

Leaflet I

**WHAT THE STATION  
CAN DO.**

New York Agricultural Experiment Station  
Geneva, N. Y.

1909

### The function of the Station.

The question of the work the Station should undertake to do is an ever recurring one. Its primary office, unquestionably, is to establish facts and principles that shall serve as a safe guide for conducting and developing agricultural practice. The effort cannot stop with this, however. It is equally the duty of such an institution to suggest new applications of knowledge, verify conclusions in their relations to agricultural practice, and disseminate the results of its investigations. All this the Station attempts to do. It must be confessed, however, that its efforts are not as closely confined to its real function as is essential to maximum efficiency. There are constant and insistent requests for services that lie outside the purposes for which the Station was founded. It is very certain, however, that the members of the staff cannot successfully carry on important investigations and experiments unless they can give to such work their uninterrupted attention through a large portion of the year, a fact that is not fully appreciated by those without experience in studying scientific problems. For this reason it becomes necessary to decline to perform many of the services that are requested. The following explanations are offered with the hope that they will clear up misunderstandings in several directions.

### Addresses.

This is a time of the strenuous exploitation of agricultural knowledge and the agricultural public is demanding that

those connected with agricultural institutions shall be almost constantly acting as popular platform teachers, a service that is undoubtedly productive of great good. The experiences of past years make it clear, however, that because of the continuous demands made on the members of the Station staff for speaking and demonstration work of an educational character, the management of the Station will find it necessary to limit the time and energy that the members of the Station staff shall give to popular teaching. It cannot be truly said that such teaching is more important than the discovery of facts and principles, for indeed there can be no teaching without knowledge and no well established knowledge without careful and severe inquiry. The members of the Station staff can properly devote but little time to public speaking outside of the larger agricultural conventions and a given amount of institute work.

**Chemical analyses for individuals.**

There come to the Station each year numerous requests for services of special kinds, such as the analysis of soil, drinking water, samples of feeds, fertilizers, seeds, milk, vinegar, drugs, mineral substances, stomachs of animals supposed to be poisoned, etc. Many persons evidently suppose that it is the rightful business of the Station to analyze anything that may be sent to it. These persons do not understand that to comply with these requests in an indiscriminate way would largely waste the funds of the Station and the time of its staff. The Station must necessarily hold itself pretty closely to activities that serve the interests of its constituents in a more or less general way.

**Commercial  
chemical  
analyses.**

Manufacturers of fertilizers and feeds and dealers in the same, often ask for analyses of the products they manufacture or sell. In many cases there is expressed a willingness to pay for the service. The answer to these requests is that the Station does no commercial work and under no conditions whatever can it assume the burden of the chemical or other expert work for the trades.

**Analyses of  
fertilizers  
and feeds.**

Frequently farmers mail us samples of feeds or fertilizers, asking for an analysis. In most cases these are samples of brands that are inspected by the State and it is unwise to duplicate work, especially when samples sent by consumers, because of inexperience in sampling, are liable not to represent fairly the goods from which they are taken. Users of feeds and fertilizers should utilize the official reports as a guide to the character of these materials. It would be impossible to make special analyses for each farmer in the State, but what is granted in one case cannot rightfully be refused in another.

It is often possible by the mere physical inspection of a sample of feed for us to determine what are the materials out of which it is made. This sort of an examination consumes little time and it can often be made the basis of useful advice to a prospective buyer. Such examinations we are glad to make.

It should be stated, however, that when an association of farmers makes a contract for the purchase of a large lot of feed or fertilizer on the basis of a guaranteed composition, the Station is always willing to make free analyses to determine whether the goods are according to the guarantee. This we have done in many cases. Such analyses must not interfere, however, with the prompt analysis of official samples sent to the Station by the Commissioner of Agriculture.

**Seed  
examinations.**

Inquiries are frequently received by us as to the purity of samples of seeds. Such inquiries can be answered with comparatively little effort and our replies often serve to warn the farmers of a community against injurious adulterations, such as dodder and trefoil in alfalfa seed.

