



Pacific Pests and Pathogens - Mini Fact Sheet Edition

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Potato black scurf (295)



Photo 1. Underground stem of potato with cankers caused by black scurf, *Rhizoctonia solani*.



Photo 2. Close-up of underground stem of potato showing cankers caused by black scurf, *Rhizoctonia solani*.



Photo 3. Black scurf, the name given to the appearance of potato tubers when sclerotia of *Rhizoctonia solani* form on the surface.



Photo 4. The cottony growth (mycelium) of black scurf, *Rhizoctonia solani*.

Summary

- Worldwide distribution. On potato, rice, and more. Many strains. An important disease.
- Brown sunken cankers on stems and stolons, limiting tuber growth and causing wilts, stunting and death. Balls of fungus in black rinds (“sclerotia”) on tubers. It also causes seedling damping-off.
- Spread in movement of soil and seed.
- Cultural control: certified seed; best to sprout seed, inspect, then plant; remove volunteers; avoid, cold wet soils and plant only 5 cm deep so that the warm soil encourages rapid shoot growth; improve field drainage; manure; 3-year rotation; harvest as soon as tops removed; collect and burn trash after harvest.
- Chemical control: seed: treat with penicycuron or mancozeb.

Common Name

Black scurf, rhizoctonia canker

Scientific Name

Rhizoctonia solani. It is also called *Thanatephorus cucumeris*, which is the sexual state; it may occur on the lower stems of potato. There are a number of strains, and the common one on potato is referred to as AG3.

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Information from *Diseases of vegetable crops in Australia* (2010). Editors, Denis Persley, Tony Cooke, Susan House. CSIRO Publishing; and from Wharton P, Wood E (Undated) Rhizoctonia stem canker and black scurf of potato. University of Idaho Extension. (<https://www.cals.uidaho.edu/edcomm/pdf/CIS/CIS1198.pdf>). Photos 1-3 Gerald Holmes, California Polytechnic State University at San Luis Obispo, Bugwood.org. Photo 4 Bouček-Mechiche K (2016) Black scurf. CNISINRA. (<https://www.potato-tuber-blemishes.com/Symptoms/Pitted-or-raised-symptoms/Black-scurf>).

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