Growing Good Potatoes in the Pacific Northwest

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

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

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CROP rotation will often reduce the amount of disease in an infected field, but the periods of rotation should be longer than three years. The collection and burning of the tops upon a diseased field will decrease the amount of the fungus upon that field and tend to diminish the amount of disease.

"Rosette," "Little Potato."

The "Rosette" or "Little Potato" is often introduced into a section with the seed potatoes. These diseased tubers have upon their surface dark brown, irregular patches of the fungous threads These are most easily seen if the tuber is wet. When these diseased tubers are planted the young shoots are early attacked by these threads upon the tuber causing black spots upon the stems near the surface of the ground. Sometimes the stem is completely girdled by disease. The fungous threads spread to the underground parts of the plant and may proceed upward above the surface and form a grayish white layer around the stem. The effect of this layer is to cut off the supply of food that should go to the tuber and thus cause the formation of small aerial tubers upon the stem above the ground. Where the disease does not so affect the plants the tubers under ground are affected and their surface may become more or less covered with the rusting stage of the disease.

The effect upon the plant is very marked at times, causing the nodes to become shortened and so producing the so-called "Rosette."

Treatment Is Told.

The shortening of the stem and the consequent rosetting of the leaves is accompanied by the rolling of the leaves inward and upward, especially in the middle of the day. This often results in tip-burn because of the inability of the leaves to return to their normal position before they are exposed to the sun the following day.

Since the principal means of spread of the disease is through the use of infected seed, all treatment must be directed toward preventive measures, as in the case of the scab. Clean seed and only clean seed should be planted. If there is any doubt as to the seed being clean and free from the disease it must be treated as for the potato scab.

Infected tops and tubers should be removed from the field and destroyed by fire. Soil badly infested should not be planted to potatoes, but such soil may be made to produce fairly good crops by liming, clean culture methods and crop rotation.

"Black Leg."

Potato plants affected with "Black Leg" are usually readily seen in the field by a careful observer. They appear more or less unhealthful and somewhat undersized, according to the severity of the attack. The branches and leaves have a tendency to grow erect and not spread out as much as usual, thus giving the plant top a more compact appearance. Later these plants become lighter in color and die. The disease is certainly known by the blackened stem below the ground, although the color may extend in some cases two or three inches above the surface. Usually the seed tuber from which the diseased plant grows is found to be decayed with a soft rot and may have disappeared entirely.

First, select clean seed; that is, seed from fields that are not infected. Second, discard all potatoes that show wounds, cracks, or decayed areas. Third, treat all seed before planting with formalin—one pint to 30 gallons of water—for two hours.

Diseases Rare or Unknown.

The following potato diseases are either unknown in the state or are of no serious import as yet, but may become so at almost any time.

"Early Blight" is not serious in the state. The "Early Blight" causes brownish gray spots upon the leaves. These spots are irregularly circular in outline, are concentrically marked and make their first appearance about the time the tubers begin to form. The disease often causes the destruction of the leaves while the stems remain green. The progress of the disease is slow, usually covering a period of three or four weeks. It does not attack the tubers and does not cause a rot. The effect of the disease is to reduce the yield through loss of leaf surface.

Treatment.

The same mthods of control apply here as are recommended for the control of the "Late Blight."

"Powdery Scab."

This disease is very prevalent in European countries and has caused some agitation in the quarantine work of the federal government. It appears as small pimples that show a slight discoloration upon the surface of the tuber. The tubers are attacked from the time they are the size of hazel nuts until they are practically mature. In dry soil the disease forms small circular patches about one-quarter insh in diameter. In wet soil the spots develop until they sometimes form cavities one inch in diameter.

Treatment.

Plant clean seed or seed affected may be treated as for the ordinary scab.

"Wart Disease."

The wart disease causes roughened and wrinkled excrescenses upon the tuber. These may vary in size from a pin head to an egg. The disease usually begins around the "eye."

"Silver Scurf."

Silver Scurf causes blackish olive patches on the surface of the potato which often cover considerable area. The surface of the discolored area when clean takes on a silvery or glistening appearance. These areas are depressed in the later stages of the disease and at length the whole surface of the tuber is involved.

W. Wisner, who lives in Polk County, near Salem, prics as a rare relic a pair of spectacles said to have been made at least 150 years ago. As described by the Salem Statesman these ancient "lamps' were hand made, the rims of brass and the lenses of very rude construction. Mr. Wisner is 77 years of age. The spectacles were first the property of a great-grandmother.

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