a larger percentage of the power developed by the Avery "Draft-Horse" Motor at the drawbar, and all the power in the belt.

These and other big features make Avery Tractors run steady, economically and last a long time. These are some of the reasons why Avery owners are buying their second, third, fourth and even sixth Avery Tractors. They are easy to operate, even by the inexperienced. Avery prices are based upon the big output of three large Avery factories and the low selling cost of the complete Avery Line.

The Avery Line includes tractors for every size farm—six sizes, 8-16 to 40-80 H.P., with "Draft-Horse" Motors and "Direct-Drive" Transmissions. Two small tractors, Six-Cylinder Model "C" and 5-10 H.P. Model "B." One and two row Motor Cultivators, "Self-Lift" Moldboard and Disc Plows, Listers and Grain Drills, "Self-Adjusting" Tractor Disc Harrows. Also roller bearing Threshers, Silo Fillers, etc.

Write for the Avery Catalog and interesting Tractor "Hitch Book." Both books free.

AVERY COMPANY, 4703 Iowa St., Peoria, Ill.
Branch Houses, Distributors and Service Stations Covering Every State in the Union

AVERY Motor Farming, Threshing and Road Building Machinery
The Moline Tractor is Universal
It is THE ONLY FARM POWER-PLANT
Combining Exclusive Features with Indispensable Results

1. Does all field work, including cultivating, harvesting and belt work
2. One man completely operates both tractor and all implements
3. A single seat in the center of all controls of tractor and implement
4. A single unit of operation—the tractor and implements form but one unit
5. Operator sees all his work—"Foresight is better than hind sight"
6. Tactive power in front of the work with operator behind the work

MEANS No duplication by horses
MEANS A large saving in labor
MEANS Great ease of operation
MEANS Can back and turn short
MEANS Better and faster work
MEANS Power used as horses are used

UTILITY IS NOT SACRIFICED FOR PRICE
The Power of a Correct Principle
The principle of doing all field operations with one man sitting where he can watch his work is correct, or farming has always been done backward, and the operator would always have ridden or lead his horses instead of driving them.

NOTE—If desired you can use the "drag behind" or horse drawn implements you now have with the Moline Universal the same as with other types of tractors.

See your Moline Dealer or write our nearest branch for full information

Moline Plow Company, Moline, Illinois

Atlanta New Orleans Dallas St. Louis
Oklahoma City Poughkeepsie, N. Y. Baltimore Los Angeles
Stockton, Cal. Spokane Portland Salt Lake City
Denver Kansas City Omaha Minneapolis
Minot, N. D. Sioux Falls, S. D. Des Moines Bloomington, Ill.
Indianapolis Columbus, Ohio Jackson, Mich.
What Would It Profit Us
to offer Avalon Farms HOG-TONE on our 60
Days' Free Trial basis, if it failed to produce the
results we promise?
The institution behind Avalon Farms Veterinary
Remedies has absolute confidence in the efficacy
of all its products—and is achieving a satisfac-
tory measure of success by relying absolutely on
the fairmindedness of farmers using Avalon
Farm remedies.

Why not try Hog-Tone on your hogs? All
you need do is fill out and mail coupon be-
low. You pay only if you are completely satisfied that you got
more fat from the same feed and that the HOG-TONE has
eliminated the minor diseases that retard hog-growth.

Avalon Farms Company
341 West Ohio St., Chicago, Illinois.
Put Your Chicks on this Schedule

If you expect to have layers in December your chicks must be properly developed during the first six weeks. They must be supplied with the same balance of nutritive elements that they got from the egg for their first nourishment. Put your chicks on the following schedule and reap the profits that come from sturdy winter layers:

FIRST WEEK

Do not feed chicks at all for forty-eight hours. Keep them warm and dry. Nature has provided a feed for the first few days in the form of the remainder of the yolk of the egg which is drawn to the little chick’s body just before it breaks the shell. After the second day feed Purina Chicken Chowder, dampened with warm water, sweet milk or fresh buttermilk until crumbly, five times a day—at 7:00, 9:30, 12:00, 2:30 and 5:30 o’clock. Do not shift from sweet to sour milk, or vice versa. Feed only as much as will be cleaned up. Remove and destroy damp Chowder after fifteen minutes.

SECOND WEEK

Replace the night meal with Purina Chick Feed, throwing it in a shallow litter of clean hay or straw. Continue four feedings a day of the damp Purina Chicken Chowder.

THIRD TO FIFTH WEEK

Discontinue the damp Purina Chicken Chowder, keeping dry Purina Chicken Chowder before the chicks in an open hopper all the time. Throw as much Purina Chick Feed in the litter as will be eaten up clean four times a day. Get the chicks out of doors, on the ground, if the weather is warm and dry. Avoid dewy grass and keep the feathers dry. Keep the chicks hungry.

SIXTH TO TENTH WEEK

Change gradually from Purina Chick Feed to Purina Scratch Feed, mixing a little more Scratch Feed with the Chick Feed each succeeding day. Feed the grain feed in a litter three or four times a day. Keep dry Purina Chicken Chowder before the chicks all the time.

After the first week supply plenty of fresh greens all the time. Keep the water basins absolutely clean and filled with fresh water. Supply plenty of coarse grit (coarse sand may be used the first week or two instead). Some poultry raisers keep fine ground limestone or oyster shells in hoppers.

Double Development or Money Back Guaranteed

The money paid for Purina Chicken Chowder will be refunded if baby chicks when fed Purina Chicken Chowder with Purina Chick Feed, as directed, do not develop twice as fast during the first six weeks as when fed a grain ration.

RALSTON PURINA COMPANY
ST. LOUIS, MO.

Ft. Worth Nashville Buffalo

Sold in Checkerboard bags only
The 1920 Primrose at the 1918 Price

A study in manufacturing and Farm Equipment Economics

Butter and baby shoes, underwear and eggs, coal and automobiles—prices of these things and other things have climbed and climbed since Armistice Day. Has the price of anything on earth stayed down?

Yes! Primrose!

Primrose Cream Separators are selling for the price of 1918—selling for slightly more than the good old price of 1914—before the war days. Primrose popularity has grown so rapidly that the big production permits the maintenance of the low price.

To the analytical student, Primrose Cream Separator price stability presents an interesting study in manufacturing and farm equipment economics.

To the practical farmer it presents an opportunity to buy an exceptionally high-quality product at an unusually low price.

INTERNATIONAL HARVESTER COMPANY
CHICAGO OF AMERICA INC. USA
Bigger, Stronger Litters and Bigger, Faster Growing Shoats

The care and feed given the sow from the time she is bred until she farrows and then, both sow and litter until weaning time, has much to do with the profits you make from your hogs. If your sows are fed and handled right, bigger, stronger litters are sure to come. The pig will thrive better, grow vigorously right up to weaning time. Then, if given the proper growing feed, pasture and exercise, bigger frames, heavier bone and better finish, with bigger profits, will result.

SCHUMACHER FEED

and the SCHUMACHER SELF-FEEDING PLAN have proven to thousands of hog men and farmers to be an ideal way of raising hogs. First, SCHUMACHER FEED, fed in self-feeders with tankage, puts brood sows in ideal farrowing condition. Second, it gives the little pigs the right start through the mother. Third, after weaning it develops bigger bone and frames and with the addition of corn and tankage it will put on fat quicker and cheaper than anything you ever used.

Don't feed ear corn in a snow covered feed lot—it is too expensive—too much feed is wasted. The self-feeder with compartments for corn, tankage and Schumacher affords a much cheaper and better way.

The Quaker Oats Company  Address Chicago, U.S.A.
Hazel M. Andrews, a member of the Juniors class in agriculture, and
an assistant editor of The Campus Countryman,
died of pneumonia at the Corn-
ell infirmary on February 6. She
entered the university from her
home in Newark Valley, N. Y., 
taking work in home economics and
being active in student affairs. Her
death is greatly mourned on the
campus.

The epidemic of "flu," grippe, and
thor diseases which has swept the
country did not pass Ithaca by.
The infirmary was overtaxed dur-
ing both Block Week and Farmers'
Week, but fortunately few of the
cases resulted in death. The epi-
demic started to decline soon after
the first week in February.

Doctor Cornelius Betten, secre-
tary of the college, has not been
at his office since February 1, be-
ing confined to his home with
rather a severe case of influenza.
He is now reported to be on the
 mend, however, and may be expect-
ed back at his desk almost any
day. "Dick" (R. A.) Morduff had
left for a while his winter re-
searches and go back to his old
job, helping Mr. Smith, Miss Ash-
ton and all of them thru the rush
hours of registration.

Well or Getting Well

Dean Mann, who was ill for some
time around Christmas, was as
active as ever throughout Farmers' Week. Professor J. L. Stone, re-
tired, who was also ill, is said to
be coming along in good shape.

Professor C. B. Hutchinson of
the plant breeding department went
out to his old school, the Univer-
sity of Missouri, and addressed
Farmers' Week audiences during
the week of January 18-23. He
was taken with influenza while
there, and has only recently re-
turned to Cornell, in full health.

Rees-Anderson

We are glad to announce the
marriage of Professor R. W. Rees
of the pomology department and
Miss J. Norma Anderson, who is a
graduate and instructing in plant
pathology. The ceremony took
place in Sage Chapel January 16.
Mr. and Mrs. Rees will be at home
at 837 University Avenue.

HFR. MANN RETURNED

Prof. Stone and Hutcheson
Also Recovered

Dr. Betten Incapacitated During Rush Period

COLLEGE STAFF
HARD HIT BY
THE INFLUENZA

CROP SPECIALISTS AND
ESTIMATORS WANTED

Mr. Shepherd, Local Field
Agent, Issues Call

John B. Shepherd, the local field
agent for the bureau of crop esti-
mates, tells us that this bureau
wants quite a number of capable
college men who have had some ex-
perience. A law now before Con-
gress will greatly expand the esti-
mation activities of the federal de-
partment of agriculture, both as to
the number of persons employed
and the range of activities under-
taken.

Especially attractive, says Mr.
Shepherd, are opportunities now
opening up for capable and ex-
perienced crop specialists. These
will cover the entire country
and should soon become recognized
authorities in their specialties.
There is also need for men trained
in the interpretation and utilization
of figures, and for persons skilled
in preparing facts for newspaper
publication.

Mr. Shepherd has an office in
Forestry 312, and will be glad to
talk to any interested person.

PROF. KNUDSION IN SPAIN

Will Lecture This Month at
Madrid University

Howard Plays

THE BELLE FOR
OLD INTERLAKEN

Local Lad the Leading Lady of
the Village Ball

THE TOWN SCANDALIZED

Eases Right Up Into Smoker
With Rest of the Boys

Bob Howard, Sp, was the sen-
sation of the Interlaken Masque.
He is said also to have created a
sensation on the way thereto.

Arrayed in the fineries of the
latest feminine fashions, and ac-
companied by a train of admirers,
including gentlemen of such emin-
ence as Nolden, Ford, Moore, Art
Simpson, Jim Gee, and
Don Moorhead, Bob burst into
the placidity of the smoking es-
cutive of the Interlaken local on Febru-
ary 13, and electrified all beholders
by lighting up right with the rest
of the boys. Word quickly ran
thru the train that there was a lady
a-puffin' away in the smoker,
and that she would be at the mas-
querade ball at Interlaken that
evening. Gentlemen of the party
with homes in Interlaken found
themselves anything but popular
and respected in their own home
town when they arrived. But the
whole town turned out to the ball
to see what would happen.

How She Did Dance

Much happened. How that gal
danced! The inhabitants of the
village conferred in dark corners
and in deep whispers. The climax
came at eleven o'clock when the
lady, danced an entire number
crotch-to-crotch with a stalwart
admirer, cheek-to-cheek and
nothing else touching! A vigilance
committee of townsmen, mobilized
earlier in the evening, was just
about to take action, when the
dancers unmasked and the lady also
unwiggled.

"Well!" said one of the chaper-
one. "I must say I did think it
was a woman, but I can't say it
acted very womanly."

The three week's short course in
farm tractors, offered by the rural
engineering department, opened
on the Monday following Farmers'
Week, February 16, with excellent
attendance. It will close March 6.
Eighty Dollars Added to Eastman Prize
By Generosity of W. H. Hook, '12, Prospector

A happy climax to the eleventh annual Eastman Stage, held in Bailey Hall on Thursday night of Farmers' Week, came when Dean Mann read a letter from W. H. Hook, '12, who "made the stage" in 1911, but who was not among the prize winners. He had, he wrote, often thought that if he ever came into money he would offer a compensation prize to men passing successfully from the crowd of seventy-five who try out for the stage to the six finally chosen to speak, and who, in the final speaking, do not win or "place." And now, prospecting in Texas, he had quite recently literally "struck oil," and was glad to send twenty dollars to each of the speakers not awarded first or second prize.

H. L. Crael, ’20 won the first prize of a hundred dollars by a splendid presentation of the problems and possibilities of the new Pennsylvania federation. At the stage, Rothwell, ’20 was awarded second for the convincing manner in which he conversed with the audience on the need of "Conservation in America." Walter Meadslay, Jr., ’20, argued for the league of nations in the light of his war experiences. Clarence Johnson, ’20, showed the desirability of an uncommercialized county fair, and both B. A. Jennings, ’21, and F. H. Bond, ’22, treated ably with different phases of the marketing problem.

The stage was poorly attended by a spiritless audience, but the speaking was fully up to the standard of previous years. This is the first stage since 1914 that has not included a woman speaker.

Other Neighborhood News Gleaned By Our Correspondents

Students who have assisted in compiling the returns of a questionnaire sent to Tompkins County farmers on the subject of the daylight saving plan say that they furnished as excellent specimens of the power of invective as even Falstaff in his palmiest days. George R. Fitts, president of the country farm bureau, announces more sedately that the farmers questioned have shown almost unanimous opposition to the measure.

Prof. E. W. Benjamin has been appointed advisor to the special committee of the department of farms and markets at Albany to establish egg grades and prepare laws for the standardization of eggs.

Prof. J. H. Vorhees of the department of farm crops resigned February 1 to become assistant editor of the Pennsylvania Farmer, Philadelphia.

Professors Hosmer, Spring, Recknagel, and Guine attended a meeting of the New York State Forestry Association at Buffalo on January 28. At the meeting Professor Spring was elected auditor of the association. At a meeting in New York on January 13 Professor Hosmer was elected chairman of the New York Section of the Society of American Foresters.

Sam Higginbothen, dean of the Agricultural College of Allahabad, India, gave an interesting lecture on scientific agriculture as a solution to the famine problem of India. It was held in Strong Hall on January 27. In the afternoon he met informally seniors and graduate students of the agricultural college who were interested in his particular line of work. Higginbothen emphasized particularly the influence of practical Christianity in aiding the lower castes in India.

DAIRY

Professor Troy has just returned from Sabbatical leave. His time has been devoted partly to experimental work and partly to writing up methods of testing and standardizing dairy products in collaboration with Mr. Timothy Mojenier of Mojenier Brothers Company, Chicago. The findings may be published later in book form.

About eighty students in the course of Dairy I and about seventy-five winter course students took the examination for the State Testers license for testing milk and cream by the Babcock method. The license is necessary for testing where milk is bought or sold on the basis by the Babcock method or where the test is used as a public record. Ninety per cent of the competitors passed the examination.

Professor Guthrie has just returned from New York where he has been seeing dairy plants, butter placed in storage last summer.

Mr. W. A. Ayres is seriously ill with pleuropneumonia. He is getting along well considering the seriousness of the illness.

On February 24 Professor Piske will address the Western New York Butter and Cheese Makers Convention at Cuba.

Big Party at Neighbor Warren's

The folks in agricultural economics and farm management have a faculty for having a good time when we are working in that department. One evening not long ago they held a picnic in the Farm Management building. Plenty of good eats, games and music were on the program. Not the least enjoyable was the barrel of "spies" that was "stolen" by Mr. Warren. All the professors and instructors and their wives, clerks, accountants and assistants not detailed by sickness attended. A general feeling of favor of having these social events as often as Miss Bush will hostess at them.
DOM ECON

Miss Blackmore, Miss Hope and Miss Hunter from the clothing department were busy making costumes for the annual Kermis presented at Farmers' Week, which costumes were a feature of the performance.

Prof. Van Rensselaer and Prof. Rose acted as joint hostesses with the departmental staff in entertaining the Campus Club at its monthly meeting the third Wednesday in January.

Lucile Brewer has returned from her vacation spent at her home in Gordon, Nebraska. Miss Brewer accepted an invitation to lecture at the annual Farmers' Week of the Michigan Agricultural College and stopped at Lansing for this meeting on her return.

Dr. Ruby Greene Smith of the home bureau office, was called to Washington, in January, by the office of extension, the north and west, to assist in the preparation of a government bulletin based on a study of the national returns from the farm homes surveyed.

"Feeding for the Sick" and "Home for the Homeless" are two new courses offered in Dom Econ this semester. Prof. Lulu Graves will give the course in feeding for the sick.

Mabel Randolph arrived at Cornell January 1 and has taken up duties as department secretary. Previous to coming here Miss Randolph held the position of secretary to the president of the University of North Dakota for several years.

Mary A. Gaut, instructor in clothing for the winter course has left for Nashville, Tennessee, where she will continue her work at Peabody College, the next semester.

Mrs. Helen B. Young held open house for her class in housing Saturday afternoons January 24 and 31. The girls had a wonderful time wandering thru the model home and explaining over each pleasant and unexpected arrangement. The afternoon was complete when Mrs. Young brought forth the crackers and cocoa for refreshments.

The household management class was given a treat when Helen Louise Johnson, editor of the General Federation Magazine, New York City, spoke to them, on January 30 and 31, concerning the budget system. She also spoke on "Standard Clothing for Women." Both talks were greatly enjoyed by the Dom Econ girls.

Prof. Martha Van Rensselaer and Prof. Flora Rose have accepted invitations to meet with various women's state organizations in New York, Buffalo, Binghamton and Cortland during the month.

Natural Acting Marks Presentation of "All Thumbs," the Third Kermis Play

"That boy didn't have to act; he was it!"

The speaker was referring to Henry, the hired man in the Farmers' Week play, "All Thumbs." The part was played by G. B. Harrison whose attitudes and draws fully satisfied the audience.

The play this year was characterized by an especial fitness in each part. Hugh Jones, the poet-farmer boy, needed only the looks and voice and action of H. L. Schofield to be wholly realistic. A. W. Force, originally cast for the part, might have been more poetic and less boyish, but in either case the character fitted.

Powdered hair and a grizzled mustache could not wholly take away the youthfulness of E. B. Tor-Bush and make him a convincing father as W. P. Jones. Lowell Huntington as Jeff Hinkley looked and acted the part of the successful and unimaginative farm neighbor; and the character of Billy Pratt fitted W. I. L. Duncan quite as closely as the tights he wore in the last act. F. L. Manning had a part in the Kermis play two years ago, at which time he won the Eastman Stage with a speech that had a good deal of preaching; as a Farmers' Week visitor this year he stepped naturally into the preacher's part the day before the performance when D. H. Heller who had originally been cast as the pastor was taken ill. B. Y. Kinsey had a small part as Thornton Bingham but made the most of it, also coming in at the last moment to complete a cast in which five-ninths of the principals had been completely changed in the course of rehearsals.

The two women in the play, Anita, the school teacher, played by Faye Vories and Mrs. Jones, the mother of the poet, by Sarah Van Wagenen, were particularly well cast. Miss Vories showed an especially intelligent conception of the part, and her acting was marked by an artistic restraint at all times. From the moment that Miss Van Wagenen, as Mrs. Jones, was disclosed in the opening curtain, her place in the sympathies of the audience was secure. She played with such calm assurance and perfect ease that she lent confidence to the whole cast and steadied the production more than any other performer.

All in all, the acting was marked throughout by a consummate naturalness. This may have been due to the characteristics of the actors or to the training given by Professor Everett; at any rate no one familiar with the play can deny that the one fact which added most to the success of the performance was the skill with which the final cast was chosen in respect to its fitness to the parts portrayed.

B. A.

P.EOPLE WHO HELPED PUT IT OVER

Left to right—Duffies, general manager; Harrison as Henry; Manning as The Pastor; Miss Vories as Anita; Huntington as Jeff; Schofield (seated) as Hugh; Miss Van Wagenen as Mrs. Jones; Duncan as Billy; Ter-Bush as W. P. Jones. And then Prelivitz, Scene Director; Miss Hunter and Miss Blackmore, Costumers; Dubois, Stage Manager; MacDonald, Howlett and Button, Assistants.
OUR NEWS REVIEW OF FARMERS' WEEK

COUNTRY WEEKLIES DECORATED BY COLLEGE

Warrensburg and Camden Take Blue, Artist Checks Judges Decision

Stone 192 was full of human interest throughout the entire week. One hundred and ninety-eight people filled the Saturday meetings with their best efforts to surpass the other. And they did it. There were 192 individual writers, 192 articles, 192 columns, and 192 people who contributed to the success of the week.

The awards for makeup went to The Warrensburg News, The Hastings News, and the Liberty Register, in the order named. The three papers adjudged best as to material were The Warrensburg Advance Journal, The Port Byron Chronicle, and the Delaware Republican of Delhi.

The awards for makeup went to The Warrensburg News, The Hastings News, and the Liberty Register, in the order named. The three papers adjudged best as to material were The Warrensburg Advance Journal, The Port Byron Chronicle, and the Delaware Republican of Delhi. It may be of interest to know that Walter King Stone, artist and illustrator, placed the papers as to makeup in precisely the same order that the editor-judges had previously placed them.

There's an art to everything, and particularly to makeup.

"High Analysis Fertilizers Save Car Space"—Cavanaugh

In a lecture, "Some phases of the fertilizers," Professor G. W. Cavanaugh urged strongly the early purchase of fertilizers. Due to the unsettled labor conditions, the strikes in the phosphate mines, and the shortage of cars the amount of available fertilizer is limited. Professor Cavanaugh also pointed out the economical saving in efficiency of high grade fertilizers as against the use of low grade fertilizers.

Who's Knocking Now?

"The country newspaper habitually boosts its community, and the community continually knocks the paper," writes the address given by Lee Parsons, editor of The Cortland Democrat, on Wednesday.

Parsons urged that there be more cooperation, a better understanding of the bond of friendship between the newspaper and the community.

Large crowds visited the labor saving exhibit in the home economics building. There was a large display of electric washing machines, cooking machines, and a great many other devices to simplify the tasks of the busy housewife.

Sidelights

Dean Mann gave his address of welcome at two p.m. on Monday in Roberts Assembly. He urged that the visitors feel perfectly free to ask questions, and join in discussion.

Attendance for the first day exceeded that of any previous first day, but after that it fell off and at the end showed 2,750, nearly a thousand less than last year.

The restricted attendance is traced to heavy snowstorms and consequent traffic difficulties. Severe weather also gave difficulty to the tender of Olson dining for stock. Above all, the present prevailing epidemic of cold weather diseases had its effect.

One thing which increases steadily from year to year, despite wind and weather, fire and plague, is the number of signs in Roberts Corridor during Farmers' Week. This year they numbered 54 as against 44 in 1917, the last year the present reporter was here to count them.

To watch the crowd on the first day being initiated into the mysteries of the Dom Echo cafeteria, carried you back to your first dinner in a dining car. Lucky people, those, who don't have to stand in line for their food so often as to diversify the process of all charm and wonder!

Other things which the visitors gazed upon with glee were the flopping gollashes of the students, particularly of the Cornellians. These hardened Cornellians go down the hill, leaping blithely from slide to slide.

E. R. Barney, '22 won the grand championship cup for excellence in fitting cattle for show.

The livestock parade on Friday reached from Roberts almost out to Poultney. It passed in review in front of the main agricultural group and was warmly applauded. The stock in fine shape, and made quite a showing.

Landscape Art's demonstration of the proper disposition of windbreaks and shrubbery for beautifying and protecting the farmstead was a center of interest throughout the week, particularly in the case of visiting ladies.

The poultry department conducted its usual egg laying contests throughout the week. Many of the visitors hazarded opinions as to the number of young chicks; Tuesday, on the predominacy of roosters; Wednesday, the laying power of certain hens; and on Thursday and Friday the number of eggs laid during the lifetime of exhibited individuals.

Miss Ruperti Beats the Boys in Horse Racing Contest

It certainly takes the women when it comes to taming bad actors. Miss Ida Ruperti won the horse racing contest at one o'clock last afternoon, and was awarded a gold medal. Miss Ruperti has had considerable experience with horses, having showed up three times last year, and the colt showed the results of her skill.

She had it eating out of her hand, following her around like a dog, and as a grand finale she made it lie down and play dead. G. M. Beck '20, had a difficult task in training his colt because it was of bad horse nature, he said, and slow to learn. He fully deserved his second place. W. R. Freeman was first, with a beautiful little sorrel filly.

The Sick Perform

Kermis and the Eastman stage were carried thru in large measure this year by students sick enough to be home and in bed. Cap Creel, after winning the Eastman stage, drew to the infirmary for a quiet week-end. Both the leading lady and the character lead of the Kermis play also played theill, refusing to allow themselves to become incapacitated until the day after.

BAILEY HALL FORUMS WERE FEATURE OF WEEK

Schurman, Ort, Lusk, and Mrs. Vanderlip Join Farmers in Discussion

The civic forums held in Bailey Hall was of especial significance this year, when the farmer is being called more and more into the field of public influence. It drew 2000 to the Madison Square Garden discussion. Prof. Samuel P. Orth's address on "Americanism" delivered on Tuesday, comprised the best and most enduring of the old Fourth of July oration, but reduced to logic and presented with a fine solemnity. The next day Jacob Gould Schurman advocated sound, self- sounding, won, and presented with a fine solemnity. The next day Jacob Gould Schurman advocated sound, self-respecting, class selflessness and arrogance, and the last day of the session, Mrs. Frank A. Vanderlip, a field of usefulness for enfranchised women. The forum's main feature was "Bolshevism," the senator demonstrated that in the light of findings made by his committee, bolshevism is not only a scare and delusion but a real menace to the state.

The campus countryman, March, 1920
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FARMERS’ WEEK LECTURES

At the first lecture of the week, Prof. E. V. Hardenburg discussed the seed potato problem. He pointed out the need for standardizing potatoes according to type, thereby eliminating many of the varieties which differ only in the number of seeds per acre. This is as great as that in many other sections, but only because our climate is not suited to potato growing. Selection in potatoes can be effective in increasing yield and disease resistance. The yield of a given acre, rather than tuber selection should be the means toward this end. Figures show that New York as a whole can well afford to plant more seed to the acre.

ADAMS ON PUBLICITY

"If neither news or advertising," said Prof. Bristow Adams to his conference of country editors, gathered in their Stone Hall office Wednesday, "were possible, we would be unable to express what we see in the papers. Prof. Adams’ subject was "The Use and Abuse of Publicity." It’s not the type, he said, that lay in the dissemination of news; its abuse, in the publication of advertisements, surprisingly disguised, in the news columns.

FEMININE CIVICS

Work to be done by women in maintaining New York a better state in which to live was again stressed at the conference of the state federation of women’s clubs, held in the Home Economic building on Friday. Mrs. George Hewitt, president of the federation, was the principle speaker.

THE CAR SHORTAGE

Speaking before the farm bureau conference, held in Bailey Hall during the week, Prof. Samuel Frazer of Genesee reported the results of an extended personal investigation into the car shortage. He said that the federal railroad administration had proposed new tariffs for refrigerator cars which in some cases would make the ice cost more than the fruit.

PURE LIME AS A SPRAY

P. J. Parrott, entomologist of the Geneva experiment station, was particularly interesting in his lecture on the latest in insect and disease control. He said the federal railroad administration had proposed new tariffs for refrigerator cars which in some cases would make the ice cost more than the fruit.

FINLEY ON EDUCATION

"Education is the only hope of the farmer’s sons," said Prof. John Finley, state commissioner of education, speaking in Bailey Hall on Thursday. He pointed out how France held her schools together even when the children had to go to them wearing gas masks, and how England passed the Fischer bill, expanding its educational measures, at the very crisis of the war. Good country schools, he said, are particularly fundamental to any effective rural civilization and the primary need of the rural schools is enough money to attract inspiring teachers.

AROUND ROBERTS’ HALL

At the present writing the College of Agriculture heads the inter-collegiate field hockey tourney. Roberts’ Hall scored four victories and met one defeat. We bowed to the Veterans as the result of a fast game which was only decided in an extra period. Two more games, one with architecture, the other with arts, remain on the schedule.

EASTERN BEEF CATTLE

Prof. W. H. Tomhave of the Pennsylvania state college of agriculture spoke to a large audience on Friday upon the subject of "Beef Production in the East." With the west approaching eastern conditions in respect to size of land holdings, he believes that cattle will become profitable along the Atlantic coast.

Malt Wason To C.D. II

The bone-dry Berry Patch now dares to laugh at ag-folk, moosty meek, who pass up Block Week’s well affairs and damply joy in Farmers’ Week. That fellow C. D. II, I guess, was born and reared in some big city, and can not know me and you the fun of it; the more’s the pity! Would that all neat and likely boys of sociable proclivities might share with us the heady joys of Farmers’ Week activities!

'Tis then we bring the old folks in; 'tis then they tell us what they think of Bryan and crops and all this din of prices, bombs and printers’ ink. 'Tis then we give out little shows and all our little speeches say, to make them feel before they go that we are folks the same as they.

And then it is that people sing the old, old songs in Bailey Hall, and argue the essential thing, without a book—reel after all, we’ll pass up parties swift and sleek, and all of Block Week’s stress and fuss. A good old-fashioned Farmers’ Week is plenty good enough for us.

THE POULTRY BALLET

This cut, donated by the poultry department and crowded out of the front of the issue, we are glad to print here.

OLD CLUBS GOING AGAIN

The old Lazy Club and the more recent Kenton Club, after severe setbacks during the war, are again on their feet and going strong. The Lazy Club, now in its 10th term, met at a special meeting and received a new set of by-laws, including a change of name to the "Old Lazy Club." The Kenton Club, which was formed last December by a group of old members, and definitely reorganized, R. H. Sawyer was elected president, A. R. Vickers, secretary and treasurer; and R. V. Dubois, assistant secretary and treasurer. These officers keep appointed hours at the club rooms, and always accessible to any poultry student with a problem, or possessed of a desire to converse with them.

The meetings of the association have been particularly well attended, and have been addressed by such as April in 1917 when Cornell rushed off to war, and discussions of who won said war and why were engaged in by all.

LECTURES IN LUXURY

Prof. James G. Needham, Dr. Gesignier, Embody and Mr. Herr and T. Rogers, superintendent of state game farms, will be leading speakers at the conference of the American Association of Women in Bailey Hall in the luxurious confines of the Waldorf-Astoria, New York, on March 1 and 2.

THE BOYS COME BACK

Jack Vandervelte, Birge Kinne and E. B. Sullivan were three County boardmembers of ante-bellum days who dropped into the offices last week and had a reunion around the old coal stove. Few of the present incumbents had seen these men since that chaotic period. All were in good health and were asked if they had changed, and all answered in the affirmative.
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MAY ALLISON, in
"The Walker Offs"

HAROLD LLOYD, in
"His Royal Slynness"

March 14th, 15th
"THE RIGHT OF WAY"
By Sir Gilbert Parker

DOUG. FAIRBANKS, in
"Man from Painted Post"

March 16th, 17th
PAULINE FREDERICK, in
"Loves of Letty"

March 18th, 19th
OWEN MOORE, in
"Sooner or Later"

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"Little Shepherd of Kingdom Come"

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We carry nothing but the best.
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Try our steaks, chops, cutlets or chicken dinners.

Rarebits, salads, and sandwiches a specialty.
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Devoted to Neighborhood Happenings at the Top of “The Hill”

Published on the first of each month during the school year by The CORNELL COUNTRYMAN, Inc. Contributions should be in the hands of the Editor by the fifteenth of the month previous to the date of issue. Say what you want and sign it, indicating whether you want your real name used, or another one.

RUSSELL LORD, Editor

No. 5 March 1920

Exit Doc, Grinning

Doc Fuller has appeared in person before the petitions committee and entertained them in graduating him a term ahead of the rest of the class. The Campus Countryman, therefore, is breaking in a new editor this month.

Doc did well with this enterprise. Journal during the first months of its life. He saw the whole ag campus as a bunch of country people living in something like a rural community and he wrote it up just like the country editor writes up his home town. Possessed of an utter inability to grow up, he grinned with the little world he thus reported, and made his paper grin with them. With Doc gone, the paper is found to grow up a little, and something goes out of it which will be missed. Still, the idea is there, and it ought to stick more or less. Starting last month, the paper passed out of the experimental stage and is now included in every number of the bigger paper instead of simply in those issued about the hill. All of the multitudinous news of the campus formerly covered by Campus Notes now fall within its dainty columns. It will have to be a more responsible publication from now on, but we hope still to keep it human, youthful, and a good grinner.

Doc Fuller, reporting the campus to the alumni in this manner instead of the straight news form formerly employed in Campus Notes, finds that an interest of happenings here seems to be greater than their news interest, particularly to those gone “far away” from the place. We hope still a little bit homesick for what goes on here.

Next month we shall castigate the wretch who writes the student directory and calls our girl “A. B. Smith.”

“The Pro-wetness” Our Pet Policy

We hear the word “wet” and groan “boring.” But it’s forty ways. We’ve had this nice new word since before the War, but it’s still going strong. “Wet,” you must know, is that human interest that is not applied in the usual aequous, nor yet in the stronger alcoholic sense, but simply to indicate that freshpeople are “wet.” When we submit, is the right, the duty and the glory of youth!

It is a picturesque and an extremely dainty word; there is a sneer in it which makes the man with the yellow and pink necktie squirm and turn out the next day in a black affair about as fitting to his mood and condition as the yellow and pink one would be on an honorary pallbearer.

To address this to the discerning who have already seen the pity of it and, perhaps, the humor. To see a kid who ought to be in the yellow and pink stage of emotional expansion easing around with a frozen face, and the right sort of gollashes and sheepskin coat and hat and all to see him eye the passing throng of his fellows and whisper “wet” wickedly out of the corner of his rosebud mouth; in fine, to see nice boys and girls playing the sophisticated and superior personage and thinking they’re getting something of it—alas! And the dainties of it is that we’re all doing it, more or less.

The situation strikes us as one needing reform and that’s our business. Yes sir! The Campus Countryman hereby declares itself the chosen champion of the wet birdees. Agriculture is said to have an unusual number. We believe it, and shall stand by it. If it’s “wet” we’re with it; what they are, we want to stay as young and dizzled as we can just as long as we can, and to be “just folks” just as much as we can. If you’ve got them, don’t drip them! To your squirt-gagents, and let the battle proceed!

Pensees d’Education

“Twould seem such finished nourishment of mind, Such spaciousness of spirit as the sage Of other days might search his star to find Is not bequeathed to us on printed Nor can we gain it studying the horse, Nor corn, nor cows nor any other Passed out as “agriculture” in a course Enduring things must mount on other foot Consider Rome! Consider England when Great writers got along without From Rome a fiddle; English ale, and then From Greece the choicest product of Heigh-ho! for all the patter of the sages, These be the things that have outlived the ages!

De Parson’s Warning

Breddren and Sistern:

I is going to denounce to you a dream what I drumpt las’ Sunday night, aftah pertakin’ ob some uncommon luscious chicken a Brudder Jacksons.

I drumpt dat I died and was blowed deColonel’aven by some dandy and pretty soon dere was me an’ old Saint Peter face to face, wi’ chickenas a shining and de angel singing. And I asked an’ says, “Who’s dere? I hellers.”

“Whose dere, you hellers?”

I said, who twas, “What’d you have for dinna?”

“Who’s dere, you hellers?”

I said “Saint Peter.

“Chicken,” I says. Just den come a clucking and a chirping. I thought says, de angel was taking de air, but no omen. Breddren an’ sistern, dere comes three big fat chickens, walking in a line! I says, de angel as ever you saw! “De chickens you eat,” announces Saint Peter.

Den old Saint Peter claps his hands three times and out comes three big, fine-looking gemen, walking in a line like those big fat chickens. O! Saint Peter picks up de first chicken and opens its claw and de first gemen, a big, fine gemen wid a halo (“electric lights”) “Perfesser Rice, whose grain is dat?”

An’ Perfesser Rice says, “Dat’s de Colonel Carter’s grain. He had de chicken; I could tell dat grain of his anywhere I seen it. Dat’s a stolen chicken, as such as you’ve been.”

An’ den Saint Peter says to de second gemen, “Perfesser Heuser, whose chicken feet is dem?” An’ de second gemen says, “Dem dere’s de Colonel’s chicken feet.”

An’ Saint Peter asks de third gemen, “Perfesser Kent, whose chicken feathers is dem?” And Perfesser Kent an’ a halo (“electric lights”) “Chancen,” and it’s the other two, “Them’s the Colonel’s chicken feathers.”

An’ den ol’ Saint Peter says to me, “You go on back down dere an’ tell dose people we got experts un here now, an’ dat dey’d better be more careful.”

Hairpin Mechanics

“Father, you came on now and fix that faucet.”

“Ain’t it fit yourself, Maggie; you got men for that.”

This sprightly dialog, received on our private psychophone from the world of the near future, predicting our failure to arise in time of a new course, must have induced me to go into engineering for women, just started this term by Professor B. B. Robb of Rural Engineering.

“Well, why not? But it will seem some sort of strange to speak of a handy woman about the house.”

E. D.
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—that’s the way we feel about it

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The General Electric Company, with its many years' experience, has played a great part in hydro-electric development. By successfully co-ordinating the inventive genius of the company and its engineering and manufacturing abilities, it has accomplished some of the greatest achievements in the production and application of electrical energy.

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It's getting to be a pretty big place, but your letter will reach the right person, whether you want to know about feeds, soils, chickens, pigs, cooking, bugs, milk, flowers, alfalfa, woodlots, clothes, shrubbery, oat smut, accounts, or silos. Besides, it has publications on these and other subjects. They may help you start a reference library of your own.
Baseball

At times we have doubted whether baseball weather would get here before college closed but we prepared with a good stock as usual. The stock is ready. We sell standard makes.

Tennis

There are new models in the "Lee" rackets this year but the popular number will be as before. "Lee" rackets have always given satisfaction. Buy at the Co-op. as usual.

Cameras

Spring is a seven-day-a-week camera season. The Sunday walks are not complete without a camera. Take pictures of your friends and, of the glens and streams. A geological survey sheet will show you the places.

Cornell Co-op. Society

Morrill Hall

Ithaca, N. Y.
CONTENTS

APRIL 1920

State College of Agriculture and State Agricultural Experiment Station
Affiliate—A. R. Mann ............................................. 387
Fragment—From "All Thumbs" .................................... 388
From Army Camp to Dairy Farm—D. S. Hatch .................. 389
Good Milk That Tests Too Acid—H. G. Troy ................. 391
Producing for Producers—W. S. White ........................ 394
How Control the Coddling Moth?—L. F. Strickland .......... 395
Answering the Lime Question at Home—M. C. Porter ........ 397
More Crops Than Land—E. R. Lupton .......................... 398
Book Reviews ...................................................... 400
The Farm Home .................................................... 401
Editorials .......................................................... 402
Former Student Notes ........................................... 403
Campus Countryman ............................................. 427

Copyrighted 1920, CORNELL COUNTRYMAN, INC.
Entered as second-class mail matter at the Post office, Ithaca, N. Y.
ANNOUNCEMENT has been made of the affiliation recently effected between the New York State College of Agriculture at Cornell University and the New York State Agricultural Experiment Station at Geneva. The formal act of affiliation is the consummation of a discussion between the institutions running back for several years. The bond that has been established did not involve legislative authorization, but has been effected on the basis of the powers which the authorities of the two institutions now have under the law. On February 14 the Committee on General Administration of the Board of Trustees of Cornell University took the following action:

"RESOLVED: that the acceptance by members of the staff of the College of Agriculture of appointments to the staff of the New York State Experiment Station at Geneva, without pay and without required duties, is hereby approved, the members of the staff so appointed to be those mutually agreed upon by the Director of the Station and the Dean of the College of Agriculture.

"RESOLVED: that the President is hereby authorized to nominate for appointment to the staff of the New York State College of Agriculture such members of the staff of the New York State Experiment Station at Geneva, without pay and without required duties, as may be mutually agreed upon by the Director of the Station and the Dean of the College of Agriculture."

Similar action had been taken by the Board of Control of the State Experiment Station a short time before.

It will be seen that under the new arrangement each of the institutions will maintain its present organization and functions, but that the affiliation will make possible an exchange of work and workers between the two institutions. No additional expense to the State is involved and there is no change in the status of the men affected in their respective institutions.

For some time the farmers of the State have realized that the College and the Station have much in common and at times are pursuing closely similar lines of work. The Station has devoted its energies chiefly to research, tho it has also been called upon to do not a little extension work. The College of Agriculture on the other hand has devoted its energies chiefly to teaching...
and extension, but under the law it has also done a large amount of investigational work. The similarity of work has never involved difficulty between the institutions and the relations have been notably harmonious and cordial.

Thru the affiliation it will be possible for workers at the College of Agriculture to have access to the materials and laboratories at the State Experiment Station at Geneva and the investigators at the Station can take advantage of the facilities at Ithaca. The new arrangement will promote conferences between the workers at the two institutions, resulting both in a better mutual understanding of the work in progress at the two places and the removal of the likelihood of any unnecessary overlapping.

Furthermore, the workers at Geneva will be free to utilize, so far as may be helpful, the extension organization of the College. It is expected also that members of the State Experiment Station may offer occasional lectures on their investigations to the more advanced students at Ithaca.

A still greater advantage will perhaps lie in the fact that it is anticipated that graduate students registered in the University will be able, when the nature of their work calls for it, to spend some time at Geneva taking advantage of the facilities there offered, and also that the young men on the station staff at Geneva may be able to register for advanced degrees in the University and do part of their work, for which academic credit will be allowed, at the State Experiment Station.

The members of the State Experiment Station staff who have been appointed to professorships in the College of Agriculture at Cornell University are: Dr. U. P. Hedrick, professor of pomology; Dr. L. L. Van Slyke, professor of dairy chemistry; F. C. Stewart, professor of plant pathology; P. J. Parrott, professor of entomology; Dr. R. S. Breed, professor of dairy bacteriology; B. J. Anderson, professor of animal nutrition; R. C. Collison, professor of soil technology; Dr. W. H. Jordan, professor of animal nutrition.

Members of the State College who have been appointed to places on the staff of the Experiment Station are: Dr. T. L. Lyon, chemist in Division of Agronomy; Dr. R. A. Emerson, geneticist, Division of Horticulture; W. H. Chandler, pomologist, Division of Horticulture; W. A. Stocking, bacteriologist, Division of Bacteriology; Dr. L. A. Maynard, biochemist, Division of Bio-Chemistry; G. W. Herrick, entomologist, Division of Entomology; Dr. Donald Reddick, botanist, Division of Botany; A. R. Mann, Agricultural Economics.

Fragment

From "Everyday" By Hugh Jones

Sometimes, you stars, I think you do us ill
To beckon us with beauty, and to fill
Our little hearts so greatly. Man's but mud,
Save for a touch of starshine in the blood!
From Army Camp to Dairy Farm
A New Agriculture in Mesopotamia

BY DUANE SPENCER HATCH '15

MUD, artillery, machine guns, mules, cavalry, both British and Indian infantry, barbed wire entanglements, supply stores and more mud, constituted the conglomerate picture I saw when I first looked out across the plain from the left bank of the Central Tigris. Then I was away up the line for a bit, and coming back, I stood on the opposite bank and looked across the river. What were those buildings going up on the "old camp ground?" I rode my horse down the canal, across the pontoon bridge, and then up thru the barbed wire entanglements. What are all these animals? Not transport camels—no, dairy cows; in the twinkling of an eye so to speak, the camp ground has become a government dairy farm; the barbed wire entanglements have become farm fences.

Here were several hundred milch cows—good looking cows too, all of them of the Sind breed from North India. This breed has in general not quite so pronounced a hump on the shoulder as most Indian breeds; this makes them more closely resemble in looks our own European cattle.

The bulls are splendid fellows. On the farms they work daily on the carts or the plows. They are big and muscular, exhibiting a bit more life and speed than the ordinary Eastern ox. Several English bulls have already been brought out to cross with the native cattle. Some of these very soon died with the heat; others succumbed to disease; but the survivors are as fit as a fiddle. When I asked an Indian soldier-keeper to lead one of them out to be photo-
graphed, he said "He's a budmash from Blighty" that is "an ugly brute from England." However, the Indian managed him in state-fair style.

Are we back in the Chicago stock yards? Truly it reminds one of them, these yards of hundreds of young ani-

mals being grown into dairy cows. They are graded into herds according to age, and kept in separate yards. These calves are half breeds with European fathers and Sind mothers. As yet the government dairy farm cattle are little pastured. They are yard fed with fodder from near-by grass farms. In the grey light of the morning, the Indian keepers have finished the milking and can be seen starting their herds out for a "walk," three hours exercise over the barren and as yet unirrigated plains. The rest of the day until evening they must be kept quiet under the farm sheds, shaded from the tropical sun.

A soldier engineer shows us thru the pasteurizing, separating, and butter-making plant. On many of the larger government farms, such a plant may be found, a plant full-fledged with up-to-date, well set, smooth running machinery, many pieces of apparatus, the same familiar makes we used to work with at the agricultural college and on the dairy farms in the States. These plants are now run by oil fuel from the Persian oil wells, a single plant burning as high as two hundred gallons a day. The milk tests exactly three per cent butter fat. Every quart of milk goes to the military hospitals, but not until all above three per cent butter fat has been taken out.

