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ANOTHER VIEW OF THE QUESTION "DO COMMERCIAL FERTILIZERS PAY?"

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European Farmers through Commercial Fertilizers produce much larger Crops than we do. We import 26 times as much Fertilizer now as in 1894. Why? Some points to be considered in purchasing Fertilizer.

"DO Commercial Fertilizers Pay?" After reading the remarks of Mr. G. E. Cottingham in Farm and Dairy of Jan. 25th under this heading, I was reminded of an article that appeared in the Chicago Live Stock World" the past month entitled, "What Aro We Doing?" which reads as follows:

WHAT ARE WE DOING?

"Many people have grown rich out of robbing the soil. If the methods of the past prevail many farms that have made money because everything was taken out and nothing put back will point the way of their future owners to the poor farm.

"In Europe where they have been farming all the available land for hundreds of years they are beating us to a frazzle. If they farmed in Europe as carelessly and recklessly as we do they would quickly become bankrupt or starve to death.

"The following comparison of European crop yields with American crop yields tells the story in the most startling manner:

Average per acre	America	Europe
Wheat	13.5	35.1
Barley	25.1	35.2
Oats	29.6	35.9
Potatoes	84.4	212.8
Hay	1.44	1.96

"Henry G. Bell, secretary of the Middle West Soil Improvement Association, points out that our farmers will be compelled to take better care of their land.

YIELDS NOT DUE TO SUPERIOR SOIL.

"The reason for the superior yields of European crops over the American cannot be credited to the original superior fertility of European soils, for they have been cultivated for centuries, and within the last century have not only maintained their yield, but their fruitfulness has increased.

"The opinions of prominent European agriculturists relative to the cause of this great increase in yield per acre will be of interest. Von Seelhorst, Royal Agricultural Experiment Station, Göttingen, Germany, says: "I believe that the principal increase of the harvest is to be attributed in part to the application of artificial fertilizers themselves, and in part to their continuation with green manures. Through the application of the two, the average yield has doubled on our common light soils. In some cases the yield has even increased two and one-half to three-fold. In general I assume that of the 100 per cent increase in the yield 50 percent. can be attributed to artificial fertilizers.

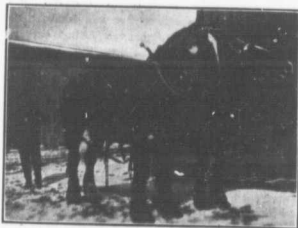
AS SEEN IN FRANCE

"The Minister of Agriculture, Paris, France, writes: 'As near as I can determine, the relative importance of the different factors are as follows: In extensive agriculture—

Increased use of farm manure and commercial fertilizers, at least 50 per cent.
Better preparation of land, 30 per cent.
Selection of seed 15 to 20 per cent.
In intensive agriculture—
Effect of fertilizer 70 per cent.
Effect of preparation of land 15 to 20 per cent.
Effect of selection of seed, 10 per cent."

WHY DO WE DO IT?

When we consider that farmers in the United States in 1910 used nearly \$90,000,000 worth of commercial fertilizers and that in 1894 Canadian farmers imported \$25,000 worth of fertilizers, and



These are the Boys to Do the Work

When it comes to hauling a manure spreader, a two-furrow plow, a disc harrow, or, in fact, almost any of the large machinery used on our farms nowadays the small horse isn't in it with horses of the type here named on the farm as in the city. The horses here seen are owned by C. H. Watson, York Co., Ont.

that in 1909 our importations had grown to \$530,000, there can be no doubt left in the minds of our farmers as to whether it pays or not to use these fertilizers.

If we farmers of Canada would only realize that we must take into consideration the guaranteed analysis of the fertilizers we buy, and not so much the dollars and cents we must pay per ton, there would not be such unsatisfactory results reported as we have in the case of Mr. Cottingham. While I do not infer that Mr. Cottingham has not done this, I fully believe, and it has been amply demonstrated, that if commercial fertilizers are judiciously applied, the results will be entirely satisfactory, and will prove concentrated plant foods to be very economical and profitable for general use. In order to apply them judiciously it requires a careful study of the crop requirements and the natural fertility of the soil. It must always be remembered that the element present in smallest quantities is the one that determines the success or failure of the crop.

As we all know, there are two main classes of commercial fertilizers—those of purely chemical composition and those based on materials of organic origin. There has been considerable discussion as to which is the more economical for us to use. The first class have been extensively used, as they show results immediately. There is a plentiful supply of nitrogen available if nitrate of soda is used up to the time when the plant begins to fruit heavily, but from this point the supply grows rapidly less and disappears entirely long before the fruit matures; that is, when the plant most needs support it is entirely cut off and growth is very slow and poor. In consequence we have small grain, or in the case of fruit a large part of it will fall off. Where, however, other forms, such as blood, tankage or bone fertilizers are used, the readily available nitrate will give the plant a vigorous start, and when it is done the organic fertilizers come right along and give a full supply of nitrogen up to the time of full maturity. This to my mind shows out very clearly that 'animal fertilizers' are as a rule the most reliable and economical for us farmers to use.

During the past number of years practically all of the fertilizer of this class has necessarily been imported from the United States, but now a few of our large killing houses are placing on the market high grade brands of animal fertilizers manufactured here in Canada.

TRY IT OURSELVES

The only way to ensure success in the use of commercial fertilizers of any kind is to experiment yourselves. First we must ascertain what food constituent is wanting in our soil and then apply such brands high in this constituent that are recommended by reliable firms for the crop we intend to grow. I believe that if we farmers would obtain some good literature on fertilizers and study it carefully, and also solicit information from fertilizer experts in connection with Experiment Stations and fertilizer firms we would be much better rewarded than by proceeding according to the directions of a fertilizer agent who may possibly not know the first thing about the practical application of such materials. We always ask these agents for printed information—all up-to-date firms supply them with it.

I hope that a number of our most enterprising farmers, men who have used and are using commercial fertilizer, will take up this discussion and favor us through Farm and Dairy with their experiences, as I am sure they might be of great financial value to those readers who have not as yet used these materials.

The crammering machine may be a means to the end in the hands of an expert poultry man, but it would not be a profitable investment for the ordinary farmer. With a crammer, the very highest quality of flesh is obtainable, but it takes an expert to handle the machines.—John I. Brown, Montreal, Que.