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Do Commercial Fertilizers Pay?

G. E. Cottingham, Chateauguy Co., Que.

In Farm and Dairy Jan. 4 there appears an article by T. W. Shipley, York Co., Ont., advocating the use of commercial fertilizers on corn. Mr. Shipley gives a case where their use was attended with satisfactory results. I do not wish to make any comments on this article nor to insinuate that there are any statements in it that are not strictly true, but just to state that such marked success does not always follow the use of commercial fertilizer. Will you kindly allow me space to relate my own experience with the stuff?

Last season I purchased two tons of fertilizer specially recommended for wheat and corn for use on three arpents of hood corn, viz: Fodder corn, roots, potatoes and Indian corn. I was advised by the agent to use about 250 lbs. to the arpent. As a matter of fact, I used from 300 to 350 lbs., and by way of experiment I decided to use it on part of the crop and have a portion without it. The field had an even dressing of larnyard manure all over it. In the case of the fodder corn and roots the fertilizer was applied with a drill having fertilizer attachment sowing all the fertilizer the machine would put on. In each case on one ridge (or land) I threw the fertilizer attachment out of gear, so none was there now.

CHECK PLOTS PLANTED

In the case of the potatoes and Indian corn I followed the advice of the agent implicitly, planting in squares, or checks, and using a handful of the fertilizer in each hill. This plot was checked out 50x72 hills, and in planting I worked across the plot by the shorter way, planting six rows with fertilizer and leaving every seventh without any. As I did the work myself I know just how it was done, and no mistakes were made.

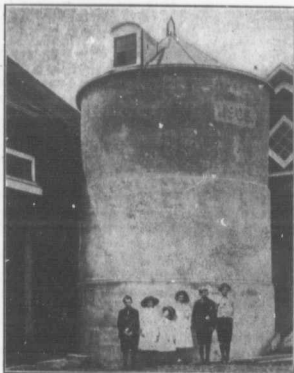
I had abundant opportunity to note the results of the fertilizer applications during the hoeing, all through the period of growth and at harvesting. I must say candidly that there was no advantage whatever to be seen for the fertilizer either by myself or any one of the several neighbors I had to see the crop, each of whom I asked to point out the unfertilized portions of the field and they could not. The potatoes were all dug by hand and the yield measured, and here again the fertilized rows failed to show any larger yield either in quantity or quality.

A friend of mine also was a "victim," having buried \$36 in fertilizer, which he drilled in with oats at or a little over 200 lbs. per arpent, leaving some sedges or lands without it, and watched for results. His experience was the same as my own—no benefit whatever, either during the period of growth or in the yield of grain when threshed.

MORE ACTUAL EXPERIENCE

Two years ago another neighbor used fertilizer both on his grain crop and ensilage corn with no benefit whatever in the former and only a seeming benefit in the case of the corn. The fertilized portion of the corn was a foot taller than that alongside (which only had manure) at the end of the third week of July, but by the first week of September the whole field of corn was of equal height.

I have tried the commercial fertilizer game three times now in an experimental way. I have been fooled each time, and the last time worst of all, having spent, besides the extra labor involved, \$15. And I did not receive 15c worth of benefit. I have decided that three times is about enough to be fooled by the same trick. It remains to be seen what great benefits may be stored up in the soil to be taken up by the two succeeding crops. "There is never a bad but there might be a worse" is an old saying, so perhaps I should feel thankful that the use of the



A Silo Outside the "Corn Belt" '98

It is not generally known that corn will reach that stage of maturity where it will make good ensilage in Nova Scotia. So far the farmers of Nova Scotia have been depending on roots to provide succulents for winter feeding. At the Nova Scotia Agricultural College Farm at Truro, however, the silo has been used for many years with good success. Two are now in use on that farm, one of which may be seen in the illustration.

—Photo furnished by F. L. Fuller, fertilizer (?) did not prove to be positively detrimental.

Note.—No definite rule can be laid down as to the amount or kind of fertilizer that can profitably be applied to any crop. Each farmer must experiment for himself on his own land and determine his own needs. Mr. Cottingham and Belyoa Bros. (mentioned in Mr. Shipley's letter) have had widely differing results. The quality of the land, the applications of barnyard manure, and the varying amount of rainfall might all explain the difference in results. Farm and Dairy welcomes further discussion of this important subject by those of our readers who have had experience in the use of commercial fertilizers with corn or other commonly grown farm crops.

Editor.

One-third of the buds on an apple tree may be sacrificed without doing the tree any damage, and the pruning will improve the tree and quality of the fruit. The pruning should be done any time after February and before the buds have started in the spring.—A. McNeil, Fruit Division, Ottawa, Ont.

Conclusions from the Use of Legume Bacteria*

Prof. S. F. Edwards, O.A.C., Guelph

The work of distribution of artificial cultures of nitrogen-accumulating bacteria for inoculating the seed of legumes, such as clover and alfalfa, was started at the Ontario Agricultural College by Dr. Harrison, now of Macdonald College, and Mr. B. Barlow in 1905. The method of preparing the cultures, as devised by Mr. Barlow, and which has been used ever since with some slight modifications, consists in isolating the appropriate bacteria from the "tubercles" on the roots of the different legumes, growing them on artificially prepared culture material in glass bottles, and distributing to the farmer in such condition that he has only to mix the culture with the seed to be treated, and sow it in the usual way.

These cultures are sent in the spring. During the early autumn, blank reports are sent out to recipients of the cultures asking them to state the results of the experiment. — These reports are carefully reviewed, and those are discarded in which no uninoculated seed was sown, or where any other condition militated against fair judgment as to the success of the experiment. The tabulated results of this work for the seven years since its inception are as follows:

Year	T. cul. sown	Total tubercles received	Inoculation per cent	Inoculation beneficial	Per cent favor-able
1906	546	134	21	40	67.3
1906	375	144	72	48	24 60.0
1907	372	137	57	37	43 54.0
1908	2115	699	397	237	65 62.5
1909	2817	894	211	141	126 57.7
1910	3375	771	343	179	248 65.7
1911	4941	1507	655	371	483 55.0

*In this column are included reports from farmers who sowed no uninoculated seed, or in which some condition injured or destroyed the seeding.

During the last three years, the demand for cultures has been mostly for inoculation of alfalfa and red clover. Of the 4,941 cultures sent out last season, 3,944, or 79.8 per cent, were for alfalfa, and 796, or 15.3 per cent, were for red clover, leaving only 4.9 per cent of the total number to cover alsike clover, white clover, peas, leas, vetches, sweet peas and lathyrus, the other cultures sent out.

For alfalfa and red clover, the percentage of favorable results from the inoculation was 50.4 for alfalfa and 56.6 for red clover. In view of this percentage, we feel that the work is well worth while, and are planning for its continuation.

We may doubt the profitability of putting money into fine buildings for the storage of hay, straw or grain. The experience of our best dairymen everywhere, however, is that the investment in a good dairy stable is not only profitable but necessary to the greatest success.

Cleanliness and haste are two of the most important points in sugar m'king.—F. H. Mizeren, Brome Co., Que.

*This report before the Ontario Agricultural and Experimental Union, giving the results of seven years' work, will be of particular interest to all who are thinking of seeding alfalfa for the first time in 1912. Study the results of inoculation carefully. Note that inoculation has been successful in 50.4 per cent of the trials.