For richness of milk, the Sind cows have even our proud Jerseys beaten; they rival the Indian buffalo. Their milk tests five to eight per cent. The New York State Milk Law that "you shall add nothing to, and take nothing away," does not hold here. By taking away from three to five per cent for butter, these cows have been able to supply the sick and wounded with both milk and butter.

An interesting feature connected with the dairy farm is its contract milk. A government boat runs nightly to pick up milk from Arab farmers living up and down the river. Other farmers deliver their milk at the farms, bringing it by river in long, narrow, heavy paddle canoes, called mashoofs. This is one of the places where the government farm and native farmer are beginning to join hands for mutual profit.

The Arab farmer arriving at the milk station with his load of milk

The broad and well founded agricultural plan now in operation looks not only to the present but to the future. It includes a gigantic irrigation scheme which will make the fertile, alluvial desert soil give up its priceless treasure. It aims at feeding and nursing back to flesh the thousands of refugees who have finally escaped or been delivered from the Turk. The plan helps the native to irrigate and till his lands. It puts good seeds in his hands; encourages him to plant more acres; to cultivate them better and more intelligently. It as-

(Continued on page 412)
Good Milk that Tests Too Acid
A Source of Dissatisfaction between Producer and Purchaser
BY H. C. TROY
Professor of Dairy Industry, Cornell University

In the manufacture of concentrated milk products it is practically impossible at present to successfully use milk containing any appreciable amount of lactic acid. This fact has caused condensaries and evaporated milk plants to apply acid tests to detect unsatisfactory milk.

The test commonly used consists in adding to a definite measured amount of the milk a few drops of a substance known as an "indicator." This substance is colorless in acid solutions but gives a pink color to alkaline solutions. After adding the indicator, a dilute alkaline solution is run into the milk from a graduated glass tube until enough has been added to neutralize the acid and leave a small excess of alkali. The excess is shown at once by the indicator changing to a permanent pink color. The acidity of the milk is then estimated by noting on the graduated tube the volume of alkaline solution used.

All milk when freshly drawn from the udder contains substances that act like acid. This acid property of fresh milk is known as the "apparent acidity", to distinguish it from the real acidity that usually develops several hours after the milk has been drawn from the udder, from the action of bacteria on the milk sugar.

As the acid test does not distinguish between the apparent and real acidity, when real acidity is present an allowance must be made for the apparent acidity. Milk receiving plants applying the test have placed this allowance at eighteen hundredths per cent calculated as lactic acid. Milk showing a higher percentage has been rejected. As the producers are usually not prepared to dispose of the milk for other purposes it becomes a total loss.

Investigation has shown that the apparent acidity of fresh sweet milk from different herds may vary between ten hundredths per cent and twenty-four hundredths per cent, altho it is usually less than eighteen hundredths per cent. Since milk from some herds at times may normally show more than eighteen hundredths per cent apparent acidity, an arbitrary limit of that amount as enforced at milk concentrating plants, is too low to admit all perfectly wholesome milk. Also, no experimental data have been published to indicate that milk containing more than eighteen hundredths per cent apparent acidity is harmful when manufactured into evaporated or condensed milk.

The difficulty arises because the acid test does not distinguish between apparent and real acidity. It allows milk to pass that contains eighteen hundredths per cent of real acidity, that is objectionable, if the apparent acidity of the milk is about twelve hundredths per cent, but it rejects milk that contains no real acidity when the harmless apparent acidity is as high as eighteen hundredths per cent.

This has been the cause of much dissatisfaction to milk producers. In some instances they were led to believe that something was wrong with their cows when the herds were perfectly normal. They were advised by inspectors to give the cows medicine to correct the condition and to resort to other remedies. Such instruction should not be followed except on the advice of a properly accredited veterinarian.

Attempts have been made to develop an acid test that will distinguish between the apparent and the real acidity, but none has been devised as yet that works satisfactorily. If such a test is developed it will not relieve milk producers of vigilance in their efforts to produce milk of high sanitary quality.
They must continue to practice clean methods of milking, thoroughly cleaning and sterilizing all milk utensils (especially milk cans), and cooling the milk as soon as possible after it is drawn from the udder to a temperature below fifty degrees Fahrenheit. Let “clean and cold” be the watch word for milk producers.

Better Alfalfa Varieties for New York

Variegated Strains Yield More Hay to the Acre

BY JOHN H. BARRON
Assistant Extension Professor of Farm Crops, Cornell University

For several years there has been interest in the so-called hardy varieties of alfalfa in New York State. These varieties are characterized by having branched root systems, recessive crowns, and bearing flowers of various shades of green, purple, yellow, or variegated. In contrast to these characters common alfalfa has tap roots, exposed crowns, and purple flowers.

Demonstrations carried on with many different strains of alfalfa in various parts of New York indicate that several varieties of the variegated type, Grimm, Baltic, and Ontario Variegated, are usually superior to common alfalfa. In the summer of 1918, observations were made on a large number of alfalfa varieties seeded in 1915. If it is borne in mind that these observations were made three years after seeding, the results secured would appear to have special significance. In the first cutting it was found that the variegated varieties, Baltic, Grimm, and Ontario Variegated greatly exceeded common alfalfa in yield of hay. The stands of the variegated varieties were uniformly thicker and weeds in these plots were not in evidence. Observations of a like nature were secured when the second and third cuttings were made.

In the summer of 1919, seven alfalfa variety demonstrations were held in Essex County. Each of these demonstrations included eleven strains, six variegated and five common. At the first cutting, variegated strains took the first four places. When the second cutting was made, variegated strains filled the first three places in each test.

In Madison County observations of a similar nature have been made on alfalfa demonstration plots during both 1918 and 1919. The results of the first cutting in 1918, where three tons of limestone to the acre had been used, showed 9.4 tons green weight of variegated alfalfa to the acre and 4.7 tons green weight of common alfalfa; for the second plot in 1919, the yields for the first cutting were 10.24 tons green weight to the acre of variegated and 1.4 tons green weight of common alfalfa for the second cutting; 4.25 tons green weight to the acre of the variegated variety, and 2.25 tons green weight to the acre of common alfalfa.

Many miscellaneous observations agree with these results. As a rule, variegated alfalfa proves superior to common alfalfa in New York, and the more adverse the conditions, the greater is the superiority of the variegated varieties.

Grimm, Baltic, and Ontario Variegated have given the best results in these studies. As the commercial supply of seed for Baltic and Ontario Variegated is limited and the price high, most attention has been given to the Grimm variety, which is available in large
quantities and at quite reasonable prices. Those who are interested in trying Grimm or either of the other varieties should use care in purchasing their seed, as much common seed is sold at the prices quoted for the hardy variegated types. Purchasers should buy only from sources authenticated by the experiment stations in the north-western states, or only after consulting their county agents about local sources, thus making sure of the hardy variegated variety.

Common alfalfa in the right hand; hardy alfalfa in the left, from two year old stand in Ontario County.
URGED by potato growers from Long Island and New Jersey, I began making a business of seed potato production in the spring of 1914. Climate, altitude, and soil conditions were all favorable for success, but a poor location proved a stumbling block from the first. Our one hundred and seventy-five acre farm is four or five miles from a railroad station. The roads are poor, and there are some very long steep hills, so that the expense of hauling the crop to market and bringing fertilizer to the farm is considerable. Nevertheless, I feel that I have achieved very fair success.

I started with the tuber unit system so as to produce seed for my own planting. This method consists in selecting tubers of proper size to cut into four pieces and planting them in four consecutive hills. The similarity in the growth of these related hills was remarkable. Every time one exceptionally good hill was found, three more were sure to follow. The same was true of the poor ones. Reserving the good hills and rigidly culling out the poor ones has put me on the road to being a successful seed potato raiser more than any other single thing.

I like to plant in check rows, cultivate both ways, and dig by hand. In this way all inferior and weak hills are eliminated, and a man can be sure of just what type of hills his seed came from. I have followed this practice from the very beginning, and the fact that the last digging showed less hills to be eliminated than ever before indicate that it was well worth all the labor and trouble it took.
We are not troubled to any extent by the late blight or the Colorado beetle and need do very little spraying. Before planting, however, I treat the seed with corrosive sublimate, using four ounces to thirty gallons of water. I have found it convenient to use three barrels. Two of them have a hole bored in the bottom and a plug is fitted in the hole. These barrels are placed on a bench high enough above the ground to allow a pail or bucket to be placed under them. The third barrel is used to hold the solution. The two barrels are filled with potatoes and the solution is poured over them until they are all completely covered. They are treated for half an hour, after which the solution is drawn off by pulling out the plug in the bottom of the barrel. The potatoes are then spread out to dry and be cut while another batch is being prepared. The solution may be safely used on three batches,—about eighteen bushels.

I prefer fall plowing, but when this cannot be done I plow as early in the spring as possible and thoroughly disc and drag until I have a reasonably fine seed bed. What stable manure I have is applied before planting and is accompanied by an application of five hundred pounds of acid phosphate to the acre. I find that this gives as good results, if not better results, than the complete fertilizer. When we have no manure we use a 4-8-3 fertilizer. Planting is usually done from May 29 to June 12. I have had some very good results from late planting.

Seed potato production means far more work and worry for a farmer than does the production of ordinary market potatoes; it requires careful observation and attention to details but the end in view is worth the work involved. Our potatoes have been certified for three consecutive years now. I am proud of them.

X. How Control the Codling Moth?
Old Methods May be Wrong in Western New York
BY L. F. STRICKLAND
Inspector, State Bureau of Plant Industry, Lockport, N. Y.

Since 1878-1879 the codling moth has received much attention in the great apple regions of the east and west. Woodward '78, Howard '88, Slingerland '96-'98, Quaintance '10, Hammer '10, and Felt '09-'19, have all given distinctly valuable information about the control and life history of the pest.

We find that the codling moth has one complete brood and a partial second one each season in both the Hudson River valley and on the Ontario plain. Dr. Felt's experiments in the Hudson valley indicate that a high degree of control can be obtained by one thorough arsenical spray immediately after the petals fall. Cooperative experiments in 1915-1919 indicate, however, that the codling moth is a most stubborn insect to control in the orchards of the Ontario plain.

Since 1912, our records prove that the codling moth in the Ontario region of western New York is subject to the influence of rather uncommon climatic conditions. They show that the egg laying period usually begins about June 28. Oviposition is at its maximum from July 1-10, with a gradual decline to the end of the month. Very few larvae of the first brood mature that same season; instead, they live in the soft larval stage until early June of the next summer.

Records for daily minimum temperatures for June and July average considerably below sixty degrees Fahrenheit. This rather cool weather causes the moths to delay oviposition until it is warmer. The egg laying period for 1919 started ten days earlier than any other year since 1912. Each year since 1912 maximum oviposition has not been reach-
ed until mid-July. The curve shows the effect of temperature on oviposition in the Ontario plain region.

Oviposition reaches its maximum at the higher temperatures, but is affected by each drop of the thermometer to points below sixty degrees Fahrenheit.

It appears that in most regions of the United States a large percentage of the young larvae enter the apple thru the blossom end and are killed by the arsenicals that were applied as soon as the petals had dropped. On the Ontario plain, however, a large majority of the larvae enter thru the sides of the apple and in so doing make both shallow and deep channels in the flesh. This is not all; most of these larvae mature and desert the fruit before the apples are ready to pick without finding the poisons that were placed in the calyx. This new factor of shallow and deep work of the codling moth is the cause of considerable loss to the apple grower. Three years of experiments on plots where we have used arsenate of lead paste indicate that even in three thorough applications after the petals drop, eighteen per cent of the apples will nevertheless be injured and reduced in value. This is because the larvae enter thru the sides where they do not encounter sufficient poisons. A little over two per cent of the original infestation can be eliminated by the arsenical, since about this proportion of

Oviposition reaches its maximum at the higher temperatures. Records for 1919 in Niagara County

the larvae enter thru the blossom end. The grading standards of our State and especially of our cooperative packing associations must be such that the product will stand out as an individual brand or pack. The codling moth problem is the greatest problem in the production of clean apples in western New York. Experiments are being continued and we hope for a more successful method of meeting it, because the defects will become more pronounced when, in the near future, we may pack our apples on the basis of color, as well as size and defects.
TESTS made on soils in nearly every part of New York State show an acid condition, especially where they are light and dry. But tests in the laboratory do not show the farmer whether it will be profitable to use lime, nor do they tell us whether it will be profitable to use lime once in every rotation.

When I first commenced to use lime I obtained good results and so have been using it on practically the entire farm since. No check plots have been left except on one piece, so I shall consider the results on this piece.

The soil is a gravelly loam and well drained. In 1913, the entire field was heavily manured and planted to ensilage corn with good results. In 1914, I applied ground limestone at the rate of one ton to the acre, leaving a check strip one rod wide across the entire side of the field. The lime was applied when the soil was dry and thoroly worked in; two hundred and fifty pounds of acid phosphate to the acre was used over the entire piece, and the field was sown to oats and barley, which yielded a good crop of grain.

In 1915, good results from lime were seen, but no weights were taken. But most soils in New York State respond to the application of lime and the field was again manured in 1917 and planted to potatoes. These potatoes were planted in check rows without commercial fertilizer and yielded over two hundred and fifty bushels to the acre.

In the spring of 1918, ground limestone was again applied at the rate of one ton to the acre, leaving the same check as in 1914. It was sown to oats and barley, using two hundred pounds of acid phosphate to the acre. Six pounds of timothy, three pounds each of alsike and red clover, and one pound of alfalfa were sown to the acre. The grain was allowed to ripen.

This land has had a good coat of manure and acid phosphate over the entire piece once in each four year period and lime on all except the check strip in
each rotation. An exceptionally heavy growth of straw in 1918 held seeding back so it did not look very promising that fall.

The spring of 1919 was good for grass, and the hay was cut the last of June and test weights of field-cured hay were taken by the Farm Bureau manager. The limed areas showed a yield of five hundred and twenty pounds of hay to the acre, and the unlimed, a yield of two hundred and eighty pounds. The summer was very wet and the piece was cut again the last of August. Weights of the field cured hay were again taken from the same area as before. The limed area gave a yield of two hundred and ninety-six pounds, and the unlimed two hundred and forty pounds to the acre. Adding the yields of the two cuttings together, we have a yield of eight hundred and eighty pounds to the acre on the limed area and a yield of two hundred and thirty-two pounds to the acre on the unlimed area, or a total increase of six hundred and fifty-six pounds of hay to the acre as a result of liming.

The increase in hay in the first rotation would have paid the cost of the lime and its application, so we can figure the profit on the second application. The lime cost $4.60 a ton, and the hauling and applying probably cost $2.00 a ton more, making a total expense of $6.60 an acre for the lime. Figuring hay at $20 a ton, which is a fair valuation for the quality of hay, we have a gain of six thousand five hundred and sixty pounds at $20 a ton, or $65.60. Deducting the cost of lime, $6.60, gives a net gain of $59 an acre, the only cost against it being the haul to the barn. This piece of land is ten acres, making a total gain of $590. Next year I expect a good increase of hay again on the limed area.

With the present high price of concentrates and the known value of clover hay for dairy feeding, can any farmer on the light and dry soils of New York State afford not to try lime?

XII. More Crops than Land
Fertilizer's Part in Truck Farming
BY EDMUND R. LUPTON
Mattituck, Long Island, N. Y.

FARMERS on eastern Long Island specialize in the production of vegetables for the market, principally potatoes, onions, carrots, beets, cauliflower, brussels sprouts, cucumbers, and green lima beans. As these crops are well suited to the soil and climate of this section and it is within easy reach of the New York city market, farming here has been successful and prosperous for years.

These crops require high fertilization; the usual practice is to use about a ton to the acre of high grade commercial fertilizer analyzing four or five per cent ammonia, eight or ten per cent phosphoric acid, and when obtainable, three to seven per cent potash. Besides this, many farmers make a practice of applying ten to twenty tons to the acre of New York City stable manure every one, two, or three years. Because of this high expense of fertilization it is essential to keep the land producing intensively. The potato is especially suited to this intensive cultivation, as it can be grown year after year on the same soil and maintain high yields if fertilizer and humus are supplied. More than half of the heavy soil in this vicinity is in potatoes each year and yet thru intensive fertilization yields are increasing. The humus is maintained largely by the use of rye cover crops and stable manure. The
other crops, especially of the cabbage family, require rotation.

I operate one hundred and seventy-five acres and grow each year sixty to seventy acres of late potatoes, twenty acres of early potatoes, and from ten to twenty acres each of cauliflower, brussel's sprouts, cabbage seed, lima beans, Luce's Favorite corn for seed, and hay. Thru double cropping, principally of cauliflower, sprouts, and cabbage stock for seed, I raise about two hundred acres of crops annually on one hundred and seventy-five acres of land. Some farmers in this vicinity, especially in Orient, double crop to a much greater extent. However, most of the farmers do not grow such a variety and so cannot double-crop.

In laying out a crop plan there are two principal considerations: (1) to raise enough market crops to get full value out of heavy fertilization, and (2) not to make the labor requirements too large at any one time. About twice as much labor is necessary in the harvest season as in the rest of the year. I have come thru the war period without serious difficulty in obtaining necessary labor by employing married Polish men, furnishing them houses and hiring their wives by the day for potato cutting, hoeing, picking up potatoes, picking beans, tying cauliflower, and packing sprouts. Seven men attend to the planting and horse cultivation, and the seven women have a steady job from June to November at the other work. As I store from seven to ten thousand bushels of potatoes a year, and some years mix a hundred tons of fertilizer and unload ten to twenty cars of manure in the winter, I have work for four or five men all winter. In this way I am able to maintain a satisfactory labor force.

My plans for the future are to grow considerably more grass, alsike clover, and timothy. These I sow in early September after potatoes and cut for hay the following June. I believe there is nothing equal to grass roots for conditioning the soil. I also expect to increase the number of market crops by more double-cropping.
Book Reviews

Deep Waters
By W. W. Jacobs, Charles Scribner’s Sons, New York.

“There’s eddication and there’s common sense. Some people ‘as one and some people ’as the other. Give me common sense.”

The night watchman has common sense and remarkable sharpness, in his own opinion, but his cronies of the docks usually leave him the worse for their encounters. He tells these stories of cockney sailors ashore in his own dialect with a twist all his own. The people, the boys of the neighborhood, the lady-friends of the captains of the ships that come to his wharf, and even his own wife seem to be in league against him, but he tells of their spying on him and their “botherin’ of ‘im” with as much relish as tho he always kept the upper hand, as he does in his own opinion. He is a true sailor-man, with his frequent trips to the Bear’s Head for a “’arf pint to keep out the cold” and his bits of homely philosophy and humor thrown in here and there, always grumbling but ready to help his friends, usually to his own disadvantage.

The flavor of the sea and the quaintness of the book make it entertaining to all of us. Mr. Jacobs is a past-master of surprises; one wonders what will happen next, and the night watchman does the unexpected thing to make us laugh. Being a collection of short stories, one can pick it up at odd times and be sure that he will put it down with a feeling of satisfaction in a good story well told and a good laugh for the night watchman and his troubles.

H. A. S.

In Winter Quarters
By Alvin Howard Sanders, The Breeders’ Gazette Print, Chicago, Illinois.

It isn’t a very large book; there’s no hero or heroine, but its so intensely human and natural that the reader forgets all about a possible hero or heroine. Mr. Sanders takes one into the depths of the forest primeval, there to learn for oneself of the murmuring pines and the hemlocks. There one learns to reverence the works of Nature as in no other place. And here I have given you merely a hint as to the appeal of the book.

In his winter quarters in Lincoln Park West, Chicago, the author reminisces, taking the reader with him back to the glimpses of his boyhood days, days too precious ever to forget. One is reminded of some of the terrible trials and the overpowering joys of childhood; and of the appeal the evidences of Nature have for all children.

But not only does the forest interest us. We are taken on expeditions even to the zoo, to observe the plight of and to commiserate with those “behind the iron bars.” From thence to the bookshelf or to the study of sculpture may seem a far cry, but we make it without a whist of discomfort.

In Winter Quarters is intended for all who are really human and who therefore have an innate love of nature. To those who already live largely in the Great Outdoors this book may bring a much-needed realization of the things in life which are so obvious that they often remain unseen. To those who have never learned of all these evidences of Nature and their power for true happiness, this book may bring an inkling of a world far superior to our own crude man-made world.

J. R. F.

The Place of Agriculture in Reconstruction

Mr. Mormon has brought together a good compilation of the part agriculture is expected to share in the reconstruction plans of the principal Allied countries. These plans are broad and general; some were drafted in the early days of the war. For the most part, they are the outbursts of well-meaning city folk and legislative assemblies, most of
whom know very little of practical agriculture.

The demands made by labor unions and socialists, as quoted in Mr. Mor-
man's book, are quite impossible of attain-
tment. Civilized society is too well
grounded in the history of past experi-
ments and too vigilant of the needs of
the future to allow itself to succumb to
the goldbrick schemes of experimental
faddists. Then, too, most of the recon-
struktion plans anticipate armies of un-
employed in the face of the present acute

(Continued on page 412)

THE FARM HOME

Did you ever go to a picnic when you
were a youngster, and feel "left out" of
things because you were just a little too
young to enter into the games, or just
a little too old to be interested in the
sports of the younger members of the
party? If you never have, you prob-
ably can remember seeing others who
felt that way. It may have been a party
your older sister had, where all the guests
were much too "grown up" to feel like
wasting time with a child who was too
young to enter into their amusements; or
it may have been at home where work
was being done.

So often we hear a child say "What
shall I do now?" when he is tired of
just playing and wants something to do
which will really interest him. Toys be-
come tiresome after a time, especially to
a little girl who is watching her mother
sew or cook or to a boy who sees his
father working in the garden or shoveling
snow. A mother could spend most
of her time inventing new games for a
child who wants to be kept interested all
the time, as most children do. Instead
of holding a child's interest in just any-
thing that keeps him out of mischief,
why not allow him to do the things the
older members of the family do, in a
smaller way.

Why not let the child who likes to
string beads make some interesting little
gifts for members of the family, or out-
line little picture cards, sets of which
can be bought at almost any toy shop or
department store. Before the girl is old
enough to learn to make clothes herself
she can sew on simpler things. Many
children spend hours playing indoors at
games which only hold their interest,
not teaching them anything, or helping
them acquire skill in any special direc-
tion. The girl who watches her mother
cook takes intense interest in the molasses
cookie man baked for her particular
benefit, and even more interest when she
has a little rolling pin of her own with
which she can roll out an occasional
cookie.

Junior project work is doing just this
thing for girls and boys who are inter-
ested in learning to do things. You
would be surprised, if you have not al-
ready been, to see the garments the
younger girls make. Girls you might
think too young to take interest in and
do careful work not only make garments,
but cook simple dishes.

Let's interest the children in the
homes and in the community in worth
while things, directing their interest and
energies toward those things which will
make them say when they are older "I'm
so glad I became interested in really good
books, when I might have been wasting
my time with the other kind;" or "I'm
glad I acquired that skill when I was
very young, when it was so much easier
for me."

R. H. N.
TWO interesting documents have come to our attention during this last month: the report of the first annual meeting of the American Farm Bureau Federation early in the month in Chicago and a copy of a paper read at a recent extension conference in New York by W. A. Lloyd, of the States Relations Service at Washington.

The farm bureaus of twenty-eight states, with a membership of over seven hundred thousand farmers, were represented at the meeting in Chicago, and according to the report, it seems probable that every state in the Union will eventually join the Federation—a tremendous power in the commerce and industry of this country.

Mr. Lloyd’s speech is interesting for another reason. He spoke of the scarcity of county agents in all parts of the country and said that, although new counties were taking up the farm bureau idea continually, the work may be seriously handicapped by the lack of men to take the positions of county agents. The average period of service of county agents is less than two years. The States Relations Service sent out questionnaires recently to all county agents in the north and west. The answers showed that most of them left their positions because they could get better pay and an easier life somewhere else. He recommended several things as remedies for the situation, but perhaps the two most vital were a reasonable increase in entrance salaries and regular promotion of county agents, and the bettering of field conditions, especially as they concern hours of work and night meetings.

BUT what is the connection between the meetings of the American Farm Bureau Federation in Chicago and Mr. Lloyd’s statement of the facts of the county agent situation? Only this—that farmers are seeing the need of getting together. We realize now that to be in business at all, as we most certainly are, we must have business organization to compete with other industries for labor, raw materials, and fair prices for our products. But in adjusting our business to increase production and take our places in the industrial and commercial world, we must not forget the men who take care of the details. The farming business is the most extensive one in this country today, but its organization and orientation to its rightful place among the nation’s activities must start at the bottom—with the local farm bureau. It must be solidly grounded; must have the whole-hearted support of the best farmers in its county; and must pay its county agent enough to keep him if he is a good one, or to get another if he isn’t good. Only by such fundamental organization of the local county farm bureaus can the state federations, and thru them, the American Farm Bureau Federation occupy the place it should in the economic life of this country.

THE COUNTRYMAN announces the election of G. J. Druckerman to the business staff and the transfer of F. A. Wicker to the circulation staff.

We are glad to welcome to the College the new professors from the
'80 B. S.—Robert L. Stevenson died in New York on February 22, where he had been practicing law for many years. During the last few years he has been assistant corporation counsel of the city of New York.

'85 B. S. A.—Arthur Minier Breed died on October 3, 1919, at Corning. Hemorrhage of the brain from overwork was the cause. For several years after leaving college Breed was engaged in farming; later he moved to Corning.

'85 B. Agr.—Amoroso Eugenio Lima, one of the old time graduates in agriculture, writes from Rio de Janeiro, “I am also getting more and more to the snow limit and the cooling effect of age is already coming; but for that, sweetly, as in the quietness of a summer evening.” Lima is managing his cassava plantation on the slopes of the Serra dos Orgaos. He has experimented with wheat, rye, and flax but finds the Brazilian topography is too “craggy.” Lately Lima has taken up the culture of olives and has found that they grow very successfully around Rio de Janeiro.

'93 B. S.—Howard Russell is in the real estate business in Minneapolis, Minn., with offices at 432 Security Building.

'96 M. S.—Edward M. Kindle of Ottawa, Canada, was elected third vice-president of the Paleontological Society of America, at its annual meeting held recently in Boston.

'98 B. S.—Ernest M. Bull is a member of the firm of A. H. Bull and Company, 17 Battery Place, New York, one of the leading shipping houses in the city. They are general agents for the A. H. Bull Steamship Company, the Bull Insular S. S. Company, and owners of the Bull Steamship Line of Baltimore, as well as managers and operators of a number of Emergency Fleet Corporation vessels.

'08 B. S.—Walter S. Marsland is county agricultural agent of New London County, Conn.

'08 B. S. A.—Vaughn MacCaughey is now professor of botany, College of Hawaii, Honolulu, Hawaii. During the last six years MacCaughey has given lectures before several of the leading universities, colleges and summer sessions throughout the country. He is especially interested in field work, ecology, and the humanistic phases of biology.

'09, '10 W. C.—F. W. Kazmeier is extension specialist in poultry husbandry at the Texas Agricultural College.

'10 B. S. A., '13 M. S. A., '15 B. S.—Mr. and Mrs. Henry Carleton Moore (Cornelia F. Kephart) announce the birth of a daughter, Virginia, on February 15, 1920. Since his discharge from the army where he served as a second lieutenant in the Field Artillery, Moore has held the position of extension specialist in vegetables and potatoes at the Michigan Agricultural College, East Lansing, Mich.

'12 B. S.—Miss Cecilia McKay was married on April 8, 1917, to James Champion. They are now living in Williamsport, Pa.

'12 B. S.—E. Wright Peterson is now employed by the Spooner-Campbell Com-
pany, Inc., operators of a chain of stores in northern New York, selling farm machinery, automobiles, trucks, and tractors. He is in the headquarters store at Gouverneur.

'12 B. S.—Pearl Boynton is now housekeeper at the Harlem Hospital, New York City.

'12 B. S., '13 M. S. A.—Roy D. Anthony is finishing his work for his doctor's degree here at the college.

'12 B. S.—A. M. Goodman, who has been connected with the Bureau of Animal Industry in Washington, is doing extension work in the department of rural engineering.

'12 B. S. A.—Mr. and Mrs. James L. Kraker, of Beulah, Mich., announce the birth of a son, James Lewis, Jr., on January 22. Kraker is county agricultural agent for Benzie County, Mich. He is also developing a fruit farm in that county.

'13, '14 W. C.—C. S. Thompson was injured very recently by the explosion of a gasoline soldering torch at Vernon. Thompson operates a milk plant there, and is president of the Cornell Dairy Students' Association.

'00 Sp. — Louis Moulton, formerly farm manager of the City Farms of Cleveland, Ohio, is now with the Council of Farms and Markets as inspector of the county farms of the state. He owns a farm at Cuba.

'13 B. S.—A. L. Dean is an instructor at the Massachusetts Agricultural College at Amherst.


'14 B. S.—Ray Huey is teaching agriculture at Newark.

'14 B. S., '20 M. S.—H. B. Allen has been appointed assistant professor of agricultural education at the West Virginia State College of Agriculture, Morgantown, W. Va.

'14 B. S.—Leonard C. Treman and Mademoiselle Marguerite Dujardin were married in Paris on January 22. They are now visiting Treman's parents in Rochester.

'14 B. S.—Harry B. Alger has left the Castle Ice Cream Company to accept a position in the Laboratory Division of the City Dairy Company of Baltimore, Md. He will have charge of all chemical and bacteriological work.

'14 B. S. — Walter Wilkey, formerly farm manager of the Gowanda State Hospital, has bought a farm at Amsterdam.

'14 B. S.—T. J. Conway, professor of poultry husbandry at the Texas Agricultural College, reports rapid development of the poultry industry in that state.

'15 B. S.—N. P. Steve is doing drainage work in the department of rural engineering. He recently changed his residence from Montezuma to Ithaca.

'15 B. S.—Stanley Coville has left W. Atlee Burpee Company to take a position with Northrup, King and Company, wholesale seedsmen of Minneapolis, Minn.

'15 B. S.—E. F. Hopkins, who is now associate plant pathologist of the Alabama Experiment Station, will go April 1 to Columbia, Mo., as plant pathologist at the University of Missouri. He was in Ithaca March 25 to take an examination for his doctor's degree.

'15 B. S. A., '16 M. S. A.—Duane S. Hatch, after returning from Europe last August, spent four months at Arr's Springs, California, and later delivered lectures in the West. He helped to organize the Student Volunteer Convention at Des Moines, Ia., on December 29 last.

'15 B. S.—T. W. Vann, who has been county agricultural agent in Chemung County, has taken up a similar position in Wyoming County.

'15 B. S.—D. Reeves Noland, of Asheville, North Carolina, is assistant specialist of dairy management in the dairy division of the Federal Department of Agriculture. He has been cooperating since 1916 with the dairying division of the extension department of North Carolina. He is in charge of the dairy manufacturing in the western section of the state, purchasing all supplies and managing thirty-two cooperative cheese factories. His main problem lies in pro-
De Laval users are on the profit side

No machine used on the farm returns a larger profit on the investment than a De Laval Cream Separator.

It saves from 25% to 50% of cream twice a day every day in the year over crocks and pans; and from 10% to 25% of cream over an inferior or half-worn-out separator.

With butter-fat at the present high prices these savings mount rapidly. Many thousands of users have found that their De Lavals paid for themselves in a few months. De Laval users are always on the profit side of the ledger at the end of the year.

More De Lavals are used than all other makes combined.

Your local De Laval agent will be glad to demonstrate what an Improved De Laval will save you. If you don't know the nearest agent, please simply write the nearest office below.

The De Laval Separator Company

165 Broadway 29 East Madison Street 61 Beale Street
NEW YORK CHICAGO SAN FRANCISCO

50,000 Branches and Local Agencies the World Over

Tell Advertisers Who Introduced You
moting dairy industry in this new dairy part of the state.

'16 B. S.—A. R. Eldred is with the Seabrook Farms at Bridgeton. He has charge of all the hired help.

'16 B. S.—Waldo B. Cookingham was married to Miss Amelia Ardell on December 26, 1919.

'16 B. S.—Fred G. Behrends, who was with the New York State Food Commission during the war, has been appointed extension professor in rural engineering.

'16 B. S.—J. A. Vanderslice, former editor of THE COUNTRYMAN won second prize in a sales contest held by the Hercules Powder Company, last December.

'16 B. S.—George H. Boettner is now teacher of science in the high school at Burlington, Iowa.

'16 B. S.—W. D. Chappell is teaching agriculture at Portville.

'16 B. S.—Lieut. Arthur A. Nelson, U. S. M. C., and Miss Mary Lilyan Greenfielder were married on November 17 at Newport, R. I. They are now living at 50 Powell Avenue, Newport.

'16 B. S.—M. L. McInerney is with the Sayre Creamery and Cold Storage Company at Sayre, Pa.

'16 B. S.—Orley G. Bowen is now county agricultural agent of Middlesex County, N. J.

'16 B. S.—Willis A. Conklin is with the Cuyamel Fruit Company, Puerto Cortes, Honduras. He may be addressed at Hotel Palma.

'16 B. S.—Alvin F. Griesdieck is with the Griesdieck Company, St. Louis, Mo.

'16 B. S.—Ralph H. Griswold is a landscape architect with Bryant Fleming, at Wyoming.

'16 B. S.—C. F. Schill is now teacher of vocational agriculture at Gowanda.

'16 B. S.—Mr. and Mrs. Merriman G. Lewis (Gertrude M. Button '16), of Lexington, Va., announce the birth of a son, Markham Van Fossen.

'16 B. S.—Loren J. Mead has returned from China and may now be addressed at 602 Chestnut Avenue, Santa Anna, California.

'16 B. S.—R. W. Harman is teacher of agriculture in the Berkshire Industrial School at Canaan.

'17 B. S.—“Wis” Purdy has returned to his home in Massachusetts after an extended tour in Alberta, Can., where he was out of touch with everyone for months. He is now going to Columbia, South America, as a representative of the Standard Oil Company.

'17 B. S.—F. A. Weeks is teacher of agriculture at Clarence.

'17 B. S.—Mr. and Mrs. Kenneth Mayer are living at 159 Ridgewood Avenue, Brooklyn.

'17 B. S.—Russell A. Beck is with
"I haul on pneumatics and deliver fruit unbruised—direct from tree to town—no reloading from orchard teams. Others here have ruined thousands of dollars' worth of fruit by jolting it on solid truck tires. A truck contractor has used two sets of solid tires since I began hauling on my Goodyear Cord Tires."


IN much the same way as that described above farmers everywhere have demonstrated how thoroughly pneumatic tires equip motor trucks for all farm hauling.

By affording traction, cushioning and quickness that solid tires cannot supply, Goodyear Cord Tires on trucks help users forget crop-moving difficulties hitherto requiring extra labor and expense.

The able Goodyear Cord Tires do away with needless transfers of loads from teams to trucks, protect crops in transit and enable marketing with a promptness that catches prices at their highest.

Their unflinching behavior in grinding toil shows that all the valuable advantages of the pneumatic tire have been made entirely practical for truck duty through the development of Goodyear Cord construction.

Farmers' reports, describing in full the effect of pneumatic truck tires in eliminating farm drudgery, assisting general motorization and increasing yearly income, can be obtained by writing to The Goodyear Tire & Rubber Company, at Akron, Ohio.
the Transcontinental Oil Company, at Comanche, Tex. His address is Box 159.

'17 B. S.—Mabel Pashley is teacher of homemaking at Newark.

'17 B. S.—George S. Kephart is with the Lincoln Pulp Wood Company, Bangor, Me.

'17 B. S.—William Crimm may be addressed at Stone and Warren, New York Life Building, New York City.

'17 B. S.—Harold O. Johnson is assistant adjuster in the life and accident claim department of the Traveler's Insurance Company, 76 William Street, New York. He lives at 338 Mountain Avenue, Bound Brook, N. J.

'17 B. S.—E. B. Hewes is teacher of agriculture at South Dayton.

'17 B. S.—Mrs. Anne Bristol Hall has announced the birth of a son on December 20. She lives at 56 Shepherd Street, Cambridge, Mass.

'17 B. S.—Julia Ernison, who has been home economics advisor for the New York county chapter of the American Red Cross, has gone to Jerusalem, Palestine, where she will be dietetian in the Jerusalem Hospital.

'17 B. S.—A. W. Plough is teacher of agriculture at Pulaski.

'17 B. S.—Miss Ruth Davis is spending the winter in Florida, with her aunt, Mrs. Lucia Eaton.

'17 B. S.—Frank P. Culliman is assistant in pomology at Purdue University. He may be addressed at the Agricultural Experiment Station, Lafayette, Ind.

'17 B. S.—Walter A. Huelson, who has been assistant in horticulture at the Purdue University Agricultural Experiment Station for the past two years, has accepted a position with the Seed Farms Company, of Moorestown, N. J.

'17 B. S.—Auleen B. Russell is with the Dairymen's League, Inc., 303 Fifth Avenue, New York.

'18 B. S.—Mr. and Mrs. Stuart D. Jackson (Lillian A. Stevens '18) are living at 130 Blair Street, Ithaca.

For All Fruits and Vegetables

USE

Universal Bushel Shipping Packages


Write for interesting booklet "SHIPPING PROFITS"

PACKAGE SALES CORPORATION
10 E. Jefferson Street
South Bend, Indiana
Ammonia pays in the orchard

Ammonia is the most important fertilizer element used in fruit production. It is ammonia that promotes the vigorous wood growth so necessary for the formation of fruit spurs and fruit buds.

Quickly available ammonia added before blossom time will invigorate the fruit buds and increase the amount of fruit set.

The failure of the fruit to set and the early falling of fruit is generally due to ammonia starvation.

In some sections an early application of quickly available and non-leaching ammonia has increased the yields four and five times that of unfertilized trees.

**ARCADIAN Sulphate of Ammonia**

Arcadian Sulphate of Ammonia is the best nitrogenous fertilizer for fruit production. It contains one-third more ammonia than any other top-dressing and this ammonia is all soluble, quickly available and non-leaching.

It can be applied early and it will last throughout the season. Its fine dry crystals make it easy to apply by hand or machine.

Give your orchard and your small fruits a top-dressing of Arcadian Sulphate of Ammonia and note results. Apply 100 to 150 pounds per acre over the area of feeding roots just before blossom time. You will use it again. Place your order now.


Baltimore, Md. The Barrett Company Berkeley, Cal.
Atlanta, Ga. Medina, O.

Tell Advertisers Who Introduced You.
A Dollar Isn't Much

--but we need that dollar of yours in our business.

--the bills are now out.

--if you owe, kindly remit at once.

Keep your Subscription Paid--That Helps

The Countryman Along

"Three of a Kind"

Pathfinder, Defender and Orion Cherry King

The three best Duroc blood lines known, we have granddaughters of each.

Our Herd Boar is Boothby's Defender No. 96407.

Grandson of the Great Defender, the only Boar ever twice international champion.

We guarantee satisfaction. References: any and all customers, also Bank. We have never had a dis-satisfied customer.

Lakeside Piggery
LOUIS L. DRAKE, Owner
Delaware New Jersey

'18 B. S.—Homer B. Neville is taking graduate work in the University and is instructing in dairy husbandry.

'18 Ex. — L. V. Lodge is studying forestry at Yale University.

'19 B. S.—Roger C. Eastman is associated with his father in the operation of a three hundred acre dairy and general crop farm at Belleville.

'19 B. S.—F. L. Manning is farming at Otisville.

'19 B. S.—E. B. Sullivan has been elected to Sigma Delta Chi, the national journalistic fraternity.

'19—Donald F. Calkins was married to Miss Francis Oneita Hudson on January 1, 1920. Calkins is working for the Bennett Lumber Company in North Tonawanda. Their home is in Sanborn.

'19 B. S.—J. G. Wolf is teacher of agriculture at Spencerport.

'19 B. S.—T. C. Dietz is teacher of vocational agriculture at Geneva.

'19 B. S.—Charles J. Schlesinger is with the firm of Bendiner and Schlesinger, analytical and bacteriological chemists, Third Avenue and Tenth Street, New York.

'19 M. S.—W. J. Weaver is assistant state supervisor of vocational agriculture.

'19 B. S.—E. F. Kramer is assistant state supervisor of vocational agriculture in Iowa.

'19 B. S.—Margaret Steer, Helen Bool, and Hazel Dunn are new teachers of homemaking in the state of Pennsylvania.

'20 B. S.—F. H. Alfke has taken a position with the Beaver Board Company of Buffalo.

'20 B. S.—Gladys Bryne has gone to Edmeiston as teacher of homemaking.

'20 B. S.—W. R. Buell has gone to Orchard Park as teacher of vocational agriculture.

'20—Clayton T. Bridges is now assistant manager of the Wayne County Farm Bureau.

'20 Ex.—Stanley Earl is running a large dairy farm at Unadilla.
DO YOU KNOW HIM?

In 1909 as a farm boy, pitching hay, he had a vision of satisfaction and profit from an Agricultural Course at Cornell. Figuratively he "BET" on it by entering that Fall. Graduation in '12 and positions as Teacher of Agriculture, Maryland, County Agent, Ulster County, N. Y., and Newton County, Mo., brought satisfaction and reward far above his dreams of 1909.

Student public speaking offered a "chance" for development. He staked his time and effort and made the Eastman in 1911 and '12 and the Rochester and Woodford in '12. Development came in large measure.

He "bet the Ag. College could have a winning crew, made the gamble safe by putting in his own effort, and stroked them to victory in 1910 and '11.

In 1913 he "bet" Ulster County, obscure, inexperienced, could win the State Prize for Fruit. It did. Everything he has accomplished WORTH WHILE has come because he TOOK A CHANCE then GOT BEHIND HIS CHANCE AND PUSHED IT.

I KNOW FOR I AM HE

In 1919 the so called "oil game" assured large returns for at least ten years. I "bet" on it by studying it first handed in the Oil Fields of Texas from November to March 1st. Where I found a small oil company with honest officials, making a straight-forward effort to secure oil in a promising new field, I took a $200 or $300 chance.

I placed $1500 in careful investments in oil projects. Already their value in 3 months has been increased by development to over $10,000, and this is just the beginning of their increase.

Then an opportunity comes to my older brother, a practicing lawyer in Texas, and I to form an oil company with three others in a promising new field where twelve companies are drilling test wells to find oil. We take plenty of time to investigate thoroughly the three other men, the new field, and the proposed 1000 acres under lease in the midst of development, which were to form the holdings of the company.

Our Exacting Standards Were Satisfied.
Possibility of Failure was Negligible.
Every Assurance of Winning and Winning Big.
THE CHANCE WAS SO GOOD THAT HE TOOK IT.
The Long Ridge Oil Company was formed.

With an $8,000 interest in this company, I am "betting" that it is a safe place for my money, that it will be a success and that before another year rolls around it will yield the large rewards to me that other oil companies have bestowed on others.

HAVING TAKEN THIS CHANCE, as a trustee and vice-president of the company, I SHALL WORK TO MAKE THAT CHANCE GOOD.
In the Ag. boat no matter how much power I put on my oar, the rest of the crew went over the line to victory. We had to win together.
In our Company my efforts cannot bring individual advantage. All the Shareholders will win together.

Brief Sketch of the Long Ridge Oil Company.
No salary to officers until after production is secured, except a nominal salary to the secretary.
Sinking fund limited to 25 per cent of the profits from production.
Over 1000 acres of leases located in Bell County, Texas, near Nolanville.

Leases have been paid for with stock of the company.
12 oil wells drilling around our holdings.
7 definite locations made for more wells to be drilled soon.
Capitalization small $100,000. Your proportionate share of profits is greater in a small company.
Only about $15,000 in shares available for this locality.
SHARES ARE NOW AT PAR VALUE, $25 EACH.
Development on our holdings or around us, may warrant the trustees in advancing the price soon.

Mail your check now to get in on the ground floor.

W. H. HOOK, "Ag. '12, Until Apr. 15, Lock box 744, Kingston, N. Y.
After April 15, Killeen, Texas.
OUR COMBINED "TEXT BOOK FOR OIL INVESTORS," "OIL TERMS DEFINES AND EXPLAINED" and PROSPECTUS, sent gratis, on request.
Practical Knowledge

To know how to accomplish the desired results in the application of dairy husbandry is as valuable as to know what the desired results are.

Because thousands of users know the superiority of

![Wyandotte Cleaner and Cleanser]

and profit by this knowledge they are able to prevent the regrettable losses of milk quality that are certain to occur unless the milk containers, machinery and utensils are kept sanitary, wholesome and clean.

So valuable is the use of this cleaner and so little its cost that no one engaged in dairying or any of its branches can well afford to be without the assistance it brings.

**Order from your supply house, or write us.**

It cleans clean

Indian in circle

in every package

The J. B. Ford Co.

Sole Mnfrs.

Wyandotte, Mich.

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From Army Camp to Dairy Farm

(Continued from page 390)

sires him a market for his produce before he plants and helps him to market his products when ripe. The public market system (on a small scale, but in principle the same as Boston, New York, and European cities) has already been adopted. A market square is set apart where the farmers and their wives from far and near come with all sorts of farm produce.

