**1. Late Blight Found in North Carolina**

Late blight was found on July 28 in western North Carolina in Henderson County. This is the closest report to Tennessee this year. Previously, late blight had been found in scattered locations in a few states. The weather has not been favorable for an epidemic, but growers in East Tennessee should still take precautions by spraying their fields with protectant fungicides. Those who are battling foliar bacterial diseases with mancozeb and copper do not need to make any changes. If these diseases are not present on the farm, chlorothalonil may be a better choice, since it has better activity against late blight than mancozeb. If late blight appears, a locally systemic material such as Ranman, Presidio, Revus, or Previcur Flex should be tank mixed with the protectant.

Please report any late blight to your county Extension agent or to me. This is a disease of regional concern because of its ability to move in the upper atmosphere, and we need to warn others when it approaches. (SB)

**2. Cucurbit Downy Mildew Update**

No cucurbit downy mildew (cdm) has been reported to me from Tennessee, but it is not far away - http://cdm.ipmpipe.org/scripts/map.php. Henderson County, NC growers reported cdm on four dates since July 1. In Haywood County, NC (west of Asheville), cdm has been reported on three dates since July 7. Cucumber, giant pumpkin, cantaloupe, and butternut squash have been affected.

This summer’s weather pattern favors cdm more than late blight, as cdm is not inhibited by high temperatures, and a heavy, all-night dew is all the moisture that is required for cdm infection. Include chlorothalonil or mancozeb in every spray - they will give you protection against several other fungal diseases as well as cdm. If cdm appears in your field, apply Presidio, Ranman, Previcur Flex, or Tanos, tank mixed with chlorothalonil or mancozeb. (SB)

**3. Cucurbit Powdery Mildew Spray Season**

Well, it’s that time of year - time for the annual appearance of cucurbit powdery mildew. The basic fungicides you have been using to this point in the season will need some help from the more specialized mildewicides. BUT NOT UNTIL YOU SEE THE FUNGUS. Inspect the interior part of the canopy for the initial signs of powdery mildew - separate, white colonies as shown on the right (although they will more likely form on the stems).

When found, immediately add one of the fungicides in the following table to the protectant fungicide. All of them other than sulfur have to be rotated with a fungicide from a different resistance management group (FRAC code). Note that some of the formerly effective materials now have little to no activity against this fungus in Tennessee due to the development of resistant strains. A label for the new fungicide Luna is expected soon, and will provide much needed help. (SB)
### 4. Bitter Rot of Apple

There have been several reports of unusually severe cases of bitter rot of apple, caused by the anthracnose fungus *Colletotrichum gloeosporioides*. Empire and Freedom have been hard hit, but many varieties are susceptible.

Some tips for controlling this disease include using a surfactant (spreader-sticker) to apply the fungicide, because of the slick surface. This is needed to avoid losing the spray deposit to the spray droplets beading up and running off. By relaxing the surface tension with the surfactant, the droplets will spread out and less will run off. Homeowners can use dishwashing detergent.

Make sure the spray contacts the fruit. If branches are in the way, they have to go. Do a good job of winter pruning to produce a thin canopy that allows good spray penetration and air movement.

Captan is the primary fungicide for bitter rot control. Commercial growers should consider tank mixing the captan with Ziram, which should improve control. Ziram is also the only material other than zinc oxide that will provide control of necrotic leaf blotch of Golden Delicious. Start using captan and/or Ziram when the fruit start to form and repeat at 10– to 14-day intervals. An occasional application of a strobilurin (Flint, Pristine, or Sovran) in lieu of captan/Ziram will maintain equivalent control of bitter rot and improve control of scab and sooty blotch and flyspeck. However, strobilurins are limited to four applications per year. (SB)

### 5. Fusarium Crown and Root Rot of Pumpkin

Fusarium crown and root rot is a soil-borne disease that sometimes takes growers by surprise. Since wilting and death are the major effects, former tobacco growers who have taken up pumpkin growing may think they’ve got black shank. However, the two causal organisms aren’t even related.

Prizewinner pumpkin is particularly susceptible. Fusarium crown and root rot is the major limiting factor in growing this variety. Summer squash is also susceptible. Control consists of a four-year rotation period in which cucurbit crops are not grown for three years. There are no remedial measures for a crop that is currently affected. The disease can be particularly destructive in soils that do not have good internal drainage, and soils with genetic hardpans or plow pans should be avoided or steps should be taken to improve drainage. (SB)