

The Use of Commercial Fertilizers Defended*

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Fertilizers "are not always suitable to the land to which they have been applied." Unfortunately this is sometimes the case. However, one firm with whom the writer is familiar is paying particular attention to this point, and is placing experts in soil fertility in various sections of the province of Ontario to assist and advise their local representatives in recommending suitable mixtures for farmers to use on the various classes of soil they wish to fertilize. They also maintain a laboratory in which chemical and physical analysis of soils are conducted, simply for the purpose of endeavoring to eliminate the danger of misapplication of their fertilizer mixtures.

Dr. Dandeno says, "Plant excretions are the chief cause of infertility, and it is in the decomposition of such materials that the application of fertilizers of any kind proves of value." To the writer's mind continued cropping without replacing the plant food annually consumed is what leads to soil impoverishment and

resultant yields of poor quality. It is true that some plants excrete certain toxic substances which have been known to retard the growth of other crops, but, upon exposure to the air for a certain time by plowing or by treating with lime or some such neutralizer their injurious effects soon vanish.

"To supply a commercial fertilizer with prospects of success at least three things are necessary"—if Dr. Dandeno had stopped there he would have been all right, but he goes on to say—"first, a knowledge of the effect of the previous crop on the soil; secondly, a knowledge of the crop now to be grown and its relation to the excreta of the previous crop; and thirdly, a knowledge of the biology of the soil." We certainly should take into consideration the effect of the previous crop on the soil, the amount of plant food that has been applied previously, the nature of the soil, and the crop to be grown, but if a farmer has to wait until someone determines the relation of the crop to be grown and the previous crops excreta and the bacterial content of his soil besides, before he can feel safe in applying a fertilizer, he had better sell his farm at once as such information will

not be available for practical application for some time to come.

It is indeed amusing to farmers of Nova Scotia and the other Maritime Provinces to hear of such criticisms in connection with the use of commercial fertilizers. We all use, and with excellent results, on the average half a ton to the acre and so far haven't had any introduction to either the bacteria or plant excretions supposed by Dr. Dandeno to be so essential. If the farmers of Ontario are baffled in this question I venture to say it is due to a large extent to the publication of such ridiculous articles as the one we now have reference to.

"Certain fertilizers are adapted to certain crops and to certain soils." This, to the writer's mind, is one of the few reasonable statements in the doctor's article. Owing to this fact it is necessary for the fertilizer manufacturer to place at the disposal of the farmer mixtures of different analysis. Thus we find on the market a three-eight-six, a three-six-ten, a four-eight-eight, and so forth, varying in price according to their plant food content. It is necessary to determine just what essential element your soil lacks and then furnish it in the correct proportion by selecting a mixture in which the desired element is prominent. Always remember that the "plant food element" which exists in the smallest quantity governs the crop producing power of the soil.

WELL TAKEN POINTS

All the points mentioned by the writer of the article in question in connection with barnyard manure were well taken with the possible exception of a "neutralizing effect on all plant excreta." No one, not even a fertilizer manufacturer, condemns the use of barnyard manure, but there are crops which can be raised decidedly cheaper on fertilizers in addition to which they ripen earlier (as corn) and are of better quality (as potatoes). Farmers are, as a rule, accustomed to think of manure as a bulky article and want bulk for their money, but we should remember that a little of the substance required is better than a good deal that is not needed. It is reckoned that one ton of average commercial fertilizer contains at least twenty times as much plant food as a ton of the best barnyard manure, and may be applied with one-twentieth the labor.

"In buying and using commercial fertilizers patent medicine chances are taken." Most people when they get "stung" would rather not let other people know how they were taken in, but the author of the above quotation evidently does not believe in keeping it a secret. Of course, this is purely an assumption on the part of the writer, but it looks as if Dr. Dandeno has at one time or another been a victim of some



A Well Sprayed Pear Orchard: That of Mr. Stirling at Kelowna, B.C.

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*This article, the first part of which was published in our February issue, is the continuation of a reply to an article on "Common Fertilizers" by Dr. J. B. Dandeno, of Bowmanville, Ont., that Horticulturist. The discussion is continued on page 72 of this issue.