

## 2007 Disease Prevention and Spray Guide (Cucumber)

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**Soilborne diseases.** There are some soilborne diseases that affect cucumbers. These diseases can attack the crop from seedling stage through harvest and are referred to as crown-rot diseases. Many of these diseases, however, attack the foliage and fruit and are deposited there by water splash or by physical contact between the fruit and the soil. Early, seedling crown rot can be caused by either *Rhizoctonia solani*, or species of *Pythium*. **Phytophthora crown and fruit rot** (*Phytophthora capsici*) can damage the roots, crown, foliage and fruit. **Southern stem rot** (*Sclerotium rolfsii*) and **Rhizoctonia belly rot** (*Rhizoctonia solani*) can attack fruit that come into contact with soil. **Cottony leak** (*Pythium* spp.) can be severe on fruit during periods of wet weather. **Bacterial wilt** (*Erwinia tracheiphila*) is transmitted by cucumber beetles and is rarely seen in Georgia.

### Recommended practices in chronological order are as follows:

1. Rotation with non-cucurbit crops reduces potential inoculum of all of the above diseases except Phytophthora crown and fruit rot.
2. Avoid low-lying, wet areas and poorly drained conditions that favor Phytophthora crown and fruit rot.
3. Deep turning with a moldboard plow will help with all diseases except *Phytophthora* and *Pythium*.
4. Fumigation with methyl bromide will suppress all soilborne diseases. Alternatives to methyl bromide that suppress diseases are Telone C-35, K-Pam, Vapam, and chloropicrin. Telone products are nematicidal.
5. Avoid planting seedless to fields with a history of Fusarium wilt.
6. Products containing mefenoxam (Ridomil, UltraFlourish) can suppress losses to *Phytophthora*.
7. Quadris/Amistar applied at vine run can suppress losses to belly rot and southern stem rot.
8. Acrobat tank-mixed with copper applied intensively at fruit set may protect some fruit from *Phytophthora*.

**Foliar diseases.** There are several foliar diseases of cucumber. **Downy mildew** (*Pseudoperonospora cubensis*) is a common problem on cucumber and can cause severe losses if left unchecked. Mancozeb, Gavel, Previcur Flex, Cabrio, Forum, Tanos, Ranman, chlorothalonil, Ridomil Gold Bravo and Reason can reduce losses to downy mildew. Tank-mix Previcur Flex, Forum, Ranman and Tanos with chlorothalonil or mancozeb. **Gummy stem blight** (*Didymella bryoniae*) is another destructive disease affecting cucumbers and there is no commercial cultivar resistance to this disease. Gummy stem is best controlled using disease-free seed and transplants and preventive sprays of chlorothalonil and Pristine. **Anthracnose** (*Colletotrichum obiculare*) is another troublesome disease of cucumber that is suppressed by mancozeb, strobilurin fungicides, and Topsin M. Powdery mildew and Alternaria are rarely problems on cucumbers in Georgia. The aphid-transmitted mosaic viruses can cause losses, especially in the fall.

### Recommended practices in chronological order are as follows:

1. Use disease-free seed and plants.
2. Avoid fall-planted cucumbers as diseases are more severe during that time.
3. Begin chlorothalonil sprays at 1st true leaf then rotate to mancozeb.
4. Rotate Pristine and Topsin M + mancozeb for gummy stem and anthracnose.
5. Rotate in downy mildew products if downy mildew is located in or near the field.

### Spray Schedule for Cucumber

<u>Transplanting/Emergence</u>	<u>Vine run</u>	<u>Blooming</u>	<u>Fruit Set</u>	<u>Harvest</u>
Begin chlorothalonil rotated with mancozeb		Quadris for belly rot		
			Pristine rotated with Topsin M + mancozeb	
			Rotate in downy fungicides as needed.	