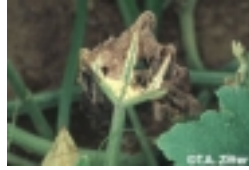


Bacterial Wilt of Cucurbits:

“Signature Symptoms”

Symptoms on pumpkin

Note the distinct interveinal chlorosis (yellowing), with the main leaf veins remaining dark green in color. The interveinal tissue eventually becomes necrotic (brown in color). The image on the right is drought damage. Note the lack of the signature interveinal yellowing and green veins.



Interveinal chlorosis and necrosis on pumpkin leaves



Drought symptoms

Plants often exhibit shortened, tufted leaf growth that turns pale yellow with necrosis on the leaf margins, resembling herbicide damage or Phytoplasma-like symptoms. The stunted growth habit may be the main signature feature of plants infected at the seedling stage, or may appear at individual nodes of older vines.



Stunted, tufted growth at nodes of pumpkin plants

As the disease progresses one or two vines may wilt and collapse. Such plants may support one or possibly two fruits, but they fail to reach quality size and color. Finally, plants may become necrotic, rot, and die if they were infected in early growth stages.



Wilted vines



Poor fruit on infected plant



Necrotic, rotting plant

Symptoms on summer squash

Summer squash exhibits some of the same “signatures” as pumpkin, including interveinal chlorosis and necrosis, but not tufted growth because plants are not vining.



General chlorosis and collapse



Interveinal chlorosis & necrosis not as distinct



Plugging of xylem vessels

Symptoms on melons and cucumber

The typical bacterial wilt symptoms on cucumber and melon consist of flaccid (limp) leaves and then death of one or more vines. Cucumber and melon are generally considered more susceptible than pumpkin and squash.



Wilting melon plant



Melon



Cucumber

T. A. Zitter and M. M. Kennelly
Department of Plant Pathology
Cornell University
Ithaca, NY 14853-4203

Photo credits: Author; Wilting melon plant, R. Latin