

of cases to apply a fertilizer which presents all three elements, nitrogen, phosphoric acid and potash. Of course there are cases in which soil conditions or special crop requirements call for nitrogen or for phosphoric acid or for potash. For such we recommend the application that seems desirable—perhaps superphosphate, perhaps nitrate of soda, and so on. But in the majority of instances we advise a complete fertilizer, for experience has taught us that from such there is the greatest expectation of a profitable return.

MINIMUM EXPENDITURE FOR THE MAXIMUM PROFIT.

The next point is that the largest profits do not always result from the largest applications. That view is not generally held, especially in the provinces of New Brunswick and Nova Scotia, where in late years fertilizer agents and others have been advocating increasing the amounts of fertilizers, particularly for the potato crop. But, as I have said, it is not a question of yields; it is a question of profits. That is what we use fertilizer for, and we have obtained the best returns, dollar for dollar, from a moderate application of fertilizer. We might say that in the larger number of cases from five hundred pounds of complete fertilizer we have got a better monetary return than from an amount exceeding that, say from eight hundred or one thousand pounds. Some people apply as much as a ton to the acre. They have, of course, increased their yield but frequently not profitably, and that is what the fertilizer is for. That is one of our main arguments in connection with the application of fertilizer. We want the farmers to find out the largest yield from the smallest application; we want them to know what they are putting on the soil, and to be able to compare profits and yields. This knowledge is valuable for their future guidance.

DOMESTIC SOURCES OF POTASH, OTHER THAN MANURE.

Wood Ashes as a Potassic Fertilizer.

Wood ashes are essentially a potassic fertilizer, ashes of good quality, that is, dry, unmixed with sand, etc., and unleached, containing between 4 per cent and 6½ per cent potash, the average potash content being about 5½ per cent. This potash is in a soluble form and hence immediately available for crop use.

In addition to their potash they contain some 2 per cent phosphoric acid and from 20 to 30 per cent carbonate of lime, enhancing their fertilizing value and making them, in a sense, an all-round fertilizer for supplying the mineral elements required by crops. And, further, they correct acidity, a condition detrimental to the thrift of most farm crops.

From 25 to 50 bushels of wood ashes per acre will furnish from 60 to 120 pounds of potash, the latter an ample dressing for even very light soils. They are not needed on heavy clay loams; indeed their use on such may destroy good tilth and do more harm than good. Their application is best deferred to spring, broadcasting preferably on a quiet damp day on the ploughed land, and incorporating in with a thorough harrowing.

For clover, corn and mangels, they will be found very valuable. Especially are they beneficial for orchards and for grapes on sandy loams. On turnips, mixed with one-third to one-half their weight of bone meal, superphosphate or base slag, they have similarly proved advantageous. But indeed there are many crops on light and gravelly soils, as also on vegetable loams inclined to be sour, for which wood ashes cannot be employed with profit.

Seaweed as a Potassic Fertilizer.

Seaweed occurs on both our Atlantic and Pacific coasts (more abundantly probably on the latter) and may be collected in large amounts at little expense on many