

## 2006 Florida Plant Disease Management Guide:Okra<sup>1</sup>

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### Specific Common Diseases

#### **Cercospora Leaf Blight (*Cercospora abelmoschi*)**

**Symptoms:** Leaf spots have no definite shape, size or margin. The causal fungus appears as an olivaceous to sooty-colored growth on the lower leaf surface. Injured leaves will often roll, wilt and abscise. This is usually not of economic importance in commercial plantings.

**Cultural Controls:** There are no cultural or chemical controls available for this problem under present growing conditions in Florida.

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

**Symptoms:** This disease can affect plantings by the fungi reducing seed germination or infecting emerged seedlings. Cultural or environmental conditions that delay the rapid germination of seed, such as cool soil, may result in pre-emergence damping-off. The soilborne fungi responsible for seed decay can also infect young seedlings at or below the soil line causing them to topple over and die.

Affected plants will exhibit soft, mushy roots and stems or discolored areas on these plant parts.

**Cultural Controls:** Plant only when soil moisture and temperature favor rapid germination. Apply a seed treatment fungicide to protect seed during germination.

**Chemical Controls:** Use a fungicidal seed treatment. See PPP-6.

#### **Powdery Mildew (*Oidium* sp.)**

**Symptoms:** This disease is characterized by the obvious white coating of fungal mycelium on lower and upper leaf surfaces. Severe infection will cause the leaves to roll upward and result in leaf scorching. This disease can be particularly severe during the winter cropping season in south Florida.

**Chemical Controls:** See PPP-6.

#### **Southern Blight (*Sclerotium rolfsii*)**

**Symptoms:** This disease occurs during warm, humid weather. Okra plants exhibit a progressive wilt symptom as the causal fungus infects the roots and lower stem. During moist weather a coarse white

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fungal mycelium can be observed at the soil line around and on the stem. In a few days, numerous white nodules form on this mycelium. These structures (sclerotia) turn brown with age and are the size of a mustard seed. These sclerotia survive in the soil and serve as survival structures for this fungus over a number of years. Any movement of infested soil will spread this disease problem.

**Cultural Controls:** Rotate to a grass crop in fields with a high infestation of this fungus. Deep plow infected crop debris to place most of these sclerotia below the root zone of the next crop. Amistar fungicide would suppress this disease when applied to the soil by the stem prior to occurrence of this disease. This disease is not listed on the Amistar label.

### **Verticillium Wilt (*Verticillium albo-atrum*)**

**Symptoms:** This is a fungal wilt disease of okra. A slight leaf yellowing will be noted (usually on lower, older leaves). Plants begin to exhibit an increasing period of wilt around mid-day. Wilt progresses from the lower to the upper foliage for longer periods until the plant dies. Slight vascular discoloration can be observed when the lower stem is slit lengthwise. This disease is most likely to occur on soil with a high pH such as in the Homestead/Florida city area of Southeast Florida.

**Cultural Control:** Plant okra crops onto new land or on land rotated away from such susceptible crops as the solanaceous vegetables or strawberries. Good rotation crops are grasses, cucurbits, and legumes. Soil fumigants applied prior to planting can shorten rotation time. Avoid over liming of the soil.

### **Wet Rot (*Choanephora cucurbitarum*)**

**Symptoms:** Young and old blossoms, young fruit and wounded leaf tissue may become infected. Newly opened blooms will wilt and collapse. Fruit may become infected from the blossom and affected plant parts become covered with a dense white growth of fungus that is whisker-like in appearance. These whiskers (sporangiophores) develop purple-black heads at maturity. Affected plant parts will soften, rot and fall to the soil surface.

**Cultural Controls:** Improve air circulation by avoiding dense plantings. In garden situations, dislodge the flower from the fruit as soon as fruit set has occurred.