The first fruits of the development of the plan are at the same time so immediate and so gigantic as to fill us with surprise and assured hope. In one year three hundred thousand acres have been redeemed, irrigated, and bought under cultivation. We are this year reaping a harvest which will tax the transport of the country to the limit. Camel, donkey, bullock, Arab horse, Persian and Arab coolies, motors, the new railways, native and government river craft, assist in bringing in the corn. The irrigation work already done along and between the Tigris and the Euphrates rivers, especially along the latter, is enormous.

No one enjoys seeing his own desert "blossom like the rose" as does the Arab himself. Thousands of them are working with us on the restoration. Never before in his life has the Arab been so well off; never has he enjoyed so hopeful an outlook. Thousands of green fields in the place of the hottest and driest desert sand is a miracle he has hardly dreamed possible. In a parched desert of oppression and poverty, he had never dreamed of better days to come. He only pondered over and over, regretfully and hopelessly, the true stories handed down by his fathers—stories of the days of paradise and plenty.

This is the first of two articles by Mr. Hatch on agriculture in Mesopotamia. Next month he will tell of the development there in other lines than dairying. The Editors.

**Book Reviews**

(Continued from page 401)

labor shortage. Therefore, the plan for settling returned sailors and soldiers on
We could build Case Tractors cheaper—but they would cost you more!

Built into every Case Kerosene Tractor is a high degree of immunity from frequent repairs, replacements and undue wear. It would cost less to use iron castings in many places instead of the drop-forged steel we do use; but it would cost you far more for replacement of broken and worn out parts.

We could save a lot by using cast-iron open gears instead of cut steel gears running in oil-tight housings; but later on, you’d pay many times the difference for extra parts, and lose more by delay.

Thus, all through, in design, material, workmanship and equipment, we build Case Kerosene Tractors the best that they can be built instead of building cheaply and “passing the buck” to you.

Case Kerosene Tractors are built in a standardized design of three sizes: 10-18, 15-27 and 22-40 h.p. respectively and are uniform in dependability, durability and simplicity of operation and adjustment.

Back of Case Kerosene Tractors is the great line of power farming machinery built by the J. I. Case Threshing Machine Co., including equipment for keeping a Case Kerosene Tractor profitably employed throughout the year.

Write for free catalog descriptive of Case Tractors, and listing our great line of tractor drawn or driven machinery.

J. I. CASE THRESHING MACHINE CO., Inc.
Dept. CK-4, Racine, Wis., U. S. A.

Making Superior Farm Machinery Since 1842

Tell Advertisers Who Introduced You
For Cheese Factories
and Creameries
HANSEN’S
Danish
Dairy Preparations
Pure, Concentrated, Ready to use.
For uniformly best results in making finest cheese, butter and buttermilk.
America’s standards backed by years of specialized experience, used in the country’s finest creameries and cheese factories.
Hansen’s Danish Rennet Extract.
Hansen’s Danish Cheese Color.
Hansen’s Danish Butter Color.
Bulk, 1 gal. or larger.
To properly ripen the cream for butter, and the milk for cheese and commercial buttermilk, use Hansen’s Lactic Ferment Culture.
For sale at all dairy supply stores.
Chr. Hansen’s Laboratory, Inc.
Little Falls, N. Y.
Interesting treatise “The Story of Cheese” by J. D. Frederiksen, free on request.

Why not raise every chick?
You can do it with

H-O STEAM-COOKED
CHICK FEED

It saves the lives of little chicks because they can digest it
Now sold in 5-lb. cartons
Write for free samples, prices and descriptive folder
THE H-O CO., Feed Dept. Buffalo, N.Y.
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Albany, N. Y. office, Hartford, Ct. office,
48 State Street, P. O. Drawer 1436
D. J. Hyland, Mgr., John J. Campbell, Mgr.

Say Where You Saw It When You Write

the land in order to enable them to earn their living is unnecessary.
The people who returned from service are quite as human as the rest of us
and will go wherever opportunity allures them. Morris-chair socialists and city
philanthropists would be of far more service to their country and would do a
real kindness to the returning soldier if they would take themselves out into the
country and assist in producing some of the common necessities of life instead of
extending propaganda and impractical theories, which serve only to fire the
minds of the unlearned in the real problems of economics and practical agriculture.
Mr. Morman’s book is a good presentation of the plans for using agriculture in
the reconstruction programs, most of which are fast going down into past history. It will be interesting reading for
those who like to review past proposals with little regard for the true theoretical
and practical. It will also fill an important place on the library shelf as a
record of legislative bubbles. But for the demobilized soldier or industrial war
worker who has been a farmer boy and who really desires to know some practical plan to go into farming as a business
proposition, this book is an empty bird’s nest. However, Mr. Morman is to be
commended for bringing together these documents as records of past legislative
history relating to war and agriculture.
I. W.

Diseases of Domesticated Birds
Gallagher, D. V. M. The Macmillan Com-
mpany, 66 Fifth Avenue, New York.
In the introduction to this book, Dr.
V. A. Moore, Director of the New York
State Veterinary College at Cornell Uni-
versity, remarks that “diseases are the
greatest hindrance to the development of
animal and poultry husbandry.” That
this is especially true of poultry hus-
bandry everyone must realize. Too many
flocks have been badly hit and often en-
tirely wiped out by some epidemic of dis-
ease which might have been preventable,
When asked: "How many cows can a milking machine take care of in an hour?" S. E. Van Slyke, a practical dairyman who has owned a Perfection Milker for four years said: "That all depends on the cows and the operators of the milker. We find that two men can milk as many cows per hour as five or six did by hand and do it much more easily. The Perfection sure is a time saver for the farmer."

Better Than Hand Milking on A. R. O. Test

"The first winter we used the machine we tested a number of two-year-old heifers on seven-day A. R. O. work. As they had never been milked before we did not use the milking machine on them until the test was completed. You can be sure we were both surprised and pleased to find that their milk flow increased when the Perfection was put on them.

"As they were milked four times a day for some time with the Perfection without any udder trouble, we are confident the machine will not hurt the cows as long as they are rightly used. We hope to do considerable A. R. O. work in the next year and will use the Perfection for all of it."

Names, Addresses and Catalog Sent Free

The many satisfied owners are the best recommendation for the Perfection. We will be glad to send you Mr. Van Slyke's address together with the names and addresses of many other dairymen to whom you can write. We will also send you FREE, "What the Dairyman Wants to Know," the book that answers every question about milking machines. Write us today.

Perfection Manufacturing Company
2142 E. Hennepin Avenue Minneapolis, Minn.

The Perfection is the Milker with the Downward Squeeze Like the Calf.
at least, if not curable. Hence the value of such a book as this to poultrymen and more especially to veterinarians, who never have given enough consideration to diseases of poultry. The authoritativeness is vouched for, since it has been prepared by men of long experience in the phenomena of disease.

Briefly, it contains two introductory chapters, one on anatomy and the other on general hygiene and the sanitation of the environment. Then follow several chapters relating to practically all diseases known to affect domesticated birds, including internal and external parasites. It takes up in more or less detail the symptoms, character, and treatment of each disease. There is also a splendid chapter on toxicology, indicating the results of many experiments and the best methods to employ in administering toxic solutions as a treatment for or as a preventative against disease. And finally, a practical chapter on surgery, including an exposition on exoponizing, gives detailed directions for treating the more common surgical diseases.

J. R. F.

The Call of the Soil
By the late Adrien Bertrand, of the Chasseurs Alpins. John Lane Company, New York.

Perhaps it would be nearly sufficient comment on The Call of the Soil to mention that it was awarded the prix Goncourt for 1916 by members of the Académie Goncourt, and that M. Clemenceau, until recently premier of France, predicted that the author would become one of the foremost figures in French literature. Unfortunately, this last is impossible, since M. Bertrand was killed later in the Great War. But a word of explanation may give some a better understanding of the book.

It might be dangerous at the outset to call this a war book, but we'll risk branding it as such. It is that in the sense that it contains descriptions and word-paintings of a few of the earlier
Placing the reinforcing steel of the door opening.

A Natco Silo
Costs a Little More—Lasts a LOT Longer

It does cost more to build with everlasting Natco Hollow Tile than with materials that soon decay, but it's far cheaper in the long run. A Natco Silo will not rot, burn, burst or blow down. It has no hoops to tighten, needs no painting and seldom any repairs. You can pass a Natco Silo to your children practically as good as new. Or the farm will bring more should you wish to sell.

Farmers who figure costs closely are using Natco Hollow Tile for silos, dairy barns, hog houses, dwellings, etc. Our book "Natco on the Farm" describes and pictures many such uses. Send for it today — no charge. Ask your building supply dealer to quote you on Natco Hollow Tile.

National Fire Proofing Company
1206 Fulton Building
Pittsburgh, Pa.

23 Factories assure a wide
and economical distribution

Foundation and bottom courses of a Natco Silo. Note the still air spaces and the steel reinforcing bands.

Tell Advertisers Who Introduced You
battles of the war. The chief value of the book, however, lies in the interesting discussions among the men at the front, which give one an insight into the Frenchman's psychology and philosophy of the war. Perhaps the fundamental philosophy of the French is expressed in the sentence, "We are only obeying an invisible will which is imposed upon us—a will which has its origin deep down in the soil in which we are rooted. We are its instrument."

Another novel bit of philosophy concerning the Frenchman's almost stoical belief in an ultimate victory is tersely expressed by an officer of the army when he says, "The reason is the will of the soil to remain French."

Evidently it is a book from which we Americans might learn some valuable lessons. However, being very human, we don't like to read books for that reason. The simple, direct style of the book with its human qualities will make its own appeal, without taking into consideration the power of its philosophizing in inducing the reader to do a little thinking for himself. J. R. F.

Editorials
(Continued from page 402)
State Experiment Station at Geneva. We are glad, too, that our own men will be given the opportunity to work there. In the affiliation between our college and the Geneva station we see another instance of this spirit of getting together for the ultimate good of all farming. No one institution can have all the facilities for the greatest good to the people it serves; the interchanging of scientific men and investigators between these two great laboratories for the study of farming will most certainly be of greater help to the farmers of the State than either could be alone.

BURRELL MILKERS

A complete
MILKING SYSTEM
of definitely correlated essential and distinctive features.

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Little Falls, N. Y.

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Double Your Cultivation
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With an Avery Motor Cultivator you can cultivate double or more acreage than one man can ordinarily handle with horses. It has a variety of speeds that can be controlled to suit the size of the growing crop. You can creep along slowly when the crop is small and tender, or you can go as fast as you like when the crop is large. Hot weather and flies can’t stop or bother it.

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Avery Motor Cultivators are built in two sizes—a six-cylinder two-row and four-cylinder one-row machine. The two-row is built in widths for crops planted in any width rows. Can also be furnished with various styles of front wheels so that all row crops, such as corn, listed corn, cotton, peas, beans, beets, potatoes, asparagus, tomatoes, etc., can be handled successfully. Can also be furnished with planting attachment for planting such row crops as corn, cotton, peas, beans, etc.

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Also includes tractors for every size farm. Six sizes, 8-16 to 40-80 H. P. with “Draft-Horse” Motors and “Direct-Drive” Transmissions. Two small tractors, Six-Cylinder Model “C” and 5-10 H. P. Model “B.” “Self-Lift” Moldboard and Disc Plows, Listers and Grain Drills, “Self-Adjusting” Tractor Disc Harrows. Also, roller bearing Threshers, Silo Fillers, etc.

Write for the Avery Catalog and interesting Tractor “Hitch Book.” Both books free.

AVERY COMPANY
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Branch Houses, Distributors and Service Stations
Covering Every State in the Union

AVERY
Motor Farming, Threshing
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Avery “Grain Saver”
“Yellow-Fellow” Thresher
The Correct Way to Air-Cure Hay

It isn’t sun-drying that puts quality into hay, but air-curing. And hay is air-cured best when side-raked and tedded into light, breeze-sifting windrows such as those that trail off in the wake of the International Combined Side-Delivery Rake and Tedder.

With this machine it is possible to follow closely behind the mower, as it has left hand delivery, and rake and ted the hay before the leaves begin to wilt. The teeth of the rake strike the heads of the hay first and rake clean because of the fact that they work against the leave crotches so that the stems cannot slip past the rake teeth. The hay is turned completely over and deposited in snug, airy windrows, through which the air circulates freely, curing evenly both stems and leaves with its magic touch.

Side-raking and tedding is good haying practice, and everywhere progressive farmers are recognizing this fact. Properly air-cured hay is quality hay—and there is no better implement for air-curing than the International Combined Side-Delivery Rake and Tedder. Sold by International dealers everywhere.

INTERNATIONAL HARVESTER COMPANY

CHICAGO OF AMERICA INC. USA
Dig Your Ditches With Hercules Dynamite

Through tangled southern swamp land, through gumbo of the middle west, or through muck or boulder-filled clay of the north, Hercules Dynamite easily digs clean cut ditches, leaving no spoil banks. "We have found this the most practical, economical and quickest method," wrote the people who blasted the ditch shown below.

Our Agricultural Service Men will aid you in shooting test sections. Ditches from three to fifteen feet wide, from two to six feet deep have been blasted at from twenty to forty cents a cubic yard, including labor costs.

"Progressive Cultivation," a sixty-eight page book, will give you complete information about the use of dynamite in blasting ditches, removing stumps or boulders, tree planting and subsoiling.

Send for this book today, and state your problems to our Agricultural Department.

Hercules Dynamite is sold by leading hardware and implement dealers.
The principle of doing all field operations with one man sitting where he can watch his work is correct, or farming has always been done backward and the operator would always have ridden or led his horses instead of driving them.

The Moline Universal Tractor places the power of nine big horses where the horses stood—is driven just like horses are driven, from the seat of the implement, and hitched up to the implements just as horses are hitched.

No duplication by horses  
Because

A large saving in labor  
Because

Great ease of operation  
Because

Can back and turn short  
Because

Better and faster work  
Because

Power used as horses are used  
Because

Utility Is Not Sacrificed for Price

If desired you can use the "drag behind" or horse drawn implements you now have with the Moline Universal Tractor, the same as with other types of tractors.

See your Moline Dealer or write our nearest branch for full information.

Moline Plow Company, Moline, Ill.

Branches at:

Atlanta  St. Louis  Stockton, Cal.  Denver  Minot, N. D.
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Dispersable Results

Does all field work, including cultivating, harvesting and belt work
One man completely operates both tractor and all implements
A single seat in the center of all controls of tractor and implement
Single unit of operation—tractor and implements form but one unit
Operator sees all his work—"Foresight is better than hind sight"
Tractor power in front of the work with operator behind the work
THE founders of Avalon Farms Company are practical hog-raisers. When Hog-Tone was perfected it was first tested on the herds at Avalon Farms, near Churubusco, Ind. The excellent results achieved resulted in the conviction that other hog-raisers would find it valuable.

From the very beginning we have offered Hog-Tone to every hog-raiser on 60 Days' Free Trial. Our plan of merchandising Hog-Tone is still the same.

We send you 60 days' supply of Hog-Tone for all your hogs. You pay nothing when you get it. At the end of the 60 days you pay if you are completely satisfied that Hog-Tone has accomplished all claimed for it. Otherwise the charge is canceled. You, alone, decide whether you get value received. We believe this is fair, sensible, businesslike. Read the coupon.

AVALON FARMS COMPANY
353 West Ohio Street
Chicago, Illinois

This Coupon Brings 60-Day Free Trial Treatment

W. O. Gandy, President
AVALON FARMS COMPANY
353 West Ohio Street, Chicago, Illinois

I have, hogs. Ship me immediately
State Number

Name
P. O.
R. R. No.
Shipping Point

enough Avalon Farms Hog-Tone to treat them for 60 days. I am to pay nothing now except transportation charges. I agree to report results to you at end of 60 days and pay for the Hog-Tone at that time if it has done all that you claim. If it does not, I will return the labels to you and you agree to cancel the charge.
Put Your Chicks on this Schedule

If you expect to have layers in December your chicks must be properly developed during the first six weeks. They must be supplied with the same balance of nutritive elements that they got from the egg for their first nourishment. Put your chicks on the following schedule and reap the profits that come from sturdy winter layers:

**FIRST WEEK**

Do not feed chicks at all for forty-eight hours. Keep them warm and dry. Nature has provided a feed for the first few days in the form of the remainder of the yolk of the egg which is drawn to the little chick's body just before it breaks the shell. After the second day feed Purina Chicken Chowder, dampened with warm water, sweet milk or fresh buttermilk until crumbly, five times a day—at 7:00, 9:30, 12:00, 2:30 and 5:30 o'clock. Do not shift from sweet to sour milk, or vice versa. Feed only as much as will be cleaned up. Remove and destroy damp Chowder after fifteen minutes.

**SECOND WEEK**

Replace the night meal with Purina Chick Feed, throwing it in a shallow litter of clean hay or straw. Continue four feedings a day of the damp Purina Chicken Chowder.

**THIRD TO FIFTH WEEK**

Discontinue the damp Purina Chicken Chowder, keeping dry Purina Chicken Chowder before the chicks in an open hopper all the time. Throw as much Purina Chick Feed in the litter as will be eaten up clean four times a day. Get the chicks out of doors, on the ground, if the weather is warm and dry. Avoid dewy grass and keep the feeders dry. Keep the chicks hungry.

**SIXTH TO TENTH WEEK**

Change gradually from Purina Chick Feed to Purina Scratch Feed, mixing a little more Scratch Feed with the Chick Feed each succeeding day. Feed the grain feed in a litter three or four times a day. Keep dry Purina Chicken Chowder before the chicks all the time.

After the first week supply plenty of fresh greens all the time. Keep the water basins absolutely clean and filled with fresh water. Supply plenty of fine grit (coarse sand may be used the first week or two instead). Some poultry raisers keep fine ground limestone or oyster shells in hoppers.

**Double Development or Money Back Guaranteed**

The money paid for Purina Chicken Chowder will be refunded if baby chicks when fed Purina Chicken Chowder with Purina Chick Feed, as directed, do not develop twice as fast during the first six weeks as when fed a grain ration.

RALSTON PURINA COMPANY
ST. LOUIS, MO.

Ft. Worth Nashville Buffalo

Sold in Checkerboard bags only
Does Cletrac Ability Measure Up?

THE Cletrac meets the Spring rush when time is limited, weather unsettled and help scarce and costly.

It replaces four to eight horses, works longer hours and more days, saves time and cuts costs.

A Cletrac speeds up plowing and fast plowing pulverizes the soil and cuts down work on the seed bed. It travels easily over soft and sticky ground, turns short, gets the corners and swings back to the furrow quickly. Puts more acres under cultivation and helps produce bigger crops.

Besides plowing it prepares the seed bed, harvests the crop and does hauling. In winter when horses are idle, eating expensive food and getting daily care, the Cletrac is busy clearing roads and sawing wood. When not working its keep costs nothing.

The quick popularity of the Cletrac has led to a bigger output with lower manufacturing costs. That's why we can offer an improved Cletrac—and at the same time lower the price from $1585 to $1395, f. o. b. Cleveland.

You are going to want a tractor some day. Get all the information on tractors now, while you have time to study the various makes carefully. "Selecting Your Tractor" is an interesting booklet that tells you all about the Cletrac—write for it today.

The Cleveland Tractor Co.

Largest Producers of Tank-Type Tractors in the World

19123 Euclid Avenue

Cleveland, Ohio
READ AND PROFIT BY THIS
ADVICE MR. DAIRYMAN

Mr. J. M. Hackney, owner and developer of several World’s Champion cows, three of which are shown on this page, has proven the importance of feeding a ration which will furnish cows adequate maintenance, without which no cow can produce maximum flow.

Mr. Hackney has found out by experience that too much protein is injurious—that to secure maximum milk production cows must be kept at top-notch physical condition—the ration must be a health builder, strength and vitality giver. That’s why Mr. Hackney likes his cows to have

SCHUMACHER FEED AND
BIG “Q” DAIRY RATION

Owners of cows holding world’s records, as well as owners of grade cows, alike endorse the merits of SCHUMACHER FEED, the great maintenance ration. 36 World’s Champion Cows have been helped to make their world’s records with SCHUMACHER as a part of their maintenance ration.

BIG “Q” DAIRY RATION is a Quality protein ration—when fed in conjunction with SCHUMACHER it supplies just the right amount of protein to stimulate milk production without “burning out” or tearing down the cows’ physical condition.

The ideal SCHUMACHER BIG “Q” combination will keep your cows “going strong” month after month, and it’s the cow that maintains maximum production over long milking periods that is the profit producer; feed dealers everywhere can supply you with these big result-producing feeds. Give them a trial. The best time to start is NOW.

The Quaker Oats Company
Address: Chicago, U. S. A.
Heb-sa’s Show at
Third Ag. Assembly
Brings Out Crowd

Minstrels Merrily Mimic Fads and Foibles of Campus

Show Staged in an Hour

Coeds, Angered by Attacks, Shower Cast With Cabbage

Robert’s Assembly sported an S. R. O. sign for the second time this year on the night of March 11. The first time was when two professors and two students debated the grave question, “Are Professors People?” This time, of course, was with the Heb-sa’s show. "Jacque Kwatt and his Burnt Cork Brunettes” in an old-time minstrel first-part, brought up to the minute by local hits and campus parodies, and presented by the Heb-sa senior society. The show was written on the Sunday before the assembly and put on with about an hour’s actual rehearsing. It was a fine specimen of what can be done in an hour’s preparation, and what can not be done. For one thing, nobody, particularly the performers, knew just what was coming next, nor greatly cared.

All of which helps, if the cast went adrift and fell quite frankly to comparing what they had written on their little cards, the audience laughed all the more. In putting over a gag, the cast didn’t get it over the first time, somebody would call for the previous question, and the gag would be retold until it was perfectly understood and properly applauded. Once or twice it looked as if it would be necessary to use the blackboard.

Jacque Kwatt Stars

John M. Watt, in the title role, at Middlebury, and Pat Huntington, right End Man, opened the dialogue with a profound crack about The Sun being as full of advertisements as is the moon of green cheese. K. Mayer described the mystic rites of entrance into an ag. faculty meeting, “Young” Kirkland dilated upon the traditional difficulties of Tambo with his better half; “Stan” Duffies philosophized on the human qualities of the faculty, the two end men staged the customary razor duel; and then a chicken thief suddenly became a deacon in it, put in a quartette a choir, and the audience a congregation. That was the sort of show it was. There was also singing, particularly by Jeff Knight and A. L. Tuttle, with banjos.

The staff columnist of this family journal is reproducing some of the gags of the show, with proper credit, in his “This ‘ere and That ‘air” on our editorial page. We trust the will make appropriate mention of the ladies who handed up vegetable bouquets after the song, “Coeds I Have Met, and Why They Saw Me First.”

It Was All Right

It was the irresponsibility of the performance, communicated to the audience from the moment the brunettes drifted in casually reading them to the grand final judgment of the Gentleman With the Mop, that put the thing over and made it such fun for everybody there; the county agents into a neighborly one; it made a good assembly.

Extension Men on Tour

Many Out of Town For Spring Regional Conferences

The greater part of the extension staff is out of town during these first ten days of April attending a series of conferences with farm bureau managers. New York is their first stop and then on to Albany, Utica, Rochester and finally to Elmira. A three-day schedule of speeches and round table sessions, the high-light of their tour, with the dates overlapping so that the entire staff of traveling advisors can get on to the next place as soon as they have finished their contribution at the last.

For example, Professor Adams opened the New York City conference on March 31 with a presentation of plans for wider publicity for agricultural news. The second and third day of the conference considered other things, while on April 1 he was at Albany, conducting his first-day program there. In this manner, the entire staff of agricultural specialists is swinging the circuit of the state, fitting their overlapping schedules, without waste of time.

The Idea of It All

The idea of the series of meetings is to bring current events into touch with the latest advances of specialists, and to bring them into such contact in the region of their work. Each department at Plant Path and Pomology, with field workers of their own, are particularly well represented at the conferences.

Seniors Suggest
Survey Course of Whole Curriculum

College Honor Societies Want Frosh to Know Field of Ag.

Resolutions Are Framed

Course Would Prepare Underclassmen to Specialize

Heloids and Heb-sa, senior honor societies of the College, are considering in joint session the various department heads might lay before freshmen the possibilities of specialization in agricultural science. They then referred their plan to Heb-sa, which society seconded it, with broadening amendments.

The Heb-sa amendments assert that the course should do more than establish the relations of department to college, but should tie each department up with the university, the state, and the Country Life Movement in general. It is believed that a course to help freshmen “find themselves”—much need in view of the increasing tendency to specialize in scientific schools—should establish ideas not only of what is to be undertaken by the individual in school, but what is to be undertaken by him, and by fellow workers in other fields, afterwards.

Prexy To Start It

Specifically, the Heb-sa amendments are said to include recommend that the first lecture of the course be given by the president of the university; the second by the dean of the college; and then by the proposed vice-deans of research, extension, and administration. After that would come the heads of departments, in logical order, each speaker establishing the relation of his specialty to the whole.

Whether the joint recommendation will urge that the course be required, or leave it elective, is still undecided.
DOM ECON

Ellen A. Reynolds, B. S., M. S., M. A., comes to the campus from the University of Kentucky. Miss Reynolds was made head of the department of science at the Morton High School, Lewisburg, Kentucky; then followed three years as assistant professor in the department of home economics at the University of Kentucky. Later, as assistant professor, she taught sanitation and hygiene at Kansas State College.

Miss Alma Binzel, assistant professor in child training at the University of Minnesota, is giving a very popular course of 12 lectures on "Child Training" at the School of Home Economics.

Miss Binzel B. S., M. A., started this course at the University of Minnesota as an experiment. The numerous requests that came from outsiders and other universities for more knowledge regarding the problems of older children, filled a very necessary part in the education of students as well as of professor’s wives.

At the recent Homemakers’ Conference held in connection with Farmers’ Week, Professor Van Rensselaer was asked to serve as secretary to a new organization formed by the presidents from the different women’s educational organizations which met here. This federation of presidents will be an informal organization and will meet at the next Homemakers’ Conference at Cornell.

The death of Gladys Smith, ’16, which occurred on February 13th, is considered a great loss to the department. Miss Smith graduated from the School of Home Economics in 1916, and taught at Farmington, Maine, for a year, afterwards joining the staff of Home Economics as instructor, where she has done excellent work in foods.

Miss Smith had just returned from Columbia University where she was taking graduate work in the Biological Department. She is a black, weighs about 185 pounds and stands sixteen and three quarter hands.

At a meeting of the Alumni Association during Farmers’ Week, Anna E. Hunn was elected vice-president of the association, and Claribel Nye was elected a member of the Executive Committee.

PERSONALS

K. Mayer, ’20, Forester, has been elected president of the Student Council, and, by the same token, president of the senior class of the university. Of the four men on the ticket, two were from Ag. College’s Senate.

Professor B. A. (dams) went to Silver Spring, Md., the second week of March and talked to the folks there about “Americanism.” A letter recently received by Professor Montgomery Robinson from T. W. Van of that place asserts that the talk “would be rather hard to improve upon” and that “everybody was very much pleased.”

T. T. Buckley, Jr., ’21, was elected vice-president of the Intercollegiate Forestry Association at the New Haven Conference last month.

Professor Fiske, of Dairy, took a party down to see the Cheddar Cheese factory at Lowell during vacation.

E. E. McClain resigned February 1 from the department of soil technology to take a position with the Importing Fertilizer Company of Baltimore, Md.

W. K. Elodgett has left the department of rural engineering to become agricultural director at Hampton, Va.

CORRESPONDENCE

To E. D. of the Cornell Countryman—for his edification and the Countryman’s publication if so be they see fit—

Have you ever noticed how the entrace of women into a trade dignifies it and gives it standing? Proof? Well, here it is. From the immortal there have been plumbers—plumbers of male persuasion—adding no special dignity to the trade. But, with the beginning of this year of 1920, plumbing has been dignified. We have “Lady Plumbers” now. Did you ever hear of a “Gentleman Plumber”?

Thanks are due our plumber chresteners. We appreciate the trust.

(This letter, darkly anonymous and sweetly scented, is, we judge, a response to remarks on “Hairpin Mechanics” printed last month. We are momentarily expecting to lose our E. D. by Hairpin Murder—E. D.)

ENGINEERS FOREGATHER

The rural engineering faculty held the first of a series of monthly suppers at the Senate last Saturday night. Profs, assistant profs, instructors, and assistants—seven in all—sat down to a pow-wow over plumbers as the occasion. The idea is simply a further development of the department’s endeavor to keep human, the learned.

Of the 293 bustees this year, 61 were from the College of Agriculture. Of the 61, 39 were freshmen, 18 sophomores, 6 juniors and 5 seniors. Two were special students.

OLIPHANT

The first crop of colts by Oliphant, the College’s imported Percheron stallion are just beginning to arrive. The old boy was imported from France by Truman Brothers and shown by them at the 1918 International, where he was fifth in the four year old class. He is a black, weighs about 1850 pounds and stands sixteen and three quarter hands.
Professor Krum, Departing, is Given Send-off

At a meeting in the poultry building March 8, W. G. Krum, who has just signed for three years as manager of Mr. A. Clayburgh's dairy and poultry plant at Madison, was presented with a silver platter "as an evidence of the friendship and esteem of the members of the staff of the Poultry Department." The foregoing is quoted from the inscription on the platter, the sentiment of which are framed to include Mrs. Krum.

Professor Krum came to Cornell in 1901 as superintendent of the poultry farm here, and left for a period of six years between 1905 and 1908, during which he managed large poultry projects for James Forsyth, Oswego, and for Major Cary, Watertown. He returned during the winter of 1906 to teach in the winter course and returned again in 1908 to stay until the present time, putting in three years at his old job of superintendent, and then nine years as extension specialist of the department.

He leaves many friends who hope that they will again see him at Cornell after he has still further added to a considerable fund of experience in practical activities.

Professor White, who is secretary of the American Rose Society, will attend the meeting of the society March 18-21. An exhibit of roses will be held at the Grand Central Palace in connection with the convention.

Professor W. F. Lusk and Cora E. Binzel attended the meeting of the National Society of Vocational Education held in Chicago, February 18-21.

Professor J. E. Butterworth, E. N. Ferris, and Professor G. A. Works attended the meeting of the Department of Superintendence of the National Educational Association held February 16-20 in Cleveland, Ohio.

Professor H. W. Riley will lecture before students of the new Columbia school of agriculture, New York City, speaking on rural engineering subjects on April 5, 10, 23 and 24.

During the spring recess Professor Guthrie took a class to New York on the usual inspection trip of butter-making methods.

Professor James G. Needham told Cornell students a few things about "Social Organics" at a meeting of the Intercollegiate Socialist Association held in Barnes Hall on March 19.

Professor F. F. Hemster spoke to the Poultry Club on recent experiments of their meeting of March 13. The club has a big dance on the way.

BREVITIES

One hundred and seventeen beekeepers, representing six thousand colonies and a production of four hundred thousand pounds of honey last year alone, attended the recent short course in commercial apiculture. New York is said to be the second state to really do something in agricultural extension work. California started it.

A recent issue of the Bankers Magazine, New York, contains an interesting article by Ivan Wright, of Rural Economy, tracing the development of cattle loans in the west. Livestock shown to make admirable security, one concern which has made twenty million dollars on such security having lost less than six hundred of it. Dairy loans are further said to contribute much to the advancement of Wisconsin dairying, with mutual satisfaction to banker and farmer.

H. E. Babcock, secretary of the farm bureau association, reports that his office received 100 per cent response to a questionnaire sent 1,500 farmers on daylight saving. The response show unanimous opposition to the measure.

Each farmer addressed was asked to estimate the value of man hours lost on his farm through the operation of the law. Massing these estimates, the office here reckons that by the ordinance New York State imposes an annual tax of twenty-five million dollars in labor lost on its farms.

Husk Knapp, '29, is taking charge of Doc Seulke’s meat market counter, with the usual large enrollment.

Mark J. Smith, assistant extension professor of animal husbandry has also resigned and is now living at his small farm near town. Professor Smith’s work was along the line of sheep production and much of increased interest in sheep manifested by many New York State farmers may be attributed to his influence.

John C. Maddy, extension instructor in animal husbandry has resigned his position and will start farming on his old farm near Watertown. Mr. Maddy has been in charge of the teen-testing associations of the State.

Neighbor "Billy" (Dr. W. L.) Williams spoke before the Round-Up on the evening of March 8, on the subject, "Obstacles to Reproduction." He discussed briefly some of the infectious diseases which so greatly hinder cattle breeding work. Particular emphasis was laid on the economic importance of the infectious diseases of the grade cattle in comparison with purebreds.

Neighbor (Prof. E. S.) Savage recently visited the "Hub of the Universe" to address three different organizations on topics relative to the feeding of dairy cattle. He discussed "The Value of Home Grown Feeds" before the Massachusetts Agricultural College Dairy Cattle Club, "The Proper Margin for Extra Butterfat" before the New England Milk Producers Association; "Lime in Ration of Dairy Cattle" before the Massachusetts Agricultural Society. Neighbor Savage spent but a short time in Boston on this last trip.

The position in our neighborhood recently left vacant by the resignation of Mr. Lukens is now held by one who has but lately left the ranks of the humble seekers after wisdom. Neighbor L. C. Norriss, a recent Cornell graduate, is Ex-neighbor Lukens’ successor.

Old Dame Rumor (see Coed) has it that our neighbors in the faculty in An. Hus. are gradually slipping away until they’ll be as scarce as the teeth in the upper jaw of the old family cow. Professor Seulke and Smith and Messers Lukens and Maddy have all left since February. As yet their places have not been filled, which means additional work for those now in their places.

While we have no vital statistics to report this month, such as marriages etc., the future promises much. Oh! Yes! We understand that two of the stenographers talking of "mahogany in the dining-room, porcelain in the kitchen," and so on. Oh! Yes! We understand only knew of all these plans!

Another neighbor of ours has returned after his return from France last summer. E. S. Ham ’15 is down on his father’s farm near Verbank.
Wherein We Hear
From Earl Lukens
Who Is Farming The Farm School at Farm School, Pa.

Thru the kindness of neighbor Savage we have been privileged to read a letter he received from our old friend and neighbor, Earl G. Lukens, who is now superintendent of farms at The National Farm School at Farm School, Pa. We are not exaggerating too much to call him a mighty busy man, judging from his letter. He resides two miles west to help in the chores. Mr. Lukens has the aid of thirty boys of the school, who evidently get much practical as well as book work. The school owns about twenty-five acres in apples and peaches, besides experimentation in crops and pastures. The cattle herd is comprised of seventy-five of which are purebreds. Mr. Lukens installs two milking cows, which will do no add a few gray hairs to his head and mean the loss of the precious sleep. However, we hope the two milking cows will facilitate his efforts. In addition to his work as superintendent of the farms, Mr. Lukens is giving two courses.

MAKING KIDS EAT RIGHT
Nutrition clinics now being conducted by senior students. Economics in two of the public schools of Ithaca are succeeding notably in his work. It is unmerited by a department survey made last month. Thirty per cent of the boys and girls in the first three primary grades were found to be undernourished.

Seniors from the School of Home Economics will be in the schools once a week and give lessons on cleanliness and hygiene. Proper food regular hours and attention to theorems and formulas are stressed. Equipment for hot dishes to supplement the noon lunch has been installed, and the menus served are copied by the children and taken home to show the right sort of food for growing boys and girls.

DOC SEULKE GOING GOOD
The Aberdeen-Angus Journal for this month shows our old friend Doc Seulke, who recently left his work here to go with them as eastern representative. Getting away with his new job like a profe.sional. In the first place, he has the leading article, "The Interesting Story of a Cow's Husband," and we have heard of the good work he is doing in raising the standard of the stock by instilling that the average farmer is to be commended, the editors have added:

INDIAN SCHOOLS OFFER JOBS
The United States Civil Service Commissioner writes us that Indian schools and agencies are in need of various classes of workers. Plans are being made to offer to the Indians as a group, after an investigation, a large number of positions.

FORESTERS TO AID ITHACA
Speaking thru Professor R. S. Hodges of the forestry department the College of Agriculture, has offered help to Ithaca in manning Six Mile Creek Gorge a public park. The faculty and older students are eager to lay out the plans and assist in the planting that would follow.

And Wherein We Meet an Emissary

Who Borrows a Match and the Plans of the Poultry Building

A little man with pleasant manners, not to mention a black derby hat and a foreign accent, dropped in. He introduced himself as a representative of the Brazilian government, and the reason he wanted the cuts of the poultry building was to get his government to build one like it near Rio de Janeiro. Evidently the club's interest in the wilds of Brazil at some future time you see a replica of the Cornell Poultry majestic among the banana trees, blame it all on us.

ROUND-UP STAGES SESSION
The Round-Up Club is still going strong, according to all reports. On Monday evening, March 1, they held their second meeting for the spring. There were only about thirty present, which is not bad for a night in March. The games were played with enthusiasm. The meeting was concluded with a dinner served in the old Barn, which is the modern entertainment center of the school. The food was excellent, and the company was enjoyable. It was a night well spent.

B. A.

THE COUNTRY WEEKLY
I am the Country Weekly. I am the friend of the family, the bringer of tidings from other friends. I speak in the home in the evening light of summer's vine-clad porch or the glow of winter's lamp. I dictate to the housewife's right hand, the small, the varied acts of the days and weeks that go to make up life.

I am for and of the home; I follow those who leave humble beginnings, whether they are to greatness or to the gutter, I take to them the thrill of old days, with wholesome messages of the common man; my words are fitted to his understanding. My congregation is larger than that of any church in my town; my readers are more than those in the school. Young and old alike find their satisfaction, recreation, entertainment, inspiration, solace, comfort. I am the chronicle of birth, and love, and deeds of the great facts of man's existence.

I bring together buyer and seller, to the benefit of both; I am the Luther Burbank of the world. I record the activities of the farms.

I am the Country Weekly. I am the Country Weekly.
THE CAMPUS COUNTRYMAN

Devoted to Neighborhood Happenings at the Top of "The Hill"

Published on the first of each month during the school year by THE CORNELL COUNTRYMAN, Inc. Contributions should be in the hands of the Editor by the fifteenth of the month previous to the date of issue. Say what you want and sign it, indicating whether you want your real name used, or another one.

RUSSELL LORD, Editor
No. 6 April 1920

Who's After Helois?

Heb-sa, has cast aside the traditional passive complacency of honor societies and done something actively undignified and blithely useful. It has given a minstrel show that brought out a big crowd to the Ag assembly and sent it home inclined to come to the next one. And now we hear that the Helois boys are going to do the same, only more so, for the next Assembly.

Nothing more hopeful for future university and friendliness in the College has happened in our time on the Hill. Now if the departmental clubs—social and scientific—can see that they have no more right to exist simply for themselves than the so-called "honor societies"; if they will now come forward with proffer of further stunts why, then the vexed question of having real Assemblies will take care of itself. Minstrel shows are not the only possibility by a long shot—concerts, farces, debates, amateur nights and no end of other things suggest themselves.

How about—Foresters and Round-upians and Poultrymen—don’t you owe the College a bang-up Assembly?

A Kick Comes In

After so happy an affair as the above Assembly it is regrettable that so many students chose to throw the cores of their free apples on the floor of Roberts Hall rather than to take them home in their pockets like ladies and gentlemen. A couple of profs who merit our particular respect have called attention to our action very nicely and asked us to say something about it, so there won’t be much work for us next time. It was, as they said, only a little thing, one that we can fix up easily by taking a little thought in the future.

Perhaps it was because we didn’t get any apples that we find less justice in a complaint that came about at the same time, namely that the "burnt cork brunnettes" left their dressing room decidedly daubed up. We defy any man to get that stuff from off his face without getting something else. Anyway, we’ll bet that the janitor wasn’t any longer cleaning up that room than we were cleaning up our ears.

Front Names for Coeds

As we were saying last month, we went to live and see the day when the author of the Student Directory here at Cornell will realize his guilty partnership in a common tendency to rob the world of one of its most picturesque features to wit, the front names of its female inhabitants. The present practice of printing ladies’ names preceded only by initials and accounting for their gentler sex merely by a “Mrs” stuck in between parentheses cannot long be defended.

Now, there are some such names—we think at the moment of Irene and Ada. At any rate, we’re so surprised with confident expectation of universal acclaim. However, when the same hand that strikes them down also lays to dust such meaningful and beautiful sounds as Mary or Ruth or Phyllis or Anita or some thousand more, we, for one, winch and roar. To tear such good old-fashioned apppellations to nothing more than stark capital letters seems at first sight after them—that is to go at the poetry of every-day life with a meat-axe!

We might take the case of a fair young maid named, let us say, Anna Belle Lee. Even without such poets as Poe to write the picture from the name? And it’s a pretty picture, isn’t it? All right: she comes from the south and that immediately becomes “Lee” (Miss) A. B. ’23 Ag.” Who could ever write a poem about her now?

Song of Muddy Water

Wintertime’s a grave time.
Old and cold alike,
Tune me up a lute!

Spring’s a young and gay time,
Hearken to my lay.
Even as I make my rhyme,
Winter runs away!

Sunshine all a-glitter
On the squally snow
What’s your hurry, Winter—
Where you got to go?

Pretty little snowflakes
Lace the tree, trickles to the gutter,
Greatly to my glee!

Muddy water, pouring
Valleyward, o’erhails
Greater waters roaring
O’er the waterfalls.

Old south wind’s blowing,
Blowing through my hair,
Winter, keep a-going—
Springtime’s in the air!

Spring’s the young and gay time,
Winter’s old and gray.
Even if I make my rhyme—
Winter runs away.

This 'Ere & That 'Air

The entire staff of this newspaper being pressed into service in writing the book for the Assembly Minstrel Show (for account of our feature writer on page one), the conductor of this column begs leave of our editor, the managing editor and the editor-in-chief of The Campus Countryman to wipe their thunder and thus fill his space this month.

Our proof-reader, by the way, wishes to assure all responsibility for the songs “I Never Knew What Love Was” ‘Til I Saw Her in Goggles, “If You Really Want to Make Her, Study Meteorology,” and “Tie Your Little Holstein to My Dairy Industree”—which songs The Sun kept saying that Professor Bristow Adams wrote. That is, neither to Professor Adams, nor to our proof-reader.

It was our Fashion Editor that composed the two-line sonnet, so full of feeling:

“A girl I hate is Sadie Knox,
She always smores in eight o’clocks’

And certainly it was not Professor Adams who perpetrated—

‘We’re fond of Henry Hiran Wing But we wouldn’t like to hear him sing.’

Our Paris correspondent callously lays claim to the following—If a horse grasps its manger, what would Professor Cavenagh?”

The fabricator of the sublime aphorism about certain pros not saying enough to keep you awake, and saying it too loud to let you sleep, modestly desires to remain anonymous.

And also the mother-in-law stories, not to mention the rest of the jokes in the show. Our ouija board editor reported that, at a late hour last night, Methuselah and Adam were fighting for the psychic wire to claim their share in the royalties as joint authors. Whatever our rights, we shall maintain a dignified silence and join in no controversy.

Professor Adams, however, insists that it be known that he wrote the Bustee Song, and that he wrote nothing else. It is true that the various faculty members now gunning for him will therefore desist.

The entire cast asks us to announce that they are keeping those bouquets the ladies give ’em until the ladies give a show. Making it clear that the nurses, at least, the cabarets are getting better and better.

“What a waste!” said a professor’s wife as Pat Huntington received his bunch of turnips from the co-ed donor.

Or maybe it was, “What a waist!”
Ithaca and Geneva Join Hands To Further Research Work

An affiliation has been effected between the College and the State Experiment Station at Geneva. Each institution will maintain its present organization and functions, but the new arrangement makes possible an exchange of work and workers.

Thru the affiliation, it will be possible for workers at the College to have access to the materials and laboratories at the Geneva Station, while investigators at the station can further research by means of the facilities at Ithaca. The increased opportunity for conferences thus afforded will remove the likelihood of unnecessary overlapping and at the same time there will be a better mutual understanding of the work in process at the two institutions. It will enable men at the Experiment Station who have heretofore been largely restricted to scientific investigations, to pass on the results of their investigations by means of occasional lectures to the more advanced students.

As a result of the affiliation, the following members of the station staff became members of the staff at the College: R. J. Anderson, chemist; R. S. Breed, bacteriologist; U. P. Hendrick, horticulturist; W. H. Jordan '78, director of the station; P. J. Parrott, entomologist; Fred C. Stewart, botanist; and L. L. VanSlyke, chemist and expert on fertilizers.

Those from the College who now become members of the station staff are: W. H. Chandler, pomology; R. A. Emerson, plant breeding; G. W. Herrick, economic entomologist; T. L. Lyon, soil technology; Donald Reddick, plant pathology; and W. A. Stocking, dairy industry.

The affiliation is said to be an instance of direct gain to both institutions without cost or loss to either.

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Thursday, Friday, Saturday
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M A Y
THE CAMPUS COUNTRYMAN, PAGE 487
FOR years after the discovery of X-rays it was evident that only intensive research could unfold their real possibilities.

Meanwhile, scientists of the General Electric Company developed the process of making wrought tungsten. This proved ideal as the target in X-ray tubes and its use for this purpose soon became universal.

Then further research resulted in the development of an X-ray tube of a radically new type—the Coolidge Tube—with both electrodes of wrought tungsten and containing the highest attainable vacuum. But the complication of high vacuum pumps made the new tube in large quantities impossible. The answer to this problem was the Langmuir Condensation Pump, utilizing mercury vapor in its operation and almost automatic.

