



# Extension FactSheet

Plant Pathology, 2021 Coffey Road, Columbus, OH 43210-1087

## Fusarium Dry Rot and Seed-Piece Decay of Potato

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**F**usarium dry rot is an important postharvest disease of potato tubers that causes significant losses in storage and transit of both seed tubers and those for table consumption. It is also a major cause of seed-piece decay after planting.

### Symptoms

Infected tubers usually develop a dry rot, but a moist rot may occur if secondary infections with soft-rot bacteria also are involved. Surfaces of infected tubers are sunken or wrinkled, and rotted tissues appear brown or gray to black. A white or pink mold is sometimes visible on tuber surfaces. When tubers are cut, internal cavities within rotted tissues may contain white, yellow or pink molds. In storage, blue, black, purple, gray, white, yellow, or pink spore masses may develop in these internal

cavities. After low-temperature storage, internal tissues often will become firm and dry or even powdery.

### Causal Organisms

Fusarium dry rot is caused by several species of the soilborne fungus *Fusarium*. These fungi are common in most soils where potatoes are grown and survive as resistant spores free in the soil or within decayed plant tissues. Although some infections may develop on tubers before harvest, most infections occur as the fungus enters tubers through harvest wounds. Small, brown lesions appear at wound sites 3–4 weeks after harvest and continue to enlarge during storage, taking several months to develop fully. The disease develops fairly rapidly at temperatures above 50°F, but lesions will cease enlarging below 40°F. The fungus is only dormant at these low temperatures, however, and will resume growth when tubers are warmed.

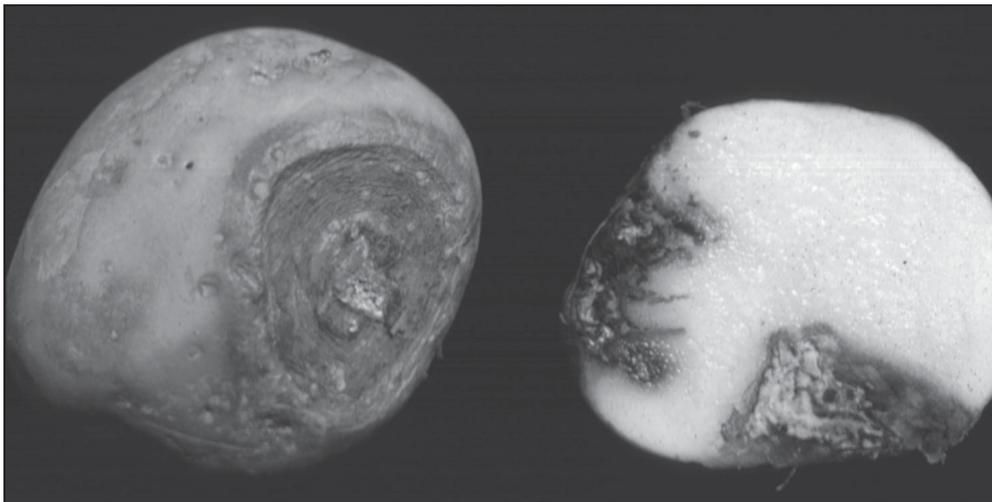


Figure 1. Tubers with *Fusarium* dry rot have wrinkled, sunken, brown to black lesions. When cut, infected tissues are dry and crusty.

*Fusarium* seed-piece decay is really the same disease. Seed tubers may be infected prior to shipment. Decay during transit or storage often accounts for poor quality seed tubers. When these *Fusarium* fungi are present on seed pieces or in the soil, poor stands may result, especially if cut surfaces of seed pieces are not properly healed. *Fusarium* seed-piece decay begins as reddish-brown to black depressions on cut surfaces. These may expand to cover the entire seed piece and often result in a slimy rot when infection by secondary soft-rot bacteria follows.

## Management

1. Harvest tubers only after the vines are completely dead to ensure skin maturity.
2. Take all precautions when harvesting and handling tubers to minimize cuts and bruises.
3. Hold newly harvested potatoes at 55–60°F with 90–95% relative humidity for the first 1–2 weeks to promote wound healing. After this curing period, lower the temperature of table stock to 38–40°F for long-term storage.
4. Plant only certified, disease-free seed tubers. If possible, use whole (B-size) seed tubers that do not have to be cut into seed pieces before planting.
5. When receiving seed tubers in bags, do not stack more than five bags high. With bulk or bagged seed, store at 40–45°F until 2–3 weeks before planting. Then allow seed potatoes to warm prior to cutting.
6. Treat cut seed pieces with recommended fungicide dressings immediately after cutting. For current recommendations see the Ohio Vegetable Production Guide (OSU Extension Bulletin 672).
7. Plant treated cut seed pieces immediately or store them at 55–60°F and 95–99% relative humidity to hasten healing of cut surfaces. Condensation on surfaces of seed pieces must be avoided.



Figure 2. Infected areas of tubers with *Fusarium* dry rot often have internal cavities containing white or pink molds.

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