

sults. We have ample testimony that on many of our heavy and light soils this treatment has been eminently satisfactory.

NATURALLY-OCCURRING FERTILIZERS.

Closely relating to the question of soil plant food is that of fertilizers. In many parts of the Dominion are to be found vast deposits of material rich in the elements necessary for plant growth. These accumulations of swamp muck, peat, marl, gypsum, moss, river and tidal muds, seaweed, etc., etc., are all most valuable. Their composition should be better known and their methods of application more universally understood. Analyses made in our laboratories have established the fact that swamp mucks are nitrogenous fertilizers of a high order. In an air-dried condition they will average per ton between 30 lbs. and 40 lbs. of nitrogen which element by suitable fermentation may be converted into assimilable forms for crop use. Moreover, we have ascertained that this material (air-dried) is an excellent absorbent so that it can be used to advantage in and about our farm buildings and indeed everywhere where there is liquid manure to absorb. By its use in this way not only is the most valuable portion of the manure saved from loss but the buildings, the farm and the yard well kept clean. The fermentation that subsequently ensues in the manure pile results in the production of a rich and quick acting fertilizer. These deductions are drawn from over one hundred analyses made by us of muck collected in the various provinces of the Dominion.

A word or two about moss litter. During the past year an investigation was made in our laboratories of samples of peat moss from New Brunswick. The results obtained established a high value for this substance as a bedding material. Its absorptive capacity is high, the air-dried moss holding as much as 16 and 18 times its own weight of liquid. Not only is it useful in keeping stables dry, but also preserves them free from odour, for it has the property of absorbing ammonia and other gases. Moss litter (principally species of *Sphagnum*) contains about half of one percent of nitrogen, as well as notable quantities of other