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Feed Control Legislation

BY L. A. MAYNARD, Ph. D
Assistant Professor of Animal Husbandry, Cornell University

What information does the farmer require relative to a commercial feed in order that he may know definitely what he is getting and in order that he may thus use the feed intelligently in a ration? How can provisions for the statement of this information be incorporated in a law which will be fair to the manufacturer and dealer, which will be capable of enforcement and at a reasonable cost? These questions are not new but they are unanswered. The latter statement implies that our present laws are inadequate, and this is true. However, legislators, aided by feed control officials, are making a special effort to answer the above questions at the present time, and several bills to amend present laws have been introduced, both in Congress and in the State Legislature. A consideration of our present laws, their defects and possible remedies, is therefore, timely. In the first place it is worth while briefly to review the system of feed control.

Because it is impossible to tell by appearance whether a commercial feed is of standard quality and as represented, certain laws regulating its sale have been enacted. Such laws are not only a protection to the consumer, but to the honest manufacturer as well. The sale of feeds in interstate commerce is controlled by a federal law. In addition, nearly every state has some sort of a law governing the sale of feeds within its borders. These various laws are by no means uniform. All, however, require certain statements as to the chemical analysis of the feed and most of them require some sort of a statement as to the ingredients. Of course the different laws contain provisions for their enforcement which involve chemical analysis of the feeds offered for sale and the publication and prosecution of violations. The present New York State law provides that every feed offered for sale shall be licensed under a brand name and bear a tag showing the following information: the chemical analysis expressed in terms of the minimum per centum of crude protein and fat, as the maximum per centum of crude fiber; the maximum per centum of phosphoric acid in the case of meat products; if a compounded feed, the name of each ingredient; if artificially colored, the name of the material used. The law further provides that the Commissioner of Agriculture shall at least once a year have analyzed at least one sample of each different feedingstuff offered for sale in the State and that the results of these
analyses shall be published. The law provides a penalty of $25.00 for its violation.

It is evident that the provisions of our feedingstuff laws, tho they do give the farmer a considerable amount of information, do not give him near as much information about a compounded feed as he has about a ration which he mixes himself. For example, he has no basis for computing digestibility. He knows the protein content, but he realizes that protein varies widely in digestibility according to its source. Here a list of the ingredients does not help, because, not only must he know what ingredients are present, but also he must know in what quantities they occur, if he is to compute digestibility. Thus one provision favored for incorporation in a revised feed control law is that the percentage of each ingredient shall be stated. Such a provision was included in the Haugin bill introduced into Congress last year. There is great opposition to such a provision on the part of the manufacturers, who assert that they would thus be compelled to divulge secret formulas which are responsible for the success of their business. Those favoring such a provision question whether it is so much the secret formula which the manufacturer hesitates to divulge as it is the percentage of low grade materials which go into his feed.

There is, however, a real objection to requiring a statement of the percentage of each ingredient, which is recognized by manufacturers and feed control officials alike. It is believed that such a provision would be difficult or impossible of enforcement, and that an unenforced law would be an invitation to dishonesty and work a hardship against the honest manufacturer. Such a statement of ingredients could not be checked up by chemical analysis; neither could it be done by combined chemical and microscopic methods without a very laborious procedure, and even then the methods would fall down in the case of certain feeds. As an alternative, a system of factory inspection has been proposed to check up whether the manufacturer was living up to the statements made regarding his feed. Such a procedure has greater promise of success, but the practicability of it is questioned in the minds of many. Certainly it must be recognized that the enforcement of a law requiring a statement of the percentage of each ingredient will entail considerable additional expense because of the labor and personnel involved in checking up the manufacturer’s statement. Doubtless this extra expense would be added to the cost of feed, either directly or indirectly.

If it is not feasible to furnish the farmer with information as to the amount of each ingredient which goes into a mixed feed, an alternative suggestion is that information be given as to the amount and nature of any low grade materials present. A low grade material may be considered as one which is of poor feeding value due to its being of low digestibility or unpalatable. Its poor value is not necessarily shown by its analysis. Certain states already have laws with special provisions dealing with low grade materials. Some states require a percentage statement of the content of specified low grade materials, such as oat hulls and cottonseed hulls. Other states prohibit altogether certain low grade ingredients. Though it may be granted that no material which has food value should be excluded, nevertheless it is realized that it is poor economy to include an undue proportion of low grade materials in any ration. Thus the farmer is entitled to fuller information here than is shown by the analysis and statement of ingredients. This point is becoming increasingly important because the development in milling and in any process producing feeds as by-products is to turn more and more of the grain or plant into human food or products for industrial uses with a resulting lowering of the quality of the by-products going into feeds.

A feed control bill which is receiving the most consideration in Congress at the present time requires a percentage statement of each ingredient of low

(Continued on page 468)
The New Era in Mesopotamia
Diversified Farming in the Land of the Arab
BY DUANE SPENCER HATCH, ’15
Formerly with the Mesopotamian Expeditionary Force

This is the second and final article by Mr. Hatch on the agriculture of Mesopotamia. The first, “From Army Camp to Dairy Farm,” appeared in the April number.

AND now the army has come,—has come to help the Arab push back and reclaim the desert. I have spoken of the dairy farm a bit in detail, only as an illustration of how, in the different departments of agriculture, the change is coming. The new copious Government Grass Farms are already flourishing. After one rides his horse for miles across the trackless, parched plain, his eye is gladdened, refreshed, and

rested as he begins to approach the pleasant greenness of one of these farms. The Sergeant in charge of the first post on the farm directs, “Ride seven miles further in this direction, Sir, and you’ll come to where they are operating the new hay-pressing plant and hauling the pressed hay to the river; and then six miles further, a little to the south, is where all the mowing machines are at work cutting hay just now.” It does a fellow good to see the modern farm machinery at work on a five thousand acre farm; with it the impossible becomes possible; and such a paradise for the heavy tractor—never a stone and never a rise nor a knoll!

A little to the side you see the Arab farmer plowing—plowing with a plow that has to go over the ground three times at least. He walks fifty-one miles in plowing an acre, while a plowman with one of our walking plows only walks eight miles; and even then the Arab has not plowed the ground; he has only scratched in three directions the hard surface of soil naturally most exclusive to water. When light rains come, the moisture cannot sink in; it quickly evaporates and is gone. Yet even with these poor methods the extreme productiveness of the soil causes it to yield surprisingly. I shall not forget the surprised expression of a former market gardener who had grown vegetables for the city of Minneapolis. We found watermelons growing and flourishing without any cultivation at all in

English stallions are crossed with Arab mares

The Arab plowman walks fifty-one miles in plowing an acre
the hard ground along the bank of the Tigris. He said, "Well, if watermelons will grow in a place like that, I'll be hanged!" We see threshing floors covering two or three acres. Contrary to the old Jewish law they do "muzzle the ox that treadeth out the corn". A miscellaneous collection of asses, cattle, and horses tied together in teams of three or four are driven by men, women, and children round and round over the sheaves of grain. Methods akin to those of our Great West will 'ere long change the scenes.

The absence of disease or destructive insect is most happily noticeable. Our home cotton-growers would be interested in the absolutely clean, long-fibered cotton grown from seeds taken from Arab gardens.

The enormous flocks of wild fowl, ducks, geese, partridges, and grouse speak of the natural suitableness of the country for poultry. It is not uncommon for a gunner to bag from twenty to thirty grouse with a single shot from a shot-gun. We shall not ruthlessly exterminate this wild game wealth. Spacious sanctuaries for the birds have already been set apart; we have our restrictions as to the number of birds that can be taken per gun; we have our closed seasons.

The small poultry farmer was everywhere when the troops came; that is, every Arab woman had a hen or two; every few had over a dozen. As the troops moved up the line, women and girls ran out with eggs to bargain. The prettier the girl—and some of them are pretty—the surer the sale of the eggs and the better the price, naturally. We have often remarked that in spite of the super-tropical heat, the eggs we bought were comparatively fresh. This was, of course, because of the extreme poverty of the country people. As soon as an egg was laid, its owner's need prompted him to "grab it and run", to start with it immediately to look for a buyer, the "direct from producer to consumer" method. He or she thinks nothing of traveling miles to sell a half-dozen eggs.

Once, during the Wazirestan campaign of 1917 along the frontier of Afghanistan, where conditions were in this particular similar, an old Mahsud-Wazir had come from a long way back in the hills to bring six eggs. Noticing that his eggs had a striking resemblance to one another, I asked him how many hens he kept. He answered in his own language, "One hens." Dear old girl! She was probably his sole support.

Now at a poultry farm such as the one at Hillah, the Government has thousands of laying hens, and supplements its output by buying as many more eggs from the natives, who bring them in. These native producers are encouraged to increase their flocks and to take better care of them.

As for fruit prospects, allow me to say that we stand amazed at the variety of fruit that seems adapted. Just a narrow strip of palms along the river feeds the world with dates. We are able to make Christmas far away from home (the fifth such for many men) a bit brighter by adding to other Christmas gifts thousands of oranges grown near Baghdad, oranges which in flavor and quality more closely resemble the real old Florida and California oranges than any I have found from any other country. In Numbers, 13:28, we read, "And they came unto the brook of Eschol and cut down from thence a branch with one clusters of grapes, and they bare it between two upon a staff." We find grapes here now growing in such large clusters that the above method would be a safe and not entirely foolish way of carrying them.

Our optimism about the future of this country has rock foundation. There is no more positive fact than the latent and potential wealth of this land. The land, which the sons of England and India have at tremendous cost of life and health finally wrested from the blight and oppression of the Turk, is certain and speedily to once again regain its "ancient power", to take its place and stand among the foremost granaries of the world.
WITH the coming of warm weather we are again nearing the close of another testing season, and it is with this in view that I am going to try and summarize briefly the work that Cornell has done in that department of the work this past year. As all who are actively interested in animal husbandry know, there are two quite famous animals in our herd at present,—Model King Segis Konigen and Glista Ernestine. I mention them particularly because all the noteworthy records that have been made in our herd this year have been made by daughters of one or the other or of both of these animals.

First, let us take the daughters of "King" and see what they have accomplished since April 1, 1919. In order to see more clearly the work of these animals I am going to start with the youngest and group them as to age, leaving the oldest until last.

The table on the next page does not contain the entire number of "King's" daughters, but it is simply a summary of the records added to his list during the past year. When we consider that the work was performed entirely by student labor, it again only emphasizes the remarkable prepotency of "King" as a sire. Summarizing the table, it can be seen that "King" has one thirty-pound daughter and one twenty-eight in a week at the age of four years. He also has eleven daughters with records better than twenty pounds at an average age of three years. His twenty-one tested daughters for this past year show an average production of more than twenty pounds of butter per week at an average age of less than three years.
His twenty-one tested daughters for this past year show an average production of more than twenty pounds of butter per week at an average age of less than three years.

As for the Ernestine family, a brief history of the cow herself is necessary.

**DAUGHTERS OF MODEL KING SEGIS KONIGEN WHO HAVE MADE RECORDS DURING THE PAST YEAR**

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Length of Record</th>
<th>Lbs. Milk</th>
<th>Lbs. Butter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glista Fortuna</td>
<td>1 yr. 11 mos.</td>
<td>7 days</td>
<td>312.1</td>
<td>15.57</td>
</tr>
<tr>
<td>Glista Divina</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>442.3</td>
<td>21.21</td>
</tr>
<tr>
<td>Glista Euphony</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>450.3</td>
<td>20.74</td>
</tr>
<tr>
<td>Glista Darling</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>385.8</td>
<td>20.04</td>
</tr>
<tr>
<td>Bertha Segis Konigen</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>419.1</td>
<td>19.89</td>
</tr>
<tr>
<td>Queen Model Segis Johanna</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>417.6</td>
<td>19.36</td>
</tr>
<tr>
<td>Glista Empress</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>391.1</td>
<td>19.41</td>
</tr>
<tr>
<td>Glista Esther</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>382.8</td>
<td>18.00</td>
</tr>
<tr>
<td>Glista Dicentra</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>297.0</td>
<td>16.77</td>
</tr>
<tr>
<td>Glista Eucalyptus</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>393.3</td>
<td>16.19</td>
</tr>
<tr>
<td>Glista Gertrude</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>383.9</td>
<td>15.88</td>
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<tr>
<td>Glista Eriegenia</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>326.1</td>
<td>14.22</td>
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<tr>
<td>Glista Girola</td>
<td>2 yrs.</td>
<td>7 days</td>
<td>306.8</td>
<td>13.16</td>
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<tr>
<td>Glista Fluella</td>
<td>3 yrs.</td>
<td>7 days</td>
<td>559.6</td>
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<tr>
<td>Glista Georgie</td>
<td>3 yrs.</td>
<td>7 days</td>
<td>483.5</td>
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<tr>
<td>Glista Gnome</td>
<td>3 yrs.</td>
<td>7 days</td>
<td>464.4</td>
<td>22.26</td>
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<tr>
<td>Glista Florence</td>
<td>3 yrs.</td>
<td>7 days</td>
<td>458.0</td>
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<tr>
<td>Glista Harmonia</td>
<td>3 yrs.</td>
<td>7 days</td>
<td>473.6</td>
<td>21.50</td>
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<tr>
<td>Glista Grace</td>
<td>3 yrs.</td>
<td>7 days</td>
<td>492.0</td>
<td>21.04</td>
</tr>
<tr>
<td>Glista Gentian</td>
<td>4 yrs.</td>
<td>7 days</td>
<td>609.5</td>
<td>28.59</td>
</tr>
<tr>
<td>Glista Gentian</td>
<td>4 yrs.</td>
<td>30 days</td>
<td>2362.5</td>
<td>111.58</td>
</tr>
<tr>
<td>Glista Eulalia</td>
<td>4 yrs.</td>
<td>7 days</td>
<td>648.8</td>
<td>30.21</td>
</tr>
<tr>
<td>Glista Eulalia</td>
<td>4 yrs.</td>
<td>30 days</td>
<td>2705.1</td>
<td>123.2</td>
</tr>
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</table>

The full realization of her phenomenal productive and reproductive ability. Ernestine was born November 11, 1908, and since that time she has given birth to eight calves. Five of these have been heifers, of which four are still in our herd. Unfortunately, her second and third calves were bulls and were sold for very low figures before the worth of Ernestine became known. Her last calf was also a bull, at present heading the herd at Alfred University, but he will return here next January to be used as our own herd sire. Of Ernestine's fifth heifer, Glista Fidelia, little is known except that she was sold in our Farmers' Week sale after having made a record of fourteen pounds of butter in a week as a yearling, and was recently sold in the A. S. Neale sale at Manhattan, Kansas, for more than thirteen hundred dollars. Of the four others when they develop. Her next famous daughter is Glista Floralia, with a record of twenty-nine pounds of butter in a week from over six hundred pounds of milk at the age of four years. Glista Fluella follows closely upon her heels with a twenty-seven-pound record as a junior three year old. Considering age and condition, she should be the best producer of the group. Last but not least is little Glista Fortuna, who, before she had reached the age of two years, had completed a record of fifteen pounds of butter from three hundred and twelve pounds of milk.

Perhaps some estimate of the value of these animals can be obtained by comparing their records with the fourteen-pound record of Glista Fidelia, who sold for more than thirteen hundred dollars. And again, some notion of the

(Continued on page 472)
The Practical Value of the Soil Survey

BY H. O. BUCKMAN

Professor of Soil Technology, Cornell University

ONE of the most important phases of soil study instituted in recent years is the soil survey work, which in part at least is an inventory of our soil conditions. It is impossible to give a concrete definition as to what a soil survey is or should be. It is better to offer an explanation. In general, a survey is an attempt to classify the soils of an area into distinct groups or types. The soils of each type should have the same general chemical, physical, and what is of particular importance, the same fertility, at least originally or potentially. It cannot be said, however, that this classification has already actually developed to this extent.

In order that such work may be permanent, the soils so classified are located on maps as the work proceeds, and at its conclusions the maps are assembled and given a proper legend. In order that such a map may be of the highest value, it is accompanied by a report which should not only describe in detail each soil recognized and mapped, but should also discuss the general agricultural conditions in so far as they are within the experience of the surveyor.

Soil conditions are so complicated that a survey cannot proceed in a haphazard manner. A rather detailed classification has, as a consequence, arisen as the work has developed under the direction of the Federal Government. This classification recognizes that certain factors determine the character and productivity of any soil. These factors include climate, mode of formation, kind of material, and certain inherent chemical properties, such as color, organic content, and lime needs which arise through the mode of formation. Soils which are the same in all of these factors are grouped together as a soil series. The series is susceptible to subdivision according to the texture or size of particle. Each series may thus contain clays, clay loams, loams, or sandy loams, according to the particular conditions which have given rise to the group.

For convenience, the various series are given names, as the Ontario for all soils of New York State formed from the calcareous till and drumlin materials in the central part of the state. When a definite soil is to be specified, it is designated by its series name plus its textural characteristic, thus: Ontario sandy loam, Volusia silt loam, and the like. Each soil so designated is considered a type, which within certain limits should have properties, as far as crop production is concerned, of approximately the same order.

The naming of the series, using suitable local names in most cases, is a very fortunate feature of the classification scheme, since a simple means is afforded of designating soil groups of known fertility. In southern New York, for instance, every progressive farmer knows the Volusia group of soils and what it stands for in fertility and management. The series name connected with the textural or class name, as Volusia silt loam, leaves no doubt as to the specific soil referred to. By the series plus the class name, we may express in two or three words characteristics and distinctions.

The accuracy of the field work in the soil survey is always a pertinent ques-
tion. No matter what the training and experience of the field man may be, there is a limit to the accuracy. Soil types grade into each other, often very gradually, and if the productivity grades in the same manner, a sharply defined boundary is difficult to establish.

The most frequent criticism, however, involves the detail of the map. The field work is done on a base map of the scale of one inch to the mile. On such a map, it is difficult to show areas less than ten acres in extent. When a farmer looks at the map of a county, he may find his own farm mapped as a simple type, as, for instance, clay loam. Small areas of sandy loam varying from one to five acres in extent may occur. The surveyor, of course, was aware of such a condition but was unable to show it on a map. He nevertheless is branded as a careless and unsystematic field man by those who do not take the trouble to look more closely into the question. The survey work naturally suffers from such misunderstandings. Such limitations are not due entirely to size of map. Time and expense also must be considered. After a certain point is reached, increased detail adds but little.

The ordinary report as put out by the Bureau of Soils at Washington generally discusses the following points in a more or less logical order: (1) description of of the area as to location, boundaries, topography, drainage and transportation facilities; (2) climate; (3) agricultural development; (4) present agricultural conditions; (5) general description of the soils especially from the series standpoint; (6) detailed description of each type; and (7) conclusions with such suggestions for improvement and management as may have resulted from the field man's observations.

Such a report accompanied by the map is admittedly of much interest. Undoubtedly, it is of value also. Its possible practical use lies in two general directions: (1) to the extension worker, farm bureau manager and men of similar training on the one hand, and (2) to the farmer on the other. The first group usually has had a college training and combines considerable technical knowledge with field experience. These men are more likely to understand the scheme of classification and are able to interpret survey data into everyday farming terms. The practical information extracted, however, is never great.

Nevertheless, such reports enable the extension man, crop demonstrator, farm management investigator, agricultural high school teacher, and farm bureau manager to very quickly obtain a general idea of the conditions within the county. To the college teacher and investigator, the report is of value also, especially as to the classification data it has to offer. Unfortunately, means of dealing with unfavorable soil conditions are very seldom mentioned, due to the lack of correlation of soil types with productivity and crop adaptation. Such problems—the really vital points at issue—are left to farming interests more closely in touch with the situation.

For the average farmer, the survey report and map seem to be of little value. The classification is generally not understood and the practical points are usually lost in technicalities. The impossibility of extreme accuracy in boundary location and the limitations as to detail are not realized. Beyond the pleasure of locating his farm on the map and reading the description of his soil, the average farmer finds little of interest in the soil survey report.

If the foregoing statements are correct, the soil survey report seems to be of use only to the technical or practical man who can extract from it the small amount of information that is applicable to everyday farming problems. What then is the importance of survey work?

Before an investigation of a local fertility question can be carried out, an inventory of general conditions must be made as a basis for fundamental work. The soil survey furnishes such an inventory and lays such a basis. By its means the soils of the area are scientifically classified and their characteristics established. The various types are located in the field and this location permanently recorded on a map. While this first
work is always more or less methodical and often extremely impractical, it clears the way for certain follow-up activities which deal with the pressing fertility problems in a practical manner. Many lines of follow-up work are possible, some of these being but indirectly related to soil improvement. Field crop surveys, potato surveys, orchard surveys, farm management investigations, and even routine crop reports are aided by a soil survey. It is, however, in regard to strictly soil fertility work that the survey is of greatest service.

When a county has been surveyed in the ordinary way, either by the Federal Government or by the State, the preliminary work is complete. The next step is in the nature of a follow-up. In this regard, general procedure plans have been rather well tested by several states, such as Iowa, Illinois, and Wisconsin. Generally, farms or plats are established in the area upon such types as are of especial importance. Complete fertility tests are made with the idea of determining the deficiencies of the soil and its response to various treatments. These tests are continued for a number of years. When adjoining areas have the same types, one set of experiments may serve for all, thus reducing the costs involved. These results may be supplemented by pot tests in the greenhouse and by chemical and mineralogical analyses. More complete data as to general farming conditions are gathered by the state agents, who are in the county every summer during the period over which the field tests extend.

The bulletin which can now be issued is for the farmer particularly. It is an end in itself and is issued to aid the farmer in solving his soil problem. To a perspective resident of the county, it is full of the information which will help him select his farm. It allows the county agent to issue suggestions which are based upon authentic trials. While an ordinary soil survey is no doubt of use, its real value remains unexploited unless it is made a basis for obtaining, as outlined above, practical fertility data of direct and immediate aid to farming interests.
EXPERIENCE: A Series of Personal Stories by the Best People in the State of New York—Men and Women Designated by their Farm Bureau Agents as Leaders in their Home Communities.

XIII. The Farm Experiment Station

Common Farm Practises Once Considered Experiments

BY LEWIS F. ALLEN

Macedon, N. Y.

A CO-OPERATIVE farm experiment organization of a dozen careful men carrying out certain lines of experiments with fertilizers, field seeds and cultural methods would establish truths indisputable in the community where such organization existed.

While the College of Agriculture and experiment stations must be the leaders in experimental work, yet the co-operation of the farmer is necessary to demonstrate their practical value. The teacher develops the idea and the pupil puts it into practice.

So many of our farm experiments, their practicability having been demonstrated, have become a part of regular farm practice that we no longer think of them as experiments.

Several years ago a Cornell bulletin gave me the idea that our gravelly loam soils would not respond to applications of potash. As an experiment I began sowing alternate sacks of 2-8-4, 10-8, and 14 per cent acid phosphate on oats. Quite a difference in price of material, but no appreciable difference in crop yield.

The next question; would it work on other fields? The same plan was followed with like result until most of our fields were tested out. For a number of years no fertilizer has been used with wheat or oats except 14 or 16 per cent acid phosphate. Crop yields have not decreased and I am firmly convinced that on our farm the available phosphorus is the limiting factor in crop production.

The corn tester, altho started in a small and much ridiculed way, has so demonstrated its value that it has come to stay. My first tester—a cigar-box affair—weeded out a beautiful ear of corn. At a Grange meeting where the ears of corn and test box were exhibited, a good brother ventured the remark that “A man would be a fool to throw away an ear of corn like that”.

It did seem so, yet the test box showed negative results. We gave that beautiful ear of corn of eight hundred kernels the third degree by testing again, with negative result. As a final check we planted a row in the garden; not a kernel grew. Such proof of the inability to determine the vitality of corn by its appearance led to the adoption of a home-made tester of the Geneva model, testing sixty ears at a time. This has tested every ear of field corn for some time with excellent results. The corn tester also demonstrated the fact that tip and butt kernels were not so good. Whole rows of them have been planted as further proof, and tip and butt kernels are always discarded from the seed box, as a result.

The potato sprayer has so proven its value that no discussion is necessary. I will, however, cite one interesting incident. My first sprayer, a pioneer in the community, was used on alternate six rows thru a whole field on a farm where a skeptical tenant would not consent to spray, yet was willing to divide the field in this way. Blight was very prevalent and at the third application of Bordeaux Mixture men were coming miles to see the difference between sprayed and unsprayed rows. At harvest time it was

(Continued on page 474)
The Federal Grades for Grain

BY O. W. DYNES
Instructor of Farm Crops, Cornell University

The United States Grain Standards Act, approved August 11, 1916, authorized the Secretary of Agriculture to investigate various phases of grain handling and marketing with a view to fixing official standards for grain. This act has now become operative on the following classes of grain: shelled corn, December 1, 1916; winter wheat, July 1, 1917; spring wheat, August 1, 1917; and oats, June 16, 1919.

The passage of this act in its final form, largely thru the efforts of the experts of the U. S. Department of Agriculture, brought together the best shot on various phases of the grain trade of three groups of interests—the producer, the middleman, and the miller. In the early days of pioneer farming in the United States the close proximity of the buyer and seller of grain made the factor of condition and quality of relatively small value, and the development of distinct classes and grades was necessarily slow. With the advent of rapid transportation, the growing of crops a long distance from market and the development of terminal markets in large cities, the consumer and producer were not able to get together. Grain consigned to the trade was chiefly handled thru commission firms and it was quite natural that farmers, owing to lack of understanding regarding the method of assigning grades, should have become dissatisfied with a system that often resulted in unfair discrimination to the grower. The present grain grading regulations are made oper-

Samples of grain are taken from the cars for grading.
ative thru a non-interested party, the Secretary of Agriculture, and are enforced by the United States Bureau of Markets.

Previous to the passage of the Act the attention of Congress had been rather forcibly called to the inadequate system of handling, shipping, and grading grain thru two sources. American consuls in Europe for years had pointed out the unsatisfactory status of our foreign commerce with relation to shipments of export corn. Much of it arrived in a heated condition due to excess moisture. Members of Congress from the rural districts of our grain states advocated a uniform system of grading due to the widespread dissatisfaction among the farmers caused by the methods then in vogue. The fundamental cause back of the formation of the Non-Partisan League in North Dakota was the supposedly unfair discrimination against the farmer's wheat at the terminal markets. Much preliminary investigational work by the U. S. Department of Agriculture made in anticipation of the final passage of a uniform grain grading law proved to be of distinct value when the grades were finally established.

The Federal grades which now apply to corn, wheat, and oats are distinctly superior in many ways to the haphazard system of grading formerly used. The primary weakness of the old system lay in the fact that each terminal market had its own grades. No uniformity existed in the operation of these grades and they were likely to change from year to year varying with the quality of the crop grown. Grading factors were vague and in the case of wheat were not always correlated with the milling quality of the grain. The present standards provide:

1st—Definite classes and sub-classes.
2nd—Definite factors in grading.
3rd—Definite percentages permitted in the various grades.
4th—Standard methods for obtaining samples, making test weight, determining moisture content and percentages of the various factors in grading.

A general misconception prevails regarding the U. S. Standards Act, that it applies to all grain shipped to terminal markets. This is not so, as it operates only in interstate and foreign commerce. It does not apply to the movement of grain within state boundary lines. At the present time the law applies only to corn, wheat, and oats, altho other classes of grain will be undoubtedly added from time to time.

Another misconception existing is that the Federal government makes all the inspections and assigns the grades. The operation of the law depends on the work of inspectors who hold a license from the Government, but these men are not Federal employees. Except for those men who are already attached to a state inspection department, an inspector's license is issued only to those who pass an examination and who agree to follow the official standards in grading. An inspector must hold an individual license for the class of grain he wishes to inspect and the fees charged must be reasonable. In case his methods of grading are faulty his license can be revoked. He cannot be compelled to inspect grain, however, and thus operates independently.

If the buyer and seller are both satisfied with the inspector's grading the transaction is completed. However, if either one or both are not satisfied with the grade, an appeal may be taken directly to the Federal government for the determination of the true grade. The United States is divided into thirty-five districts, each in charge of a supervisor who is located in a large market and who is a federal employee. A copy of every original inspection is placed on file in the district supervisor's office, and in case of an appeal a sample is forwarded for reinspection. After regrading, the supervisor mails a sample with the appeal to the Board of Review in Chicago. This is an arbitration board or jury of five Federal supervisors who are charged by the Secretary of Agriculture with interpreting the grading factors, and the appeals are checked by this board, who represent the "Court of Last Resort."

(Continued on page 476)
Following the Harvest
Which Deals with the Application of the Advice: Go West, Young Man! Go West!

BY W. L. SAVAGE, Jr., '21 AND E. HASSAN, '20

ABOUT this time last year when the spring fever was getting into our bones and making us restless, four of us in the "Ag" College were talking over the possible plans for our summer vacation. Many wild ideas were being discussed when someone suggested that we go out West and "follow the harvest." This met with general approval as it had many strong points in its favor: we could get better wages there than at almost any other place, would do considerable traveling, which would satisfy that roving spirit we had acquired while in the service, and could look over the types of agriculture in the greatest agricultural belt of this country, beside having a good time and a decided change from our studies.

We wrote to the employment bureaus in the different states and from the information they gave us mapped out a route starting in Kansas and ending in North Dakota. The financial possibilities of the trip looked even more favorable as the days passed until it seemed like a "get-rich-quick" scheme. Counting on these future earnings we bought a drawing-room to Kansas City, leaving New York in the latter part of June. We were feeling so "high" that nothing was too good or too expensive for us. From Kansas City we were directed to Great Bend, Kansas. On arriving there we experienced no difficulty in getting a job, as there were about a hundred farmers waiting at the station to hire men to help them with their harvest.

The work was hard, but not as hard as we had been advised by our pessimistic friends. It did get rather warm at times, too; in fact, one day the temperature was 115 degrees in the shade, but it is such a dry heat that one does not feel it very much. Then too, the job had many good points. The boss did not work us as hard as he might, and often would quit before we had put in the full ten hours that he was paying us for. The meals could not be beaten. The table was loaded down with plenty of good food of all kinds at every meal. They often served a luncheon in the field during the afternoon, too. The farmers out there treat their hired men right, for they realize that they must compete with the demand for men in the cities where living conditions are better.

Finishing that job in about three weeks we moved on in search of another. At this time our dream of big profits received its first set-back. The days we were looking for our next job and paying carfare, buying meals and parting with a dollar or two each night for a place to sleep devoured our savings at a terrible rate. Therefore we changed our habits and commenced traveling in "side-door pullmans" with the rest of the hobos. This was not quite as comfortable but much cheaper.

Near the town of Atwood, Kansas, we landed our next job. Probably due to the poorer quality of the farms in this district the farmers were not as well off, so we naturally did not live as well. The boss was more particular that he got a full ten hours' work in the field each day. Our meals were very poor. We almost lived on canned salmon, bread, and Karo syrup.

While working on this place we wrote up to Nebraska and the Dakotas and learned that there was very little demand for men up there, due chiefly to the ravages of the brown rot blight. On the strength of this we gave up our trip to those states and went back into central Kansas to try to get a job with a threshing crew there. For about a week we traveled around there looking for a threshing outfit that would take on

(Continued on page 478)
Book Reviews

Feeding and Management of Dairy Cattle for Official Production

The author has brought together in a compact and well arranged form a large amount of useful and practical information, and the book should find large use among those who are engaged in modern, efficient dairy production.

It is to be regretted that so many of the illustrations are taken from a single herd of a single breed of cattle. Some of the charts and plans have been so much reduced in printing that their usefulness is materially lessened, and it might be considered that some of the charts, particularly those for feeding, are too fixed and rigid. The skilled feeder would find them of little service and the novice would be likely to be led astray. Up-to-date feeders of animals no longer hold to the Wolff standard. It is very doubtful if an analysis of feeding stuffs as mentioned on page 70 would give any useful information to the purchaser, further than that furnished by the dealer on the analysis tags required by law.

H. H. W.

Field and Study

Old John Burroughs, perenially young, vernal and inspiring! The veteran naturalist in his latest book, Field and Study, has given us proof that his mind refuses to recognize its age. The freshness, beauty of style, unmatched simplicity of diction, and the sympathetic treatment of the subject found in these essays are special privileges that belong to youth, the perpetual youth of John Burroughs. The book is divided into two parts, the first dealing with Nature "afield", the second with literature, religion, science, and the author's quaint philosophy. We look in vain in such earlier works as Wake Robin and Winter Sunshine for essays more delightfully vivid, fresh, and spontaneous than Fuss and Feathers, Orchard Secrets, Nature in Little, and Each After Its Kind, in Part I of this latest volume. There is much that is inspiring in Part II also, including an unforgettable passage on Walt Whitman. We trust that Mr. Burroughs will live many years yet, and that each year will be productive of a volume equal to Field and Study.

We learn with interest that Mr. Burroughs, now eighty-three, has recently completed the manuscript of a new book, The Faith of a Naturalist. May he live long to write many more! W. P. A.

Home and Community Hygiene
By Jean Broadhurst, Ph. D. J. B. Lippincott & Company, Philadelphia.

This book deals with home and community hygiene from every possible viewpoint and should have a decided effect upon improving hygienic conditions. There is first a discussion of bacteria and microorganisms. Then the human body is likened to an engine, both as to requirements and activities. The chapter on food deals with its function, the need of balancing the diet, and types of diets as relating it to the occupation of the individual. An interesting illustration is that of the Italian dietary of corn meal, olive oil, and beet greens, a balanced diet that fills all the body requirements. Pure food laws, the preservation of food, and food substitutes are fully considered. The need of an increased use of milk is emphasized, together with the necessity for high standards of sanitation.

The importance of the water supply, the careful ventilation of homes, and the disposal of sewage and refuse are shown, as well as the transfer of disease, disinfection and quarantine. The relation of the home to the sanitation and hygiene of the community, and the problems of summer camps, schools, and other community units are taken up. Other subjects considered are infant welfare, tuberculosis, industrial and occupational hygiene, and conditions in rural and ur-

(Continued on page 480)
What is your favorite labor-saving device, either home-made or purchased? How have you saved time by the use of one particular piece of equipment? If you use a labor-saving device which other women would be interested in hearing about, write and tell us so that we can give others the benefit of it.—Women’s Editor.

Can You Afford to Be Without a Canner?

A Story With a Financial Moral

BY MRS. L. M. STANDISH

Albion, N. Y.

MANY women when purchasing a pressure canner think only of the better and more perfectly balanced meals it will enable them to have the year round, by canning fruits and vegetables during the summer for winter use, and by canning fresh meat and soup during the winter for summer use. Perhaps a great many are not aware that it is also a practical utensil for everyday use. However, if once used for general cooking, the saving of time, labor, and fuel is at once apparent.

The pressure canner costs from $14.40 up, according to size and kind, whether aluminum or steel. But in buying one, you are purchasing a pressure canner, a steam pressure cooker, and a fireless cooker combined. It may be used with any fuel: coal, wood, oil, gas, or gasoline. It may be used for any kind of cookery where moist heat is required. Brown bread, tough cuts of meat, rice, potatoes; in fact, any meat or vegetable may be cooked admirably in it.

I have used it in place of a fireless cooker, a steam sterilizer, and a steam cooker, as well as for canning. I have cooked a chicken dinner while at church by putting the chickens in the kettle and two kinds of vegetables in the tray, and using five pounds pressure; then setting them back on the reservoir. When we reached home the dinner was cooked perfectly.

Cabbage, onions, or any odoriferous vegetable may be cooked without any odor going thru the house. I have cooked pork and beans and suet pudding in fifteen minutes at fifteen pounds pressure. My canner has also been used to sterilize the dishes to prevent infection when any disease was present in the family. Dishes, as everyone knows, should be sterilized, and it is easily done by putting them in the cooker, bringing them to five pounds pressure, and then letting them cool. I have also used it to renovate pillows. In addition to these uses, I canned twenty-four cans of vegetables saving over seven hours by using this canner. I used the canner fourteen times in canning seventy-eight cans of meat, with a saving of forty-two and a half hours from the old four-hour method. I put hard water in the canner, so that the liquid was saved for soup or gravy.

I cannot accurately state the saving on fuel, as we burn wood from the farm, and it is not measured, but I estimate one cord of wood at $4.50. Fifteen cans of chicken saved $18.00 on feed from December 22 to March 1; five pillows renovated,—a saving of fifty cents each.

(Continued on page 480)
THE COUNTRYMAN

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ITHACA, N. Y., MAY, 1920

THE COUNTRYMAN announces the election of J. R. Fleming as editor, A. N. Lawson as manager, and F. A. Wickes as circulation manager for the coming school year. With this issue we lay down our editorial pen and turn over the proverbial chair to its new occupant. The work of gathering and presenting experiences and the results of research for the service of agriculture has been a training which could be gained in no other way. We can only wish the new officers success in their work, and the same pleasure we have had from the associations it will bring.

WHEN Governor Smith signed the annual State appropriation bill last month, he enabled the State College of Agriculture to start on one of the greatest strides in the history of its development. The appropriation of nearly two million dollars provides for the beginning of new buildings and increases in the salaries of the teaching staff—both badly needed if the College is to continue to hold the place it has gained for itself in agriculture. The bill also gives the executive staff some discretion in fixing the salaries of the teaching staff, in place of the old “segregated budget” system, under which salaries were fixed by statute and as a result of which some of the best teachers have been and would be called to other positions. In addition, the bill allows for further extension of the work in rural marketing and finance than has hitherto been possible, and creates two new executive positions, that of Vice-Dean of Resident Teaching and that of Vice-Director of the Experiment Station. Besides these immediate benefits, the Board of Trustees of the University are authorized to contract for three million dollars to apply on new buildings for the College, plans for which are to be drawn by the State architect. Thus the College is made the completely well-rounded institution it needs to be in order that it may continue with the great work which has become so vital to us all.

THESE appropriations were not made hurriedly or in any spirit of simply spending the State's money. They were made after a careful study of the College by its Dean and members of its faculty, and by farmers and their wives, city people, and legislators, who visited the College in small groups and saw the conditions under which its work was going on. The appropriations were made to conform to the recommendations of representatives of the faculty, of people who had been to Ithaca, had seen conditions, and who know the work the College is doing, and with the assistance of the State architect, who visited us in our working clothes to study our equipment and needs. The fact that the College this year received not only the largest appropriation it has ever had, but the largest ever given to any state college of agriculture, only illustrates what an important place agriculture has assumed in our economic life and what service our College has rendered in its best development. All honor to those who, by their untiring efforts and clear vision, have made "Service" the watchword of the College.
'09-'10 W. C.; '11-'13 Sp.—E. R. Zimmer, who since 1916 has been manager of the Tioga County Farm Bureau, was selected permanent field secretary for the New York Holstein-Friesian Association at a meeting of the Executive Committee of the association held at Syracuse on March 5. That Mr. Zimmer is well qualified for the work by training, experience, and temperament is proven by his record. During the three years he has had charge of the Farm Bureau work in Tioga County, the membership in that county has been increased from 225 to 1977, which, in proportion to the number of farms in that county, was the highest membership in the State last year. He has pointed an assistant in animal husbandry, giving practical instruction in milking and dairy herd management. During the next two years he served as an instructor in animal husbandry and also gained some experience in extension work at farmers' meetings and on demonstration trains. It was his marked success in the Farm Bureau work that first attracted the attention of the directors of the New York Holstein-Friesian Association. He will be released from his present position to take full charge of the Holstein work on May first.

Mr. Zimmer has been of the greatest assistance to The Countryman in the past year by keeping us in touch with farm conditions in his county. Incidentally, he has helped us get in touch with some of the practical farmers who are leaders there. Their articles have appeared in recent numbers of The Countryman under the heading "Experience". We expect to hear of the great work he will undoubtedly carry on.

E. R. ZIMMER
(Courtesy of The Holstein-Friesian World)
'99 B. S. A., '00 B. S. A., '07.—Mrs. T. Harry King, the mother of Professor Asa C. King, Herbert P. King, and T. Harry King, Jr., died on March 8 at her home in Kingtown, near Trumansburg, N. Y. She leaves also her husband and three daughters.

'00 F. E.—R. C. Bryant is still at Yale in charge of the work in lumbering.

'01 F. E.—T. F. Borst resides at Newton, Mass., with business at 15 Beacon Street, Boston.

'01 F. E.—Walter Mulford recently announced the birth of a son, Stewart Furnam. The date of the stork's arrival was February 20.

'02 Ex.—W. M. Maule has been forest supervisor of the Mono National Forest since 1909. He can be reached at Minden, Nevada.

'04.—Ex.—W. R. Mattoon is with the Forest Service at Washington, giving particular attention to extension work.

'05-'06 Sp.—Rollo Van Dorn, of Three Mile Bay, a member of the Jefferson County Farm Bureau since its organization, is now acting as its president for his second term. "Van" has built up a herd of pure-bred Holsteins consisting of ten cows and five heifers. The bull he is using was sired by King Korndyke Sadie Vale and the dam is a twenty-seven-pound three year old daughter of Sir Korndyke Pontiac Artis. In conjunction with the farm bureau and the plant breeding department of the College, he has been testing oats and timothy seed of his own development. He finds that he has a variety of timothy which yields on the average a ton per acre more than the ordinary commercial variety.

'06 Ex.—Clyde Leavitt is with the Commission of Conservation of the Dominion Government, at Ottawa, Canada.

'07 W. C.—E. W. Mitchell is operating two farms near Waterloo, specializing in hay and grain. He has played an active part in the grange life insurance work and has just completed his tenth year as county deputy of the grange.

'07 B. S. A.; '09 M. S. A.—Minnie K. Jenkins resigned on March 13 from the Food Research Laboratory of the Bureau of Chemistry, U. S. Department of Agriculture, to become superintendent of the Frozen Egg Department of the Titman Harding Co., Kansas City, Mo. Miss Jenkins has been with the government for eleven years working on problems relating to cold storage and frozen eggs. She has co-operated with the industry in installing and conducting egg-breaking plants and has published several departmental bulletins.

'09 B. S. A.—E. L. Seymour is engaged in agricultural writing—editing for several magazines, trade journals, and publishing houses.

'11 B. S. A.—Mr. and Mrs. George B. Birkhahn announce the arrival of a son, Charles D., born February 3. Mr. Birkhahn is president of the Farmers' Service Corporation, Inc., Middleton. Mrs. Birkhahn was formerly Miss Helen Fisher, W. C. '17.

'13-'15 Grad.—G. A. Burrows is now with the engineering department of the Niagara Power Company, Niagara Falls.

'14 W. C.—Louis R. Bonnell has been working his father's farm northwest of Waterloo, specializing in fancy fruit. He married Miss Mae Ferguson, a graduate nurse of the Good Shepherd Hospital—in 1917. They have one son, Louis Radcliffe, Jr. Mr. Bonnell has been appointed county deputy for Seneca County by the master of the state grange for this year.

'14 B. S.—J. Lossing Buck, who has been an agricultural missionary in China from December 1, 1915, until January 31, 1920, is now teaching farm management and farm engineering in the College of Agriculture and Forestry, Nanking University, Nanking, China. Mr. and Mrs. Buck are the happy parents of a little daughter, Caroline Grace, born March 4th last.

'14 B. S.—Mr. and Mrs. "Shorty" Green announce the birth of a daughter, Judith Elizabeth, on March 15.

'14 W. C.—G. O. Clark is the junior member of the firm of Abbott and Clark, Holstein breeders of Cortland, which will dissolve partnership the middle of May when a dispersal sale will be held. Two forty-pound cows, ten daughters of
DeLaval Service covers the continent

This map shows how completely the service of the De Laval organization reaches every community.

Every separator user realizes the importance of having his separator in use every day. Delays waiting for parts, with a separator out of use, mean great inconvenience and loss of product.

Every dot on the map represents ten De Laval agents, and every De Laval agent is individually trained to assist his customers in setting up and operating their machines, to furnish and put in place repair parts, and to insure prompt service and satisfaction to De Laval users.

Not only is the De Laval Cream Separator superior in all points of separator efficiency, but every user of a De Laval is assured of prompt and competent service for all the years to come.

It is therefore not surprising that there are more De Laval separators in use than all other makes combined. Now is a good time to begin saving time and product by securing a De Laval.

The nearest De Laval agent will be glad to demonstrate a De Laval. If you do not know his name, write to nearest De Laval office.

THE DELAVAL SEPARATOR CO.
165 Broadway NEW YORK
29 East Madison Street CHICAGO
61 Beale Street SAN FRANCISCO
forty-pound cows, and twenty daughters of thirty-pound cows, are among the two hundred seventy-five head to be sold.

'14 B. S.—H. C. Knandel has been appointed head of the department of poultry husbandry at the Pennsylvania State College of Agriculture.

'14-'16 Sp.—T. F. Luther is engaged in the lumber and milling business near Saratoga Springs.

'14 B. S., '15 M. F.—W. J. McCarthy has a temporary leave from the Forest Service, and is at present at his home in Brooklyn.

'14 W. C.—Thomas M. Marshall and his father are operating a three-hundred-acre farm near Aurora. Breeding and exhibiting pure-bred Belgian draft horses are their main enterprises.

'14 B. S., '15 M. F.—C. W. Strauss writes that he is still with the Great Western Sugar Company, Longmont, Colorado. He is the proud father of two sons.

'14 W. C.—Howard W. Strong is working the home farm at Waterloo. He is a general farmer specializing in fruit and dairying.

'14 W. C.—William Hoster Yost married Miss Mildred Tobey of Waterloo in the spring of 1919. They are working the Yost farm south of Waterloo, specializing in hay and grain.

