

Control.—From what has been said, it will be seen that the disease is spread mainly by planting seed which is infected, or which has been in contact with infected tubers, bags, implements, etc. In purchasing seed from the districts mentioned above, a guarantee should be required that no powdery scab has been found in the field, or, still better, on the farm where they were grown. Seed-disinfection (*see* under "Common Scab") should always be practised. This will not render apparently sound tubers from an affected crop safe to use for seed, as the disease may possibly be present in such tubers in sufficient amount to affect the crop raised from them and to infect the soil, and yet be in a form not reached by seed-treatment. It will, however, destroy spores on the surface, and therefore remove the risk of the disease being introduced on healthy tubers which have been in contact with containers or implements contaminated with spores. Corrosive sublimate should be used for this purpose in preference to formaldehyde. Sound tubers from an infected crop may be disposed of for consumption if each container is plainly marked "Table potatoes only—not to be used for seed." Affected tubers, or tubers from an affected crop, should be cooked before being fed to stock, otherwise the manure may be contaminated and the disease be spread to other fields. The same applies to parings and other refuse from an attacked crop. These should not be thrown on the manure-heap, but boiled or burned. Cellars, bins, bags, etc., where diseased potatoes have been should be disinfected with bluestone (copper sulphate), 1 lb. to 5 gallons, or formaldehyde, 1 lb. to 1 gallon of water. Infected soil should not be planted to potatoes again for five years. Farmers' Circular No. 5 of the Division of Botany, Dominion Department of Agriculture, Ottawa, deals more fully with this disease than is possible here, and should be written for by those interested. (*See* note at head of this article.)

RHIZOCTONIA.

Tubers are very commonly found with what appear to be bits of hardened soil adhering to them. Careful examination shows, however, that these masses of foreign matter adhere very firmly, and on being moistened take on a black colour. In size they may vary from that of a pin's head or less to $\frac{1}{4}$ inch in diameter, and may be very numerous. They may be detached with the finger-nail and the skin of the tuber underneath will be found quite sound. These bodies (named *sclerotia*) are compact masses of the resting mycelium of a fungus commonly known as *Rhizoctonia*. They do not cause any disease of the tuber, except perhaps in rare instances, but they injure its appearance. If such tubers are planted, however, the resting mycelium in the sclerotium gives rise to an active form which may work much injury in the growing crop. In many cases the sprouts are killed before they get above ground, this being one cause of potato failures. Later in the season various symptoms may appear. Some stems may die prematurely, and on examination there will be found at the base of the stem, usually at the ground-line or extending either way from this, dead, brown, cankered areas, often extending right around it. In cases where the stems have been more vigorous or the attack less severe, the girdling may have only been sufficient to partially prevent the flow of sap downwards. In such cases a cluster of small tubers may be found close to the base of the stem, and very commonly small green tubers are formed above ground in the angles between leaf and stem. These aerial tubers are very characteristic of the disease, but may be produced from other causes leading to partial girdling; e.g., the breaking of the stem by wind. Another stage of the fungus in the form of a greyish mould on the stems also occurs in late summer and produces spores, but the chief means by which the disease is spread is by the planting of tubers bearing sclerotia. In addition to potatoes, a large number of cultivated plants are liable to attack from this stem-rot, with consequent dwarfing or wilting of the plant. "Damping-off" of seedlings in the seed-bed is also often caused by this fungus.

Control.—When once present in the soil it is impossible to "starve out" the fungus, since there are so many plants, including weeds, on which it can live. It