Pacific Pests, Pathogens & Weeds - Mini Fact Sheet Edition

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Watermelon gummy stem blight (007)

Photo 1. The large black spots are typical of gummy stem blight, *Didymella bryoniae*, on the leaves. Notice the concentration of the spots at the margins of the leaf where water stays for longer. Some of the spots have joined together.

Photo 2. This is typical of the defoliation that occurs with gummy stem blight infection, making it a serious disease. Leaves go yellow, collapse and die when they have only a few spots. The older leaves die first.

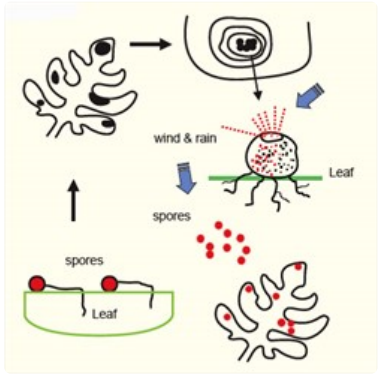

Diagram. Life-cycle of gummy stem blight, *Didymella bryoniae*.

Photo 3. Gummy stem blight infection,*Didymella bryoniae,* on a seedling. It is just possible to see the black dots that contain the spores in the centre of the spot. Infection of seedlings in the nursery is a major threat to watermelon production as it means the fungus is taken to the field and early infection and spread is guaranteed.

Photo 4. Checking in the nursery for infections of gummy stem blight, *Didymella bryoniae,* on seedlings of watermelon. This should be done at least twice a week. If infections are found, the plants should be removed and burnt. Notice that the nursery is high above ground.

Summary

- Worldwide distribution. On watermelon, cantaloupe melon and cucumber (**see Fact Sheet no. 201**).

An important disease.

- Spots on leaves grow rapidly, leaves blacken shrivel and die. Spots on vine leak a gummy (sticky) liquid.
- Spread as spores from black sacs on the leaf spots in wind and rain.
- Cultural control: site nursery away from production areas; pasteurised soil or soilless mixes; check each seedling for spots, and discard if seen; 3-year rotation; do not plant next to diseased watermelon crops; collect and destroy trash after harvest.
- Chemical control: coppers, mancozeb, or chlorothalonil every 7-10 days, depending on weather.

Common Name

Gummy stem blight

Scientific Name

Stagonosporopsis cucurbitacearum; (previously, *Didymella bryoniae*). Also known by the asexual state, *Phoma cucurbitacearum* or *Ascochyta cucumis*. The later is commonly found on plants in the field producing minute oval spores in round black structures in the leaf called "pycnidia" that are just visible to the naked eye.

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