

in all animal tissue. Before that little oat plant would grow, it must have phosphate of lime and a certain proportion of potash. Nothing will do instead of these two things. If there is phosphate of lime in the soil, the plant has the peculiar property of dissociating it and taking advantage of it. But as a man does not want too much plum-pudding for his dinner, so a plant does not want too much phosphate of lime. Where does the plant get its phosphate of lime? We find it in the ordinary rock, and also in very small proportions in the granite rock. Potash is also present in small proportions, though the proportion is sufficiently large. In the ages long gone by we had an accumulation of vegetable richness, from the fact that the vegetables picked up the soluble material, brought it out, utilized it, and thus produced a richness in the soil and on its surface. So long as Nature alone had charge of these things the soil did not deteriorate, but rather improved. But when man came along he proceeded to reverse these things. Whether it is cheese or vegetables that a man raises, or whatever it is, a certain amount of phosphate of lime goes away from the soil never to return. Where is the grave of all these things thus sent away. Practically their grave is in the ocean. He sends shipments to London, and the phosphate of lime taken from the soil in this Valley often finds its way to London, and out of the London sewers into the ocean. We are shipping valuable portions of our soil away, and it is only a question of time before we will begin to feel the effects of it. We have a very large bank account, so to speak, as regards rich soil, but if we take up the agricultural history of the Eastern States we will see how clearly those states have suffered from the same cause. The farms are "run out," just because although the land was at one time good, they shipped away their grain, and continued working the land without putting back into it the richness they had taken away. All you need do is to restore your soil, and you will have it the same as before. The farmers in every section of the country should try if possible to return to the soil the articles which they send away. They send away the manufactured product in the shape of animal and vegetable. All they have to do to keep up the fertility of their soil, is to return the phosphate of lime that was taken away.

How are we going to get phosphate of lime. Canada seems to be exceptionally favored in having a large proportion of phosphate of lime within its territory. I have not been able to ascertain how valuable it is, unless it be chemically manipulated to render it

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