

Plant Disease Notes

Buckeye Rot of Tomato

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Buckeye rot of tomato fruit is caused by the soilborne fungus *Phytophthora parasitica*. The disease induces fruit rot of tomato, pepper, and eggplant and commonly occurs in the southeast and south central areas of the United States.

Symptoms. Initial symptoms consist of a brownish, water-soaked spot that usually appears near the blossom end, or at the point of contact between the fruit and soil. The spot further enlarges and develops into a lesion with a characteristic target-like pattern of concentric rings of narrow dark brown and wide light brown bands. Fruit symptoms caused by buckeye fruit rot can be confused with symptoms of “late blight,” which is caused by the fungus *Phytophthora infestans*. Buckeye fruit rot lesions are at first firm and smooth, whereas late blight lesions are typically rough and sunken at the margins. Buckeye fruit rot may produce a white, cottony fungal growth on the lesion under moist conditions. The buckeye rot fungus can affect both green and ripe fruit. Diseased fruit are usually located nearest the ground in staked tomatoes.

Persistence and Transmission.

Buckeye fruit rot most commonly occurs under prolonged warm, wet conditions. The buckeye rot fungi may be

introduced through infected seeds or transplants, or through volunteer plants from the previous crop. Fungal spores are produced when the soil is wet and above 65°F. Spores are spread by surface water and splashing rain. Fruit may become infected when they come into contact with infested soil or when being splashed with mud containing fungal inoculum. Temperatures between 75° and 86°F are ideal for disease development.

Control. Buckeye fruit rot is best controlled by using the following strategies:

- Ensure proper soil drainage.
- Avoid soil compaction.
- Use soil fumigation to disinfect heavily infested soils.
- Rotate on a 3- to 4-year basis with crops other than those belonging to the tomato family.
- Use stakes and/or mulches (plastic, straw, etc.) to reduce fruit/soil contact.
- Apply fungicides that contain chlorothalonil, maneb, mancozeb, or metalaxyl as their active ingredient on a regularly scheduled spray program. **(Always follow the manufacturer’s label directions and restrictions when applying any pesticide.)**



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Use pesticides **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label.

For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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