Specific Common Diseases

Alternaria Leaf Spot (*Alternaria cucumerina*)

**Symptoms:** Small circular spots (may appear water-soaked) develop on leaves and enlarge to 1/2 inch or more across. Concentric rings appear in the spots as they enlarge, giving a “target spot” appearance. Fruit is seldom attacked unless plants are nutrient deficient. The pathogen over-seasons on infected plant debris and spores are wind-borne and rain-splash dispersed.

**Chemical Controls:** See Chapter 7 of the 2017–2018 Vegetable Production Handbook of Florida, “Cucurbit Production” (http://edis.ifas.ufl.edu/cv123).

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

**Symptoms:** Symptoms occur on the leaves, stems, and fruit. Spots on the leaves are irregular in shape, angular, and water-soaked. These spots of dead tissue will occasionally drop away from the healthy tissue leaving irregular holes in the leaves. Bacterium is seedborne and rain-splash dispersed. This bacterial disease occurs during cool weather.

**Cultural Controls:** Choose resistant varieties. Deep plow plant residue and practice crop rotation.

**Chemical Controls:** See Chapter 7 of the 2017–2018 Vegetable Production Handbook of Florida, “Cucurbit Production” (http://edis.ifas.ufl.edu/cv123).

Anthracnose (*Colletotrichum lagenarium*)

**Symptoms:** The disease symptoms first appear on the foliage as small, yellow water-spots that enlarge rapidly and turn brown. The dead tissue dries and may crack and fall out. On 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. See *Cucumber Anthracnose in Florida* (http://edis.ifas.ufl.edu/pp2660).

**Cultural Controls:** Use pathogen-free seed. Rotate land. Avoid handling plants when wet.

**Chemical Controls:** See Chapter 7 of the 2017–2018 Vegetable Production Handbook of Florida, “Cucurbit Production” (http://edis.ifas.ufl.edu/cv123).
**Bacterial Fruit Blotch (Acidovorax citrulli)**

**Symptoms:** Angular, water-soaked leaf spots that are restricted by leaf veins occur in an aggregated pattern on leaves. Lesions may appear as pin-stripping aside of veins. During dry conditions these spots become light brown and have a papery thin consistency. Sunken spots that are slightly water-soaked, and green occur in fruit. These sunken spots can be 1” or greater in diameter and may occur anywhere on the fruit, but they are most common on the top and sides of the fruit.

**Cultural Controls:** Purchase seed that are indexed to be free of bacterium. Purchase transplants that are disease-free. Use crop rotation with non-cucurbit crops. Destroy cucurbit weeds and cucurbit crop volunteers.


**Cercospora Leaf Spot (Cercospora citrullina)**

**Symptoms:** Leaf spots are small (ranging from 1/8”–1/4” in diameter), circular and often are surrounded by a slight yellow halo. The lesion centers typically develop a white color. Spores are air-borne and rain-splash dispersed. The fungus over-seasons on plant debris and weed hosts.

**Cultural Controls:** Destroy infected plant material.

**Chemical Controls:** See Chapter 7 of the 2017–2018 Vegetable Production Handbook of Florida, “Cucurbit Production” (http://edis.ifas.ufl.edu/cv123).

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

**Symptoms:** This disease on seedling cantaloupes is caused by several soil-inhabiting fungi and fungal-like pathogens that are almost universal in occurrence. These pathogens infect portions of the plant at or below the soil level, resulting in collapse and death of the seedling. Conditions unfavorable for rapid emergence of cantaloupes (cool, wet weather) are usually most favorable for this disease.

**Cultural Controls:** Plant in well-tilled soil where old crop and weed debris has been plowed down 30 days previously.

**Chemical Controls:** Plant only fungicide-treated seed (most seed is purchased pre-treated). See Chapter 7 of the 2017–2018 Vegetable Production Handbook of Florida, “Cucurbit Production” (http://edis.ifas.ufl.edu/cv123).

**Downy Mildew (Pseudoperonospora cubensis)**

**Symptoms:** This disease first appears on the foliage as pale areas separated by islands of darker green tissue. These spots develop into an angular, yellowish lesion. Older lesions become brown and necrotic. Severely affected leaves may brown and shrivel entirely. During moist periods, a grayish spore mass may be observed on the lower leaf surface under these spots. Spores are dispersed by wind. See Management of Cucurbit Downy Mildew in Florida (http://edis.ifas.ufl.edu/pp325).

**Cultural Controls:** Choose resistant varieties.

**Chemical Controls:** See Chapter 7 of the 2017–2018 Vegetable Production Handbook of Florida, “Cucurbit Production” (http://edis.ifas.ufl.edu/cv123).

**Gummy Stem Blight (Didymella bryoniae)**

**Symptoms:** On young seedlings, lesions on the cotyledons and true 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 produce small black specks (pycnidia) in the plant tissue. The fungus over-seasons on old plant debris and can be seedborne. The pathogen is spread by splashing rain from plant to plant. See Management of Gummy Stem Blight (Black Rot) on Cucurbits in Florida (http://edis.ifas.ufl.edu/pp280).

**Cultural Controls:** Avoid planting in fields with residual cucurbit crop debris still present. Purchase disease-free transplants.

**Chemical Controls:** Use treated seed. See Chapter 7 of the 2017–2018 Vegetable Production Handbook of Florida, “Cucurbit Production” (http://edis.ifas.ufl.edu/cv123) for foliar fungicides.

**Powdery Mildew (Podosphaera xanthii)**

**Symptoms:** The fungus affects the leaves and stems. Symptoms first appear 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 color, 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 become sunburn. Spores are readily wind-dispersed.

**Cultural Controls:** Purchase disease-free transplants.

**Chemical Controls:** See Chapter 7 of the 2017–2018 Vegetable Production Handbook of Florida, “Cucurbit Production” ([http://edis.ifas.ufl.edu/cv123](http://edis.ifas.ufl.edu/cv123)).

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

**Symptoms:** Leaves show varying degrees of mottling, distortion, and stunting. Growth habit may altered as infected vine tips appear more erect. Fruits may occasionally be mottled and deformed. These are the most common viruses in cantaloupe in Florida. They may also occur naturally on many weed hosts throughout the state and is moved into cantaloupes by aphid feeding.

**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. JMS Stylet Oil can be sprayed in a rigorous program to delay the onset of the epidemic.

**Whitefly Transmitted Viruses (Cucurbit leaf crumple virus, Cucurbit yellow stunting disorder virus)**

**Symptoms:** Symptoms of Cucurbit leaf crumple virus are yellowing and crumpling of leaves. The disease does not appear to progress much beyond these symptoms. Symptoms of Cucurbit yellow stunting disorder virus (CYSDV) are mild and may resemble nutritional disorder or water stress. The first symptom is a yellow spotting of leaves and the veins remain green.

**Cultural controls:** Practices to reduce the number of whiteflies in the crop such as not planting new crops near older crop fields, destroying the crop completely at the end of the season, and eliminating weed hosts are recommended. For a complete list of recommended cultural control methods see Recommendations for Management of Whiteflies, Whitefly-Transmitted Viruses, and Insecticide Resistance for Production of Cucurbit Crops in Florida ([http://edis.ifas.ufl.edu/in871](http://edis.ifas.ufl.edu/in871)).

**Chemical Control:** Managing the whitefly vector is recommended. For management of the whitefly vector, see Insect Management for Cucurbits (Cucumber, Squash, Cantaloupe, and Watermelon) ([http://edis.ifas.ufl.edu/in168](http://edis.ifas.ufl.edu/in168)).