

LOUISIANA PLANT PATHOLOGY

DISEASE IDENTIFICATION AND MANAGEMENT SERIES

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Scurf of Sweet Potato

Monilochaetes infuscans Halsted ex Harter

Scurf, formerly referred to as soilstain, is caused by the soilborne fungus *Monilochaetes infuscans*. This fungus only colonizes the skin of the sweet potato, causing superficial purplish-brown-to-black lesions that enlarge very slowly during storage. Usually, only a few scattered lesions are seen on the root, but in severe cases, almost the entire surface of the root can be affected. The disease does not affect the eating quality of the sweet potato, but, in storage, sweet potatoes with scurf lose water faster than healthy roots.

When infected roots are stored under high humidity, the fungus produces chains of spores on the surface of the lesions that can be seen only with the aid of a hand lens or microscope. These spores then can be spread from infected roots to healthy roots during handling, such as during bedding or packing.

Monilochaetes infuscans has a very narrow host range, infecting only the sweet potato and closely related plants, including several of the morning glories that are common weeds in Louisiana. It survives in soil for only 1-2 years, depending on soil type. Survival in soil is higher in fine-textured soils and is also favored by higher organic matter content. The primary means of spread of the disease is on planting material. The fungus can grow from an infected seed root up onto the sprouts produced from that root. In the field it then can grow from an infected slip down onto the daughter roots produced by that plant.

Scurf is a very common disease of sweet potatoes. As the result of research done in the early half of the 20th century, however, Louisiana has experienced few problems with scurf over the past 25 years. Scurf is a disease that can be managed quite effectively through an integrated program of sanitation, crop rotation and fungicide treatment of seed roots. As with most diseases, it is easier to prevent the disease rather than to try to eliminate it once it becomes a problem.



Fig. 1. Scurf on sweet potato roots.



Fig. 2. A hill of sweet potatoes showing scurf lesions that had spread from the stem of the mother plant onto the daughter roots.

The following combination of practices have proven effective in managing scurf:

- Use only scurf-free sweet potatoes for seed. States in which sweet potatoes are grown for seed will certify this seed only if it meets standards for freedom from diseases, such as scurf, root-knot nematode, etc. If you cannot examine the seed before buying it, make certain that it is certified by the appropriate state agency.
- Treat seed roots with an effective fungicide, such as thiabendazole (Mertect) or dichloronitroaniline (Botran), being sure to cover the entire surface of the root as thoroughly as possible.
- Bed seed roots only in soil that is free of the pathogen. Do not bed in a field where sweet potatoes have been grown recently, and especially not in a field where scurf has occurred.
- Cut slips at least 1 inch above the soil line to avoid carrying the pathogen (and other pathogens and insects) to the field on infected stems.
- If scurf has become a problem in a field, it may be necessary to rotate out of sweet potatoes for 3-4 years. Shorter rotations may be possible if scurf has not become well-established.

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Photo Credits

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