

PLPA-POT003-2011

RHIZOCTONIA CANKER AND BLACK SCURF OF POTATO

The two types of symptoms are caused by the same fungus, *Rhizoctonia solani*, which can be soilborne or introduced into pathogen-free fields by planting contaminated seed tubers.



Fig. 1. Canker on the stolon.

Brown to black sunken lesions are seen on sprouts, stolons or roots shortly after plant emergence (Fig. 1). These lesions may cause stem girdling, resulting in wilting and death.



Fig. 2. Fungal growth (spore-forming stage) on lower stems.

Under cool, moist conditions, the fungus may grow directly on the lower stems, without causing any rot or affecting the growth of the leaves (Fig. 2). This symptom may look similar to another fungal disease, late blight, which causes a brown canker on the stem, killing it, as well as affecting leaves. The growth of *Rhizoctonia solani* has a white, powdery appearance on the stem surface (Fig. 3).

The fungus will also produce hard, brown to black growth on the surface of tubers that does not wash off (Fig. 4). These structures are formed late in the growing season. This growth is the source of infection with future plantings.



Fig. 3. Close-up of sporulating stage on lower stem.

The stem canker is favored by cool temperatures that delay emergence after planting. To prevent this disease, plant non-infected seed tubers and rotate out of potatoes for 1-2 years. Commercial growers can use fungicides at planting, either to treat the seed tubers or as an in-furrow soil treatment.



Fig. 4. Black scurf (fungal growth) on a tuber.

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April, 2011

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