PURITY OF FARM SEEDS IN 1913.

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The seed inspection law of New York State is securing some of the good results expected from it. Only 17 1/2 per ct. of the samples collected in 1913 failed to reach the standard set by the law, while in 1912 almost 21 per ct. were in violation of its provisions.

The mixed grass seeds, such as the lawn mixtures, were poorest in quality, as three of the six samples, or 50 per ct., were in violation of the law. One of these samples contained only 37 per ct. of pure seed and another less than 50 per ct. Those who wish to use mixtures of different grasses will find it much safer and more economical to buy the seeds of the several kinds desired and mix them at home. Almost as large a percentage of alsike clover samples as of lawn grass were in violation of the law, 44 per ct. of the 34 samples; but the quality of the seed was very much better, since only one sample showed less than 75 per ct. of pure seed, one other less than 80 per ct. and eight others less than 90 per ct. Red clover was somewhat better than alsike, with 25 violations out of 85 samples, or about 30 per ct., of which only one sample contained less than 85 per ct. of pure seed, and three others less than 90 per ct. Redtop was not as good as it should be, showing 17 per ct. of violations, with one sample containing less than 65 per ct. of pure seed, one 75 per ct., and nine others less than 90 per ct. White clover was still better, with one violation only out of eight samples, and this contained more than 90 per ct. of good seed. The one violation among the nine samples of blue grass contained almost 90 per ct. of good seed, but one other sample, not a violation of the law since it contained only small quantities of other seeds, was so mixed with rubbish that it showed less than 75 per ct. of good seed, two samples only 80 per ct., and none of the remaining five samples was over 91 per ct. The examination of timothy seed brought to light only one violation in 86 samples, with 95 per ct. of pure seed; and practically all the other samples showed 97, 98, even 99 per ct., or better, of good timothy.

*This is a brief review of Bulletin No. 378 of this Station on Seed Tests made at the Station in 1913, by M. T. Munn.
No samples contrary to law were found in alfalfa, crimson clover, millet, orchard grass, rape or vetch; but the orchard grass contained too large an amount of rubbish to entitle it to very high grade.

From some of the cases mentioned above it will be seen that the seed law does not safeguard the purchaser to anything like the same extent as other inspection laws. The fertilizer law requires the manufacturer or dealer to guarantee the amount of valuable ingredients in the brand; and the feeding stuffs law demands, in addition, that one rather undesirable ingredient, fiber, shall not exceed a certain minimum without an explicit statement, among the other guarantees, of its presence and amount, and also that all constituents of mixed feeds shall be named on the container.

The seed law, on the contrary, requires no guarantee of the amount of pure seed, but merely that a label must be used if the seeds contain "in excess of three per centum . . . of foul or foreign seeds." This makes it very necessary for the purchaser to examine closely the seed he is about to buy, even if he has the dealer's guarantee that it complies with the law. Personal examination will usually detect any considerable amount of rubbish present, like sand, gravel, chaff, pieces of plant stems, joints of grasses or similar material, for such substances are much more easily recognized than foreign seeds. If the seed appears to contain considerable amounts of such rubbish, the buyer should insist that it be cleaned before he takes it, secure a reduction in price proportionate to the amount of impurity, or look elsewhere for his supply.

The seed buyer should also make sure that the seeds of pernicious weeds are not included among the impurities in the seed he secures.

Alfalfa seed under the limit of "three per centum of foul or foreign seeds" and hence legally sold without a label, might contain enough wild mustard seeds to give 120,000 plants of this pest to the acre, enough of Canada thistle to give 300,000 plants, or of alfalfa dodder to give 350,000 plants.

Again, the samples of seeds do not represent goods that are likely to be as uniform in source and quality from year to year as are the standard brands of fertilizers and feeds.

For these reasons, the seed inspection bulletin under the present law can not be as useful a guide in the purchase of seeds as are the other inspection bulletins in respect to the goods they cover. However, the knowledge that the seeds they handle are liable to sampling and analysis, with public announcement of the results and prosecution for violations, makes dealers much more careful in regard to seed quality, so that, as we have seen, there has been a general, and not inconsiderable, improvement in seed-trade conditions in 1913 as compared with 1912.
The regular bulletin bearing the same number as this "popular edition" contains the results of these official inspection analyses. This bulletin will be sent on request, but its somewhat limited usefulness seems to make it inadvisable to send it to all on the Station mailing list, as is done with the fertilizer and feeding stuffs bulletins.

Voluntary examinations. The seed-inspection law is so restricted in scope that even with the yearly bulletin at hand, the individual purchaser would have little assurance as to the quality of the seeds in his market; therefore the Station will continue, until the demands overtax its facilities, to make examinations of samples for farmers who wish to sow only pure seed. Certain conditions are essential, however, if the samples are to furnish reliable information.

First, the sample must be large enough to represent fairly the quantity of seed from which it is taken. This means at least two ounces for the larger seeds, like alfalfa, the clovers, millet and rape, and at least one ounce for grass seeds.

Second, the sample should be taken from lots from which the dealer agrees to supply the purchaser's needs after the report of the analysis has been received. The small packets or samples sometimes furnished by dealers are frequently taken from seed specially cleaned for advertising purposes; and examination of them serves to delude rather than to enlighten the sender.

Third, in taking samples, the bulk of seed should be thoroughly mixed, or small quantities should be taken from top, middle and bottom of the bag or other container and mixed before taking out the amount to be sent to the Station.

Fourth, the sample should be sealed in a strong, tight package that will not be easily broken in the mail and marked plainly with the name and address of the sender. It is not sufficient to send an unmarked package with a separate letter describing its contents, as the Station may receive a score of seed samples in a single mail.

If these conditions are complied with, the Station will examine the samples as promptly as possible, usually within two days, and report to the sender at once, giving the percentage of pure seed, percentage of rubbish and percentage of other seeds, with an indication of the kind and quantity of specially undesirable weed seeds present. A statement is also usually made as to the general quality of the seed; but the Station does not make germination tests. It must be thoroughly understood that these examinations will be made for farmers only, or for other intending purchasers of seed for farm use. The Station can not and will not examine seeds for dealers or others who wish to know their quality for purposes of sale, or for labeling under the law.