

2007 Florida Plant Disease Management Guide: Pumpkin¹

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Specific Common Diseases

Alternaria Leaf Spot (*Alternaria cucumerina*)

Symptoms: This is not a common disease on pumpkin in Florida. Small, dark circular spots (may appear water-soaked) develop on leaves and enlarge to 1/2 inch or more across. Concentric rings appear in the brown spots as they enlarge, giving a "target spot" appearance. Fruit is seldom attacked unless plants are nutrient deficient. See Plant Pathology Fact Sheet PP-32.

Chemical Controls: See PPP-6.

Angular Leaf Spot (*Pseudomonas syringae* pv. *lachrymans*)

Symptoms: This is not a common disease in pumpkin in Florida. Infections are found in the leaves, stems, and fruit. Spots in the leaves are irregular in shape, angular, and water-soaked. Free moisture allows the bacteria to ooze from the spots, which, upon drying, leaves a white residue. These spots of dead tissue will occasionally drop away from the healthy tissue leaving irregular holes in the leaves.

Cultural Controls: Use disease-free transplants.

Anthrachnose (*Colletotrichum lagenarium*)

Symptoms: This is not a common disease on pumpkin in Florida. The disease first appears in the foliage as small, yellow, water-soaked spots which enlarge rapidly and turn brown. The dead tissue dries and may crack and fall out. In the stems, the lesions are elongated. On the fruits, dark, circular, sunken lesions appear, varying in size with the age. During wet weather the center of the spots often show a pinkish color due to production of spores.

Cultural Controls: Choose resistant varieties.

Chemical Controls: See PPP-6. Fungicides listed for downy mildew and powdery mildew will be useful.

Damping-Off (*Pythium* spp., *Fusarium* spp., and *Rhizoctonia* spp.)

Symptoms: This disease affects seedlings and is caused by several soil-inhabiting fungi that are almost universal in occurrence. These fungi infect portions of the plant at or below the soil level, resulting in collapse and death of the seedling. Conditions

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unfavorable for rapid emergence of cantaloupes (cool, wet weather) are usually most favorable for this disease. See Plant Pathology Fact Sheet PP-1.

Chemical Controls: Plant only fungicide-treated seed (most seed is commercially pre-treated). See PPP-6.

Downy Mildew (*Pseudoperonospora cubensis*)

Symptoms: This disease first appears on the foliage as pale-green areas separated by islands of darker green tissues. These spots develop into angular, yellowish lesions. Older lesions become brown and necrotic. Severely affected leaves may become chlorotic, brown and shrivel. During moist periods, a grayish spore mass may be observed on the lower leaf surface on these spots. See Plant Pathology Fact Sheet PP-2.

Cultural Controls: Choose resistant varieties, if available.

Chemical Controls: See PPP-6.

Gummy Stem Blight (*Didymella bryoniae/Phoma cucurbitacearum*)

Symptoms: This is not a common disease on pumpkin in Florida. Lesions on the cotyledons and leaves are round or irregular, brown, with faint concentric rings. Lesions on the crown and stem are brown and usually turn white with age. The causal fungus can often be observed to reproduce on the crowns or stem lesions and will form small pycnidia (black specks). Asexual spores are produced within the pycnidia in the plant tissue. The pathogen can be spread by splashing rain from plant to plant, or be carried long distances on wind currents. The fungus "over-winters" on old plant debris and can be seedborne. See Plant Pathology Fact Sheet PP-27.

Cultural Controls: Avoid planting in fields with residual cucurbit crop debris still present.

Chemical Controls: See PPP-6.

Powdery Mildew (*Sphaerotheca* spp. or *Erysiphe* spp.)

Symptoms: The fungus affects the leaves and stems. It first appears as round whitish spots on the under side of the older leaves. The spots increase in number and size and coalesce. These appear on the upper surface with a white powdery growth. Severely affected leaves lose their normal dark-green color and become pale yellow green, then brown and shrivel. The young stems may also be killed. Fruits of infected vines ripen prematurely, are of poor quality and often sunburn.

Cultural Controls: Choose resistant varieties.

Chemical Controls: See PPP-6.

Viruses (*Cucumber mosaic*, *Papaya ringspot virus type W*, *Watermelon mosaic virus 2*, *Zucchini Yellow mosaic virus*)

Symptoms: Leaves show varying degrees of mottling, distortion and stunting. Growth habit may alter as infected vine tips appear more erect. Fruits may be mottled, have greenish lines or ring spots, and can be deformed. These viruses are spread by aphids. See Plant Pathology Circular 1184.

Cultural Controls: Control weeds in and around plantings. This will aid in virus control. Treating fields repeatedly for aphid control is not recommended because of the short time period needed by aphids to transmit the virus while feeding.

Chemical Controls: See PPP-6.