

MESSENGER-INQUIRER

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Cucumber Beetle and Brown Marmorated Stink Bug

It is frustrating when insect pests enjoy your garden vegetables before you. By continually observing your vegetable garden plants, problems with insect pests are caught early. Brown marmorated stink bug has a host range of over 110 plant species including vegetables, fruits, grain crops, and ornamental crops. Another pest on plants in the cucumber family includes the cucumber beetle.

The brown marmorated stink bug (BMSB) attacks fruiting parts of plants as well other succulent parts. The damage occurs from the BMSB using their piercing-sucking mouth parts to feed on leaf and fruit tissue. The feeding results in small, discolored or necrotic areas. The damage to fruit includes water-soaked lesions or cat-facing, depending on the amount of feeding. Our native stinkbugs cause problems when feeding on tomato fruit and peppers, but BMSBs gather in large numbers, so the damage will be greater compared to our native stinkbug species.

Stink bugs are roundish, shield-backed bugs with five-segmented antennae. The BMSB can be recognized as a relatively large and flattened stink bug. The underside is variable in color but is much lighter than the upper side. To distinguish it from other similar stink bugs, such as the brown stink bug, it has two wide, white, banded areas on the antennae. A hand lens can be

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used to see the bands. The abdomen on the BMSB extends past the wings, exposing light colored 'triangles' past the wing edges. When disturbed, it will leave a cilantro-like odor.

In the field, populations of BMSB begin to build in May and peak in early August. In mid-September, they look for overwintering sites in protected areas including our homes, thus becoming a nuisance.

Management techniques in the vegetable garden include routinely hand-picking them in the morning when they are sluggish and dropping them in a container with soapy water. Chemical management is tricky because we don't want to have a negative impact on pollinators and beneficial insects. Contact a County Cooperative Extension agent for chemical recommendations if needed.

The cucumber beetle feeds on cucumber, squash, muskmelon, and pumpkin plants and fruit. If you see feeding on the leaves of young plants from these crops, it could be the cucumber beetle. Inspect the plant carefully because it may be hiding under the leaves.

There are two species of cucumber beetle in our area. The striped cucumber beetle has three black stripes down its back on a yellow-green background. It is one-quarter-inch long. The spotted cucumber beetle has 12 black spots on its back over a yellow-green background. It is about one-quarter-inch long.

These beetles overwinter as adults in leaf litter found in protected sites, such as near buildings, in fencerows, and wood lots. In mid-spring, the beetles begin to look for host plants. They feed on these plants, and the females place their eggs in soil cracks at the plant's base. After the eggs hatch, the larvae feed on the roots where the damage is minimal. The larvae

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pupate in the soil and emerge later in summer. They will feed on the plants, overwinter, and wait for the next spring.

Besides the feeding, some of the striped cucumber beetles may carry a bacterium, *Erwinia tracheiphila*, in their gut, which causes bacterial wilt. When they start feeding in the spring they spread the bacterium through their feces, which are dropped where they feed, or from contaminated mouth parts. Once the bacterium enters the plant through damaged sites, it reproduces rapidly and blocks the water movement in the conducting vessels, causing the leaves to wilt. Eventually it spreads throughout the plant, and it dies. This is a destructive disease of cucumber and muskmelon. Some squash and pumpkin varieties are also susceptible.

You will notice that cucumber plants infected with bacterial wilt have individual leaves that become dull green and wilt soon after infection. There is nothing you can do to save an infected plant. You can determine if the vines in your garden are wilting from bacterial wilt disease by conducting a simple “bacterial ooze test.” With a sharp knife, cut through a wilted vine near the crown. Push the two cut edges of the vine together for a few seconds and then slowly pull apart. If the bacterial wilt organism is present, a fine, thread-like strand of sticky bacterial slime will be drawn out. If you do not see the ooze, then another disease or possibly an insect is causing the problem. The bacterial ooze test works well for cucumber and muskmelon but is less reliable for squash or pumpkin.

To manage the beetles, protect the plants when they are small by covering them with row covers, screens, or cones. Other management techniques include planting resistant varieties and planting cucumber seeds several different times in the spring and early summer, so you will have

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plants to replace those lost to bacterial wilt disease or another disease. If you are still having problems with them, contact a county Cooperative Extension Service Office for more help.

For more information about cucumber beetles and the brown marmorated stink bug, contact the Daviess County Cooperative Extension Service at 270-685-8480 or

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Annette's Tip:

The brown marmorated stink bug is an invasive pest that arrived in Kentucky in 2010. It was first found in Daviess County in 2013. Numbers of this pest continue to increase. Pest-proofing the home is the best way to keep it out of your house this fall.

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