**Water  
analyses.**

Many samples of water are sent to us that we may determine their sanitary quality. Examinations of this kind are not undertaken by the Station as they properly belong to the State Board of Health, which is located at Albany.

**Analysis of  
soils.**

Numerous samples of soil are received at the Station with the request that they be analyzed to determine the fertilizers that should be used or the crops to which the soils are adapted. The Station does not undertake soil analyses for these purposes because, with our present state of knowledge, it would be practically useless to do it. There is, to be sure, a widely prevailing impression that chemical analysis is competent to de-

tect the causes of lack of fertility in any soil. In special cases this may be true, but in a general way nothing can be more erroneous. It is possible for us to ascertain exactly what is in a soil and how much, but it is safe to assert that nearly every soil contains enough nitrogen, phosphoric acid and potash to produce a great many crops of any farm plant whatever. The weak point is our inability to determine how much of this is available to the plant, and how rapidly.

The most feasible way of getting the information desired as to profits from commercial fertilizers, is by the experimental use of chemicals and raw materials rather than the mixed fertilizers. For instance, if a soil responds to phosphoric acid and to that alone, the application of an acid phosphate which contains no potash or nitrogen would be the proper thing. If potash only is needed, an application of muriate or sulphate of potash alone would be all that is required. Possibly a combination of nitrogen and phosphoric acid without potash would meet the needs. Perhaps a "complete" fertilizer would be most profitable. Now by applying these various fertilizing substances alone and in mixtures in such a way as to make comparisons, it is possible to ascertain more definitely than from chemical analysis what ingredients it is profitable to apply.

**Foods  
and drugs  
not analyzed.**

Under no conditions can the Station undertake analyses of articles coming under the food and drug laws of the State, or of minerals, mineral waters, stomachs of animals supposedly poisoned or other miscellaneous work of a non-agricultural character.

Personal inspection of farms not possible.

Requests are not infrequently received at the Station to have some member of the staff visit a particular farm or orchard or other agricultural operation in order to give expert advice as to the business management that should be followed. Such requests are made in good faith and with the best of motives and are a gratifying evidence of confidence in the Station, but they show something of a misconception of the kind of aid the institution can render to farmers. The Station staff is not made up of expert farm managers but of scientific specialists who are studying specific problems that are important to agriculture. To illustrate, the botanists study plant diseases and their remedies; the bacteriologists investigate soil and dairy conditions that involve the action of germ life; the entomologists inquire into the life history of injurious insects and the methods for preventing their ravages; the horticulturists deal with such questions as plant breeding, orchard culture, and varieties of fruit, and the chemists and other members of the staff take up questions relating to plant and animal nutrition, dairy methods, barn sanitation and poultry production. All this effort is largely in the direction of seeking new knowledge, which, when obtained, we endeavor to adjust to agricultural practice. We do not endeavor to adjust all knowledge, experience and business conditions to the management of a given farm, for this is the owner's problem and for us to take it out of his hands, even if it were possible, would do him more harm than good. We can and do give advice freely on specific points connected with farm management when the questions involved are definitely brought before us.

## Station literature

The Station is in almost constant receipt of requests for agricultural literature of the most general kind covering all phases of farm methods and management. Such requests cannot be met to the extent that seems to be expected. An experiment station endowed for the maintenance of research, cannot wisely act as a bureau of compilation to prepare and publish books or pamphlets on all sorts of agricultural subjects. Its function is not that of a publishing house, or of the extension department of a college. It is often necessary, to be sure, to do more or less compiling in order to adjust existing information with results obtained at the Station. Such organization of knowledge on a given subject is legitimate to an investigating agency and even necessary. There is a broad difference, however, between an exhaustive treatise on the growing of corn or potatoes or any other crop and a bulletin setting forth the results of an investigation on the stage of growth of corn that yields the most nutritive value, or on the influence of seed selection on the amount and character of the product. When a station has set forth the results of its work in a clear manner and their relation to pre-existing knowledge accompanied by sufficient demonstration of their practical applications, it has fulfilled its duty to the agricultural public. The Station bulletins are, therefore, practically confined to stating the results of the work of the Station, with such accompanying explanations as seem to be necessary. They are free to all citizens of the state who ask for them.