After vine crops begin to run, gardeners and farmers often notice individual leaves with severe wilt symptoms on sunny days. Within a week or two the condition spreads to entire vines which do not recover from the wilt. This disease, called bacterial wilt, is especially common with cantaloupes and cucumbers. Squash and pumpkins may not wilt as rapidly, but may be dwarfed with extensive blossoming and branching. Watermelons are rarely affected.

**Symptoms**

Wilting of individual leaves or vines of the plant is the characteristic symptom. One or a few leaves wilt and become dull green. The disease spreads from the leaves downward into the petioles and then the stem until the entire plant wilts and dies. There are other factors, such as vine borers and soil-borne fungal pathogens, that may cause cucurbits to wilt. Sometimes, if an affected stem is cut off near the ground, the sap may be milky in appearance or sticky and, if touched with the finger, the sap will string up to half an inch. This is a helpful test in diagnosis of bacterial wilt, but cannot be depended upon for positive identification.

**Causal Organism**

This disease is caused by a bacterium, *Erwinia tracheiphila*, that overwinters in the bodies of the striped and 12-spotted cucumber beetles. In the spring, the beetles emerge from the ground and feed on young plants, introducing bacteria into the leaves or stems. The bacteria reproduce in the water-conducting vessels, producing gums that interfere with water transport. The beetles and bacteria are so intimately related that controlling the beetles will control infection by the bacteria. Once infection has occurred, however, no control is possible and wilting plants should be removed, if practical. The disease is not seed-borne.
Management

The only practical management measure is to use an insecticide when seedlings first emerge to control the black and yellow cucumber beetles. Early infections are most severe, but total control depends on applications continuing at frequent intervals during the growing season. In some cases, if insect pressure is heavy, it may be necessary to apply an insecticide when plants are just cracking the soil, but have not yet emerged. Management of this disease is completely linked with preventing feeding of cucumber beetles on susceptible hosts. Consult the Ohio Vegetable Production Guide (OSU Extension Bulletin No. 672) for current insecticide recommendations.