





The damage caused to cucurbits by these two beetles goes beyond the feeding injury they inflict. ♦ Both of these beetles also transmit the pathogenic bacterium, *Erwinia tracheiphila*, that causes **bacterial wilt** of cucurbits. When a beetle feeds on a plant already infected by this pathogen, the bacteria are picked up on the beetle's mouthparts, and when the infective beetle feeds on a healthy cucurbit plant, the bacteria are introduced into the plant. ♦ The bacteria multiply in the xylem of the plant, eventually plugging up the xylem tissue, which prevents water and nutrients from being moved from the roots. ♦ The plant wilts, and hence the name of the disease, bacterial wilt. ♦ Eventually, infected plants die from this disease. Cucumber and cantaloupe are most severely affected by bacterial wilt. Both the striped and spotted cucumber beetle also transmit **squash mosaic virus**, which causes **squash mosaic**, an important disease of melons and squash. ♦ This cucurbit disease causes reduction in plant growth and yield, and is a major factor in distortion and mottling of fruit, which make the product unmarketable.

Melon plants displaying bacterial wilt infection symptoms



Controlling cucumber beetles in cucurbit plantings will significantly reduce the occurrence of bacterial wilt and squash mosaic. ♦ Extreme caution should be used in choosing insecticides for beetle control because cucurbits are very sensitive to most of these chemicals and significant damage to the plants will occur. Malathion can cause foliar burning and should not be used. Sevin formulations that are labelled specifically for cucumber beetle control can be used on cucurbits. Sevin is very toxic to honeybees and should not be applied when bees are actively foraging. ♦ Always read the label and apply insecticides at the recommended rates. Rotenone 1% dust applied to the plants will control cucumber beetles. ♦ The use of floating row covers is very effective in keeping the beetles off of the plants. ♦ Once flowering occurs, the row covers should be removed to allow bees to pollinate. ♦ In small plantings, the covers can be kept over the plants and plants can be hand pollinated. ♦ Rotenone can be used after the row covers have been removed to control beetles if necessary.