'15 B. S.—E. L. Banner, instructor in poultry husbandry here at the College, has been granted a leave of absence because of prolonged illness.

'15 B. S.—Wendall W. Brown sailed for Constantinople in April of 1918 to enter upon relief work in the near east. After three months’ service, Mr. Brown was assigned to transportation work. He ran a motor truck from Oulon Kishla, on the Bagdad railroad, to Warpoot, over a five hundred mile trip. He says that whenever he made the trip he always managed to have his truck break down at a certain station where a party of Americans were staying. He adds that a wedding trip thru the Mediterranean is enough to satisfy a man for an ordinary life time. Naturally we assume that she was one of the party staying at the station.

'15 B. S.—T. B. Charles has been appointed to the staff of the department of poultry husbandry at the Pennsylvania State College of Agriculture. He will enter upon his new duty about July 1.

'15 B. S.—Floyd D. Dean is with the E. I. du Pont de Nemours and Company, at Arlington, N. J.

'15 B. S.—F. W. Furst is now a forest assistant in District 6. He expects to spend the coming summer in the Chugach Forest in Alaska.

'15 B. S.—G. A. Spamer has returned to the South, where he is doing timber survey work.

'15 B. S.—Mary Thatcher, who has been director of the dining halls of the University for the past three years, resigned her position to accept a similar one with the Y. W. C. A. at Pittsburgh. Miss Thatcher’s resignation was effective March 21.

'15 B. S.—A son, William Theodore, was born on February 12 to Mr. and Mrs. Charles A. Comfort, of Circleville.

'15 B. S.—K. O. Ward is engaged in both live stock and lumber business at Candor.

'16 B. S.—Solomon Abelow was married to a French girl, while overseas; they are now living at 2921 Briggs Ave., New York City.

'16 B. S.—Florence Axtell has supervision of the extension work in sewing at Trumansburg.

'16 B. S.—Gertrude S. Bates, who graduated from the nurses’ training school at the Clifton Springs Sanitarium, has been appointed head of the surgical ward of that institution.

'16 B. S.—Edna Beardsley is county field secretary of the central field of the Y. W. C. A. with headquarters in Chicago, Ill.

'16 B. S.—Russell V. Black is assistant city planning engineer for the City of Akron, O. His address is 466 Woodland Ave.

'16 W. C.—Thomas A. Calhoun is herdsman at the Dehlwood farm near Mt. Kisco.

'16 B. S.—“Bill” Daggett spent a year at Yale in graduate work after he had received his bachelor’s degree at
Home Economics and Goodyear Belts

*Domestic Science* is transforming the work of the farm wife as completely as engineering and soil chemistry are advancing that of the farmer himself—and to the same ends, that drudgery may be replaced by power's economy of time and labor.

*The Farmer's Wife today* has conveniences and aids to homemaking comparable with the farmer's power equipment for increased yields and lower costs. Interurbans and telephones have brought her neighbors next door to her. In her automobile, over the new good roads, church, school, shops and theatres are only a few minutes away.

*Her home has electric lights* and furnace heat. Her sewing machine is motor-driven. Her churning, washing and ironing are done by power machines. In her daily work, power is as commanding a factor as in the field and on the road.

*And dependable belting* is as essential to the efficient operation of the farm-house power machines as it is to the giant separators and tractors. The same function—transmission of power—determines the economy of the belt regardless of size or use.

*Made of the same stock,* and built with the same careful intent to protect our good name, the Goodyear Klingtite Belt on washer, churn or lighting plant returns the same trouble-free, full-powered, long-lived service as the Goodyear Klingtite Belt on the threshing machine.

*A Goodyear Klingtite Belt needs no breaking in.* It requires no belt dressing. It is waterproof. It holds the pulleys in an even grip and works with a free-swinging action that favors the bearings of the lightest engines. These qualities which no ordinary belting affords make the Goodyear Klingtite "the best help on the farm." Students and teachers of agriculture are sent copies of the Goodyear Farm Encyclopedia on letter request to The Goodyear Tire & Rubber Company, Akron, Ohio.
FOR SALE
APPLE PROPOSITION
A real fruit farm just ready to do business. Wonderful set of buildings at the edge of an oak park overlooking Sodus Bay.

130 acres 3 3/4 miles from No. Rose on the east shore of Sodus Bay, 1 mile from state road.

Soil is a rich clay loam practically all virgin land and so good clover volunteers. The air and water drainage is perfect; not a trace of winter injury. The main orchards row the length of the farm and are ideal for a tractor.

500 12-yr. Gano and Ben Davis; 175 Northern Spys; 175 Baldwins; 300 Duchess; 150 Standard varieties, 11 years old; 140 Greenings, 9 yrs. old; 600 McIntosh, 5 yrs. old; 350 Greenings, 5 yrs. old. 400 5-yr. Clapps and Bartlett pears. 100 sweet cherries, bearing. The price

THIRTY-FIVE THOUSAND

R. H. & Geo. C. Catchpole
No. Rose, N. Y.

NOTICE
Any students (men), interested in an unusually attractive proposition covering summer vacation period, please advise at earliest convenience. State age, also previous vacation employment if any.

The Wing Seed Co.
Mechanicsburg, Ohio

Cornell. He is now assistant engineer for a quarry concern in Vermont.

'16 B. S.—C. K. Harriman is engaged in running the plant of Harriman and Harriman, at which oil is distilled from black birch. His present address is R. F. D. N. 2, Ulysses, Pa.

'16 B. S.—Anne Kerr was married to Paul Wing last summer. They are at home at Little Falls.

'16 B. S.—On February 1, Miss Arabella S. Livingston was appointed an instructor in the clothing division of the Department of Home Economics at the University of Nebraska, Lincoln, Nebr. Miss Livingston served from the time of her graduation until last June in the Department of Home Economics at the New Hampshire State College, Durham, N. H.

'16 B. S.—James B. Maguire is engaged in manufacturing coarse paper and its products, and is assistant to the superintendent of the main mill of Bird and Son, Inc., East Walpole, Mass. He lives at 16 Rosemary Street, Norwood, Mass.

'16 B. S.—“Rich” Perry will leave the College about May 1 to enter plant pathology field work. “Rich” has been here studying for his doctor’s degree.

'16 W. C.—Linda Shrader is attending the Northfield Seminary.

'16 B. S.—Mr. and Mrs. William L. Webster announce the birth of a son, William Sargeant, on March 29.

Feed Control Legislation
(Continued from page 447)

feeding value and a similar statement relative to any ingredient which constitutes five per centum or less of the commercial feed. The former provision would show the farmer how much low grade material he was buying, and the latter would be useful in judging the amounts of high grade materials by showing what ones listed as ingredients were present in small amounts only. The above information, taken with the chemical analysis and statement of ingredients, if intelligently interpreted,
TOP DRESSING TALKS, No. 6

Ammonia Pays in the Orchard

Ammonia is the most important fertilizer element used in fruit production. It is ammonia that promotes the vigorous wood growth so necessary for the formation of fruit spurs and fruit buds.

Quickly available ammonia added before blossom time will invigorate the fruit buds and increase the amount of fruit set.

The failure of the fruit to set and the early falling of fruit is generally due to ammonia starvation.

In some sections an early application of quickly available and non-leaching ammonia has increased the yields four and five times that of unfertilized trees.

ARCADIAN Sulphate of Ammonia

Arcadian Sulphate of Ammonia is the best nitrogenous fertilizer for fruit production. It contains one-third more ammonia than any other top-dressing and this ammonia is all soluble, quickly available and non-leaching.

It can be applied early and it will last throughout the season. Its fine dry crystals make it easy to apply by hand or machine.

Give your orchard and your small fruits a top-dressing of Arcadian Sulphate of Ammonia and note results. Apply 100 to 150 pounds per acre over the area of feeding roots just before blossom time. You will use it again. Place your order now.


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Money Has Power
Don't Envy Riches
Discretion—
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are winning comfortable incomes from petroleum. Win yours!
Ours may be the most acceptable prop-
osition presented to you.
You know me or can satisfy yourselves
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My four fellow trustees are above re-
proach.
Our proposition is as fair and straight-
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We open ourselves and our company
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Capitalization Small
$100,000
Shares selling at par value, $25.00
each.
Obey that impulse, send me your check
or write me for particulars.

W. H. HOOK, Ag. '12
Vice-President and Trustee,
Long Ridge Oil Company
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My Address, Lock Box 744
Kingston, N. Y.

would be very helpful to the farmer in
planning his ration. Yet no secret
formulas would be divulged. There
would, however, be difficulties as re-
gards enforcement.

A bill now before the New York State
Legislature appears to offer the best so-
lution thus far advanced. A distinction
is made between the ingredients which
may go into a mixed feed by dividing
them into concentrates and roughages.
Under roughages are included such ma-
terials as ground hay, straw, oat hulls,
barley hulls, cottonseed hulls, and
the bill provides that the percentage of
total roughage shall be stated when the
crude fiber content exceeds ten per cent.
A tolerance of one per cent is allowed
here. It seems fair that materials, even
though they result from the milling of
grains, having the value of roughage
only, should be so classed and that a
distinction should be made so as to make
it clear to the farmer what he is buying.
The bill also provides that mixed feeds
containing certain materials which have
practically no feeding value shall not
be sold. These materials are listed and
include peanut hulls, rice hulls, peat,
and sawdust. A further provision of
the bill is that, in the statement of the
ingredients of a mixed feed, they be
listed in the order of their preponder-
ance by weight. It cannot be stated at
this writing what will happen to this
bill, but it is believed that it will be
passed with certain modifications.
Whether these modifications will be such
as to destroy its effectiveness remains
to be seen.

At any rate, it is strongly believed
that, thru feed control legislation, if
possible, but at least thru our teaching
and extension work, the farmer should
have the information whereby he would
not buy as an ingredient of a mixed
feed any considerable amount of a ma-
terial which he would not think of put-
ting in a ration were he mixing it him-
self. No successful feeder would think
of putting in a grain mixture a material
which could not be classed even as a
"Tune-up" the Rig

Only a few weeks remain before threshing season will be here with a rush. Be sure you are ready. Get your Case "Steamer" out and go over it.

See that the boiler is thoroughly clean inside. Polish piston rod and valve stem. Look for lost motion at both ends of connecting rod, and adjust the brasses if necessary. Repack the pump and possibly the governor stem. Clean oil holes and grease cups so that lubricant will pass freely to all bearings. Be sure that leads to water-column are clear. We suggest that you have on hand a supply of water glasses, with proper gaskets. The safety valve is probably all right, but be sure it "pops" when it should. Scrape out exhaust nozzle, giving the steam a clear passage, directly up the stack. Replace worn clutch shoes; also repaint boiler and stack.

Overhaul the separator belting and re-lace or replace where needed. Wash out every bearing with kerosene and see that oil holes are open. Replace worn teeth in cylinder and concave, and look for harmful endplay in cylinder. 1-64 inch is right. Examine every box and bearing and take up or re-babbitt where needed. Tighten loose nuts and replace lost bolts.

Be sure you have the supplies and tools you will need. It is well to have some spare parts on hand to guard against possible delays. Check up your stock of parts with the list suggested in your "Case Thresher Manual", and order what you lack. If you have no copy of our "Thresher Manual", you should have one, and we will send one on request.

Remember that time is money to the thresherman, and right now is the time to save time.

J. I. CASE THRESHING MACHINE CO., Inc., Dept.CK-5, Racine, Wis., U. S. A.
Making Superior Farm Machinery Since 1842

NOTE: We want the public to know that our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co.
good roughage, even tho he had the material available on his own farm. New York State farmers cannot afford to pay transportation charges on oat hulls and alfalfa stems from the middle West, nor cottonseed hulls from the South. It is recognized that complete separation of low grade materials cannot be made in milling, and in purchasing the by-products the farmer cannot expect them to be entirely free from low grade materials. However, the tendency in milling seems to be to include as large a proportion of these materials in the by-products used for feed as the trade will stand for. The farmer can do much to improve this situation by insisting on getting high grade materials and by refusing to buy those feeds consisting of large proportions of low grade ingredients. Buying useless materials will not lower his feed bills.

Cornell Herd Records
(Continued from page 451)

value of Ernestine as a reproducer may be obtained when we realize that these high-producing daughters were sired by three different sires. Her reproductive efficiency is plainly evident, since by the time you read this, Ernestine will be fresh again with her ninth calf in as many years.

The honor due this great Holstein matron can only be realized when we realize what she has done. She is one of three cows in the world to have five times produced more than thirty pounds of butter in a week. None of these other cows have equalled her yearly record of one thousand and forty-two pounds of butter from over twenty-three thousand pounds of milk. Her average production for her eight lactation periods is over six hundred pounds of butter from over seventeen thousand pounds of milk. She has twice milked over one hundred pounds of milk per day for periods of one hundred days or more and three times for periods of sixty days. With reasonable luck she should cross the thirty-pound mark again at this freshen-
"FOUR years ago," says Mr. Butterbrodt in telling how he became an enthusiastic user of Perfection Milker. "I bought the second Perfection Milker sold in this vicinity. At that time this milker was generally unknown in this locality, while today it is generally recognized as the best machine on the market. I bought a Perfection when I was not wholly convinced of the practicability of any milker, but now I wouldn't part with it."

Cows' Teats and Udders in Perfect Condition

"When my cows went dry I even feared that some bad effects would be revealed after freshening. However, I was surprised to find that after freshening my cows milked more evenly on all four quarters than they ever did when milked by hand.

"A year ago I milked my cows three times a day with the machine for a period of six months. At the end of this period the cows' teats and udders were in as perfect condition as ever."

The Best Hired Man

"The milker was just as willing to work three times a day as twice. It never kicked and has never refused to work when I wanted to use it since the day it was installed in my barn. At the end of four years continuous use I am free to state that I find milking with the Perfection more satisfactory than hand milking. And the Perfection makes it easier to secure hired help and to keep the help in good humor."

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Thousands of dairymen are putting in the Perfection Milker every year. It's the answer to the labor problem. Investigate for yourself. We'll gladly send you names and addresses of Perfection owners, together with a free copy of "What the Dairyman Wants to Know" the book that answers every question about milking machines. Today is the day to write.

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1242 E. Hennepin Avenue
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The Perfection is the Milker with the Downward Squeeze Like the Calf.
ing, which will place her unquestionably in a class by herself.

Taking all into consideration, and granting all due honor to the other contenders for premier Holstein honors, Glista Ernestine is the only five times thirty-pound cow in all the world that can boast of having five Advance Registry daughters of such productive ability as those of our grand old Cornell Cow.

I trust that the above will throw some light on animal husbandry activities within our own circle, for those more keenly interested in this work. I also wish, thru this article, to express my appreciation, as a student, first to Mr. G. W. Tailby, Jr., for his untiring co-operation with me in conducting these records and lastly, to Professor H. H. Wing, who cleared the field from all obstructions to the work, and for his sound advice and direction throughout the entire season.

The Farm Experiment Station
(Continued from page 456)
the talk of the community that the tenant had to buy potatoes for his own use from the sprayed rows. Such an object lesson is worth a multitude of figures.

Recent experiments with an application of nitrate of soda to old meadows are also of interest. Last year sixty pounds of nitrate of soda, sixty pounds of acid phosphate, and sixty pounds of land plaster were sown on a timothy meadow from which three crops had been removed. The yield from check plots, after being weighed and tabulated, showed that this combination, at a cost of $6.60 an acre, made a gain of at least one ton to the acre of $22 hay.

These and other experiments with corn variety tests have proven to me that each farm is its own experiment station and the farm operator the experimenter.

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PATHFINDER, DEFENDER and ORION CHERRY KING

The three best Duroc blood lines known, we have granddaughters of each

Our Herd Boar is Boothby’s Defender No. 96407
Grandson of the Great Defender, the only Boar ever
TWICE INTERNATIONAL CHAMPION

We guarantee satisfaction. References: any and all customers, also Bank. We have never had a dis-satisfied customer.

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LOUIS L. DRAKE, Owner Delaware, New Jersey

Say Where You Saw It When You Write
Help is scarce and wages high, but you can dig new ditches, widen or clean out old ones quickly and economically with dynamite. A row of holes bored, one or more cartridges placed in a hole, an electric current released—and a surprisingly even ditch, with no spoil banks results.

A customer in Craighead Co., Arkansas, who had dug miles of ditches with Hercules Dynamite, says, "We prefer blasting a ditch to any other method of making one. We are glad to recommend your explosives to anyone for this purpose."

Hercules Agricultural Service Men have blasted ditches from 15 cents to 40 cents a cubic yard, varying with soil, labor, and other conditions.

Our Agricultural Department will gladly advise you as to the kind and amount of explosives for your work. "Progressive Cultivation", a 68-page booklet tells all about the use of dynamite for ditching, stump and boulder blasting, tree planting, and subsoiling.

*Hercules Dynamite is sold by leading hardware and implement dealers*
The Federal Grades for Grain  
(Continued from page 458)

The opinions of the Board of Review are reflected back to each terminal market by General Field Headquarters, also located in Chicago. Due to the varying geographical and commercial conditions existing in the grain trade, the supervisory districts are grouped into six large divisions, each in charge of a division supervisor. These divisions, with the headquarters of the supervisor, are as follows:

Atlantic Coast—New York City.
Great Lakes—Chicago.
Ohio Valley—Indianapolis.
Mississippi River—St. Louis.
South West—Kansas City.
Pacific Coast—Portland.

It should not be inferred that because the Federal system of grades is based on definite factors, inspection is a mere mechanical proposition. An inspector must be able to determine class and subclass, color and texture, damage and heat damage, and also be qualified to detect and classify odors. Years of practical experience are necessary for this work. The personal equation enters strongly into the assignment of grades, and the necessity of having a final board of arbitration like the Board of Review to interpret the grades is self-evident.

AIREDALE DOGS
The Most Useful Dog on Earth
They will do anything any other dog can do, and do it better. As a Guardian or Watch Dog, in the house or on the farm, no dog approaches him. By day and night he will guard your home and your children. He loves to ride in and guard your automobile.
Will help yard and herd your stock, and bring home your cows better than a Shepherd or Collie. There is no other dog his equal for the Poultry Yard. He is an inveterate ratter, the sworn enemy of weasels, skunks, coons and stray cats. As a hunting and Sporting Dog they are ideal. A Female Airedale will make you $75 to $150 a year.
Our dogs are all Thoroughbred and Pedigreed, and we sell at a moderate price. Circulars Free.
C. C. SPRAGUE, Maywood, Illinois

Follow This Sign for Bumper Crops
You’re always right with Solvay. Satisfied users say “I know what Solvay did for my crops last year—and you can bet I’m going to use more this year.” You’ll say the same when you see how this lime brings out the hidden fertility of your land and makes a two acre crop where one grew before. Give your crops the Best.

Use Solvay Pulverized Limestone—guaranteed high test 95% carbonates—finely ground, furnace dried—no waste. Brings results the first year. Order early and have it shipped early—be sure of your supply.

The Solvay Process Co. Syracuse, N. Y.

Say Where You Saw It When You Write
10,000,000 Used Last Year

**Universal Package**

Write for Booklet

Write today for free, interesting booklet, "Shipping Profits". Shows you how the Universal Package will save you money and enable you to get more net profits from your shipments. Valuable data for every shipper.

The practical container for farm and orchard use; holds standard bushel, is light, strong, permits ventilation, as well fitted for one crop as another. The centerpost provides additional protection to delicate fruits, no nails are needed in putting and attaching cover.

**Package Sales Corporation**

210 S. Jefferson St. South Bend, Indiana

---

**Does 4 Men's Work**

Stop worrying about the scarcity of labor and high prices. With a Boggs Grader one man can sort and grade your potatoes into two U. S. Government grades and eliminate culls and dirt in one operation, and save enough in wages alone to pay for the machine in a short time. In addition you can get top prices when buyers realize they can depend on getting potatoes that are uniformly graded. It will grade onions as well as potatoes.

**Boggs Potato Grader**

cannot bruise or injure potatoes as the grading is done by carrying the potatoes up over an endless belt. It operates with equal accuracy with round or long potatoes.

It is portable and occupies little space. Operates by hand, motor or engine. No experience necessary. Lasts a lifetime.

Made in three sizes to grade from 25 to 250 barrels per hour. Prices $55 and up. Write today for booklet.

**Boggs Manufacturing Corporation, Main St., Atlanta, N. Y.**

DEALERS—We have an attractive proposition for one dealer in each section. Wire today.
Following the Harvest
(Continued from page 459)
four men, as we wanted to stay together. Our finances kept rapidly ebbing until we became absolutely stranded in Grainfield.

Sitting on the curb in front of the Post Office wondering whether we would have to telegraph home for money or what we could do, we overheard a man say that he needed some laborers to dig a trench for a culvert he was building under a road. We immediately applied for and got the job. At seven o'clock the next day we were again at work, altho we had to sleep in a wheat stack that night. We kept this job long enough to learn how much energy it requires to throw a shovel-full of dirt out of a five-foot hole and also long enough to earn our carfare to Denver. We had long ago given up the idea of saving any money, so we changed our tactics, deciding to see the country and have a good time even tho we got stranded again.

The best wages paid in Colorado were three dollars a day and board. This was an awful drop after getting six and eight dollars a day in Kansas, but we had to take that or nothing, so we accepted a job haying, harvesting, and threshing on a large cattle ranch near Eastonville, Colorado. Living and working conditions were ideal there, but the prospects of earning enough money to buy our tickets home were very slim. The boss settled our minds on that score when he informed us that we could get free passage back to Chicago and possibly to New York on freight trains as drovers for shipments of livestock. With this in view we quit work at the end of three weeks and started for home with about sixty dollars in our pockets.

We had very little difficulty in getting shipped from Denver to Omaha, Nebraska, with some cattle, and there we got another shipment to Chicago. Our return trip was then half over and we still had a little cash left. It was not such a

BURRELL MILKERS
WILL
HELP HER MAKE GOOD
by milking her thoroughly and consistently every day in the year

The many distinctive features of the BURRELL MILKERS appeal to practical and scientific men alike.

D. H. BURRELL & CO., Inc.
Manufacturers of Dairy and Milk Plant Apparatus
Little Falls, N. Y. U. S. A.

Say Where You Saw It When You Write
FROM January to January the Cletrac takes on all the hard jobs over soft, wet ground or mellow seed-beds. It never sinks in or packs but rides lightly and easily over soft soil and turns practically all of its ample power into direct draw-bar pull.

The Cletrac not only plows but does quick, thorough fitting that leaves a clean, clear seed-bed, gets all crops in on time and insures bigger yields.

This fast, light-footed tractor is putting business-like system into modern farming. May we send you information about the Cletrac? You will be choosing your own tractor soon or will be called on for advice. It is well to have interesting and practical tractor material at hand.

The Cleveland Tractor Co.

"Largest Producers of Tank-Type Tractors in the World"

19097 Euclid Avenue

Cleveland, Ohio
"Accomplishment in the Dairy"

The increasing popularity of milk products is largely due to the educational work of the Agricultural College.

The Agricultural College has not only demonstrated the exceptional food value of milk, but has also educated the dairyman in methods of manufacture that insure to the consumer a wholesome, nutritious dairy product entirely free from harmful bacteria and insanitation.

These methods have been assisted and made possible by the aid of a cleaner which provides the most efficient, sanitary cleanliness to dairy equipment, and for this reason it bears the endorsement of the Agricultural Colleges of the United States and Canada.

Order from your supply house.

It cleans clean

Indian in circle

in every package

The J. B. Ford Co.
Sole Mnfrs.
Wyandotte, Mich.

simple task getting shipped East from Chicago, as drovers are not ordinarily sent with these shipments, but thanks to the influence of a Princeton man whom we met at the stockyards, we finally got shipped straight thru to New York, arriving there with an average capital of two dollars each.

We consider that was the best summer vacation we had ever had. True, we did not save any money, but we had traveled about five thousand miles, had seen most of the country and types of agriculture from New York to Colorado, had satisfied our roving spirits, and had a very unusual experience and a wonderful time at absolutely no expense beyond what we had earned. In all, the trip took eleven weeks, of which we were working eight and spending the other three traveling, sight seeing, and having a good time.

Book Reviews
(Continued from page 460)

ban communities. Lastly are the movements toward health education and administration which are bringing about some degree of improvement. E. C.

The Farm Home
(Continued from page 461)

or $2.50; total money saved,—$24.00. My canner reached me October 10, 1919. The cost was $14.40, plus express, making a total of $16.62.

As you have seen, I have made a net saving of $7.38 in only five months’ time. The time saved when used for canning purposes only would equal four ten-hour days, nine hours, and fifty minutes. The question I should ask today would not be, "Can one afford a canner?", but rather, "Can one afford to be without one?"
THE founders of Avalon Farms Company are practical hog-raisers. When Hog-Tone was perfected it was first tested on the herds at Avalon Farms, near Churubusco, Ind. The excellent results achieved resulted in the conviction that other hog-raisers would find it valuable.

From the very beginning we have offered Hog-Tone to every hog-raiser on 60 Days' Free Trial. Our plan of merchandising Hog-Tone is still the same.

We send you 60 days' supply of Hog-Tone for all your hogs. You pay nothing when you get it. At the end of the 60 days you pay if you are completely satisfied that Hog-Tone has accomplished all claimed for it. Otherwise the charge is canceled.

You, alone, decide whether you get value received. We believe this is fair, sensible, businesslike. Read the coupon.

AVALON FARMS COMPANY
353 West Ohio Street
Chicago, Illinois

This Coupon Brings 60-Day Free Trial Treatment

W. O. Gandy, President
AVALON FARMS COMPANY
353 West Ohio Street, Chicago, Illinois

I have .................................. hogs. Ship me immediately enough Avalon Farms Hog-Tone to treat them for 60 days. I am to pay nothing now except transportation charges. I agree to report results to you at end of 60 days and pay for the Hog-Tone at that time if it has done all that you claim. If it does not, I will return the labels to you and you agree to cancel the charge.

Name .................................. Please Print Name
P. O. ..................................
R. R. No. .......................... State
Shipping Point ..........................
Name and Address of my Druggist ..........................
HEADS ALL HERDS
In Iowa Cow Testing Associations

The Quaker Oats Company, McGregor, Iowa, Jan. 30, 1920

Gentlemen:—I am pleased to state that we have used SCHUMACHER FEED quite extensively in growing and developing our herd.

It is a great aid in promoting heavy production of milk and butter fat. We appreciate it much because of its perfect balance which makes it a safe feed to use in large quantities when feeding for heavy production.

We have fed SCHUMACHER FEED with excellent results to hogs and horses as well as to the Dairy Herd.

Yours very truly,

R. G. KINSLEY.

Note: R. G. Kinsley's Herd has been making the best record in the McGregor Cow Testing Association, which for several months has been leading all Testing Associations in Iowa, having the best ten highest producing cows.

The Schumacher Feeding Plan Will Help the Cows Increase Production

The Schumacher Feeding Plan consists of feeding SCHUMACHER FEED as the carbohydrate part of the ration and BIG "Q" DAIRY FEED as the protein part. These two feeds have proven with dairymen everywhere to be the ideal combination for best health conditions and maximum milk production. They simplify your ration problem—insure greater accuracy and uniformity, and require much less labor.

SCHUMACHER FEED is a finely ground, kiln dried, carbohydrate ration composed of various grain by-products that best supply the necessary maintenance for long time milk production. It affords that much needed variety of grains so essential and necessary to keep your cows in tip-top physical condition—to provide stamina and endurance to withstand the strain of long milking periods.

In addition to being the acknowledged best carbohydrate feed for dairy cows, it is also wonderful milk producer. With SCHUMACHER FEED as the maintenance part of the ration and BIG "Q" as the milk producing part, you have a ration that assures maximum production from any cow of any breed.

SCHUMACHER FEED in addition to being the acknowledged best carbohydrate feed for dairy cows, is also splendid for feeding all your farm stock. It puts "pep" and vigor into your horses—makes calves and hogs grow fast and produces big frames. It restores strength and vitality to dry cows assuring maximum milk production during the next lactation period.

Get a supply of SCHUMACHER and BIG "Q" from your dealer—let these feeds do for you what they are doing for thousands of other successful dairymen and farmers.

The Quaker Oats Company
Address. CHICAGO, U. S. A.
A Solid Cutting Foundation

After all, the principal thing is to get the grain cut—all of it. And in order to do this successfully, a binder must have a smooth-working sickle that will not jam or bind, even when the binder is working on rough ground.

McCormick, Deering and Milwaukee Grain Binders cut clean—and continue to do so during the entire life of the machine. There is no twisting, sagging or springing of the cutter bar, because the knife works forth and back on a solid foundation—a Z-shaped steel sill that effectually resists heavy strains imposed by operation in rough, uneven fields. There is no rubbing of sickle sections against guards nor binding due to springing or twisting of the sill, for it does not twist or spring.

This is only one of many features that make McCormick, Deering, and Milwaukee Grain Binders so efficient and dependable—that have won for these harvesting machines a world-wide reputation for economical, satisfactory service.

International full-line dealers everywhere handle these standard setting harvesting machines. A post card will bring you descriptive catalog.

INTERNATIONAL HARVESTER COMPANY
CHICAGO OF AMERICA INC. USA
What a Hog Needs For Quick Growth

The right materials and correct quantity of each, are just as important in building a hog as in building a house.

For the frame. The growth of the hog depends upon the growth of the frame. The alfalfa flour and tankage in Pig Chow build a large frame.

For flesh. Elements for flesh, blood, hair and hide must be liberally supplied. Tankage, linseed meal and gluten feed in Pig Chow supply these elements.

For fat. Fat must be put on as the hog develops. Molasses, hominy, ground corn and gluten feed make fat, heat and energy.

Purina Pig Chow finishes hogs in twenty to thirty days less time than the average ration, and makes

25% to 40% more live hog

costing $3.00 to $6.00 less per 100 lbs. to produce. These are demonstrated facts. Get the data. Use Purina Pig Chow on your next lot. If your dealer should be sold out, write to

PURINA MILLS, ST. LOUIS, MO.

Ft. Worth, Tex.
Nashville, Tenn.
Buffalo, N. Y.
The Universal Tractor

DOES all field work—including cultivating, harvesting and belt work. One man operates both the tractor and the implement. The operator sits in complete safety in the usual place—on the seat of the implement.

The work is always in plain sight—no looking backward. Tractor and implement form one unit—can back and turn short.

These indispensable features are particularly profitable at harvest time, when one man instead of two can cut the ripe grain at the rate of 40 acres in 10 hours.

The necessity for saving time and labor is the greatest consideration before the farmer today.

MOLINE PLOW COMPANY
MOLINE, ILLINOIS

Branches at: Atlanta, New Orleans, Dallas, Oklahoma City, St. Louis, Poughkeepsie, N.Y., Baltimore, Los Angeles, Stockton, Cal., Spokane, Portland, Salt Lake City, Denver, Kansas City, Omaha, Minneapolis, Minot, N.D., Sioux Falls, S. D., Des Moines, Bloomington, Ill., Indianapolis, Columbus, Ohio, Jackson, Mich.

Shorten Your Harvest Days
Buy Your Spring Suit Now

The whole world puts on new clothes in the spring. Be in the swim! Neckwear, shirts and gloves appropriate for the time. Get a new soft hat to top off your appearance.

BUTTRICK & FRAWLEY, Inc.
The Home of Hart Schaffner & Marx Clothes

If Clothes don't count try getting a job in your 1914 suit.

Perhaps you did not realize that outward apparel reflects your inner self.

Our effort is to properly clothe you.

W. J. Reed
146 E. State St.

Take a little sunshine into the sick room

“Say it with Flowers”
on her birthday, anniversary or holiday

Every event is an occasion for flowers.

Our service covers the entire U. S. and Canada and the principle cities in Europe. Ask us about it.

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THE BOOL FLORAL CO.
215 E. State St.
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Tell Advertisers Who Introduced You
Three Million Appropriated For New Buildings

College Gets Added $300,000 For Expenses of Current Year

Salaries May Be Raised

Vice-Directors of Research and Resident Teaching Created

A half million immediately available for new buildings, with two and a half additional millions to go ahead with the new building plan, is the increase of almost three hundred thousand over last year for salaries and running expenses; the creation of the positions of Vice-President of Resident Teaching and Vice-Director of the Experiment Station—the only positions of the College appropriation bill, passed by the legislature and signed by Governor Smith on April 13.

$1,800,090 Right Away

The bill carries a total appropriation of about a million eight hundred thousand for immediate use of the College. A half million of this is definitely set aside for construction, and fifteen thousand for the state game farm. While no definite provision is made, it is thought that more than two-thirds of the increase allowed for running expenses is to go to a long contemplated increase in faculty salaries.

The People Asked For It

This appropriation, which will allow the College at once to raise salaries to a more reasonable figure and to initiate building operations necessary to its proper expansion, is largely to be credited to a volunteer committee of farm men and women who came to Ithaca last fall and saw what the needs were. From that time on, they have been indefatigable in bringing to the attention of the legislators the necessity of such an appropriation as has now been made.

More than 30 dairy inspectors of the state were here for a five-day conference from April 12 to 16. Their objects were the development of a better system of inspection, standardized thruout the State.

HONOR STUDENTS

On April 9, the first University convocation hour for the recognition of scholastic rating was held in Bailey Hall. The names of the following appeared on the program as the students in the College of Agriculture, having the highest scholastic rating:

Seniors: Milton Adler, New York; Howard Crandall, Ithaca; Ethel Hausman, Ithaca; Will C. Usney, Bellevue, Ohio; R. Glenn Knapp, Port Byron; Charles E. Krey, Washington, D. C.; Russell Lord, Cockeysville, Maryland; Iva Evelyn Miller, Alden; Ernest G. Robinson, Moore, Montana; Lloyd H. Schroeder, New York; Charles K. Shibley, Kingston; Frances Van Arsdale, Alden; Robert M. Volkert, New York City; Vernon W. Wagner, Brooklyn.


Sophomores: Hemstead Castle, Westfield, Massachusetts; William J. A. Ewald, Utica; Ray L. Hahn, Atwater; George B. Happ, Fort Jervis; Katherine W. Harris, Harrisburg, Pennsylvania; Earl D. Merrill, Loveland, Auburn; Frank B. Mitchell, Brooklyn; Martha Parrott, Lake George; Ruth St. John, Daniel A. Talmage, Riverhead; Charles K. Tucker, Brooklyn; Lydia White, Bath.

Babcock Changes Positions

Resigns as Secretary to Be Manager of Farm Bureaus

H. E. Babcock has resigned as secretary of the state federation of farm bureaus and will take the same position to the board, and has been appointed by the board of directors, Frank Smith, as his successor.

More Afternoon Lectures and Morning Labs Considered

At the behest of the faculty, Doctor Betten is considering ways and means by which the schedule of classes for next year might be rearranged in places so as to cut down on the present number of conflicts.

A chart some eight feet long by four feet wide, covering the entire top of the large table in his inner office, has been prepared for Doctor Betten to list every course in the College by the days of the week and hour in which it is given. While this chart is as yet not completed, it is thought that it will show many courses coming in the middle of the morning or afternoon for which there may be need to shift to other branches.

Suggestions Wanted

To give further definite basis for reorganization, Doctor Betten has asked each department to furnish him with a sequence list of elective courses that students specializing in their department ought to have. It is not expected that sweeping changes need be made, but some scheme such as shifting a few lecture courses to the afternoon and a few laboratory courses to the morning would be considered.

Doctor Betten believes that students can give great aid to the work by bringing to his attention specific problems which they have encountered in the matter of conflicts, and he will be glad to see such students in his office at any time.
The annual ag. banquet, held in the Domecon Cafeteria on March 27, was marked by the last public appearance of President Schurman before going to China on investigating commission, and by the first appearance of the Dean's Hat, a traditional plug which has long existed as a tradition in the College of Agriculture, but which, unlike most traditions, has been little known. There were also other features which, the professors say, we will take up later.

Following President Schurman's address of encouragement and counsel, Dean Mann arose with a bulky bundle in one hand and a stack of letters in the other. He explained that he was about to assume the direction of the College of which the College was as yet innocent. Unwittingly the flicker of a magnificently-stovepipe hat of the old-fashioned type that flares a little at the top and which makes a high hot air balloon. It was, in every respect, what could be properly be called an elegant hat. The audience gazed on it enraptured, with presentation due solemnity.

I. P. R. The First Owner

In the days when the College was young, he said, somebody thought that Dean Roberts could cut out and make a perfect plug. They had seen such a hat as this. This one, in fact, was the very top-piece purchased by Dean Roberts by an admiral and presented with due solemnity. When the first Dean gave way to Doctor Bailey, he presented the hat to Doctor Bailey, the priceless chapeau to the new director. This letter Dean Mann swallowed passers passing the hat, so to speak, from Dean Bailey, to Dean Galloway, and from Dean Galloway to himself. In the course of the first big indoor meet insted that the Dean properly crown himself with the thing at least three times his public. (Cries of "Put it on! Put it on!")

It Fits Dean Mann Lovely

It was also suggested, continued Dean Mann, or he was about to continue, but the clamor that he was one of the few who had fitted perfectly. The crowd applauded with fervor, and he seated himself as only a gentleman wearing a plug hat thirteen and three-quarter inches can seat himself. Thus it is that traditions grow into customs. Henceforward the Dean must always crown himself with the Dean's Hat; that is settled.

The committee in charge may be said to have had bad judgment, in setting the affair on the same night as the Glee Club on Friday, April 16, Irene Zapf was elected president and Agnes Fowler secretary-treasurer for 1920-21.

OLD INSECTARY MUST GO

The old Insectary, built by Professor Creel from government service in 1886, is soon to be razed to make way for the new Chemistry Building which is to occupy that site. It is thought that the present site of Morse Hall will be left free of buildings in the future.

The Insectary is not pretty to look at, but it has been a landmark to many generations of Cornellians, who will be sorry to see it go. Much of the work for which the Insectary was noted was accomplished there, and Professor Mark Singerland got his start as an entomologist within its walls.

TIP PORTER GOES

J. P. ("Tip") Porter, instructor in the landscape art department, has been granted a leave of absence from the University for the purpose of permitting him to do some experimental landscape work in Pittsburgh, Pa., where he will be employed by a large firm of landscape architects and contractors. He will be in charge of the designing contract work, with which the company is becoming very familiar. He is expected to make a report on the plans he has made and submit them for approval.

HITTING THE MARKET HARD

The meat course has been sending shipments of hot-house lamb to New York and so far have either topped the market or else each time have come very near doing so. Once they received a dollar a head above the next highest price.

Dom Econ Adopts a Bouncing Baby Boy

And Here Is the Official Dope of the New Campus Celebrity

A new feature has been added to the course in Household Practice for the seniors. This feature promises to command more interest than any other recent development in Home Economics, not only from Dean Econ students, but also from many outsiders. A baby has been imported to the Ag. Lodge.

The baby's name is Richard Lewis—he came from Syracuse and at the time of his arrival at the Lodge he was three weeks. Richard is a fine strong boy and will undoubtedly thrive under the excellent care he is to receive.

Training the Aim

The purpose of this new feature in Home Economics is practically obvious—heretofore training has been given in perhaps all other ways. Nothing has been done to give the students experience in the care and training of children. With this in mind the Home Economics faculty has sought out Richard, who will live right in the Lodge and be under the care of the seniors. The Lodge has his daily bath in the morning, his feedings recorded, and his care is left to the seniors. Passers by, who see the baby in his carriage on the porch most of the day, have no fear that Richard will be too much handled. The fact that he is young greatly facilitates the problem of his adjusting himself to so many new people; he has not yet gotten accustomed to one person so has no objections to having different people to care for.

There May Be More

It is the hope eventually to have each class raise funds for the support of the baby whom they will care for as seniors. While in the meantime, with several practice houses operating, it will be possible to keep the children under the care of the department until each child is able to support himself. An effort will be made to keep this baby in Ithaca during the summer, so next year's seniors can have him as well.

After he is fifteen or twenty months old he will probably be placed in some home for adoption. Meanwhile, while he is the object of so much interest and homage that except for the fact that he is not allowed to rule he might well be called King Richard.

Among those elected to the Junior Women's Society, Raven and Serpent, Pericles, Plato, and the Temple, are Misses Pratt and Gertrude Lynah are members of the College of Agriculture. All three are students in the course in "straight ag."

At the meeting of the Glee Club on Friday, April 16, Irene Zapf was elected president and Agnes Fowler secretary-treasurer for 1920-21.
Daddy Tailby, Boss at Barns, Retires

Came Here When Roberts Was Dean, Forty-Four Years Ago

In view of his advancing age and failing health, G. W. Tailby, Sr., superintendent of the Horse Barn, has been placed on the inactive list as a reward for forty-four years of faithful service. Thruout these years Mr. Tailby, "Daddy," as he is called by all who know him, has served the College in the capacity of farm foreman and later as superintendent of the horse barn. In the early days of the College he was brought here thru the influence of Professor Roberts. When he came the College barns were on the site of Lincoln Hall, and the Quadrangle was an orchard. He has witnessed the steady growth and expansion of the College and has a fund of stories about the activities usually "Day" always was for the "under dog" and many a time he assisted an unfortunate "Freshman" to outwit a resident sophomore in the days when hazing was really hazing.

Lodge Built for Him

As the College grew, new barns were erected in the rear of what is now Bailey Hall, and a little cottage, now used by the Dom Eon girls for a Lodge, was built for "Daddy's" residence. Until about ten years ago, "Daddy" had the title of farm foreman, also in reality he performed the duties usually looked after by a farm manager. He worked shoulder to shoulder with Professor Roberts in the work of the College, and for over twenty years was his right hand man in the field. Some eight or ten years ago he was transferred to the department of animal husbandry where he was made superintendent of the horse barn, a position he has recently occupied.

"A Christian Gentleman"

"Daddy" is a skillful farmer, and an expert horseman. By nature, he is always a leader, never a driver, and his sunny disposition has enabled him to get far more work out of his men than the ordinary boss. But perhaps the best idea of his character may be gained from Professor J. L. Stone's statement: "Mr. Tailby is faithful in his work, loyal to his employer and to the College, of the highest honor and integrity, and a real Christian gentleman."

Morton Takes His Place

Myron Morton is filling the position of Superintendent of the Horse Barn, taking the place of "Daddy." Mr. Morton graduated from the Edith School of Agriculture in 1912. After that he came here as a special student and majored in agriculture. During the fall of 1913 he took the horse training course and at Farmers' Week in 1914 won the first prize for the best trained colt. He also

G. W. TAILBY, SR.

fitted a bull and won a gold medal for the best fitted animal in that class. Later he won the grand championship for the best fitted animal in the show. After completing his course, he remained here for a while looking after the cattle and instructing in the horse training class. Following this he went to Robinson's estate in Herkimer County where he intended to live. He remained there for three years and returned to the College a year ago last fall.

Mr. Morton is a natural stockman; he loves all animals in general, and horses in particular.

Twenty Ag Men Get The "C" at Smoker

More than Quarter of Letters Go to Students in Agriculture

Of the seventy-six athletes who received their championship ribbons at the annual Ag Men Smoker held in Bailey Hall on Friday evening, March 26, twenty were Ag. students. In spite of the rain the hall was taxed to its capacity.

Professor Bristow Adams, acting as toastmaster, introduced the speakers with customary wit. John P. Henry, baseball coach, made his first appearance before a Cornell audience. Romeyn Berry '01, graduate manager of athletics, and John Terry McGovern '00, the corner-stone of Cornell's track team, both gave interesting talks of their experiences. Colonel Frank A. Barton '01, presented the "C"'s.


Ag Leads for the Banner

The present standing by points in the Intercollege Banner Contest places Ag at the top of the list. The totals below include the points awarded him for his own track, basketball, and the indoor track meet.

Agriculture, 26½; Veterinary, 20; Mechanical Engineering, 19½; Arts and Science, 19; Chemistry, 18; Civil Engineering, 10; Law, 4; Architecture, 2.

When a man can tell a joke on himself, he's qualified to be a neighbor of the First Order. Professor Harper is hereby appointed Prime Minister. He recently showed his qualifications for this office in an An. Hus, 5 lecture. At the beginning of the hour he distributed some printed sheets showing the worst looking horse in existence, and on which were indicated graphically about every unsoundness a horse could have. In introducing this animal, Professor Harper said that several people had tried to steal it from him, and were printed with the worst looking horse in existence, and on which were indicated graphically about every unsoundness a horse could have. In introducing this animal, Professor Harper said that several people had tried to steal it from him, and were printed sheets. Thereupon, the class looked carefully over the sheet and observed down in the lower right-hand corner the name, emblazoned there in bold-faced type: Harper.
NEW CAFETERIA MANAGER

Miss Anna Hartwell Barnum comes to the School of Home Economics as manager of the cafeteria. Miss Barnum was first manager of the Great Cafeteria at Camp Upton, Dormitory, Wittier Hall, Teachers' College, later teaching domestic science at Hampton Institute, Virginia, and the Shipley School, Eynan, and from there accepting the management of Holly Tree Inn at Ithaca, New York. Miss Barnum went to New York as manager of Barbour House, a hotel run for business women. During the war as Vocational School of cafeterias in the hostess houses at Camp Upton, she served her country in the capacity of dietitian. With the closing of the camp, she accepted the management of a cafeteria connected with the Washington Irving School, New York, and comes from New York to Ithaca.

