Growing Good Potatoes in the Pacific Northwest

Some Ideas on the Homely "Spud" by Men Who Know Whereof They Write.

This is the third of a series of articles discussing potato growing.

By O. M. MORRIS, Horticulturist; J. G. HALL, Plant Pathologist, and M. A. YOTHERS, Asst. Entomologist, at Washington Experiment Station.

THE FIRST point to be observed in planting potatoes is to get seed that is free from disease, so that the plants may start in a healthful condition. After the plants reach a height of six inches they should be sprayed with Bordeaux every ten to fourteen days until five or six applications have been made. For the first two sprayings the solution should contain four pounds of copper sulphate to fifty gallons of water and for the others each fifty gallons should contain six pounds of the copper.

In case insects are present in the field and doing damage the poison to kill these may be added to the Bordeaux Mixture and applied with it at such of the regular applications for the late blight as are necessary to control the insects. For the amounts to be added consult that portion of this bulletin dealing with insect pests.

"Scab."

Scab (Oopora scabies, Thaxt.) is readily told by the rough pitting of the surface of the tuber. When the tuber is attacked early the scab is very apt to be deep, while a later attack will cause only a shallow pitting. Sometimes the diseases becomes so bad as to cause the tuber to crack. In the very young stage the scab is small, reddish spot upon the surface of the tuber. These spots increase in size and depth until they give the characteristic appearance of the scab. Scab is more prevalent in soils that are alkaline than those that are acid and on this account it is sometimes recommended that wood ashes and commercial fertilizers be applied to infected soils. There are also some varieties that are not so much subject to the disease as others.

Realizing that this is a soil disease clean seed upon clean soil will produce a clean crop. In case it is not possible to get seed that is surely free from the disease it is possible to treat the seed and thus free it from the trouble. To treat potatoes for scab place them in a sack and immerse them in a solution of formalin (one pint to thirty gallons of water) for two hours. They may then be removed, drained and dried, then cut to the usual size and planted.

Formaldehyde Treatment.

In case there are large quantities of seed to be treated it will be well to treat with formaldehyde gas, as as large quantities can be treated more quickly in this way. To treat seed potatoes with formaldehyde gas build a shed that is air tight and will accommodate the amount of seed you wish to treat. The potatoes may be treated in sacks, but they must be so piled that the gas can easily get all around each sack. In order to accomplish this all that is necessary is to pile them up in tiers with pieces of scantling two by four inches between each tier and allow a little space between each sack in the tier. Leave a space in the middle of the shed in which to place the vessel to contain the formaldehyde. No potatoes should be piled directly over the vessel used for treating and they should not be piled closer upon the sides than three feet to this same vessel on account of the danger of injuring the germinating quality of the tuber by the strong gas at these points. To make the gas, provide a flat shallow vessel, like a galvanized wash tub, put potassium permanganate in the vessel and add the commercial formaldehyde (40 per cent), stir well and quickly and leave the shed at once. Then close the shed and leave it closed for twenty-four hours. The tub and the formaldehyde should be at about the temperature of a room, that is about seventy-five degrees Fahrenheit, in order to get the best results from the mixing of it with the potassium permanganate. For each 1000 cubic feet of space it will take twenty-three ounces of potassium permanganate and three pints of formaldehyde. The cost of treating the potatoes in this way, aside from the expense of the shed, will not be over three cents a sack.

"Dry Rot."

The "Dry Rot" (Species of Fusarium) is reported as one of the worst diseases in the state and is said to have caused as much as forty per cent loss to the growers in some sections.

The first effect of the disease is usually noticed when the plants are about a foot high. The plants then assume a lighter color than healthy ones and the upper leaves are very apt to roll in at the margins and wilt during the heat of the day. The plants then fall and take on the appearance of having ripened very much earlier than is customary in healthful fields. If such plants are pulled they will be found to have many of the roots rotted off and in some cases the stem will be dry and shriveled beneath the surface of the ground. The tubers are only about half grown and do not make any more growth for the entire season. If the disease has progressed far the stem end of the tuber will be found to be rotten and dry. One of the most serious features of the disease is the fact that it continues to develop after the potatoes are put in storage. In order to avoid this loss no potatoes that come from fields known to be diseased should be stored, at least in warm places such as an ordinary cellar. It was found in Ohio that potatoes affected with the dry rot could be stored without material loss if the temperature was kept between thirty-six and forty degrees Fahrenheit, while there was a considerable loss if the tubers were stored at higher temperatures.

Sometimes if the tubers are cut across at or near the stem end it will be seen that there are black spots in the flesh about an eighth to a quarter of an inch from the surface. The development of these spots cause the rotting of the stem end of the tuber as noted above. In this stage of the disease the flesh of the shriveling end of the tuber becomes brown.

Precautions—This is another of the soil diseases and after it is once introduced into the soil it is difficult to eradicate it. It is, however, possible to keep it out of fields by the proper precautions. Seed from infected fields should be avoided. This may be accomplished by careful inspection of the seed before planting. In case the disease does not show upon the surface it can often be detected by cutting thin slices from the stem end of the tuber and if any black or brown spots are seen it is not safe to plant any of that lot of potatoes.

Sunnyside Surprises in Crops Raised.

A few years ago it was thought fruit and alfalfa were the only things of a commercial value that could be produced in the Sunnyside Valley, Washington. But now there are raised the very best of vegetables and hundreds of acres of corn at 150 bushels per acre. This is the first year much attention has been paid to a diversified system of farming. It is surprising and interesting to note the transactions of one shipper, Oscar Anderson. He ships $60 to $75 worth of poultry, each week, and 75 to 90 calves. He has handled 50 cars of hogs, shipping 33 cars that cost $57,000, and used the other, or 17 cars, at home. These animals, as well as cattle and sheep, were all raised in this vicinity. There are also other shippers.

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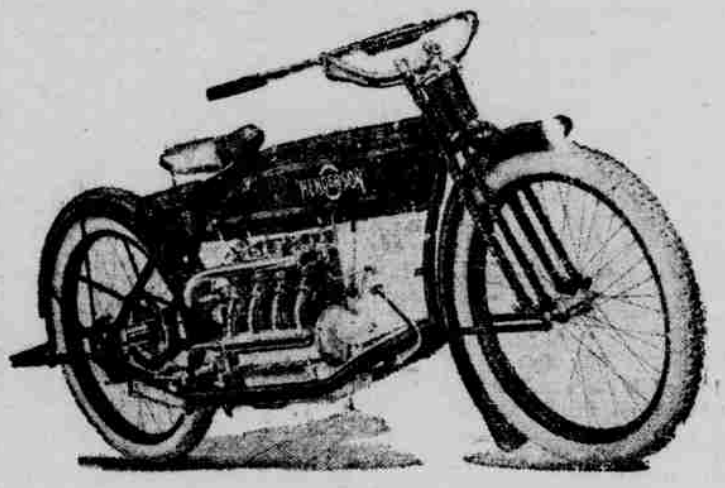

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