Gummy Stem Blight

Gummy stem blight infects the leaves, stem and fruit of all cucurbits; however melons, pumpkins and winter squash are most susceptible to this disease. Foliar infections often start as an oblong canker on the stem. Under severe infections the cankers can girdle the stem, causing the entire plant to die.

The stems of infected plants may ooze a gummy brown sap. The presence of this sap does not always indicate a gummy stem blight infection. Other cucurbit diseases, such as fusarium wilt, can also produce this gummy, brown exudate. Look for the accompanying stem lesions to determine if it is indeed gummy stem blight.

Infected plants may or may not develop obvious foliar symptoms. Symptoms first appear on the leaf margins as circular, brown, necrotic lesions surrounded by a yellow halo. Foliar infections cause premature defoliation, resulting in lower yields and poor fruit quality.

Low levels of gummy stem blight in the crop can result in harvest rots, especially during cool wet fall conditions. On most cucurbits, fruit infections cause black rot. Water-soaked circular lesions on the fruit surface develop copious sooty, black spores. On butternut squash the gummy stem blight fungi cause a superficial bronzing on the skin with distinct circular patterns.

Fungicides such as Cabrio, Lance and mancozeb will control gummy stem blight infections. This pathogen can survive on infected crop residue for several years. It can also become seed borne. Follow a 2-3 year rotation away from all cucurbit crops and always purchase certified, treated seed.
Alternaria

Alternaria is a common disease of melons. It may also infect cucumbers and other cucurbit crops. Alternaria lesions normally form on the older leaves first. The initial infection causes small, yellow-to-brown flecks with a light yellow halo. As they enlarge, the flecks turn brown and necrotic; they also develop concentric rings.

In muskmelons, Alternaria lesions may grow as large as 2 cm (3/4 in.) in diameter. Watermelons lesions are a darker brown and somewhat smaller (5 mm or 1/4 in.). If left untreated, the lesions often grow together causing the entire leaf to turn brown, wither and die. The resulting reduction in the leaf canopy often causes an increase in sunscald and damage to mature fruit.

Alternaria mycelium can survive for 1 to 2 years in cucurbit residue. Under humid weather conditions, dormant mycelium become active and produce conidia spores which then infect the current year’s crop. Secondary spores are spread to neighbouring plants by splashing water. They may also become airborne resulting in the further spread across the field.

Broad spectrum fungicides such as mancozeb, Cabrio, Lance and Bravo will control alternaria infections. As with all crop diseases, alternaria fungicides are most effective when applied preventatively.
Downy Mildew Update

The weather conditions continue to present a high risk of downy mildew infection across the North-Eastern US and Eastern Canada. Infection levels in Southwestern Ontario remain comparatively low thanks to a diligent spray program. Cucumber and melon growers should continue to spray Ranman and Tattoo C on a 7-day interval.

Downy mildew has been confirmed in a pumpkin field in Norfolk county, near Simcoe. This is the first incidence of downy mildew in pumpkins in Ontario for 2009. Pumpkin and squash growers should consider adding a downy mildew fungicide (Ranman or Tattoo C) to their spray rotation. Keep in mind that these products will not control other foliar diseases, including powdery mildew, scab or alternaria.

New Resource for Pumpkin Growers

The August 2009 (volume 93 No. 8) issue of Plant Disease has a feature article on post harvest rots of pumpkins. *Fruit Rots of Pumpkin: a serious threat to the pumpkin industry* by Mohammad Babadoost and Tom Zitter is an excellent resource for pumpkin growers. It contains excellent photographs of diseases such as phytophthora, black rot and fusarium.

The article is posted on the Plant Disease website at: [http://apsjournals.apsnet.org/toc/pdis/current](http://apsjournals.apsnet.org/toc/pdis/current) or you can contact OMAFRA at 519 674 1616 or elaine.roddy@ontario.ca for a paper or pdf copy of this excellent article.