HOTEL WORK FOR WOMEN

Margaret Noble, instructor in foods, comes back from an Easter vacation spent in Washington, D. C., while she has been visiting her friend who is assistant manager of the Chevy Chase Club. The Chevy Chase Club is the largest women's club in and around Washington and has for the first time in its history installed women in managerial positions. The work of the manager-director and her assistants shows the development and transformation in executive positions in women's clubs and hotel business. It is apparent that hotel work is becoming more and more of women's work and that the preparation for this necessary service will be brought about largely by training in Home Economics.

MEET MISS FRENCH

Irene M. French, a new instructor of Clothing and Textiles on the Extension Staff, comes to the School of Home Economics after three years' training at Mechanics Institute and one year at Teachers' College. Her teaching experience was gained in the Vocational School of clothing at Cornwall, N. Y., and in the three years as teacher of clothing and textiles at the New York State Normal School, at Geneseo.

NOTED ENGLISHWOMAN HERE

Dr. Winnifred Cullis, one of the three distinguished British women who are visiting educational institutions in the United States, visited Cornell, Thursday and Friday, April 15th and 16th, as a guest of home economics faculty. She gave addresses on two occasions, having dinner in Prudence Risley Hall, and, following afternoon, at the School of Home Economics, when the members of the Association of Collegiate Alumnae and the Cornell Women's Club was entertained by the home economics staff.

Dr. Cullis has the distinction of being the only of the two women in Great Britain who occupy University chairs, being Professor of Physiology in the London School of Medicine for Women in the University of London. Dr. Cullis is also the chairman of the Committee on Relations of the Federation of University Women of Great Britain.

FRIGGA FYLGA CAVORTS

The Frigga Fylga party, held in the Domecon building on Friday, April 16, was a great success. The first part of the evening was devoted to games and dancing. The Glee Club gave a stunt; then came the last event, the big Indoor Track Meet. The official program announced eight events each of which was closely contested. The high jump was won by whoever could jump the highest, and the note; sticks of candy were consumed at a rapid rate in an endeavor to win the pole vault; the speaker with which a penny could be rolled along a yard stick determined the yard dash; next came the handicapped dash, the handicappers tried their skill at carrying a lighted candle across the room.

Ice cream and wafers were served as refreshments. After singing the Evening Song the party broke up, declaring that it was the best Frigga Fylga meeting of the year.

FORESTRY

TRIPS AND TALKS

Professor H. S. Hosmer attended a meeting of the American Pulp and Paper Association at the Waldorf Astoria in New York City on April 10. The main purpose of the conference was to present facts and figures to manufacturers and users of paper, in respect to the pulp and paper supply, especially free news print paper.

Neighboring states will represent Cornell at the annual meeting of the National Lumber Manufacturers Association, to be held at the Congress Hotel, Chicago, the week beginning April 19. A complimentary dinner will be given Tuesday, April 20, to sixty of the leading foresters of the United States. Herbert Hoover will speak on Wednesday in relation to the conservation of timber supplies and other natural resources.

The main forestry program comes on Thursday, when lumbermen and foresters together will study the principles of the proposed national forestry program. Under the terms of this program, lands will be offered for the conservation of timber supplies, and other natural resources.

Professor A. B. Recknagel will also attend the meeting of the Lumber Manufacturers as secretary of the Empire State Foresters' Products Association.

C. W. Taiby, Jr., is looking after the cow-testing association work. This position was formerly held by J. C. Maddy.

ANIMAL HUSBANDRY

MODEL KING SEGIS RENTED

Model King Segis Konigen, the seed sire of the Holstein-Friesian, was rented to Mr. Maddy for a year. The Holstein herd at the College is largely composed of his daughters and sons. He will not be shipped to Ohio until he has been bred to five or six of the older cows in the herd. Notably among his sire's offspring is A. G. Ernest's Cornel's Grand Old Cow", which freshened recently.

THOUSAND DOLLAR MAGGIE

The next time you go out to the horse barn you want to be sure and look for Maggie, a black mare sired by the Hackney stallion. The animal husbandry department was offered a thousand dollars for her a short while ago. The offer was refused. It came from a dealer who would have taught her the saddle gait and then sold her as a gentleman's saddle horse. Maggie's owner is a Standby bred mare and her sire is Volunteer, from whom she gets her flashy, high stepping action. Just now Maggie is suckling a filly foal, a jet black little thing, that weighed one hundred and seven pounds at birth. The foal is sired by Memere, 48429, a trotting stallion, owned in Ithaca, that has a record of 2:20 1/4. The College also owns a full brother and a full sister of Maggie. Millie, the sister to the foal, is the second place horse in the horse breaking contest last February.

PERSONALS

Professor Whetzel has just returned from Bermuda Islands. He went there at the request of the Bermudian government to investigate potato and onion diseases.

Professors Heinicke, Rees, and Vinson are doing extension work in pomology thorough the state.

U. P. Hedrick of the Geneva Experiment Station is now a member of the staff of the department of pomology.

Professor E. H. Farrington, head of the dairy department of the University of Wisconsin, recently visited the dairy department of the College.

KNUDSON AT MADRID

Professor Lewis Knudson, who is in receipt of a sabbatical leave, has recently finished a series of lectures at the University of Madrid on the "Physiology of Plants." The lectures delivered in French and were given in connection with the Botany Department of the University.

Following his leave of absence from Cornell, Professor Knudson studied for several months during last fall and winter at the Pasteur Institute in Paris. He is now in Metz and will travel through Germany and Italy before his return to Iowa this May.
THE CAMPUS COUNTRYMAN

Devoted to Neighborhood Happenings at the Top of "The Hill"

Published on the first of each month during the school year by The Cornell Countryman, Inc. Contributions should be in the hands of the Editor by the fifteenth of the month previous to the date of issue. Say what you want and sign it, indicating whether you want your real name used, or another one.

RUSSELL LORD, Editor

No. 7 May 1920

THE CAMPUS COUNTRYMAN

Wherein We Retire

The new board takes over the paper for the June issue, and we are thru. The Campus Countryman passes to new hands along with its parent paper. There are the usual things to be said, and something more.

Short and rather unceremonious has been our dominion over the heat and columns of this friendly supplement to the larger paper. The job was wished on us when Doc Fuller graduated in February, on the grounds that we were the first to have suggested the wild idea of such an insert as The Campus Countryman, and that somebody had to carry on the work which Doc had begun. It has been not only a matter of work, but at the end of our share of it we were to raise a serious question in all sincerity.

The Campus Countryman was started as a stunt to gain a greater campus interest in the larger paper. This: it was included only in those copies of the campus paper which were distributed in and about Ithaca. Almost from the first, however, there has been in the minds of those responsible for the thing a belief that the idea has greater possibilities than mere stuntiness, and there has been a consistent effort to make it something real, carrying the intimate news of the ag. campus and the spirit thereof to the alumni.

It was felt that the old Daily campus Notes of the period was too stiff and formal to carry such a spirit. Since February, The Campus Countryman has been inserted in every issue of the paper, in town and out of town.

There can be little doubt that the innovation has aroused greater local interest in the paper as a whole than previously existed, and we have heard from here and there in the alumni field that it was more or less liked outside. But the point is: Is The Campus Countryman getting interest merely on the basis of a certain stuntsiness, or is it filling its real mission of carry-

ing the news of the campus to the local and alumni reader better than the old Campus Notes department could do it?

This is the question, and Countryman readers can do the paper a real service, in helping it decide. Are we to believe that The Campus Countryman is worth continuing next year. If it is not, there is good stall, all right, but we don’t want to go on with it on that basis. If it has been accomplishing more than that, we are all right and even better. We would feel well repaid for the trifling amount of work and time we have spent on the thing if we were, our own way, to bring in a respectable number of opinions, one way or another, from around the campus and from about the state.

Wrengineers

It was back in the Stone Age that woman first emancipated herself from the cabin, employing such weapons as the gods had given her, and there is every indication that, if we are to believe the campus citizen, the handiest thing at that time was a tombstone conveniently carved into a common horse-asso, and applied to the severed brow of the mere male whenever occasion demanded. Things became more civilized, the fellows served the same useful purpose.

And now the march of progress has brought the hands of enfranchised woman a weapon even more deadly — the monkey-wrench. For now the campus has a monkey-wrench of Malden, the terrible Wreengineer.

These historical musings arise from the decided manner in whiching the hairpin, and the right, to the philosophy of such movements.

The day after the squib was published, he received an anonymous but courteous letter, begging him to replace the hairpin which he prevailed upon us to publish in the face of our better judgment, and implored that he might be permitted to enter into the eighteenth century and rix a solitary hairpin to a woman who he believes to carry too many in her pocket.

The Wrengineer makes no apology for his action, and says, “You vulgar piece of tin, How dare you speak to me? What the devil’s that printed on your door:

All I can see for mud
Is ‘County Agent’—what is that?
Ye Gads! S’death!
I get your number, Henry, now
It mightily quick!
You’re nothing but a horses vegetable
Of nothing
You’re old and cheap and rickety;
I’m young and rich and new;
The limousine is a horseless car;
Thou pertwurves!”

Spoke the stately limousine
(Turn the column’s nearly done,
So guess my column’s finished)
The Ford is having fun.
They who know Fords and flowers
How hard a Ford can roar.
And this Static Ford must spit its sides.
And then some more!
Its bubbling gizzles guffaw
Till the gas-tanks bubbly, dry.
It stagger on its Fordly tires
And Fordly wets a horse.
But now it soberly
And slowly does address
The limousine with optic
Of dire distress:
Oh pretty little limousine,
So sweet, and neat, and new,
Go take a bow to our Ford A and Fordy;
And tea, and dog-show, too,
Roll smoothly on the city streets
Like a peacock in the sun.
But let a Ford go, mud is deep.
And work is done!”

He said a lot of other things,
And they were very true,
I guess my column’s finished.
But what is that to you?
The idea’s this: I’ve filled the
And far as I can see,
There’s nothing further to be said.
So long! — E. D.
A conference upon co-operative organizations between consumers and producers was held in Syracuse May 31, at which several neighbors from the extension department of the community gave addresses. This included Neighbors Mann, Adams, and Burritt. The subject for the conference was 'The Possibility of Direct Dealings Between Producer and Consumer Thru Co-operative Organizations'.

L. O. Gordon, representing the University of Pekin, visited our community lately, and conferred with Dean Mann regarding experienced men who might be available to undertake the foundation of a college of agriculture at Pekin University. The funds for the new college are being advanced by wealthy Chinese, but the personnel must come from this country.

The schedule for Intercollege baseball is now completed and as soon as the Intercollege Athletic Council passes on it, play will begin. Ag. has the jump on the other colleges. Let's go.

Neighbor Guthrie of the dairy department has been appointed chairman of the Committee on Butter Standard of American Dairy Science Association. The duty of this committee is to keep the association informed as to what the best and most practical butter standard would be from the viewpoint of law enforcement.

An Hus 17, the advanced judging class, met for the first time on April 10. The class went over to Neighbor Warren's farm to judge a ring of cows and one of heifers. The individual placed at the top of the heifer ring was a splendid animal that freshened as a two-year-old in May, 1919, and nearly a year later, in the same lactation period, she was milking forty pounds a day.

It is planned to have the class attend either Mace's annual sale or else Abbott and Clark's dispersal sale. The sales will be held in Cortland about the middle of May.
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<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover—Isaac Phillips Roberts</td>
<td>506</td>
</tr>
<tr>
<td>Frontispiece—The College Days that Are Gone—L. H. Bailey</td>
<td></td>
</tr>
<tr>
<td>The Larger College of Agriculture—A. R. Mann, '04</td>
<td>507</td>
</tr>
<tr>
<td>Back Home—E. D.</td>
<td>508</td>
</tr>
<tr>
<td>How Can the Soil Survey Be Made More Useful to the Farmer?</td>
<td>509</td>
</tr>
<tr>
<td>T. L. Lyon, '91</td>
<td></td>
</tr>
<tr>
<td>To the Former Students of the College of Agriculture—Floyd S. Barlow</td>
<td>512</td>
</tr>
<tr>
<td>A New Farmers' Week</td>
<td>513</td>
</tr>
<tr>
<td>The Reclamation of Pennsylvania’s Desert—Gifford Pinchot</td>
<td>514</td>
</tr>
<tr>
<td>The Common Sheep Infecting Parasite—W. C. Buell</td>
<td>516</td>
</tr>
<tr>
<td>Constitution of THE CORNELL COUNTRYMAN</td>
<td>518</td>
</tr>
<tr>
<td>Book Reviews</td>
<td>519</td>
</tr>
<tr>
<td>The Farm Home—F. L. Fairbanks</td>
<td>521</td>
</tr>
<tr>
<td>Editorials</td>
<td>522</td>
</tr>
<tr>
<td>Former Student Notes</td>
<td>523</td>
</tr>
<tr>
<td>Photograph of Dr. C. W. Gay—Courtesy Sickle and Sheaf</td>
<td>525</td>
</tr>
<tr>
<td>THE CAMPUS COUNTRYMAN</td>
<td>549</td>
</tr>
<tr>
<td>Index to Volumes XVI and XVII</td>
<td>559</td>
</tr>
</tbody>
</table>
The College Days
That Are Gone

The college period comes but once in a man's or a woman's life. It soon passes. It is gone forever. Only its fragrance remains, the sense of satisfaction and power that is born of it, the lasting friendships, the calmer and more confident outlook to life. It is a precious period to remember. We should not let it slip away from us, to be lost in the multitudes, in the affairs of the repeating days, to be buried in the years. By tying ourselves to the college days we express again the best aspirations, we take courage for the days yet to come, we love the world for the opportunity it offers. Reave us of our memories and we remain but poor slaves of the unending task.

[Signature]
The Cornell Countryman

A Journal of Country Life - Plant, Animal, Human

Vol. XVII  ITHACA, N. Y., JUNE, 1920  No. 9

The Larger College of Agriculture

BY A. R. MANN, '04

Dean of the College of Agriculture, Cornell University

In response to the request of the Editor of THE CORNELL COUNTRYMAN, I am glad to make a detailed statement of the authorizations given the College of Agriculture by the State Legislature at its recent session. I am sure the facts will be of interest to our former students, as they have been to resident students and faculty, and that the satisfaction with the outcome will be widely shared.

The greatest need in the College of Agriculture for some years, and particularly since the beginning of the war, has been for substantial increases in salaries for both teaching and clerical staffs. The very distressing conditions confronting teachers everywhere were fully shared in by the members of our own staff. For the general maintenance of the College of Agriculture during the year 1920-21, the Legislature provided $1,270,888.80, an increase of $260,170.00 over the appropriation for the year 1919-20. Of this increase nearly three-fourths is applicable to increases in salaries of the staff. While these increases will still leave us considerably below the minimum scale recommended by the Farmers’ Committees and concurred in by the Trustees, they will afford substantial relief to a deserving and grateful faculty.

With the very large development of the College of Agriculture in its teaching, research, and extension activities, it has become increasingly apparent that there was need for administrative officers to assist the Dean in the direction of these three large phases of the work. Three years ago a beginning was made by the appointment of Professor M. C. Burritt as Vice-Director of Extension. This year the Legislature was requested by the Trustees to provide salaries for a Vice-Dean of Resident Instruction and a Vice-Director of Research. The appropriation act carries both of these positions. It is a pleasure to be able to record here that on May 1, 1920, the Board of Trustees appointed Dr. Cornelius Betten, who for five years has served the College with conspicuous success as Secretary and Registrar, to the newly created position of Vice-Dean of Resident Instruction—a position for which he is eminently qualified by training and experience and the confidence of his associates.

The appropriation act also provides three new professorships in agricultural economics and farm management, a new professorship in plant pathology, and two new professorships and one assistant professorship in home economies.

The extreme need of the College for additional buildings has been apparent for a number of years. In 1910 the Trustees...
submitted to the Legislature a plan for the further development of the College, part of which has since been provided. By reason of the war and other conditions the State has now made no provision for new construction, except some minor items, for a number of years, and the work of the institution has been hampered severely by lack of space. It is therefore a special pleasure to be able to report that the appropriation act instructs the State Architect to prepare a plan for the further development of the College of Agriculture and authorizes the Board of Trustees to enter into contracts on the basis of such plan in an amount of $3,000,000, of which amount $500,000 is immediately available. It is roughly estimated that the further development contemplated by the Architect's plan would cost, on the basis of present prices, between five and six million dollars, and the intention has been to authorize the Trustees to enter contracts in the beginning for about one-half of the extension. The bill provides that the plan of the State Architect shall be approved by the Trustees of Cornell University by or before December 1, 1920. Separate provision is also made for the immediate construction of part of a cold storage plant in the orchards at a cost of $17,000.

The College has been greatly hampered during the last four years through the imposition by the State of a minutely segregated appropriation act whereby the salary of every individual employed was a separate appropriation and unchangeable. The Legislature and the Governor have realized the hardship which this worked to the institution and have this year allowed a small measure of freedom in the adjustment of salaries of the teaching staff.

It is of no less satisfaction to report that the securing of the appropriations was very greatly aided by the active and wide-spread interest of farmers and their organizations in the welfare of the College of Agriculture. The Alumni Association of the College also exhibited a helpful, active interest, for which we desire to thank them.

These additions will make possible a larger and better State College of Agriculture for New York, and we are deeply sensible of the increased responsibility for efficient service which these appropriations place upon us.

Back Home

When all the folks has gone to bed,
    And when the fire is way down low,
I get to thinking where I was
    And what I did a year ago.

I was a soldier then, in France,
    I took my chance like all the rest,
And I come thru: them other guys—
    Sometimes I think they had it best.

They died when they was going good.  
    They're thru; they played the biggest game,  
And maybe lost, and maybe won.  
    And things back here—they ain't the same.  
    
    E. D. N.
How Can the Soil Survey Be Made More Useful to the Farmer?
Some Definite Steps in Solving the Problem
BY T. L. LYON '91
Professor of Soil Technology, Cornell University

A SOIL survey is the first step towards a definite and systematic knowledge of the soils of a region. Beyond this lies the further knowledge which is necessary to an intelligent management of the land. The use and limitations of the soil survey have been interestingly discussed by Professor Buckman in the May issue of The Countryman. It will not be necessary, therefore, to attempt any explanation of why the survey, as conducted at present, is inadequate from the standpoint of soil utilization, but a few words may be said concerning ways of supplementing the soil survey in order to make it more useful to the farmer.

The classification of soils for survey purposes is based on the source, mode of formation, structure, and results of exposure of the soil to natural agencies, and although it gives much valuable information about a soil, it does not necessarily correlate the type with its lime or fertilizer needs, nor with a definite productivity. As yet, it has not been established that the chemical composition of soil of the same type is fairly constant. The statement of these facts must not be taken as a criticism of the soil survey, which furnishes a valid scheme of classification as far as it goes. Classification is one of the early steps in nearly every natural science, and if a soil science ever

These cylinders hold a foot of soil, and contain samples from several different types and series.
develops, the present classification will be a contribution to that end. Our problem is to project or modify the present system into one in which the final classification will connote certain definite practical relations.

In bringing this about, a complete change of method is probably necessary. Heretofore, the soil survey has depended on field observation, which has placed a limitation on the extent to which the classification of soils can be carried. If the separations are to have more agricultural significance, other methods are necessary. Chemical analysis of representative samples of soil types offers possibilities for a further separation of types, and a means of gaining more knowledge of the soils as now classified. Soil samples for these analyses must be taken carefully and systematically by a competent soil surveyor.

An example of distinct differences in the composition of soils of different series may be found in the analyses of samples taken in Tompkins County. Selecting at random five samples of Volusia and five of Genesee soil, the average lime content of the former is 0.51 per cent, and of the latter 1.65 per cent, while there is no case in which a Volusia soil has as high a lime content as the lowest of the Genesee. The knowledge of such a well-defined difference in chemical composition cannot fail to give much aid in the practical management of these soils.

If, on the other hand, systematic and significant differences occur in representative samples of a type, it may be desirable to separate the type on that basis. This would be especially desirable if a difference in composition accompanied a divergence in some important property of the soil. For instance, a wide variation in the lime content within the same type may explain why alfalfa will grow on some fields of that soil, but not elsewhere on this same type. On this basis a new type may be formed.

Experimentation must next be invoked in the effort to make a more practical utilization of the soil survey, and especially to ascertain whether the lime and fertilizer requirements of a soil type are fairly uniform for the type as a whole, or whether such requirements differ with the various regions in which the type is found. So far as the control of crop production is concerned, this information is vital, as such needs of the soil are not so apparent to the eye as inadequate drainage, lack of organic matter, and poor tillage, which the farmer himself can see. These invisible needs must be detected by experimentation.

Experiments of this kind are now being conducted at the College. About nine tons of soil of the type to be studied are brought from each of a number of places. The soil is taken out to a depth of three feet, and each foot is kept separate. When it arrives at the College it is placed in cylinders imbedded in the ground, and each foot of soil is returned in the order in which it occurred in the field. Each soil is subjected to a series of fertilizer tests to see if samples of the same type, but from different localities, respond in a similar manner to certain fertilizer treatments.

The soil types and the localities from which they were obtained are listed below:

- Dutchess silt loam, Diddell, Dutchess County;
- Dutchess silt loam, Goshen, Orange County;
- Volusia silt loam, Turkey Hill, Tompkins County;
- Ontario loam, Washington Mills, Oneida County;
- Ontario loam, Ridgeland, Monroe County;
- Vergennes clay, Comstock, Washington County;
- Vergennes clay, Chaumont, Jefferson County;
- Ontario loam, Cato, Cayuga County;
- Ontario loam, Sherwood, Cayuga County;
- Volusia silt loam, Virgil, Cortland County;
- Volusia silt loam, Alfred, Allegany County;

This work must be greatly extended if it is to afford the desired information. More types must be tested and more representatives of each type should be used.
To determine the effect of fertilizer on various soils. Note the effect of the absence of phosphorus.

It is possible that these tests may be successfully conducted in suitable vessels in the greenhouse, where more rapid progress may be made, because two or three crops can be secured in a single year. But as the environment is not normal, and as the quantity of soil used is small, it will be advisable to make careful comparisons with the cylinder tests before making independent tests in the greenhouse. The greenhouse also has the disadvantage of not being large enough to allow a large number of soil samples to be tested through a considerable number of years.

There still remains another important part of the plan, which consists in working out the best scheme of soil management for the important soil series or types found in the State. This can perhaps best be done by experimentation on fields located on soils representative of certain soil series. The number of these fields should be restricted as much as possible, as they are the most expensive equipment used in the work. The cylinder experiments mentioned above, and to some extent the chemical analyses, will serve as a means of ascertaining the extent to which it may be desirable to go in providing fields for these tests.

It may develop, in the course of the cylinder experiments, that the differences between two or more types or series, in respect to their response to fertilizers, are not greater than the differences among representatives of any one type, or, at least, that differences between types are not so great as to be of much practical importance. In such a case, one field might be sufficient for several types or series.

Groups of types having distinctly different response could then be tested on other fields. It is desirable, therefore, to hasten as rapidly as practicable the cylinder experiments, and, in the mean-

(Continued on page 538)
To the Former Students of the College of Agriculture
Which Affords an Opportunity to Invest
BY FLOYD S. BARLOW
President, Alumni Association of the College of Agriculture

THOSE familiar with organization work know that there are two essentials which must be met by leaders and members; namely, a membership of sufficient size to cover the field of activity, and a vital program which is kept before the members constantly. These essentials must be met by the Alumni Association of the College of Agriculture before it can do things worth while.

It is with satisfaction that the writer is able to say that prospects are bright for converting the Alumni Association from an inactive organization into one which shall become a working partner of the College. Credit must be given to Prof. C. H. Royce for the regeneration. At the meeting of the Association held February 11, 1920, Prof. Royce proposed that THE COUNTRYMAN become the official organ of the Association, and that membership in the Association and subscription to THE COUNTRYMAN be combined. This arrangement has been effected, so that the two can be had during 1920 for one dollar and a half.

A membership campaign is now in progress. This new arrangement has been placed before all former students by letter, and a membership committee has been appointed in all counties of the State. This issue of THE COUNTRYMAN has been made a special Alumni number, with the hope that those who read may awake with us to the duty that is ours.

What is that duty? First, to use our efforts to secure every former student of our acquaintance as a member of the Association, whether regular, special, or short course man. When the canvass is over, we will only have perfected our machinery and will then be ready for work. The duty will then extend to the program, and will be of a three-fold nature: to the College, to former students, and to those who should become students. Our combined efforts should be put into the matter of formulating a permanent program which shall be kept constantly before students and former students alike. This program should include projects upon which all can work. Those which have already been suggested are: To induce farm boys and girls to attend the College of Agriculture with the thought of returning to the farm and home; to increase the attendance at Farmers' Week; to acquaint former students with the policies and work of the College; to keep former students in touch with each other; to stimulate scholarship at the College; to give publicity to the College at fairs, and so forth; and to advise with the faculty on matters vital to the College from the view point of laymen.

The officers and Executive Committee of the Association will use their best efforts to provide the leadership intrusted to them. They must, however, have the co-operation of all former students, which must be given in the form of advice, suggestions, and work upon the program being formulated. As above stated, the first duty is membership. The minimum should be one thousand members. The present membership is one hundred twenty-five. The field is a fertile one.

You are being asked to take membership in the Association not merely as a duty, but rather as a sound investment in the future welfare of the College and of agriculture as a whole. This future is far too important to be neglected. The obvious lies before you.
A New Farmers' Week
The College of Agriculture Plans a Three Day Field Meeting

ANNOUNCEMENT has just been made that it has been decided to hold a summer Farmers' Week at the State College of Agriculture. Such events have been held successfully at some of the other colleges of agriculture, and the matter has been under consideration here informally for some time.

Before the war there were frequent largely attended farmers' picnics held on the campus. The staff of the College has desired to see increasing numbers of farmers come to the institution when the experimental work on the farms can be seen. It has now been determined to hold the initial event on June 30, July 1 and 2.

The chief purpose of the convention will be to open the institution, and especially the farms, to inspection at a time when the latter can be seen to advantage, and to provide a program that shall combine lectures, demonstrations, and recreational features.

In general the program will be organized somewhat as follows: In the morning at ten and eleven, lectures will be offered by most of the subject matter departments. In addition, there will be organized automobile tours of the campus and farm, routed and timed in such a way as to consume about one hour. These tours will be under the supervision of members of the faculty who will act as guides. They will leave from in front of Roberts Hall on the hour, beginning at 8 A.M., and will be run continuously until noon. Persons taking these tours will be provided with printed leaflets describing the chief points of interest along the road.

There will be nothing scheduled from 12 M. to 1 P.M., this hour being given over to luncheon, which will be a picnic affair held either in the Stadium or the New Armory, according to weather conditions. A band will be provided to furnish music during the luncheon hour.

Beginning at 1 P.M., several demonstrations will be scheduled at Caldwell field. The crowd will go in a body by automobile from the Stadium, and on reaching the experimental farm, will divide up into groups according to subject matter interest. These demonstrations will be of an hour and one-half duration each. There will be two during the afternoon.

The evenings will be given over to recreational features, music, games, and stunts. These will be staged in the Stadium or in the Armory, in accordance with weather conditions.

It should be noted that in scheduling this event, United States standard time, the time most used by farmers, will be followed.

During recent years, county organizations of farmers have quite commonly held summer excursions to inspect points of interest and it is anticipated that the summer Farmers' Week will attract a large number of such excursion parties to the College in co-operation with the granges, county farm bureau associations, and other organizations.
The Reclamation of Pennsylvania's Desert
Plans for Utilizing Five Million Waste Acres
BY GIFFORD PINCHOT
Chief Forester. Commonwealth of Pennsylvania

Pennsylvania was once covered with large, dense, and extremely productive forests. The large have become small, the dense have become open, and the productive have become waste. Today there are five million acres of idle mountain land in Pennsylvania too rough and rocky for the plow. This is the Pennsylvania Desert.

Many agents helped create these vast reaches of idle land, but man played the leading rôle. It took him but a few generations to remove the original forest, which required many years of Nature's best efforts to build up. Where once stood the best stands of timber in the United States east of Idaho, there remain today only wide stretches of bare and barren mountain land. This is our meagre heritage. It has little present value, but many fruitful possibilities, if handled in a constructive way.

To let this land remain idle is an economic crime. It is the duty of Pennsylvania to restore these vast areas of desolation to productive value. This is the work of the Department of Forestry, which began in 1893 as a division of the Department of Agriculture, and is now twenty-five years old.

The first thing I did upon taking charge was to ask members of the field force to give me a plan for the reorganization of the Department. They did it promptly and well. These recommendations resulted in a complete recasting and marked simplification of the entire organization of the Department, the effect of which shows already, for the morale of the personnel is improving and the output increasing. This is important, for there is much work ahead and only a few men, little money, and meagre equipment available with which to do it.

Four bureaus will handle the executive work. They are, Protection, Operation, Silviculture, and Lands. In addition, the Forest Academy and the offices of Maintenance and Information have their special work.

The most important duty ahead of the Department is the suppression of forest fires. Every other kind of work must give way to it while the fire season is on. The entire state has been divided into forty fire districts, each in charge of a trained forester, who has direct charge of fire wardens, patrolmen, observers, and other employees. Forest protection is needed in every section of the state, for there is no part of the Commonwealth of Pennsylvania without forest land.

We are doing our best to eliminate fire hazards, and to hold responsible all persons, including companies and corporations, who through carelessness or negligence, cause forest fires. The forest fire laws of Pennsylvania are in many respects good and strong, although not yet complete. They will help do the work, but we are trying to get results through friendly co-operation, rather than by costly lawsuits. Public attention has been widely called to the need and value of forest fire prevention, and conferences are being held with forest land owners, representatives of railroads, mining companies, and other organizations interested.

To stop forest fires is a large order, but even a few men who mean business can do a lot to overcome them and to restore a green and growing cover of valuable forest trees upon the barren hillsides of the Keystone State.

A budget for the Department and each individual State forest has been prepared. A re-grouping of State forests into units of about 50,000 acres each is now under way. The present area in charge of a forester averages about 20,000 acres. This increase will permit a more economical and efficient use of the working force and reduce overhead.
Pennsylvania was once covered with large, dense, and extremely productive forests.

A new system of inspection is in operation, which will help to systematize the various forest activities, promote efficiency, and prevent misunderstanding.

As yet, only a good beginning has been made, but the outlook is promising. Much important work will be done at a summer meeting of all State Foresters, which will be held on one of the State forests. A committee of foresters has been appointed to revise the rules and regulations of the Department, and will submit its report at the summer meeting.

Pennsylvania’s Desert ought to be bought as an investment by the State, for that is the only sure way to reclaim the five million acres which are now producing nothing of value.

(Continued on page 540)
THE CORNELL COUNTRYMAN

EXPERIENCE: A Series of Personal Stories by the Best People in the State of New York—Men and Women Designated by their Farm Bureau Agents as Leaders in their Home Communities.

XIV. The Common Sheep Infecting Parasite
A Description of the Life History and Suggested Control of the Stomach Worm

BY W. C. BU Ell

Holcomb, N. Y.

The greatest foe of the sheep industry in the central and eastern states, far greater than the menace of the wandering dog, is the internal parasite. Of these, the stomach worm, while the least conspicuous of them all, is by far the most destructive; so much so, that I believe that the most important single item in successful flock husbandry in New York State today is a system of management which will keep the losses from this parasite down to the minimum.

The stomach worm has a life history resembling in many ways that of the hook worm of the South. It is a little thread-like worm about three-fourths of an inch long inhabiting the fourth stomach of the sheep. Until once seen, they are quite difficult to detect, and I suspect that not one sheep man in five has ever seen them. But if you will take an emaciated, anemic lamb, kindly assist him to shuffle off this mortal coil, and open him up, you will be pretty likely to find floating around in the liquid contents of the fourth stomach a considerable number of the "haemonchus contortus" alias, stomach worm. At first sight they may look like little shreds of vegetable fibre, but if you look sharply, you will see that they are alive and wriggling like tiny snakes.

Probably most mature sheep on farms where sheep have long been kept are more or less infested, but after a sheep becomes full grown this parasite causes much less trouble. The eggs of these stomach worms, however, are continually being passed off in the droppings of the infested sheep. In the winter months these eggs fail to germinate, but in warm, moist weather the little worms hatch out in a week or so, and after a few days crawl up a little way on some blade of grass and there wait for the unwary lamb to come along and swallow them. In the stomach they finish their development and incidentally finish the lamb, as Mr. J. E. Wing so aptly said in his book, Sheep Farming in America.

We all know the symptoms of stomach worm infection as shown in the languid attitude, colorless skin, and generally upset digestion of the lamb. The parasite is one which the shepherd must always keep in mind, if his lambs are born in the spring and pastured with their mothers. There is no danger of infection so long as the lambs are in the barn, and this fact is one argument in favor of winter or hot-house lambs. But the high cost of grain and forage, and the extremely limited demand for these lambs does not encourage much increase in their production.

In combating the stomach worm an ounce of prevention is worth a pound of worm powder. Lambs are born healthy, and most of the infection seems to come from rich June grass pastures. Clover and alfalfa pastures are much less likely to spread the trouble, since sheep do not browse them so closely, and the lambs are not so likely to get hold of the little worms lying in wait for them. For this reason, the ewes with suckling lambs should, as far as possible, be kept off the short June grass pastures, and when weaned, the lambs should by all means be turned into the clover and alfalfa.
fields, and never into pastures where sheep have been earlier in the season.

Many and varied are the remedies and preventatives inflicted on the meek and patient quadruped. Turpentine, gasoline, coal tar dips, tobacco dust, powders, and medicated salts by the dozen have all been tried and probably have all saved some sheep. But I very much doubt if they have saved one-tenth as many as have been lost by a mistaken dependence upon them. The copper sulphate treatment which has come into use in the last few years gives promise of real value, however. This remedy is safe, easy to give, and cheap. There are different formulas given. The one recommended by the New York State College is one and a quarter ounces of copper sulphate to one gallon of water, with a dose varying from one fluid ounce for a small lamb to two ounces for a mature sheep, given after a twenty-hour fast. We have been using this formula for about eighteen months now, dosing every sheep before turning out in the spring, and again treating every sheep and lamb when yarding them in the fall, also treating any suspicious cases when found during the summer. We do not feel that we have given this program a long enough trial to say just what it will do. But it does seem to us that we have reduced the losses in our flock from this trouble very materially by its use.

One other practise which will go far toward preventing trouble from this pest is the use of young far-Western ewes to keep up the flock, rather than keeping your own ewe lambs for breeders. The stomach worm cannot live on the wide, dry, western ranges, so these ewes are worm-free when we get them. It will hardly be practical to try to keep them so on farms where sheep have long been kept. But if the shepherd keeps the life history of the parasite in mind when arranging his pasturage, and also makes systematic use of the copper sulphate treatment on all of his flock, I believe he can reasonably expect to escape serious loss from this source.
Constitution of The Cornell Countryman
Corrected and Adopted April 23, 1920, at the Annual Meeting of
The Countryman Association

Name
The name of this organization shall be The Cornell Countryman Association, incorporated under the Business Corporation Law of the State of New York as THE CORNELL COUNTRYMAN.

Object
The object of the association shall be to publish a monthly magazine at Cornell University in the interests of agriculture and of the alumni and the student body of the New York State College of Agriculture.

Membership
All registered undergraduates and former students of the New York State College of Agriculture at Cornell University who are paid up subscribers to THE CORNELL COUNTRYMAN shall be members of The Cornell Countryman Association and entitled to vote at the annual meeting.

Annual Meeting
The annual meeting shall be held in the College of Agriculture at Ithaca, during Farmers’ Week.

Board of Directors
A board of directors consisting of seven members shall be elected by the Association as follows: three registered undergraduate students chosen for terms of one year each as follows: one registered student not a Senior when elected from the student body, and the Editor and Business Manager of THE CORNELL COUNTRYMAN, ex-officio; three former students chosen for terms of three years, as follows: one graduate Alumnus who is a member of the faculty of the New York State College of Agriculture of professorial grade, beginning in 1920 and each three years thereafter for a term of three years, the President of the Alumni Association of the New York State College of Agriculture, ex-officio; and a business man from the City of Ithaca for a term of three years beginning in 1921.

Vacancies
Vacancies occurring during the term of office shall be filled by the Board.

Officers of
THE CORNELL COUNTRYMAN
Prior to the annual meeting, the board of directors shall nominate a student business manager, an alumni assistant manager and a student editor-in-chief, an alumni editor, and a student circulation manager for the following year, such nominations to be ratified by the Association at its annual meeting before being effective. The new officers shall assume control of THE CORNELL COUNTRYMAN with the June issue.

Quorum
Twenty members shall constitute a quorum of The Cornell Countryman Association.

Profits
It is not the purpose of THE CORNELL COUNTRYMAN to make money or other profits for the Association or its officers. No space other than for the usual advertising purposes shall be sold, and no reading articles of advertising intent shall be published.

Honorarium
The board of directors may grant an honorarium to the business manager, the editor-in-chief, or the circulation manager, or each of these officers, if the finances of the Association warrant, providing that in such event the ex-officio members of the board do not have vote on this question.

Amendment
This constitution may be amended by a two-thirds vote of the members present, provided that notice of such proposed amendment shall have been given at least two weeks previous, and that the proposed amendment be posted on the College bulletin board at least one week previous to the time of voting on the same.
Modern Farm Buildings
This treatise concerning farm structures should appeal, not only to the teacher who desires to present the subject to his students in a straightforward and practical way, but also to the progressive farmer who recognizes the advantages of good farm buildings.
The development of the subject is manifestly logical, beginning with a description and discussion of the most important building of the farm, the cow barn, presenting typical plans, elevations, and framing, and offering a detailed description of the more essential requirements in the way of apportioning the barn space.
The plans of the various types of buildings show fundamental principles, so that a study of them will help in the solution of any particular individual problem. The author has been interested not only in setting down the information required by the farmer, the herdsman, and the dairyman, but also the practical side in the design of the farm buildings from the standpoint of the architect. He illustrates it with several pictures that set forth the possibilities which farm buildings offer for attractive architecture.
The study of the text will provide the student with a sufficient knowledge of building operations to enable him, with some knowledge of carpentry, to erect his own structures.

J. E. R.

Making Tin Can Toys
(Review written by a boy thirteen years old who has actually made a number of the toys.)
I think it's a good book. You don't even have to know how to read to learn how to make the different things, because the pictures are so plain.
The first thing I made was the steam roller. It wasn't so very hard to do, and I made it in one afternoon. The biscuit cutters are easiest.
You can find all kinds of tin cans any-
where, and the fancy ones sometimes don't need much to make them just fit for what you want them for.

E. W. A.

The Corn Crops
By E. G. Montgomery, Professor of Farm Crops, New York State College of Agriculture. The Macmillan Company, New York.
This is one of the Rural Text Book series and is revised from the edition of 1913. The work is accurate and complete, the treatment simple and direct, and the conclusions are drawn from experiments of many years' duration.
The book is divided into two parts. The first considers Indian corn and occupies the major portion of the book, while the second deals with the sorghums. The consideration of Indian corn is divided into four sections. In the first, the author takes up the question of the structure, physiology, and the normal requirements of the plant. The origin, classification, and fertilization are all covered thoroughly. The second section deals with production as related to climate and soils, pointing out the need of conserving moisture and the effect of poor soils upon production. A classification of corn soils in the United States is included in the section. The third section concerns itself with how best to improve the corn plant and to adapt it to its environment. Methods of breeding, cropping systems, maintenance of organic matter, regulation of water supply are all considered. Emphasis is placed upon the maintenance of organic matter as the dominating factor in extensive corn growing regions. The last section deals with cultural methods, preparation of seedbed, planting, animal and insect enemies, and harvesting. A few pages are devoted to the production of sweet corn and to the culture and judging of show corn.
The second part of the book is devoted to the sorghums. The classification, culture, and utilization are fully covered in a manner which leaves little to be desired. All in all, it is the best
book on the subject that has yet come to our attention. It will enrich the library of anyone at all interested in corn production. L. A. Z.

**Law and the Family**

By Robert Grant, Judge of the Boston Probate Court. Charles Scribner's Sons, New York.

Judge Grant looks at the law question from the woman's point of view. He challenges the wisdom of hampering the next generation, except in the case of palpably incompetent, by limiting the enjoyment of property to income for life. He shows that the reason the average woman understands so little about the management of property is because she has so little share in it. Feminism in fiction and in real life is discussed, as well as domestic relations and feminine independence. He points out the urgent need of a uniform marriage law by citing the instances of variation in the laws of different states.

On the whole, it is a worth-while book, putting in an interesting form problems which have not before received much attention.

R. H. N.

**Poultry Culture, Sanitation, and Hygiene**


With Dr. Kaupp's latest edition of his *Poultry Culture, Sanitation, and Hygiene* there appears for the first time a book which is of equal value to the technical student of the subject and to the amateur poultryman.

In the past, most of the books dealing with the poultry industry as a whole have been written chiefly for service to the beginner with poultry. This has been only natural, for the author realizes that the sales of his book depend largely upon its popularity with people who are looking for information of a general nature. Dr. Kaupp, however, has risen above the commercialization of his book, and has produced a work of real value to the scientific student of poultry.

As the name of the book implies, it deals with the general subject of poultry culture, with special emphasis on sanitation and hygiene. All the material is up-to-date, and the various phases of the poultry industry are discussed in a clear, comprehensive manner. The book contains many pictures, showing the latest modern methods and appliances used by poultrymen. At the beginning, in outline form, is given a plan for a complete course in poultry husbandry, for use by agricultural schools. By adopting *Poultry Culture, Sanitation, and Hygiene* as a textbook, and following the outline plan given by Dr. Kaupp, the subject of poultry would be covered in a most thorow manner.

R. H. S.

**Farm Science**


*Farm Science* is primarily intended for the farm boy who is interested in the principles of all farm operations, yet it contains valuable information which many farmers may not know. It is brief and to the point, contains striking, clear-cut illustrations, and should be attractive to the city lad who wishes to know more of the fundamental operations of farming. Dr. Spillman deals in fundamental principles and does not discuss merely special localities, thus making the book applicable to farm conditions in Maine, California, or Florida. *Farm Science* is divided into four parts, each containing several chapters. The first part pertains to soils and considers soil texture, moisture, and tillage, with an exposition of the operations for putting the seedbed in condition for planting. Part Two deals with the plant and discusses fertilizers, plant propagation, weeds, insect pests, and fungi. Part Three describes the different breeds of livestock and their relative importance. It includes a discussion of the principles of breeding. Part Four is more general and is entitled "The Farm." It explains how to secure the best results from growing crops, gives the fundamental principles of livestock (Continued on page 542)
The Care of Household Machinery

The Big Three: Cleanliness, Lubrication, and Adjustment

BY F. L. FAIRBANKS

Instructor of Rural Engineering, Cornell University

Some certain types of machinery have been used more or less extensively in the farm homes for a number of years, as, for example, washing machines, sewing machines, churns, cream separators, and meat grinders. Much improvement over those first used has been made; more tasks have been overcome by machinery. With the advent of electricity on the farm, the change has been not so much in the machines themselves, as in removing them from the field of hand power to motor power. Naturally, this change has added to the ease of their operation, but it has also added parts which must receive the care of the housewife. The coming of electricity has brought into being many other handy household conveniences which lighten the day's labors, and which have hitherto been out of reach of the farm wife, such as the electric iron and toaster.

To use these household machines efficiently their operation should be understood and the necessity for proper care appreciated. Too often, when hand or animal labor is replaced by machines, the fact that machines need care is overlooked. Very little time is required, but that little makes possible the steady, more satisfactory, and longer use of the machine. The time to give attention to our machines is not when they stop or break, but while they run, and thus prevent the delays, expenses, and annoyances resulting from the condition of certain of our household equipment.

Not long ago, it was believed that pigs were most efficient producers only when caked with dirt and filth, but it has been found that the pig is by nature a clean animal, and thrives best when housed in a place where it can keep itself clean.

All machinery works best when kept clean, and especially is this true of household machinery, because of its more delicate construction.

The first care, then, should be to keep the machines clean. Such a statement, in itself, sounds simple, but by the very act of keeping the machines clean we are learning their construction, and soon come to know if parts are loose or worn, or if they are as they should be. We learn how each part functions, and then when trouble comes, the location of that trouble is made easier because of our understanding.

Next, and of equal importance, is lubrication. This should be taken care of at the same time the machine is cleaned. A few drops of a light, non-gumming oil may be applied to each bearing provided with an oil hole; in the case of a bearing oiled by a wick or oil ring, the wick tube or oil sump should have enough oil in it so that the wick or ring dips in the lubricant.

The last care is adjustment, and in-

(Continued on page 540)
WISH this June number the new 
COUNTRYMAN board is taking up
the pen left by the retiring members, and
is making its maiden trip in the editorial
chair—not a cushioned chair, by the way
—but recently left vacant by them. Accor-
dingly, we wish to thank them for the
heritage they have left us, and the won-
derful opportunities accompanying it. They
have established in THE COUNTRYMAN a
standard of real excellence. It is our de-
sire to gain the insight and ability that
they have gained in this work, in order
that we likewise may maintain that
standard.

IN addition to the elections published
last month, THE COUNTRYMAN takes
pleasure in announcing the election of
Frank W. Lathrop as alumni editor, and
Gerard Hammond as alumni assistant
manager. These elections were made at
the annual meeting of The Cornell Coun-
tryman Association on April 23. By the
election of these men, we are advancing
greatly in perfecting the relations be-
tween the alumni and the College.

