



Extension FactSheet

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

Anthracnose Fruit Rot of Pepper

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Several species of plant pathogenic fungi in the genus *Colletotrichum* cause anthracnose in peppers and many other vegetables and fruits. Until the late 1990s, anthracnose of peppers and tomatoes was only associated with ripe or ripening fruit. Since that time, a more aggressive form of the disease has become established in Ohio and other states. This form attacks peppers at any stage of fruit development and may threaten the profitability of pepper crops in areas where it becomes established. This disease can also affect tomatoes, strawberries, and possibly other fruit and vegetable crops.

Symptoms

Circular or angular sunken lesions develop on immature fruit of any size. Often multiple lesions form on individual fruit. When disease is severe, lesions may coalesce. Often pink to orange masses of fungal spores form in concentric rings on the surface of the lesions (Figure 1). In older lesions, black structures called acervuli may be observed. With a hand lens, these look like small black dots; under a microscope they look like tufts of tiny black hairs. The pathogen forms spores quickly and profusely and can spread rapidly throughout a pepper crop, resulting in up to 100% yield loss. Lesions may also appear on stems and leaves as irregularly shaped brown spots with dark brown edges (Figure 2).

Causal Organism and Disease Cycle

This form of pepper anthracnose is caused by the fungus *Colletotrichum acutatum*. The pathogen



Figure 1

survives on plant debris from infected crops and on other susceptible plant species. The fungus is not soil-borne for long periods in the absence of infested plant debris. The fungus may also be introduced into a crop on infested seed. During warm and wet periods, spores are splashed by rain or irrigation water from diseased to healthy fruit. Diseased fruit act as a source of inoculum, allowing the disease to spread from plant to plant within the field.



Figure 2

Management

1. Plant only seed from disease-free plants or seed treated to reduce any fungal populations. Seed can be disinfested with a 30-minute soak at 52°C. Refer to the *Ohio Vegetable Production Guide* (Ohio State University Extension Bulletin No. 672) for complete seed-treatment instructions.
2. Use only transplants free of disease symptoms.
3. Peppers should be rotated out of infested fields for at least three years. Fields should be planted with crops other than tomatoes, eggplants, or other solanaceous crops or strawberries, which are also hosts of *C. acutatum*.
4. Apply overhead irrigation during the early part of the day so that plants can dry before sundown.
5. In areas where market constraints and other diseases do not limit the choice of cultivar, cultivars demonstrating a moderate level of resistance (e.g., ‘Colossal,’ ‘Brigadier,’ and ‘Paladin’) should be chosen.
6. Apply protective fungicides at flowering when environmental conditions are favorable for disease development. Rates and timing of all further applications should be done according to product label instructions. Refer to the *Ohio Vegetable Production Guide* (OSU Extension Bulletin No. 672) for recommended fungicides.

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