HORTICULTURE

Some Facts About Potatoes

At the recent convention of Bedford District (Quebec) Dairymen's Association, held at Cowansville, Dr. H. T. Gussow, botanist at the Central Experimental Farm, said, in the course of an address, that there is not sufficient attention paid to the diseases of plants in Canada. The commonest fungus was mould. Fungi parasites were also common. He discussed and showed how to detect the ravages of parasites upon the leaves of crops, and advised the use of the Bordeaux mixture. He then took a good-sized potato and cut it through in several sections. In each section could be detected a more or less regular and continuous ring of dark color among the white part of the potato, not far from the outside thereof, but still inside the skin. This was fatal to its ability to sprout, as it was the work of a bacteria which commenced at the stem and affected portions of the potato which were not even visibly affected. Under the microscope, it would be found to be diseased and, by actual experiment and test, it had been found impossible of germination.

FUNGUS GROWTHS

Then Dr. Gussow took a scabby potato and held it up for inspection. He showed that such a potato had only about one eye that would germinate, that the fungus wounded the surface of the potato, and the scab was the effort of the potato to heal the wounds. It was generally caused by too much manure, or by manuring the ground too short a time before the potato was planted. Raw, scrubby or scabby potatoes should not be fed to animals without boiling, in order to kill those fungi. They would injure the animal. The feeding of any diseased potato to an animal was worse than useless, as the bacteria have taken all the goodness out of the tuber, and the sick or diseased portions of the potato would seriously injure the animal. Dr. Gussow also stated that potatoes are not a proper tuber, but are rather underground branches of a plant. He reiterated that any potato unfit for human food was unfit for cattle.

TREATMENT BEFORE PLANTING

He then showed a white potato with minute black spots on it. He had failed to wash off these black spots. They adhered to the skin of the potato. They were, he asserted, dormant fungi, which would not grow upon the dry surface of the potato skin, but which, when planted in moist ground, would at once revive and do damage to the roots of the plant. These spots did no harm to the potato as food for animal or man, if boiled. These sort of potatoes may, however, be used for seed, even when they have these dormant fungi upon them, if they are dipped three times, for half a minute each time, into a solution of one ounce of sulphuric acid to one gallon of water. It was well to put up a 50-gallon mixture and then dip the potatoes in it in bags, and afterwards allow them to dry, before planting.

Potatoes should never be planted twice upon the same field. Too much ashes or potash causes trouble with scrubbiness. It was shown by Mr. George E. Tibbits that some farms were unable to grow potatoes without scrub on them. He had tried ploughing up his permanent pasture, and had gotten a good crop, after having failed on his tillage land. It was also discovered that spreading manure broadcast over the soil was much better in every way than manuring in the hill. The speaker did not advocate the use of commercial fertilizers such as phosphate, but, if they were used, they did less harm when sown broadcast.—P. C. D.

Lime-Sulphur Wash for Scale

Editor, Farm and Dairy,—When I spray our fruit trees for San Jose scale, I first trim all the trees and scrape off the rough bark. I use 20 pounds of good stone lime and 15 pounds of sulphur in six or ten gallons of water. I put the lime in the kettle, and when slaked put in the sulphur, which I had mixed into a paste in a pail of warm water. Have a good fire and cook for about one hour and a half. I keep stirring and adding water until I have a barrel. It is then put in the pump and taken to the trees while it is hot. Spray one side of the tree with the wind, and when the wind changes spray the other side.

I have sprayed this way for six seasons, and have had good results, and am keeping the scale in check. If every one who has trees would spray, it would not be so hard to fight the scale.—J. E. Hambly, Cedar Springs, Ont.

Propagating Strawberries

The usual method of propagating strawberries is from runners. It is by means of these that the natural increase of a variety takes place. As the first runners which are made root sconest, and hence usually make the strongest plants, these are the best to use in making a new plantation. There has been much discussion during recent years regarding the merits of the so-called "pedigree" plants which have been offered for sale by an American firm, they having claimed that, through years of selection, they had developed a much better strain of certain varieties than those who had not followed this system. In the first place the term "pedigree" has apparently been improperly used by this firm, as, to have a pedigree the ancestors of a plant or animal must be known, new blood being introduced in each generation through raising a new variety from the seed. A good pedigree is very desirable, both in plants and animals, but up to the present time, the pedigree of plants for several generations is not often known. In the case of the "pedigree" strawberry plants it is said there has been a selection of plants under favorable conditions of growth, not an introducing of new blood. Plants which have been selected from the best plants year after year and grown under the most favorable conditions should show some improvement over those not selected, but the claims of superiority of the so-called "pedigree" plants have not been borne out by the results obtained here. In 1903 there were five of these "pedigree" varieties procured and compared with varieties of the same name, which had not been specially selected. These were fruited for two years, but while in some cases the "pedigree" plants yielded better than the others, they did not always do so. While the results obtained do not warrant the purchase of "pedigree" plants rather than others where there is no special claim as to selection, we believe that the principle of selection is good and if thoroughly carried out, is bound to result in an improved strain, which, however, can only be maintained by continued selection.—Extract from Bulletin on "Strawberry Culture" by W. T. Macoun, Central Experimental Farm, Ottawa.

Certain soils are poor because of their poor mechanical condition. Fertilizers applied to soils in poor mechanical condition, will not give as good results as the same fertilizers applied on soils equally good, but in better condition mechanically.—Prof. W. P. Gamble, O.A.C., Guelph, Ont.

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