THE words, "Alumni Issue," appear on
the cover of this month's COUNTRY-
MAN. We may well ponder these words,
The Officers of the Alumni Association
F. S. Barlow, President, Cooperstown, N. Y.; G. D. Brill, First Vice-President, Jamesburg, N. J.; Anna Hunn, Second Vice-President, Rochester, N. Y.; R. P. McPherson, Third Vice-President, LeRoy, N. Y.; F. E. Rogers, Secretary-Treasurer, Sodus, N. Y.


The Aims of This Department
Many former students say that in reading THE COUNTRYMAN they are most interested in accounts of what is going on at the College, and in the former student notes. Such a statement indicates two aims of this department. It is also the aim of the Alumni Editor to bring to the attention of former students the activities of the Alumni Association.

If this department is worth something to you, give it a boost. Send to the Alumni Editor today all the news of former students you can call to mind. Do not expect to see a large assortment of notes each month if you do not send in what you have.

The Alumni Assistant Manager
Elsewhere in this issue is announced the election of Gerard Hammond as assistant business manager. His proposed duties are of special interest to former students. The bulk of our former students produce high quality commodities; on the other hand, they buy high quality commodities. Business contact among them seems a logical outcome.

The plan is that the Assistant Business Manager will encourage and solicit advertising by the former students in THE COUNTRYMAN. The big majority of our subscribers are former students and as the result of the new arrangement between the Alumni Association and THE COUNTRYMAN their number will be further increased.

Thru our advertising pages the former students may give a considerable push to the better seed movement which the College has organized. Perhaps the State needs to be peppered with your favorite strain of purebred stock. Whatever high class product you would buy or sell, COUNTRYMAN advertising is a good business proposition.

Scholarship and the Alumni
On April 9th, Cornell University held a convocation for the recognition of scholarship. The program listed the names of the high standing students in each college, members of scholarship societies, and winners of prizes. Among the winners of prizes was listed Miss Frances Van Arsdale, winner of the prize offered for the year 1918-19 by the Alumni Association of the College of Agriculture.

We seem to be in harmony with the spirit of the times in offering a scholarship prize. It appears that scholarship may become fashionable at our University. The day is almost done when the undergraduate may enjoy poor scholar-
ship proudly as certain elderly ladies enjoy poor health. We may yet realize that it is entirely possible for the athlete and man of affairs to win an election to a scholarship society.

It would seem advisable that the Alumni Association adopt a permanent program for encouraging scholarship in the College of Agriculture. The prize above mentioned was not offered for 1919-20, but might well be offered again next year. The fact that the College of Agriculture has no scholarship society like Phi Beta Kappa in the Arts College and Tau Beta Pi in the Engineering College offers food for thought.

The Home Economics Reminder
This publication is issued quarterly by the School of Home Economics, and is edited by Miss Alice Blinn. Two attractive numbers have appeared. The College of Agriculture has not lost interest in you because you are no longer attending classes, and this publication is more evidence of it. Those who wish to keep in touch with the School of Home Economics should get on the mailing list of the Reminder.

Farm Boys and Girls at the College of Agriculture
No one desires to put unnecessary obstacles in the way of village and city boys and girls who sincerely desire an education at this institution, no matter how difficult it is for the College of Agriculture to turn out a creditable product. This has been proven by the whole-hearted attempts of the College to deal with this problem. On the other hand, this institution is primarily for rural boys and girls who are at some disadvantage because they find entrance difficult, owing to inadequate rural school facilities. It is quite probable that many rural boys and girls who should be at the College have dropped out of school before the end of high school, or would have come here had they received encouragement.

Elsewhere in this issue the president of the Alumni Association has mentioned the sending of more farm boys and girls to the College as part of our program. It makes an excellent project for us, because so many former students can take part in it directly. If every former student in a rural community should, by encouragement, advice, and other assistance cause a boy or girl to come to the College, the influence on the agriculture of this State would be far-reaching.

A working out of this plan would seem to require, first, a renewed acquaintance with the College, especially with the entrance conditions; second, a standing committee of former students to work out the administration of the project; third, some form of recognition for those former students who send farm boys and girls to the College of Agriculture.

"I know your thoughts, your toils, your sorrows, and discouragements; your aspirations, hopes, and joys."

J. P. Roberts
D. V. M.—Carl Warren Gay has been chief of the animal husbandry division of the Minnesota Agricultural College since 1916. Following his graduation from Cornell, he went to Ames, Iowa, with the prospect of becoming assistant veterinarian. He was so favorably impressed with conditions at the college that he decided to change to animal husbandry. Working half-time as an instructor, he received his B. S. A. degree in 1905.

A position as assistant professor was opened to him at Ohio State College. He accepted the offer and remained there for three years. During this time he was married to Catherine Andrews. In 1907 he went to the Pennsylvania State College of Agriculture, where he was made professor of animal husbandry. His merit was recognized by the State, and in 1908 he was made Director of Horse Breeding, a position he held for nine years. From 1911 to 1916 he managed the farm of the State Livestock Board of Pennsylvania, at Media, exhibiting unusual ability as an executive.

Dr. Gay was recognized by publishers as an authority on horse husbandry. In 1913 he signed a contract with the Lippincott Publishing Company to write *Productive Horse Husbandry*. Not to be outdone, the Macmillan Company contracted with him in 1914 to write *Principles and Practice of Livestock Judging*. These two years, according to Dr. Gay, were the busiest he ever spent, a fact which is borne out when the uniform excellence of the two works is considered. He also edited the breed material in Bailey’s *American Encyclopedia of Agriculture*.

Dr. Gay is blessed with two qualities: one, a happy faculty of remembering the names and faces of scores of men, and the other, the ability to ride a hobby for all there is in it. He is to be admired for his ability to know men personally, as well as to lead them impersonally. As a leader, he possesses every physical qualification, commanding the respect of all who know him.
'91 B. S. A., '97 M. S. A.—Jared Van Wagenen, jr., has just finished a term in the State Assembly as representative of Schoharie County. He introduced the act to amend the agricultural law, in relation to promoting sheep husbandry and protecting against fraud in woolen fabrics.

'00 B. S., '01 M. S. A.—Otto F. Hunziker, who was formerly a professor of dairy husbandry at Purdue, and who is now with the Blue Valley Creamery Company, has just published a new book entitled *The Butter Industry*. Mr. Hunziker has dedicated his book to Cornell, his Alma Mater.

'01 Ph. D.—LeRoy Anderson is living on his farm in the Santa Clara Valley, San Jose, California, where he is specializing in the production of peaches and prunes.

'02 W. C., '04 Spec.—G. H. Truckell has accepted a position as associate editor of the *Holstein-Friesian World*, with offices at Syracuse. In making the announcement, the World said of him, "He has been connected with the Holstein industry, both as a practical breeder and master publicist for many years and wherever he has gone his work has made him friends. He is, in fact, one of the best-posted, as well as the best-known Holstein authorities in the country today."

'05 M. S. A., '15 Ph. D.—A. W. Gilbert is Commissioner of Agriculture for the State of Massachusetts.

'08 B. S.—L. A. Toan, assistant county agent leader for this state, has resigned his position to enter the Hickox-Rumsey Company at Batavia, and to undertake the more active management of his own farms at Perry.

'09 B. S. A.—V. I. Safro is traveling extension specialist for the American Tobacco Products Company of Louisville, Kentucky. The company deals chiefly in tobacco by-products, as nicotine for spraying.

'11 B. S.—W. J. Corwin, formerly county agent of Pine County, Minnesota, has been appointed Assistant State Leader of farm bureau work for Minnesota.

'11-'13 Sp.—"Tom" Milliman, organization manager of the Dairymen's League, has been active in the campaign of the Dairymen's League Co-operative Association to purchase milk handling plants. The plan of the League depends for its success upon the co-operative handling of milk and its products thru a system of centralized ownership and control. Last April, Milliman and two other workers raised eighty-five thousand dollars in less than an hour at a farmers' mass meeting in the Unadilla valley. At the same meeting, the farmers agreed to a plan of the League whereby they are to raise six hundred thousand dollars for the creation of a large milk manufacturing plant in that valley.

'12 B. S.—Don. D. Ward, formerly county agent for Rockingham County, New Hampshire, has recently become assistant farm bureau manager for Onondaga County. His headquarters are at the court house in Syracuse.

'12 B. S.—F. A. Pearson is assistant professor of dairy economics at the University of Illinois. Pearson expects to come to Cornell this fall to begin work for his doctorate degree in farm management.

'12 B. S. A.—J. Coryell will succeed Professor H. E. Babcock as manager of the State Farm Bureau offices. Coryell was formerly Assistant County Agent Leader for New York State.

'12 B. S.—"Sam" H. Thomson resigned his position with the Bureau of Crop Estimates, Washington, D. C., to accept a position in the Acreage Investment Department of the Hartford Fire Insurance Company. This company is now writing acreage investment policies which guarantee the grower his cost of production, and insures him against wind, tornado, drought, floods, excessive moisture, and insects. This form of policy is something quite new for the insurance business, and will cover all kinds of crops.

'13 B. S.—D. S. Fox is head of the department of farm management at Penn State. Fox is married and has two children.

'13 B. S.—John S. Clark, superinten-
Penny Wise—Pound Foolish

SEPARATOR BUYING

Many buyers of cream separators are tempted to save $10 or $15 in first cost by buying some "cheaper" machine than a De Laval.

In practically every case such buyers lose from 10 to 50 cents a day through the use of an inferior separator.

That means from $36.50 to $182.50 a year—and not only for the first year but for every year the separator continues in use.

Twice a Day—Every Day in the Year

It should always be remembered that the cream separator saves or wastes in quantity and quality of product, and in time and labor, twice-a-day every day in the year.

Moreover, a De Laval Separator lasts twice as long on the average as other separators. There are De Laval farm separators now 28 years in use.

The best may not be cheapest in everything but it surely is in cream separators.

The De Laval Separator Company

165 Broadway 29 East Madison Street 61 Beale Street
NEW YORK CHICAGO SAN FRANCISCO

More than 50,000 Branches and Local Agencies the World Over
dent of Mixter Farm, Hardwick, Massachusetts, recently sold some high-priced Guernseys to a Massachusetts man. One cow was sold for two thousand dollars, while two others were sold for ten thousand.

'13 B. S.—Burnett Kelley is in charge of nursery work with the Gould Growers Corporation at Newark.

'13 B. S.—"Abe" Dean was state junior poultry club leader for Massachusetts from the fall of '17 until the fall of '19. He is now instructing in the poultry department at Massachusetts College of Agriculture.

'13 B. S.—W. C. Stokoe, formerly county agent of Coos County, New Jersey, will succeed Allen S. Merchant as manager of the Cortland County Farm Bureau.

'13 Ph. D.—M. J. Prucka, formerly at the Geneva experiment station, and who until recently has been doing research work in bacteriology at the Illinois College of Agriculture, has resigned and entered commercial work.

'13 B. S.—W. des Wilson is employed by a chemical company in Montreal, Canada, which is engaged in the destructive distillation of wood. His address is 726 Dorchester Road, Montreal, Canada.

'14 B. S.—William H. Bullock, associate editor of The American Agriculturist, has recently been made secretary of the Orange Judd Company, publishers. He may usually be found at the office of The American Agriculturist, 315 Fourth Ave., New York.

'14 B. S.—H. A. D. Leggett is in charge of the poultry work at the Vermont College of Agriculture.

'14 B. S.—William J. McCarthy is at the Priest River Experiment Station, Priest River, Idaho. He is in the United States Forestry Service.

'14 B. S.—Harold F. Keyes, who has been farming in Livingston County, has been appointed assistant manager of the Oneida County Farm Bureau.

'14 B. S., '15 M. F.—J. D. Lamont has resigned his position with the Delaware and Hudson Company, Plattsburg, and has accepted a new position with the Taylor and Crate Lumber Company of Buffalo.

'14 B. S.—W. F. Friedman visited the College on May 11. He is an authority on cryptography and during the war was engaged in deciphering enemy code dispatches. He is now associated with Col. George Fabyan, at Riverbank, Illinois.

'14 B. S.—Alexander Lurie, formerly horticulturist at the Missouri Botanical Gardens, is now in the retail florist business at Ann Arbor, Michigan. He is proprietor of the Blu Maize Blossom Shop.

'15 B. S.—J. Stanley Cobb is an instructor in agronomy at Pennsylvania State College; he lives at the University Club, State College, Pennsylvania.

'15 Ph. D.—W. J. Robbins, formerly assistant professor of plant physiology at the College, has been appointed professor and head of department of botany at the University of Missouri.

'16 B. S.—R. G. Bird is now located at Anderson, Indiana, where he is working for a concern which manufactures felt roofing.

'16 B. S.—W. S. Oles is a member of the organization department of the Dairymen's League, with offices in New York City.

'16 B. S.—C. W. Gilbert has resigned his position as manager of the Greene County Farm Bureau to become teacher of animal husbandry in the State School of Agriculture at Canton.

'17 B. S.—E. Meyers is in the automobile business at Konnersville, Indiana.

'17 B. S.—R. C. Parker, who has for three years been manager of the Suffolk County Farm Bureau, has resigned his position to become district representative of the National Lime Bureau. Parker will cover the New England States, with headquarters at Washington, D. C.

'17 B. S.—F. R. Walkley, formerly assistant manager of the Madison County Farm Bureau, has been promoted to be manager, to fill the vacancy caused by the resignation of D. F. Putman.

'17 Ph. D.—W. H. Burkholder, who is engaged in bean disease work on the special bean appropriation, has just re-
Thorough Cultivation

During these times of high prices you have an extra incentive to raise bigger crops.

One of the surest ways to increase your yields is to cultivate your crops thoroughly. To do this easily and properly you should have a cultivator particularly suited to your local conditions.

Whether you want a riding or walking cultivator you will find in the Oliver line a cultivator to meet your demand.

Oliver Chilled Plow Works
Plowmakers for the World
Rochester, N. Y.
turned from a three months’ stay at the University of Wisconsin, where he has been doing investigational work in the department of plant pathology.

'17 B. S.—A. A. Krause is at Deerfield, Virginia, where he is associated with Bernhardt '19, and Hendee '19, in the examination of forest land for the government.

'17 B. S.—Mrs. Harold E. Irish (Aromenta McDonald) died at Auburn on April 9.

'17 B. S.—Mary Albertson, who has been in charge of five cafeterias at Washington, has resigned and is now at her home in Delaware, N. J.

'17 B. S., '18 D. V. M.—Mr. and Mrs. Don A. Boardman (Elizabeth M. Abuhl '17) announce the birth of a daughter, Agnes Ellen, on February 20. They live at 107 East Willett Street, Rome.

'17 B. S.—Harold O. Crowell, who has been for some time with the Lockport Chamber of Commerce, handling school garden, curb market, and similar work, is now with the American City Bureau of New York as field secretary, doing installation work throughout the country. He is now located at Conneaut, O.

'17 B. S.—A daughter, Helen Freeley, was born on March 9 to Mr. and Mrs. H. Strycker Mills, 209 College Ave., Ithaca. Mills is an instructor in vegetable gardening in the College.

'17 B. S.—Edward Frey was overseas eighteen months with the 10th Engineers, a famous forestry regiment. He is now employed in the Industrial Engineering Department of the Goodyear Rubber Company, Akron, O.

'17 B. S.—Melva Latimore is engaged in cafeteria work for the government at Washington.

'17 M. F. (each)—Mr. and Mrs. F. H. Millen are at Trenton, N. J., where Mr. Millen is employed in the Department of Conservation and Development.

'17 B. S.—Anne Morrow, chaperone at the Alpha Omicron Pi house, also has a position in the home economics department of the College.

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**Niagara DUSTERS and DUST MIXTURES**

have proved of such value in practical commercial use for the control of insect pests and fungus diseases that every year many more successful fruit growers are finding the Dusting method indispensable in making summer application, not alone on account of the results accomplished but because dusting is so much faster and cleaner it has proven itself about 1/2 less expensive than spraying when both labor and materials are taken into consideration.

Send today for our free book on dusting and find out just what Dust Machines and Materials to use to protect Apples, Peaches, Pears, Cherries, Strawberries, Grapes, Potatoes, etc. Our years of experience are at your service. Our free book gives you the careful, accurate information gained in successful commercial protection.

For best results always use Niagara Dust Materials with the Niagara Duster.

**For Dormant Spraying, Niagara Soluble Sulphur Compound**

(The original Soluble Sulphur in powder form)

dissolves instantly in hot or cold water. Assures clean Top-of-the-Market Fruit. Absolutely the best spray material for the control of San Jose Scale, Peach Leaf Curl and other similar orchard troubles.

This year it actually costs less than any other sulphur spray material. Don’t Pay Freight on Water. Send for Free Spray Calendar and get our prices.

**Niagara Sprayer Company, Middleport, N. Y.**

Manufacturers of Dusting Machinery for Orchard, Vineyard and Field, Special Dust Mixtures, All Kinds of Spray Materials and Sulphur

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Say Where You Saw It When You Write
Case Threshers Save Your Crop

Good threshing is the climax of good farming. It's what you have been working for ever since you began preparing ground for seeding. It's just as important as fertile soil, summer showers and harvest sunshine—and it's up to you. If you do not own a Case Thresher, the next best thing is to employ one.

The Case Steel Built Thresher, in any of the six sizes we manufacture, is the machine of clean threshing, thorough separation, perfect cleaning and unequalled saving.

You owe it to yourself to save all you harvest. You can do it with a Case Machine. It successfully handles Rice, Flax, Peanuts, Peas and Beans, Rye, Oats, Barley, Wheat, Clover and Alfalfa, Millet, Buckwheat, Timothy, Orchard Grass, Raffir Corn, Sorghum, Broom Grass Speltz, Hungarian Grass, Red Top, Blue Grass, Milo Maize, Sudan Grass and Feterita.

After passing the cylinder, where all the grain is threshed and most of it separated, the straw is shaken—shaken—shaken;—230 shakes a minute! Note the improved straw-rack, the great separating surface and ample space for straw.

Write for catalog of Case Steel Built Threshers showing sizes suitable for the individual farm or for custom threshing on the largest scale.

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Making Superior Farm Machinery Since 1842

To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works Co., the Wal- lis Tractor Company, or the J. I. Case Plow Works Co.

NOTE: We want the public to know that our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co.

Tell Advertisers Who Introduced You
'17 B. S.—D. C. ("Tommy") Thompson was married to Miss Sylvia Perry of Amherst, Mass., on October 24, 1919. "Tommy" is now managing the factory of Sprague, Sprout and Lowe, Inc., at Orange, Mass.

'17 B. S.—R. A. Wheeler is in the employ of the Goodyear Rubber Company at Akron, O.

'18 B. S.—H. E. Botsford, extension specialist in poultry here at the College, has accepted a position in extension for the summer term with the Pennsylvania State College of Agriculture.

'18 B. S., '22—Alfred E. Emerson is a special assistant at the Museum of Natural History, working upon some insects from the Belgian Congo. He is to be married on May 3 to Miss Winifred Jellippe '22. Directly after the wedding they will sail for British Guiana on a scientific expedition for the New York Zoological Society under the direction of Mr. William Beebe, and expect to be there until next February. Their address will be Tropical Research Station, New York Zoological Society, Georgetown, British Guiana.

'18 B. S.—Miss Miriam C. Jones is assistant director of the dining rooms at Sage College, Ithaca.

'19 B. S.—"Russ" Drake is working his father's farm near Dunkirk.

'19 B. S.—Mrs. Carroll G. Dunham (Ellen Sticlemeyer) has resigned her position as assistant to Miss E. A. Steer in the Home Economics Cafeteria of the University.

'19 B. S.—William C. Eldridge is a scientific assistant in cereal investigation with the U. S. Department of Agriculture. His address is 923 I Street, Northwest, Washington. He will go to California early this month to take up rice work with a private concern.

'19 B. S.—"Bob" Hammond spent the last part of April at the extension conference in Ithaca. "Bob" is still engaged in farm bureau work in Orange County.

'19 Ex.—S. C. Lerner is technical supervisor of mill and yard operations

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Specially engraved halftone plates that will print well on any letterhead stock

ITHACA ENGRAVING CO.
ITHACA, NEW YORK
"In the Beautiful Finger Lakes Region"

Say Where You Saw It When You Write.
IF Helena of Summit, whose picture is shown above, could talk, she would tell you that she likes being milked with the Perfection as well as being milked by her own calf. Her milk records show that she prefers the Perfection to any other method of milking. As a three year old on Register of Merit test she gave 202 pounds of fat in the first four months. Her owner, Albert Whitehead, the well-known Jersey breeder of Pataskala, Ohio, says, "My cows are all in the Register of Merit and are now doing better milked with the Perfection than when milked by hand."

The Downward Squeeze and Adjustment the Reason

"The longer I use the Perfection Milker the better I like it," says Mr. Whitehead. "It not only enables me to milk the cows in half the time required by hand, but the cows seem to enjoy the action and stand better than when hand milked. The downward squeeze and the adjustments put the Perfection in a class by itself."

Mr. Whitehead is only one of thousands of dairymen who appreciate the nature-like downward squeeze which is exclusive with the Perfection and the simple adjustment which makes it possible to change instantly the suction and squeeze to suit either hard or easy milkers. These two features make the Perfection please the cow and get most milk for the dairyman.

Ask Us For Names, Addresses and Catalog

Why not investigate the Perfection Milker for yourself and ask Perfection owners what they think of it. We will gladly send you names and addresses of owners, together with a free copy of "What the Dairyman Wants to Know", the book that answers every question about milking machines. Write. Today.

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The Perfection is the Milker with the Downward Squeeze Like the Calf.
For Cheese Factories and Creameries

HANSEN'S

Danish Dairy Preparations

Pure, Concentrated, Ready to use. For uniformly best results in making finest cheese, butter and buttermilk. America's standards backed by years of specialized experience, used in the country's finest creameries and cheese factories.

Hansen's Danish Rennet Extract.
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Hansen's Danish Butter Color.
Bulk, 1 gal. or larger.
To properly ripen the cream for butter, and the milk for cheese and commercial buttermilk, use Hansen's Lactic Ferment Culture.

For sale at all dairy supply stores.

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Interesting treatise "The Story of Cheese" by J. D. Frederiksen, free on request.

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It saves the lives of little chicks because they can digest it

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John J. Campbell, Mgr.


'19 B. S.—"Speedy" Quick has resigned his position of instructor in the department of rural engineering to take charge of the installation of machinery in a large bakery being erected by the Ward's Baking Company in New York City. While in college "Speedy" rowed on the 1917 crew. He was a member of the Sphinx Head.

'19-'20 Sp.—Edward J. Albert is manager of the Dixonia Poultry Farm, R. F. D. No. 8, Richmond, Virginia. The farm specializes in the production of White Wyandottes in general and broilers in particular.

'19 B. S.—"Jack" Larson has left his position with a dried milk company at Mexico, and is now in Texas in the oil business.

'19 B. S.—Velma Vigert is doing social service work in New York City.

'19 B. S.—Evelyn C. Call is House Director at Wells College, Aurora.

'19 B. S.—I. H. Bernhardt is in the United States Forestry Service at Deerfield, Virginia. He is examining forest land to determine its future value to the government from the standpoint of watershed protection and forest conservation.

'19 B. S.—D. K. Hendee is at Deerfield, Virginia, where he is associated with Bernhardt '19, in the examination of forest land for the government.

'19 B. S.—Lina Darling is doing cafeteria work in Washington.

'19 B. S.—B. A. Eger announces the birth of a son, born April 15.

'19 B. S.—Harold B. Fuller, formerly assistant manager of the Otsego County Farm Bureau, has been appointed county agent of Tioga County, to succeed F. R. Zimmer.

'19 B. S.—Fred E. Wheeler has resigned his position as instructor in dairy husbandry at the Massachusetts Agricultural College and is now in charge of the ice cream mixing room of a large pure milk and ice cream plant at Pittsfield, Massachusetts.

Say Where You Saw It When You Write.
Mr. J. A. Burt, a farmer and levee contractor of Gunnison, Miss., wrote us for information about blasting ditches. We advised him to order a small amount of dynamite for a trial demonstration. A Hercules Agricultural Service Man then showed him and his help that earth could be removed at a cost of 35c a cubic yard—labor and explosives cost included. The test convinced him of the economy of using Hercules Dynamite.

Later Mr. Burt wrote us, "I have used Hercules Dynamite in blasting five miles of small farm ditches. These ditches were dug in low, swampy places where we could use neither teams nor shovels. With seven men I could dig a mile of ditch three feet deep and seven feet wide in four days. I find this the most satisfactory and quickest way of ditching, and the cost is very low for such work."

"Progressive Cultivation", a 68-page booklet, will tell you about ditch digging, tree planting, stump and boulder blasting with dynamite. Sign the coupon and mail it today.

In many sections our Agricultural Service Men are showing farmers how to use explosives. Write about this service.

Hercules Dynamite is sold by leading hardware and implement dealers.

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A Farmer-Contractor's Experience in Dynamiting Ditches

Hercules Powder Co. Orange Street, Wilmington, Del.

Gentlemen: Please send me a copy of "Progressive Cultivation." I am interested in dynamite for

Name

Address
'20 B. S.—Glenn Upton has accepted the position of instructor of dairy industry at Massachusetts Agricultural College which was left vacant by the resignation of Fred E. Wheeler, '19.

'20 Ex.—B. L Craig was overseas for nine months with the tank corps. When he returned to the states he decided to follow up dentistry instead of farming, and he is now a freshman in a dental school at Buffalo.

'20 Grad.—F. B. Wann, who is instructing in botany here at the College, has just demonstrated the fact that certain low green plants are able to utilize free atmospheric nitrogen. Mr. Wann has been working with the green algae.

'20 Ex.—Albert Force, who has been an assistant in the department of plant pathology at the College, was forced to resign his position and leave the University because of heart trouble following an attack of pneumonia. Force will not be able to return until next fall, at the earliest.

'20 B. S.—H. J. Schroeder, jr., was forced to give up his graduate work and return to the home farm at Saugerties because of the death of his father. Schroeder received his degree this February, and during the present term was engaged in research in the department of plant pathology.

'20 Grad.—T. O. Sprague, who has been assisting in pomology here at the College, has resigned to take a position as assistant horticulturist at the State Experiment Station at Geneva. Sprague will work with Professor Hedrick.

"Three of a Kind"
Pathfinder, Defender and Orion Cherry King
The three best Duroc blood lines known, we have granddaughters of each.
Our Herd Boar is Boothby's Defender No. 96407.
Grandson of the Great Defender, the only Boar ever twice international champion.
We guarantee satisfaction. References: any and all customers, also Bank. We have never had a dissatisfied customer.

Drakeside Piggery
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Bumper Crops with LIME
A fertile field with its tremendous yield is a farmer's pride and brings in the big money. Release the natural fertilizer in the soil and make it rich by spreading Solvay Pulverized Limestone. Corrects acidity and shows results the first harvest. Ground fine, high test 95% carbonates and furnace dried. No waste. Prices right—you may be disappointed in delivery if you wait. Order now!

THE SOLVAY PROCESS CO., Syracuse, N. Y.
BURRELL MILKERS

WILL HELP HER MAKE GOOD

by milking her thoroughly and consistently every day in the year

The many distinctive features of the BURRELL MILKERS appeal to practical and scientific men alike.

D. H. BURRELL & CO., Inc.
Manufacturers of Dairy and Milk Plant Apparatus
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Net Profit Counts

This is the day when the agriculturist looks at his shipments to market from the standpoint of his net profit. The

Universal Package

Every farmer needs this free booklet.
Write today for booklet "Shipping Profits". Shows how Universal Package saves money, labor, time. Better net profits proven. Valuable data every grower, shipper and receiver should have.

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210 S. Jefferson St. South Bend, Indiana
Farms Among the Finger Lakes

Buy your farm near your Alma Mater. No better farming region in the world.

Let us show you Ontario, Yates, Wayne and northern Seneca Counties. Fine level land in the heart of the limestone region.

Do not compare us to the hills of Tompkins County until you have been shown. Phone for a date and take a free ride with us among the farms in the beautiful Finger Lake Region.

Write for farm bulletin.

F. S. Brownlee
Geneva New York

'Dr. Liberty Hyde Bailey

In his latest books, "The Holy Earth," "Universal Service," and "What is Democracy," presents some new, interesting and practical suggestions for the betterment of rural and urban, national and international problems leading to a true and lasting democracy.

Press Comments:

"The Book (Universal Service) is so sound, wise, and simply written that it ought to have at least a million readers, if that could be managed. It would do an incalculable amount of good if it could be made a textbook in schools and colleges until its ideas can be eventually put into operation."—N.Y. Times.

"Mr. Bailey's book (What is Democracy) is most suggestive. Every page opens up new avenue for thought that lead to ideals of service and true citizenship."—Cincinnati Enquirer.

"The Holy Earth"—a book which I wish every farmer could read and keep handy to refer to often."—Southern Agriculturist.

Price $2.00 Each

The Comstock Publishing Co.
Ithaca, New York, U. S. A.

'20 B. S.—"Eddie" Collins is now managing the two-hundred-fifty acre farm of Dr. M. M. Slocum of Barnveld, Herkimer County. "Eddie" evidently has made good, as he was quickly promoted from assistant manager to his present position. The farm supports seventy-five head of cattle.

'20 Ex.—"Duke" Earl was married to Ruth Emily Chapman of Oldwick, N. J., on March 24. They will make their home at Unadilla.

'20 Sp.—Lawrence Hollis took the tractor short course after completing the fall term's work. He is now working on his father's farm in Oswego County, where he is caring for a large herd of pure-bred Holsteins. Mr. Hollis has part interest in old Albina Butter Boy, the sire of a forty-pound cow that sold for ten thousand dollars a few years ago.

'20 B. S.—R. E. Perry received his degree in February and at present he is at home in Westfield, N. J.

'21 Ex.—Laura Wray is engaged in settlement work in New York City.

'23 Ex.—P. A. Irish is employed in the office of the International Harvester Company at Auburn.

How Can the Soil Survey Be Made More Useful to the Farmer?

(Continued from page 511)

time, to locate fields only on those soil types which have already shown very marked differences in their response to fertilizers and lime.

When data from all these sources are accumulated and examined, there will be available a knowledge of the properties of soils of all surveyed parts of the state that will be of much practical value. It cannot be expected that the best soil management for every farm can be precisely prescribed, or that the tests will be as applicable to any piece of land as if the experiments were conducted thereon, but it will be the best substitute that can be offered. If such data be applied with good judgment and common sense, farming interests will not fail to benefit from it.

Say Where You Saw It When You Write.
Wheels on a track— the Cletrac way— take less power

You men who go onto the farm this summer for practical experience will find the sturdy Cletrac shouldering the load of summer work.

The hot, horse-killing jobs in hay and harvest fields are speedily finished— the Cletrac working steadily on at the right pace for the job, slower in heavy hay or grain, faster if the crop is light.

It handles the belt work too— lines up quickly and uses the cheapest fuel economically.

Look for the Cletrac on the farms around you this summer. Cletrac owners will vouch for its all-year-'round dependability and great work capacity.

You are probably making a close study of all tractor types now. We will gladly furnish you with interesting and practical material that will give you a line on the all-purpose, tank-type Cletrac.

The Cleveland Tractor Co.

Largest Producers of Tank-Type Tractors in the World

19123 Euclid Ave.        Cleveland, Ohio
The Reclamation of Pennsylvania's Desert

Hitherto, the policy of the Department of Forestry has been to consider the purchase of those lands only which were offered for sale by their owners. Now it is proposed to locate by actual investigation on the ground the forest land which is producing nothing, so that when funds become available, the Forest Commission will be ready to proceed to purchase.

The purchase of the Pennsylvania Desert will be an investment, not an expense. The million acres of forest land already purchased by the State at an average price of $2.28 an acre have already more than doubled in value. In the preliminary draft of the new constitution there is a provision which authorizes bonding the Commonwealth for $25,000,000 for the purchase of such forest land. If, when the time comes, serial bonds are issued for the purpose, the interest, before many years are past, will be carried by the lands bought, and before the whole series has been paid off, the purchase will represent a large net gain to the State.

The Farm Home

The tightening of all screws, bolts, and nuts; the careful study of the manufacturer's instructions as to the adjustment of certain detachable parts and of the machine itself.

These three cares: cleanliness, proper lubrication, and the proper adjustment are all-important, since they act as a preventive, rather than as a remedy for trouble. If followed, they will insure efficient operation during the life of the machine.

Why Give Away Part of Your Potato Profits?

That's exactly what you do if you grade by hand. For then the wages you pay three out of every four men is money given away that you could save with a Boggs Grader.

One man can grade and sort as many potatoes with a Boggs as four men can grade by hand in the same time.

And they'll be graded more accurately, too. That means you can get highest market prices.

Boggs Potato Grader

gives U.S. grades Nos. 1 and 2 and eliminates culls and dirt in one operation. No danger of injuring or bruising potatoes as they are graded by carrying them up over an endless belt.

It's a compact, portable machine that can be operated by hand, motor or gasoline engine. Lasts a lifetime. Thousands in use.

Made in sizes to grade 25 to 250 barrels an hour. Prices $55 and up.

Write for booklet.

Boggs Manufacturing Corporation, 18 Main St., Atlanta, N. Y.

DEALERS—Here is a splendid chance to build a profitable business. Exclusive territory still open. Write for particulars.
$735.68 Milk From A Grade Cow in One Year

Indisputable Evidence

The letter reproduced above so strikingly confirms, by actual experience, the facts we have been telling dairymen and farmers about SCHUMACHER FEED, particularly as a feed for producing MAXIMUM MILK PRODUCTION and keeping cows in “fineettle” throughout long milking periods, that it needs little additional comment. It tells what was fed—how fed—the cost and the net returns. Bear in mind this was a grade cow 9 years old and no special effort was made to make a record. It is INDISPUTABLE evidence that

SCHUMACHER FEED

is a feed you cannot afford to overlook. Check up your cows — your feed costs and see if they show a big yearly profit.

Start Now—feed SCHUMACHER FEED—not for a week or a month, but for the entire lactation period of your cows and you’ll feel as Mr. Souder does, THAT IT IS "THE BEST FEED A DAIRY-MAN CAN FEED."

SCHUMACHER FEED AND BIG "Q" DAIRY RATION

are IDEAL feeds for dairy cows. SCHUMACHER FEED supplies the carbohydrate or maintenance part of the ration and BIG "Q" the protein concentrate portion. Ask your dealer for them. If he cannot supply you, write to us.

The Quaker Oats Company
Address: Chicago, U. S. A.

Say Where You Saw It When You Write
Dairy Science

When the Agricultural Colleges entered the field of Dairy Husbandry they turned the light of science upon this industrial field with the result that better methods of manufacture and high grade products are made possible.

Among these better methods none appear to be more important or more necessary than sanitary cleanliness, if good results are to be obtained, and the use of

Wyandotte

is recommended by the Agricultural Colleges of the United States and Canada, because the fresh, wholesome, sanitary cleanliness this cleaner provides is not only an adequate protection to the dairy from insanitation, but is also proving most efficient and economical.

Order from your supply house.

It cleans clean

Indian in circle

in every package

The J. B. Ford Co.
Sole Mnfrs.

Wyandotte, Mich.

Book Reviews

(Continued from page 526)

enterprises, and brings farm investment and income up-to-date.

This book is adapted for use in schools as it contains a list of simple but valuable experiments at the end of each chapter. Dr. Spillman has carried out his aim to “enable the student to understand why things are as they are and as he knows them to be”. F. S. H.

A Manual of Canning and Preserving


This is a compact little book with all the rules necessary for canning any fruit or vegetable. A list of utensils and equipment required is given. The principles of canning and the terms used are given and carefully explained. The three methods for canning fruit are fully explained and a list of the fruits recommended for each method. The canning of vegetables is next taken up with the utensils, preparation, and recipes for the different types of vegetables. Considerable attention is given to jelly making, including preparation of fruit, test for pectin, method of procedure, and a number of recipes for different kinds of jelly. There are recipes for jams and conserves and methods of preparing fruit juices and fresh fruits. Lastly are the recipes for pickles, relishes, marmalades, and mince meats.

E. C.

A Little Garden the Year Round


The book presents information useful to every garden owner and prospective garden owner and at the same time conveys the sense of the joys of gardening, combining both prose and poetry, quite fitting for an occupation indulged in for recreation. It is not a technical book. It should be of great interest, however, to the garden lover who has both time and inclination for things other than his practical needs. For a practical florist or vegetable gardener, who seeks to increase the products of his labor, it is of little value.

F. R. U.
Our Offer Has Stood The Acid Test

For four years our offer has remained the same simple, straightforward proposition on which we founded Avalon Hog-Tone merchandising.

Even though countless dealers and farmers assure us that this Free 60-day Trial is no longer necessary, we continue it.

We are proud of it as evidence to any fair man that Hog-Tone will completely meet every promise we make for it. Your local Hog-Tone dealer can make you the same free offer extended to you by the coupon below. But—if dealer is not stocked, you can send direct to Avalon Farms Company

363 W. Ohio St. Chicago, Ill.

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This Coupon Brings 60-Day Free Trial Treatment

<table>
<thead>
<tr>
<th>W. O. Gandy, President</th>
<th>Please Print Name</th>
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<tr>
<td>AVALON FARMS COMPANY</td>
<td>P. O...............</td>
</tr>
<tr>
<td>353 West Ohio Street, Chicago, Illinois</td>
<td>R. R. No.............</td>
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I have ............... hogs. Ship me immediately enough Avalon Farms Hog-Tone to treat them for 60 days. I agree to report results to you at end of 60 days and pay for the Hog-Tone at that time if it has done all that you claim. If it does not, I will return the labels to you and you agree to cancel the charge.

---

Name and Address of my Druggist
Little Brothers of Titan Tractors

While Titan and International tractors (known to every farmer) have been blanketing the country with field and belt-power, International small engines also have been working in all corners of the land.

International Kerosene Engines are annually doing millions of hours of work: Annually taking the menial, toilsome, every day farm jobs—pumping, sawing, separator-turning, washing, grinding, shelling, etc.—off the lame shoulders of grateful men, women and children the nation over: Annually adding to the service that makes farm leisure possible and farm life more than ever worth while.

International quality in general and International Kerosene Engine quality in particular are everywhere admitted and admired. Among the engine sizes—1 ½, 3, 6, and 10 h. p.—is the correct size for every farm. Sold by International dealers everywhere.

INTERNATIONAL HARVESTER COMPANY
CHICAGO OF AMERICA INC.
USA
92 BRANCH HOUSES IN THE UNITED STATES
How to double the development of chicks and prepare them for early and profitable production

By the proper use of Purina Baby Chick Chow (Chick Feed), Purina Chicken Chowder and Purina Hen Chow (Scratch Feed), you can bring chickens to maturity in much shorter time, with greater vitality and with stronger, better-boned, better-feathered bodies.

**Purina Double Development Guarantee**

The money paid for Purina Chicken Chowder and Purina Baby Chick Chow (Chick Feed) will be refunded if baby chicks, when fed these two feeds as directed, do not develop twice as fast during the first six weeks as when fed a grain ration only.

**RALSTON PURINA COMPANY**

St. Louis, Mo.
Ft. Worth, Tex. Nashville, Tenn. Buffalo, N.Y.

*Sold in Checkerboard bags only*
Farmers' Field Days at Cornell

Bring the Family

See the College Farms

Orchards, flower gardens, pasture plots, poultry range, fish hatchery, game breeding farms, tractor contests, forest plantings, experiment plantings, experiment fields, stock judging, dairy manufacture, home making—everything!

Ithaca, New York

June 30 and July 1 and 2, 1920

Say Where You Saw It When You Write.
THE Moline Universal Tractor makes possible a real system of Power Farming instead of tractor plus horse farming. It does not reverse the old-established order of farming. It does not add expense—but cuts it.

It places the power of nine big horses where the horses stood. It is operated in the same manner as horses—from the seat of the implement. And it does all the field work that horses do, including cultivation of row crops.

It adds more power and speed to an old principle. And if this principle isn't correct, then farming has always been done backward, and you would be operating your implements from the horse's back instead of from the seat of the implement. Saddles instead of seats would have been in general use.

This is the reason for the great success of the Moline Tractor. It is built on the correct principle. One man with one tractor does all field work from plowing to harvest.

Moline Power Farmers are increasing production and decreasing the cost of production.

The Moline System of Power Farming offers a particularly helpful solution of the farm labor problem.

You will find the Moline Universal Tractor a sure, safe, satisfactory and highly profitable investment.

MOLINE PLOW COMPANY, Moline, Illinois

Branches at Atlanta, New Orleans, Dallas, Oklahoma City, St. Louis, Poughkeepsie, N. Y., Baltimore, Los Angeles, Stockton, Cal., Spokane, Portland, Salt Lake City, Denver, Kansas City, Omaha, Minneapolis, Minot, N. D., Sioux Falls, S. D., Des Moines, Bloomington, Ill., Indianapolis, Columbus, Ohio, Jackson, Mich., Memphis, Tenn.
Do you ever stop to realize that although this is an age of standardization, the one thing that cannot be standardized and yet is greater than all things is—human ability. It is not woolens we want to sell, nor models, but the greatest tailoring talent ever devoted to ready-for-service clothes.

$40  $50  $60

BUTTRICK & FRAWLEY, Inc.
The Home of Hart Schaffner & Marx Clothes

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Cars for All Occasions

Safe Storage  Expert Service
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"Say it with Flowers"

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Tell Advertisers Who Introduced You
Devoted to
Local
Happenings
TheCampus
Countryman
Around the
Top of
“The Hill”
No. 8 June, 1920 Vol. I

“Hot Stove League”
Gives Ag Assembly
Warm Session

Fifth Assembly of Year Entertained by Helios
Large Crowd Present
Shingles and Medals Given Out by the Dean

A program of light entertainment, carefully arranged by the Helios Society, and judiciously advertised as a session of “The Hot Stove League”, brought out over 400 people to the Fourth Ag Assembly held in the College Hall on May 6. The show was the second of a series by which the various classes of the Ag class will attempt in entertaining the College. If the two so far presented are fair indications, the innovation will prove effective for good and all the matter of getting out good Assembly crowds, and making them happy.

Dickie Should Shave

“Hot Stove League” was a group of old farmers sitting around a stove in a country store and conditions. The stove was a thing of art, and the make-up of the characters, the handwork of Al Herxie, was professional in its completeness. Specifically, we think of the set of gorgeous raw cotton whiskers which were glued on the cherubic countenance of Johnny Johnson, and the ravishing complexion with which he equipped one Otis as the demure school-ma’am. Dickie Domecon, played by A. R. Smokey, would have been more convincing, however, if he had been made to shave more closely. Finally, it must be credited to the make-up man that hardly any of the characters were recognizable, which was greatly to be desired, after some of the daring sallies with which they rocked the audience.

Didacticism Deplored

The sketch itself moved rapidly in the Greek or fruit-stand manner, with the conventional chorus chanting interludes on the curb outside the store. This chorus, numbering four, and led by J. T. Van Doren, sang mightily well, and at the end of the skit, succeeded, by the splendor of their performance, in holding the audience fascinated in their seats while the rest of the cast escaped. The music of the piece was far above the order of the Heb-sa show, except when the cast, excluding the quartette, burst into something about “There Are Cows That Make Us Happy.” Then it was too, that Jimmy Biermeister came close to slip in a propaganda line about the superiority of Holstein to all other dairy breeds. The day was to be a dramatic one in its future development, and the show broke up to the cheers of the audience.

Doctor Betten
Appointed to Fill
New Position

In Charge of Department of
Resident Instruction

Recommeded by Dean

Has Been Secretary of the College Since 1915

Cornellius Betten, ’05, secretary of the College of Agriculture, was appointed vice-dean of the College, at a meeting of the Board of Trustees held recently. Dr. Betten’s new position places him in charge of the Department of Resident Instruction of the College. The appointment was made on the recommendation of Dean A. R. Mann, ’04.

Vice-Deanship Just Created

The office of vice-dean was created recently, together with the offices of vice-directors of the other two phases of the work of the College, the extension department, and the Agricultural Experiment Station. These positions have been recognized and granted salaries by the State Legislature. Professor M. C. Burrill has held the office of vice-director of the Experiment Station for the last two years, while no vice-director of the Experiment Station has as yet been appointed. After graduating from Cornell with a Ph. D. in 1906, Dr. Betten went to Lake Forest College, III., where he was professor of biology. He returned to Cornell as secretary of the College of Agriculture in 1915.

Wheeler Goes on Leave

Professor Wheeler, of the extension department, has been granted a leave for the fall term. He is going West to study the organization and plan of operation of the extension departments of the middle western colleges.

Neighbor (Professor J. R.) Schramm will spend the summer in research in algae at the Maine Biological Laboratory at Woodshole, Mass.
Senior Thrills College By Recent Discovery

An Humble Bean Causes All the Excitement

L. S. Huntington, senior in an En route from a recent farm manage trip to the Tarbell farm, twelve miles north of Ithaca. Prof. K. C. Livermore vouches for the truth of the story, the discovery having been made in his presence. It seems that the party had a heated argument when it was not possible to raise a single bean in one of the fields, and to settle the argument, "Fat" volunteered to investi tigate the soil with the following results:

By the first time down brought up nothing unusual, but when "Fat" brought the augur up the second time after much straining and pulling, the soil it contained was literally full of white beans, nicely shelled and ready to bake.

Investigation by Neighbor Liver more and other members of the party discovered that this bean-bear ing soil had come from a depth of some two feet, and that the surface soil was entirely free from the legumes. The remarkable fact, without preservation of the specimens found convinced "Fat" that they were residual in that soil, and he immediately procured an option on the farm for his commercial bean venture. It is rumored that he was forced to pay a fabulous sum, and that the owner of the place made every effort to revoke the option when he learned of the discovery. "Fat," however, with remarkable shrewdness, had him hand and foot, so that he plans to go ahead at once raising beans.

SPECIAL NOTICE

Upon investigation of the re ported discovery by "Fat" Hunting ton of a bean-bearing soil in the vicinity of Ithaca, the gum-shoe reporters of the campus countryman have discovered that he had in his pocket a few beans left from those he had provided for the proper reception of the musical signal put on by Helios at this time.

Heb-Sa Elects Men From Class of 1921


Professors G. W. Cavanaugh and R. S. Hosmer were elected to honorary membership. Those who already hold honorary memberships are: Professors Brstoff Adams, G. A. Everett, and H. O. Buckman.

Glista Ernestine Makes Sixth Thirty-Pound Record

Glista Ernestine, the Cow of Cows, has established a world's record for all breeds. She has recently completed her sixth seven-day record of over thirty pounds of butter. This places Ernestine in a class above any other cow in existence, so far as is known at the present time. Three other Holstein cows have fifty-three-pound records, but now they are completely beneath the notice of Ernestine. Golden grain on a chased silver platter will not be good enough for her now.

Has Trouble at Start

We must realize that this record was made in spite of considerable trouble shortly after she calved. Ernestine suffered a severe attack of indigestion the day following her freshening, which, of course, caused her to be "off her feed" for several days. However, under the skillful care of the herdsmen, she soon recovered her appetite and her nor mal milk flow. From that time on she gained steadily, until she was able recently to make this record of over thirty pounds of butter.

James E. Belermeister, chief herdsmen, with the guidance and advice of Professor Wing and G. W. Tailby, Jr., has handled Ernestine throughout the test. The greatest credit and thanks possible must be extended to these men for their share in bringing fame and honor to the University herd, and to the College of Agriculture.

World's Record Made By H. Wing's Cow

Glista Ernestine, the only cow in the world to have made six different seven-day records of over thirty pounds of butter. She fresh ened April 21, giving birth to a 110-pound bull calf, sired by Great John Lyons. Her record just completed was 34.24 pounds of butter from 67 pounds of milk. During the last week in May she was milking over
Board of Trustees Shortens Third Term of Ag College to Twelve Weeks

Term to Run This Year from June 19 to September 11, Thus Fitting in Well With Other Terms

The third term of the College of Agriculture has recently been shortened from eighteen to twelve weeks by action of the Board of Trustees. The change was made on the request of the faculty of the College. The term this year will run from June 19 to September 11. Hereafter, the third term has been the same length as the other terms, running from the early part of June to the latter part of September. The chief objection to this shortening was that examinations were scheduled which conflicted with the opening of the term, thus seriously interfering with both students and teachers. The new arrangement eliminates this and other difficulties which have arisen.

The summer session will be the same as previously, being six weeks in length. An important change in the schedule of the school, however, will be the teaching of Farm Management 1 and 2 during this session.

The primary purpose of the summer session is to give extended courses in dairy industry and home economics. Final action on the part of the Board of Trustees has not yet been taken.

Dr. Bailey Re-Organizing Pomological Society

Doctor Liberty Hyde Bailey, president of the American Pomological Society, which was organized in 1847, is reorganizing the society through the country, and is calling Pomological branches in several of the colleges of agriculture. A branch has recently been organized in the College of Agriculture where all the students interested in pomology and fruit-growing, from both an amateur and a commercial standpoint, are now holding meetings regularly throughout the school year. It is expected that a judging team will be sent to the annual meeting of the American Pomological Society to be held in Columbus, Ohio, next December, and will there meet fruit judging teams from several agricultural colleges.

Cornell Branch Elects Officers

The officers of the Cornell branch are: president, F. S. Howlett; vice-president, J. T. Logan; secretary, R. V. O. DeBois; treasurer, L. G. Knapp. All students wishing to join should send their names to the secretary, and pay the dues of one dollar a year.

Society Establishes Programs

The American Pomological Society, since its incorporation in 1887, has had a continuous and influential history, being the oldest of our national agricultural and horticultural societies, and it has always attracted the ablest of its members. Its reports have been important guides and indispensable historical records. It has been called the "Supreme Court of Horticulture." The society proposes under its new plans of reorganization to consider the national affairs that touch the growing of fruits, including legislation, quarantine, export, transportation, and the standardizing of methods. The society also proposes to stimulate the amateur fruit-growing interest as well as the commercial point of view by putting a fruit garden of one kind or another on private places all over the country. Dr. Bailey is giving a great deal of his time to the reorganization of the society throughout the country.

Professor Savage Given Appointment

The New York State Fair commission has announced the appointment of Professor E. S. Savage as superintendent of the cattle department of the 1920 State Fair. Professor Savage is in constant touch with all the important centers of animal husbandry, both here and the other side of the water. His articles relative to the feeding of animals have appeared in magazines for several years. He has contributed to The Country Gentleman, The Holstein-Friesian World, the Cornell Cyclopedia, and others too numerous to mention. The commission has used splendid judgment in selecting one who is so obviously well fitted for the position.

Ag Association Elects

The annual elections of the Agricultural Association took place May 14. The following are the officers for the year 1920-1921: J. L. Dickinson, Jr., president; C. E. Conrow, vice-president; J. R. Fleming, secretary; L. M. Shepard, treasurer; H. B. Gifford, athletic director.

New Man Added to Dairy Staff

B. E. Brooks '97, Made Superintendent of Manufacturing

On April 1, Byron E. Brooks assumed the duties of superintendent of the manufacturing department. This position has been vacant for the past two years. During the war, because of the small number of students on College, and because of the urgent need for dairy products for war purposes, the dairy department turned over the greater part of its milk supply for the manufacture of condensed milk for export. With the products fit him exceptionally well, the department has again taken up its manufacturing work, in order to maintain the markets and facilities for laboratory instruction in the various branches of dairy work. This necessitated the appointment of a man to supervise the manufacturing work carried on by the department.

Has Broad Training

Mr. Brooks graduated from Cornell in 1897 and the following year was a graduate at Western State Fair, at which time he held the American History Scholarship. In 1899 he was head of the department of agriculture in Madison, and from 1906 to 1907 he held a similar position in the high school at East Orange, N. J. During the last year he resigned his position in order to enter commercial work, and for one year was with the Western Electric Instrument Company. In 1909 he left this position to become assistant manager for the Phoenix Cheese Company of New York City. He remained there until 1916, when he became office manager for the P. E. Sharples Company, and in 1917 he returned to the Phoenix Cheese Co., as manager of their Newark plant.

Professor Stocking Comments

In commenting on the appointment, Professor Stocking said, Mr. Brooks' training and experience in teaching and educational matters and his wide business experience in the handling of all kinds of dairy products fit him exceptionally well for his new work in the department. He still owns and operates the home farm at East Orange, N. J., and this serves to keep him in touch with the problems of the producer as well as the consumer of dairy products."

Sharple's Offers Scholarship

The Sharple's Separator Company has offered the College a five hundred dollar scholarship to be awarded at the end of the junior year to some young woman who is interested in dairy industry and home economics. Finally, the part of the Board of Trustees, has not yet been taken.
THE CAMPUS COUNTRYMAN

Devoted to Neighborhood Happenings at the Top of "The Hill"

Published on the first of each month during the school year by The Cornell Countryman, Inc. Contributions should be on the hands of the Editor by the fifteenth of the month. All unsigned articles are subject to the editor's discretion. No politics will be tolerated. Only good writing, grammar, spelling, and punctuation will be accepted.

E. D. Murdered!!!

It is with a very peculiar feeling that we announce the tragic death of E. D. Known to all of us. It is rumored that some vicious, tortoise-shelled hairpin-mechanic slew him with a molotov cocktail. It may be that she mistook him for a monkey. At all events, he is dead. Too bad.

Correspondence

May 11, 1920,
Editor Cornell Countryman:

The following are some notes on the Campus Countryman for May:

"Three Million for New Buildings. An increase of almost three hundred thousand over the previous year will be used in increasing the salaries of the teaching staff."

"Cattle Immigration Must Go."

The Editor of the Campus Countryman is in error in stating that the insectary was built in 1886. It was built in 1888 with some of the money which came to the University that spring as a part of the Hatch Fund establishing the Experimt Station. Mark Slingerland, who ended his life as a murderer and Professor George Burr roomed there, and Mark had charge of the heating plant. E. D. used to tell you he never knew when his roommate got to bed.

Dom Econ Adopts a Bouncing Baby Boy. Here I can crow a little, for the Minnesota Home Economics girls have been caring for babies during the last three years. They have two practice homes and each has its baby as a part of the regular equipment.

"Daddy's Rail Tie Retires."

The portrait shown beside this heading and labeled "G. W. Tailby, Sr." must have been taken some time ago, for it looks much too young to be put on the record. I had a chance to know William's father intiminately at the picnic. He had a room in his house near the reservoir and ate at the table. I can hear testimony to the truth of what Professor Stone says about his being faithful in his work and loyal to his department. I do not remember how he seemed to take the same interest in pushing the work of the farm that he would if it had been his own. On the farm last year, when he was rooming at his house, it happened that there were several loads of broken hay ready for the barn, and the hay crew was still at work. All the mowers had come away for the holiday. It was a good hay day, and it seemed a pity to see the time wasted. He got his young brother-in-law to help him get in the hay that was in cock; he refused to have the hay carted and keep things moving. I offered to run the mower. We hitched up "Gumdrop" and "Garfield" and I cut Clover all day.

"And it's queer that, turning gray,
Still a fellow looks away,
To the things he knows vanish
Into the paths of yesterday."

(Signed)

J. M. Drew, Ed.

THE CAMPUS COUNTRYMAN, JUNE, 1920

LEADING IN THE GOAT

This little white sheet is in a terrible state of affairs. A "Rise" Lord is leaving us. Yes, sir, he has worn up and down that he's tired from The Countryman Board for three years. We violently disagreed with him, but to no avail. At least, we hope that we may have something of his for publication every now and then. We all have to keep a string on him some way. Now all of this goes to show that "Rise" has left us, and that somebody has to be the goat for next year. Everybody has cussed and discussed the whole thing fairly well, and we're all decided that there is no one on the Board capable of being a real goaty goat. Consequently, who should be selected but our one and only office-boy, because we are, folks; we seem to have been promoted from office-boy to office-goat. We don't know whether to be insulted or pleased. At all events, we'll act as happy as we can in this desert of ours. (When we say "desert", we of course eliminate Spring Day, two days before and ten days after.) Well, now that you know who the goat is, probably you want to know what his plans are. Frankly, he hasn't any. We're simply going to give the news for the "Top of the Hill" in a neighborly, good-natured fashion, and so that it will be interesting to both old graduates and former students. To this end, we want everybody that has anything to say to tell us about it. If we like it, we'll publish it; if we don't like it—well, there's the chance that you may not see it in print. We're perfectly willing to publish just as much as our limited space will allow.

Good friends, if there is one thing that this little paper aims to do, it is to keep up that spirit of neighborliness that exists here in the A, G College. We want to demonstrate the great difference between A, G and the other large colleges of the University. We're proud of that spirit. Let's keep it living.

JACK FLEMING, Editor

No. 8 June 1920

RESEARCH: SKELETONS

If we could only poem, we might write a poem of how neighbors H. W. and C. L. A. did some research work in their back yard. In an old poem, we won't. It seems, according to our knock-kneed reporter, that the elder neighbor was giving the younger one a rather doubtful expression, which, by the way, didn't phase the lad a bit. Then the younger neighbor came tearing down the aisle in a perfect state of frenzy. The class of the young garter snake out of the corner of the attention area, the skeleton of the horse, and brought forth that of the cow.

OPPORTUNITY

It is rumored that there will be a grand exodus of seniors this year to Asia Minor. A school there is offering agricultural college graduates a position on the staff. They will not be expected to teach more than five subjects, and they have the right to stay there three winters. What do we do, could you be sweeter? And the pay is wonderful—there's so little of it. Money must be a curiosity around there. But on the other hand, we must realize that the sun is hot there, and that the temperature for the winter is for America, which means quite a saving in clothes. Anyway, clothes are going out of style. If you doubt it, just look at the female attire at the Navy Hop, the night before Spring Day.

THOSE WONDERFUL CALORIE CHASERS

Picnics for Dom Econ must be very interesting. One of our light-hearted associates did not invite one of them a "little sketch was enacted for the enjoyment of the spectators, in which some of the girls were disguised as food."
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DOM ECON

Home Economics is again taking part in the Milk and Child Welfare Exposition, where the State College of Agriculture is cooperating with the State Bureau of Farms and Markets in placing the value of milk for the benefit of New York City. This year the exposition will be held in the Grand Central Palace, from May 17th to 22nd.

It is also the proud exhibit will consist of a Garden of Health, in which Strength, Beauty, Wealth, and Happiness as the handmaidens of Health will be the value of milk to all who approach the Garden. One of the spectacular features of the exhibit will be the "Fountain of Youth," a huge milk bottle twenty-five feet in height and eight feet in diameter from which milk and milk drinks will be dispensed.

The Child Health Organization of America is cooperating with Home Economics in this project, and in addition is holding a daily competition of New York City school children for the interpretation of the value of milk thru either written essays, talks, plays, or other evidences.

The department of sewing and millinery has designed and made the costumes and hats to be worn by those who represent the spirits of the Garden.

Miss Florence Freer, leader of the state home demonstration contest in New York State since 1917, has resigned to go into business. She leaves those with whom she has worked with their best wishes for her success in the field of commerce.

Dr. Ruby Green Smith has been appointed state leader of home demonstration agents in charge of an organization in New York State in Miss Freer's place. Miss Canon is state leader in charge of program.

FARM BUREAU

Miss Mildred Sprague, who has been secretary of the State Home Bureau Office since its organization in October, 1917, has resigned. Her marriage to H. Soely, a graduate of Cornell University, takes place in June. They will make their home in Syracuse, New York.

"Little Richard," the baby boy that was loaned to the school of Home Economics by an institution in Syracuse, and who is making the campus famous, is gaining even more than his quota of ounces. He now weighs 9 pounds and 4 ounces, as against 8 pounds, the weight he bore seven weeks ago. He still has his bad habits, due probably to the competition of his mother. He is arriving at the hands of the baby sitter, who feed and handle him according to mathematical formula. He is a "bank account owner started by a brother," who felt that seeing Richard was worth five cents, if not more. His guardians taught him a bank in which to deposit what may prove to be the humble beginning of an educational fund for his future.

Course 3. Foods, on May 6th, gave a picnic at Beebe Lake, and invited the Home Economics staff to share their supper with them. A little sketch was enacted for the benefit of the inspectors, in which (sketch) some of the girls were disguised as food. Especially noticeable was the Queen of the Aquarium, but the "little fish" were not, "not tough," and Thin White Sauce, with blanched face, and body swathed in cheese cloth.

Friga Fyla, elections for the next year are: president, Norma Dunham '21; vice president, Sarah Merritt '22; secretary, Carmen Hudson on dollar bank; Helen Potter '22; and publicity manager, Eleanor Watson '23.

The Junior class elected the following officers for the coming year: president, Irene Zapp; vice president, Sarah Speer; secretary and treasurer, Mary Miller; historian, Helen Glaser.

AN HUS

Neighbor (Professor H. A.) Hopper has been granted sabbatic leave. When we saw him his plans were only tentative, but he expects to do special work at the University of Minnesota in economics and meat and milk production.

A new neighbor is going to be in our midst when R. B. Himman, the secretary, will take up his duties next August. Mr. Himman is a Canadian by birth, and was reared on a farm where sheep raising was a hobby. He obtained a broad, sympathetic view of livestock conditions in the British Isles.

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INDEX TO
VOLUMES XVI AND XVII, FEBRUARY, 1919-JUNE 1920*

Because of unsettled conditions brought about by the war, publication of The Countryman was suspended from September, 1918, until February, 1919. Only five issues, February-June, are contained in Volume XVI, and no index was published in the June issue, as had been the custom. Volume XVII contains the customary nine issues.

INDEX TO SUBJECTS

<table>
<thead>
<tr>
<th>Category</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRICULTURAL ECONOMICS—</td>
<td>Organizing Agriculture as a Business</td>
<td>E. Davenport 119</td>
</tr>
<tr>
<td></td>
<td>Farm Mortgages Thru the Federal Land Bank</td>
<td>Ivan Wright 197</td>
</tr>
<tr>
<td></td>
<td>Credit Rating the Farmer</td>
<td>Ivan Wright 7</td>
</tr>
<tr>
<td></td>
<td>The Farmer and the State Income Tax</td>
<td>E. M. Travis 212</td>
</tr>
<tr>
<td>AGRICULTURAL EXTENSION AND CO-OPERATION—</td>
<td>The Central Packing House Association</td>
<td>N. R. Peet 11</td>
</tr>
<tr>
<td></td>
<td>Co-operation Among the Plant Pathologists</td>
<td>H. H. Whetzel 13</td>
</tr>
<tr>
<td></td>
<td>The Dairymen's League</td>
<td>H. E. Babcock 77</td>
</tr>
<tr>
<td></td>
<td>Two Farm Necessities</td>
<td>G. F. Warren 126</td>
</tr>
<tr>
<td></td>
<td>The College and the Country Newspaper</td>
<td>Bristow Adams 70</td>
</tr>
<tr>
<td></td>
<td>Neighborly Dramatics</td>
<td>G. A. Everett 76</td>
</tr>
<tr>
<td></td>
<td>Why the Dairymen Organized, Part I</td>
<td>E. R. Eastman 9</td>
</tr>
<tr>
<td></td>
<td>Cornell at the National Conventions at Chicago</td>
<td>D. J. Crosby 133</td>
</tr>
<tr>
<td></td>
<td>The American Farm Bureau Federation</td>
<td>M. C. Burritt 138</td>
</tr>
<tr>
<td></td>
<td>How the Dairymen Organized, Part II</td>
<td>E. R. Eastman 141</td>
</tr>
<tr>
<td>ANIMAL HUSBANDRY—</td>
<td>Feeds with Public Formulas</td>
<td>E. S. Savage 71</td>
</tr>
<tr>
<td></td>
<td>The Dairymen's League</td>
<td>H. E. Babcock 77</td>
</tr>
<tr>
<td></td>
<td>From Live Cattle to Beef</td>
<td>L. D. H. Weld 127</td>
</tr>
<tr>
<td></td>
<td>&quot;Hothouse&quot; Lambs</td>
<td>K. J. Seulke 175</td>
</tr>
<tr>
<td></td>
<td>The Prevention of Hog Cholera in New York</td>
<td>R. R. Birch 181</td>
</tr>
<tr>
<td></td>
<td>Why the Dairymen Organized, Part I</td>
<td>E. R. Eastman 9</td>
</tr>
<tr>
<td></td>
<td>Horses vs. Tractors</td>
<td>Wayne Dinsmore 16</td>
</tr>
<tr>
<td></td>
<td>Advanced Registry for the Business Dairymen</td>
<td>H. L. Stafford 134</td>
</tr>
<tr>
<td></td>
<td>Twenty Miles to Pasture</td>
<td>E. L. Moody 136</td>
</tr>
<tr>
<td></td>
<td>Some Aspects of the Present Holstein Situation</td>
<td>M. S. Prescott 139</td>
</tr>
<tr>
<td></td>
<td>How the Dairymen Organized, Part II</td>
<td>E. R. Eastman 141</td>
</tr>
<tr>
<td></td>
<td>Hog Killin' Days</td>
<td>K. J. Seulke 144</td>
</tr>
<tr>
<td></td>
<td>Cows and Crops</td>
<td>H. C. Ingraham 206</td>
</tr>
<tr>
<td></td>
<td>&quot;What Shall It Profit a Man . . . ?&quot;</td>
<td>E. M. Parrott 266</td>
</tr>
<tr>
<td></td>
<td>Feed Control Legislation</td>
<td>L. A. Maynard 447</td>
</tr>
<tr>
<td></td>
<td>Cornell Herd Records During 1919-1920</td>
<td>J. M. Beiermeister 451</td>
</tr>
<tr>
<td></td>
<td>The Common Sheep Infecting Parasite</td>
<td>W. C. Buell 516</td>
</tr>
</tbody>
</table>

# Campus Topics

<table>
<thead>
<tr>
<th>Topic</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greetings</td>
<td>A. R. Mann</td>
<td>14</td>
</tr>
<tr>
<td>The College and the War</td>
<td>Montgomery Robinson</td>
<td>222</td>
</tr>
<tr>
<td>Standards in the College of Agriculture</td>
<td>J. L. Russell</td>
<td>19</td>
</tr>
<tr>
<td>Greetings to Students</td>
<td>A. R. Mann</td>
<td>47</td>
</tr>
<tr>
<td>The College Needs More Room</td>
<td>A. R. Mann</td>
<td>132</td>
</tr>
<tr>
<td>Why Is Farmers' Week?</td>
<td>J. L. Stone</td>
<td>259</td>
</tr>
<tr>
<td>Take Home the Facts</td>
<td></td>
<td>274</td>
</tr>
<tr>
<td>State College of Agriculture and State Agricultural Experiment Station Affiliate</td>
<td>A. R. Mann</td>
<td>387</td>
</tr>
<tr>
<td>The Larger College of Agriculture</td>
<td>A. R. Mann</td>
<td>507</td>
</tr>
<tr>
<td>A New Farmers' Week</td>
<td>A. R. Mann</td>
<td>513</td>
</tr>
</tbody>
</table>

# Dairy Industry

<table>
<thead>
<tr>
<th>Topic</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milking Machines</td>
<td>R. S. Breed</td>
<td>123</td>
</tr>
<tr>
<td>Condensed Milk and Evaporated Milk</td>
<td>F. E. Rice</td>
<td>133</td>
</tr>
<tr>
<td>Good Milk that Tests Too Acid</td>
<td>H. G. Troy</td>
<td>391</td>
</tr>
</tbody>
</table>

# Domestic Economy

<table>
<thead>
<tr>
<th>Topic</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hints on Choosing Textiles</td>
<td></td>
<td>82</td>
</tr>
<tr>
<td>Preventative Measures for Some Common Ailments</td>
<td>Lulu Graves</td>
<td>233</td>
</tr>
<tr>
<td>Can You Afford to Be Without a Canner?</td>
<td>Mrs. L. M. Standish</td>
<td>461</td>
</tr>
<tr>
<td>Care of Household Machinery</td>
<td>F. L. Fairbanks</td>
<td>521</td>
</tr>
</tbody>
</table>

# Experience (Farm Bureau Articles)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Registry for the Business Dairyman</td>
<td>H. L. Stafford</td>
<td>134</td>
</tr>
<tr>
<td>Twenty Miles to Pasture</td>
<td>E. L. Moody</td>
<td>136</td>
</tr>
<tr>
<td>Cows and Crops</td>
<td>H. C. Ingraham</td>
<td>206</td>
</tr>
<tr>
<td>“What Shall It Profit a Man...?”</td>
<td>E. M. Parrott</td>
<td>266</td>
</tr>
<tr>
<td>City Wages on the Farm</td>
<td>C. P. Leasure</td>
<td>330</td>
</tr>
<tr>
<td>Modern Conveniences from Poultry</td>
<td>Claude S. Smith</td>
<td>332</td>
</tr>
<tr>
<td>A Non-Union Day for Hens</td>
<td>W. A. Simmons</td>
<td>333</td>
</tr>
<tr>
<td>Producing for Producers</td>
<td>W. S. White</td>
<td>394</td>
</tr>
<tr>
<td>How Control the Codling Moth?</td>
<td>L. F. Strickland</td>
<td>395</td>
</tr>
<tr>
<td>Answering the Lime Question at Home</td>
<td>M. C. Porter</td>
<td>397</td>
</tr>
<tr>
<td>More Crops than Land</td>
<td>E. R. Lupton</td>
<td>398</td>
</tr>
<tr>
<td>The Farm Experiment Station</td>
<td>L. F. Allen</td>
<td>456</td>
</tr>
<tr>
<td>The Common Sheep Infecting Parasite</td>
<td>W. C. Buell</td>
<td>516</td>
</tr>
</tbody>
</table>

# Farm Crops

<table>
<thead>
<tr>
<th>Topic</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Farm Seed Catalog</td>
<td>O. W. Dynes</td>
<td>17</td>
</tr>
<tr>
<td>The Farm Garden in New York State</td>
<td>A. Thompson</td>
<td>18</td>
</tr>
<tr>
<td>Potato Planting Machinery in New York State</td>
<td>E. V. Hardenburg</td>
<td>75</td>
</tr>
<tr>
<td>The European Corn Borer</td>
<td>E. P. Felt</td>
<td>177</td>
</tr>
<tr>
<td>Crop Insurance by Drainage</td>
<td>H. E. Cox</td>
<td>67</td>
</tr>
<tr>
<td>Cows and Crops</td>
<td>H. C. Ingraham</td>
<td>206</td>
</tr>
<tr>
<td>Better Alfalfa Varieties for New York</td>
<td>J. H. Barron</td>
<td>392</td>
</tr>
<tr>
<td>Producing for Producers</td>
<td>W. S. White</td>
<td>394</td>
</tr>
<tr>
<td>More Crops than Land</td>
<td>E. R. Lupton</td>
<td>398</td>
</tr>
<tr>
<td>The Federal Grades for Grain</td>
<td>O. W. Dynes</td>
<td>457</td>
</tr>
</tbody>
</table>

# Farming in Other Lands

<table>
<thead>
<tr>
<th>Topic</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming a la Francaise</td>
<td>R. L.</td>
<td>12</td>
</tr>
<tr>
<td>War's Aftermath in Rural France</td>
<td>K. A. Ryerson</td>
<td>203</td>
</tr>
<tr>
<td>Our Neighbors Over the Way</td>
<td>L. A. Toan</td>
<td>207</td>
</tr>
<tr>
<td>From Army Camp to Dairy Farm</td>
<td>D. S. Hatch</td>
<td>389</td>
</tr>
<tr>
<td>The New Era in Mesopotamia</td>
<td>D. S. Hatch</td>
<td>449</td>
</tr>
</tbody>
</table>
## HORTICULTURE

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Central Packing House Association</td>
<td>N. R. Peet</td>
<td>11</td>
</tr>
<tr>
<td>Some Insect Pests of the Apple</td>
<td>G. W. Herrick</td>
<td>129</td>
</tr>
<tr>
<td>Some Difficulties with the Central Packing Plan</td>
<td>D. Phillips</td>
<td>10</td>
</tr>
<tr>
<td>Dwarf Fruit and Variation</td>
<td>N. H. Grubb</td>
<td>261</td>
</tr>
<tr>
<td>Apples that Pay Dividends</td>
<td>F. A. Salisbury</td>
<td>267</td>
</tr>
<tr>
<td>How to Prune and Why</td>
<td>W. H. Chandler</td>
<td>272</td>
</tr>
<tr>
<td>How Control the Codling Moth?</td>
<td>L. F. Strickland</td>
<td>395</td>
</tr>
</tbody>
</table>

## POETRY

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature's Paradox</td>
<td>L. A. Hausman</td>
<td>70</td>
</tr>
<tr>
<td>The Honeybee</td>
<td>W. P. Alexander</td>
<td>170</td>
</tr>
<tr>
<td>To Commemorate the Fiftieth Anniversary of Cornell University</td>
<td>W. P. Alexander</td>
<td>218</td>
</tr>
<tr>
<td>One Sunday</td>
<td>A. P. N.</td>
<td>18</td>
</tr>
<tr>
<td>Thanksgiving Rondeau</td>
<td>R. L.</td>
<td>81</td>
</tr>
<tr>
<td>Song of Late Autumn (First Printing)</td>
<td>W. P. Alexander</td>
<td>130</td>
</tr>
<tr>
<td>Song of Late Autumn (Second Printing)</td>
<td>W. P. Alexander</td>
<td>224</td>
</tr>
<tr>
<td>To France</td>
<td>R. L.</td>
<td>213</td>
</tr>
<tr>
<td>Fragment from “All Thumbs”</td>
<td></td>
<td>388</td>
</tr>
<tr>
<td>Dawn and Dark</td>
<td>Norman Gale</td>
<td>322</td>
</tr>
<tr>
<td>Back Home</td>
<td>E. D.</td>
<td>508</td>
</tr>
</tbody>
</table>

## POULTRY

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artificial Light, an Aid to Egg Production</td>
<td>J. E. Rice</td>
<td>10</td>
</tr>
<tr>
<td>A Method of Judging Fowls for Egg Production</td>
<td>J. E. Rice</td>
<td>15</td>
</tr>
<tr>
<td>Artificial Light to Control Egg Production</td>
<td>J. E. Rice</td>
<td>323</td>
</tr>
<tr>
<td>Selecting Roosters to Increase Egg Production</td>
<td>O. B. Kent</td>
<td>326</td>
</tr>
<tr>
<td>Catching Chicken Thieves with Science</td>
<td></td>
<td>329</td>
</tr>
<tr>
<td>City Wages on the Farm</td>
<td>C. P. Leasure</td>
<td>330</td>
</tr>
<tr>
<td>Modern Conveniences from Poultry</td>
<td>C. S. Smith</td>
<td>332</td>
</tr>
<tr>
<td>A Non-Union Day for Hens</td>
<td>W. A. Simmons</td>
<td>333</td>
</tr>
<tr>
<td>Certified Eggs and Poultry Stock</td>
<td>L. M. Hurd</td>
<td>335</td>
</tr>
<tr>
<td>Money from Mottled Anconas</td>
<td>Archie E. Vandervort</td>
<td>336</td>
</tr>
</tbody>
</table>

## RURAL ENGINEERING

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leveling for Drainage Purposes</td>
<td>J. C. McCurdy</td>
<td>8</td>
</tr>
<tr>
<td>The Truth About Tractors</td>
<td>D. S. Fox</td>
<td>74</td>
</tr>
<tr>
<td>The Tractor on the Hilly Farm</td>
<td>J. Van Wagener</td>
<td>183</td>
</tr>
<tr>
<td>The Farm Tractor and the War</td>
<td>W. K. Blodgett</td>
<td>227</td>
</tr>
<tr>
<td>Tractor Lubrication</td>
<td>F. L. Fairbanks</td>
<td>14</td>
</tr>
<tr>
<td>Horses vs. Tractors</td>
<td>Wayne Dinsmore</td>
<td>16</td>
</tr>
<tr>
<td>Tractors vs. Horses</td>
<td>A. F. Head</td>
<td>270</td>
</tr>
</tbody>
</table>

## SEMI-CENTENNIAL

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornell’s Semi-Centennial</td>
<td>W. Patterson</td>
<td>131</td>
</tr>
<tr>
<td>The Alumni Conference</td>
<td>Cornelius Betten</td>
<td>174</td>
</tr>
<tr>
<td>To Commemorate the Fiftieth Anniversary of Cornell University</td>
<td>W. P. Alexander</td>
<td>218</td>
</tr>
<tr>
<td>The Semi-Centennial Celebration</td>
<td>A. J. Whinery</td>
<td>221</td>
</tr>
<tr>
<td>“Let Us Look Backward that We May Look Ahead”</td>
<td>L. H. Bailey</td>
<td>219</td>
</tr>
</tbody>
</table>

## SOILS AND FERTILIZERS

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leveling for Drainage</td>
<td>J. C. McCurdy</td>
<td>8</td>
</tr>
<tr>
<td>American Potash in Crop Production</td>
<td>E. O. Fippin</td>
<td>121</td>
</tr>
<tr>
<td>War Time Development in the Fertilizer Industry</td>
<td>O. M. Kile</td>
<td>229</td>
</tr>
<tr>
<td>Crop Insurance by Drainage</td>
<td>H. E. Cox</td>
<td>67</td>
</tr>
</tbody>
</table>
Pro-Potash Revolution Called to Question ........................................ W. J. Spillman and E. L. Worthen 69
Selling Agriculture to Fertilizer Salesmen ............................... E. G. McCloskey 72
Progressive or Complacent Agriculture? ......................................... A. B. Ross 211
Answering the Lime Question at Home ........................................ M. C. Porter 397
More Crops than Land ................................................................. E. R. Lupton 398
The Farm Experiment Station ...................................................... L. F. Allen 456
The Practical Value of the Soil Survey ........................................ H. O. Buckman 453
How Can the Soil Survey Be Made More Useful to the Farmer? ........... T. L. Lyon 509

MISCELLANEOUS—
An Appreciation of A. D. White .................................................. L. H. Bailey 7
A Letter on the Death of A. D. White ........................................... Theodore Roosevelt 21
Culture and Agriculture, Part I .................................................. F. W. Howe 171
Culture and Agriculture, Part II .................................................. F. W. Howe 231
An Adventure in Education ......................................................... F. W. Beckman 225
A Letter to Agricultural Students ................................................ A. D. White 131
A Fallacy in Health Propaganda .................................................. W. S. Thompson 208
A Letter on “Liberalizing Agriculture” ........................................ Daniel Dean 230
Let It Blow! ................................................................................. A. B. Genung 263
Large Scale Dehydration ............................................................... E. D. 269
Following the Harvest ................................................................. W. L. Savage Jr., E. Hassan 459
College Days that Are Gone ......................................................... L. H. Bailey 506
To the Former Students of the College of Agriculture.................... Floyd S. Barlow 512
The Reclamation of Pennsylvania’s Desert .................................... Gifford Pinchot 514
Constitution of THE CORNELL COUNTRYMAN ................................ 518

INDEX TO AUTHORS

ADAMS, BRISTOW—
The College and the Country Paper ............................................. 70

ALEXANDER, W. PRINDLE—
The Honeybee ........................................................................ 170
To Commemorate the Fiftieth Anniversary of Cornell University .... 218
Song of Late Autumn .................................................................. 130
Song of Late Autumn (second printing) ......................................... 224

ALLEN, LEWIS F.—
The Farm Experiment Station ....................................................... 456

BABCOCK, H. E.—
The Dairymen’s League ................................................................ 77

BAILEY, L. H.—
In Appreciation ........................................................................... 7
“Let Us Look Backward in Order that We May Look Ahead” .......... 219
The College Days that Are Gone .................................................. 506

BARLOW, FLOYD S.—
To the Former Students of the College of Agriculture ................... 512

BARRON, J. H.—
Better Alfalfa Varieties for New York ........................................ 392

BECKMAN, F. W.—
An Adventure in Education ......................................................... 225

BEIERMEISTER, J. M.—
Cornell Herd Records During 1919-1920 ..................................... 451
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>BETTEN, C.</td>
<td>The Alumni Conference</td>
<td>174</td>
</tr>
<tr>
<td>BIRCH, R. R.</td>
<td>The Prevention of Hog Cholera in New York</td>
<td>181</td>
</tr>
<tr>
<td>BLODGETT, W. K.</td>
<td>The Farm Tractor and the War</td>
<td>227</td>
</tr>
<tr>
<td>BREEDE, R. S.</td>
<td>Milking Machines</td>
<td>123</td>
</tr>
<tr>
<td>BUCKMAN, H. O.</td>
<td>The Practical Value of the Soil Survey</td>
<td>453</td>
</tr>
<tr>
<td>BUELL, W. C.</td>
<td>The Common Sheep Infecting Parasite</td>
<td>516</td>
</tr>
<tr>
<td>BURRITT, M. C.</td>
<td>The American Farm Bureau Federation</td>
<td>138</td>
</tr>
<tr>
<td>CHANDLER, W. H.</td>
<td>How to Prune and Why</td>
<td>272</td>
</tr>
<tr>
<td>COX, HENRY E.</td>
<td>Crop Insurance by Drainage</td>
<td>67</td>
</tr>
<tr>
<td>CROSSBY, D. J.</td>
<td>Cornell at the National Conventions at Chicago</td>
<td>133</td>
</tr>
<tr>
<td></td>
<td>Large Scale Dehydration</td>
<td>269</td>
</tr>
<tr>
<td></td>
<td>Back Home</td>
<td>508</td>
</tr>
<tr>
<td>DAVENPORT, E.</td>
<td>Organizing Agriculture as a Business</td>
<td>119</td>
</tr>
<tr>
<td>DEAN, DANIEL</td>
<td>A Letter on “Liberalizing Agriculture”</td>
<td>230</td>
</tr>
<tr>
<td>DINSMORE, WAYNE</td>
<td>Horses vs. Tractors</td>
<td>16</td>
</tr>
<tr>
<td>DYNES, O. W.</td>
<td>The Farm Seed Catalog</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>The Federal Grades for Grains</td>
<td>457</td>
</tr>
<tr>
<td>EASTMAN, E. R.</td>
<td>Why the Dairymen Organized</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>How the Dairymen Organized</td>
<td>141</td>
</tr>
<tr>
<td>EVERTT, G. A.</td>
<td>Neighborly Dramatics</td>
<td>76</td>
</tr>
<tr>
<td>FAIRBANKS, F. L.</td>
<td>Tractor Lubrication</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Care of Household Machinery</td>
<td>521</td>
</tr>
<tr>
<td>FELT, E. P.</td>
<td>The European Corn Borer</td>
<td>177</td>
</tr>
<tr>
<td>FIPPIN, E. O.</td>
<td>American Potash in Crop Production</td>
<td>121</td>
</tr>
<tr>
<td>FOX, D. S.</td>
<td>The Truth About Tractors</td>
<td>74</td>
</tr>
<tr>
<td>GALE, NORMAN</td>
<td>Dawn and Dark</td>
<td>322</td>
</tr>
<tr>
<td>GENUNG, A. B.</td>
<td>Let It Blow!</td>
<td>263</td>
</tr>
<tr>
<td>GRAVES, LULU</td>
<td>Preventative Measures for Some Common Ailments</td>
<td>233</td>
</tr>
<tr>
<td>Author</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>GRUBB, NORMAN H.</td>
<td>Dwarf Fruit and Variation</td>
<td>261</td>
</tr>
<tr>
<td>HARDENBURG, E. V.</td>
<td>Potato Planting Machinery in New York</td>
<td>75</td>
</tr>
<tr>
<td>HASSEN, E.</td>
<td>Following the Harvest</td>
<td>459</td>
</tr>
<tr>
<td>HATCH, D. S.</td>
<td>From Army Camp to Dairy Farm</td>
<td>389</td>
</tr>
<tr>
<td></td>
<td>The New Era in Mesopotamia</td>
<td>449</td>
</tr>
<tr>
<td>HAUSMAN, L. A.</td>
<td>Nature’s Paradox</td>
<td>70</td>
</tr>
<tr>
<td>HEAD, A. F.</td>
<td>Tractors vs. Horses</td>
<td>270</td>
</tr>
<tr>
<td>HERRICK, G. W.</td>
<td>Some Insect Pests of the Apple</td>
<td>129</td>
</tr>
<tr>
<td>HOWE, F. W.</td>
<td>Culture and Agriculture—Part I</td>
<td>171</td>
</tr>
<tr>
<td></td>
<td>Culture and Agriculture, Part II</td>
<td>231</td>
</tr>
<tr>
<td>HURD, L. M.</td>
<td>Certified Eggs and Poultry Stock</td>
<td>335</td>
</tr>
<tr>
<td>INGRAHAM, H. C.</td>
<td>Cows and Crops</td>
<td>206</td>
</tr>
<tr>
<td>KENT, O. B.</td>
<td>Selecting Roosters to Increase Production</td>
<td>326</td>
</tr>
<tr>
<td>KILE, O. M.</td>
<td>War Time Development in the Fertilizer Industry</td>
<td>229</td>
</tr>
<tr>
<td>LEASURE, C. P.</td>
<td>City Wages on the Farm</td>
<td>330</td>
</tr>
<tr>
<td>R. L.</td>
<td>Farming a la Francaise</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Thanksgiving Rondeau</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>To France</td>
<td>213</td>
</tr>
<tr>
<td>LUPTON, E. R.</td>
<td>More Crops than Land</td>
<td>398</td>
</tr>
<tr>
<td>LYON, T. L.</td>
<td>How Can the Soil Survey Be Made More Useful to the Farmer?</td>
<td>509</td>
</tr>
<tr>
<td>McCLOSKEY, E. G.</td>
<td>Selling Agriculture to Fertilizer Salesmen</td>
<td>72</td>
</tr>
<tr>
<td>McCURDY, J. C.</td>
<td>Leveling Land for Drainage Purposes</td>
<td>8</td>
</tr>
<tr>
<td>MANN, A. R.</td>
<td>Greetings</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Greeting to Students</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>The College Needs More Room</td>
<td>132</td>
</tr>
<tr>
<td></td>
<td>State College of Agriculture and the State Agricultural Experiment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Station Affiliate</td>
<td>387</td>
</tr>
<tr>
<td></td>
<td>The Larger College of Agriculture</td>
<td>507</td>
</tr>
<tr>
<td>MAYNARD, L. A.</td>
<td>Feed Control Legislation</td>
<td>447</td>
</tr>
<tr>
<td>MOODY, E. L.</td>
<td>Twenty Miles to Pasture</td>
<td>136</td>
</tr>
<tr>
<td>Author</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>A. P. N.</td>
<td>One Sunday</td>
<td>18</td>
</tr>
<tr>
<td>PARROTT, E. M.</td>
<td>&quot;What Shall It Profit a Man . . .?&quot;</td>
<td>266</td>
</tr>
<tr>
<td>PATTERSON, W.</td>
<td>Cornell's Semi-Centennial</td>
<td>131</td>
</tr>
<tr>
<td>PINCHOT, GIFFORD</td>
<td>The Reclamation of Pennsylvania's Desert</td>
<td>514</td>
</tr>
<tr>
<td>PEET, N. R.</td>
<td>The Central Packing House Association</td>
<td>11</td>
</tr>
<tr>
<td>PHILLIPS, DEANE</td>
<td>Some Difficulties with the Central Packing Plan</td>
<td>10</td>
</tr>
<tr>
<td>PORTER, M. C.</td>
<td>Answering the Lime Question at Home</td>
<td>397</td>
</tr>
<tr>
<td>PRESCOTT, M. S.</td>
<td>Some Aspects of the Holstein Situation</td>
<td>139</td>
</tr>
<tr>
<td>RICE, F. E.</td>
<td>Condensed Milk and Evaporated Milk</td>
<td>133</td>
</tr>
<tr>
<td>RICE, J. E.</td>
<td>Artificial Light, an Aid to Egg Production</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Artificial Light to Control Egg Production</td>
<td>323</td>
</tr>
<tr>
<td>ROBINSON, MONTGOMERY</td>
<td>The College and the War</td>
<td>222</td>
</tr>
<tr>
<td>ROOSEVELT, THEODORE</td>
<td>A Letter on the Death of A. D. White</td>
<td>21</td>
</tr>
<tr>
<td>ROSS, A. B.</td>
<td>Progressive or Complacent Agriculture?</td>
<td>211</td>
</tr>
<tr>
<td>RUSSELL, J. L.</td>
<td>Standards in the College of Agriculture</td>
<td>19</td>
</tr>
<tr>
<td>RYERSON, K. A.</td>
<td>War's Aftermath in Rural France</td>
<td>203</td>
</tr>
<tr>
<td>SALISBURY, F. A.</td>
<td>Apples that Pay Dividends</td>
<td>267</td>
</tr>
<tr>
<td>SAVAGE, E. S.</td>
<td>Feeds with Public Formulas</td>
<td>71</td>
</tr>
<tr>
<td>SAVAGE, W. L. Jr.</td>
<td>Following the Harvest</td>
<td>459</td>
</tr>
<tr>
<td>SEULKE, K. J.</td>
<td>&quot;Hothouse&quot; Lambs</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>Hog Killin' Days</td>
<td>144</td>
</tr>
<tr>
<td>SIMMONS, W. A.</td>
<td>A Non-Union Day for Hens</td>
<td>333</td>
</tr>
<tr>
<td>SMITH, CLAUDE S.</td>
<td>Modern Conveniences from Poultry</td>
<td>332</td>
</tr>
<tr>
<td>SPILLMAN, W. J.</td>
<td>The Pro-Potash &quot;Revolution&quot; Called to Question</td>
<td>69</td>
</tr>
<tr>
<td>STAFFORD, H. L.</td>
<td>Advanced Registry for the Business Dairyman</td>
<td>134</td>
</tr>
<tr>
<td>STANDISH, MRS. L. M.</td>
<td>Can You Afford to Be Without a Canner?</td>
<td>461</td>
</tr>
<tr>
<td>STONE, JOHN L.</td>
<td>Why Is Farmers' Week?</td>
<td>259</td>
</tr>
</tbody>
</table>
The Feed That Makes the Milk Yield

If you have not made up your mind as to what is the best feed for large milk production, for either summer conditions or heavy feeding in winter, visit the dairy farmers in the eastern states and see what they feed. These farmers are supplying large markets with milk. Their principal production is dairy products.

Ask them what high-protein feed they are using to make up the main strength of their rations. The answer will invariably be that they are feeding Buffalo Corn Gluten Feed, and, have fed it for a good many years—and in a great many cases, their fathers fed it before them.

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The biggest step ever taken in the improvement of cream separators was the invention of the *suction-feed* principle by SHARPLES. That stride forward put the SHARPLES so far ahead of the old fixed-feed separators—in ability to skim clean, elimination of discs in the bowl, and making possible a knee-low supply tank—that in the past few years SHARPLES Suction-feed Cream Separators have replaced thousands of "fixed-feed" separators.

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