

Bacterial fruit blotch

What is Bacterial fruit blotch?

Bacterial fruit blotch (BFB) is a disease that can affect all types of melons within the Cucurbitaceae family. It is caused by the bacteria *Acidovorax avenae* subsp. *citrulli* and for many years has caused serious losses throughout Queensland's melon growing regions and has been responsible for up to 90% losses of marketable yield in some watermelon fields overseas.

Under favourable conditions, the disease can spread rapidly and can infect an entire field by harvest resulting in 80-100% fruit loss.

What should I look for?

BFB affects the foliage and fruit at all growth stages and symptoms may only become apparent a few weeks prior to harvest. BFB infections are promoted by hot and wet conditions meaning disease expression and spread is most rapid in the summer.

Seedlings

Initial symptoms of BFB include water soaked lesions on the lower surface of cotyledons which become necrotic with a chlorotic halo. This early infection often results in the death of the seedling

Leaves

On mature leaves symptoms can be less obvious, yet when they do occur; leaf lesions are brown to black in watermelon and reddish brown in melon which spread along the leaf midrib and main veins.

Fruit

Fruit typically show symptoms in the final weeks of development. Initially, greasy-looking, water soaked, lesions will be small and irregular but then progress through the rind. The fruit then decays and cracks and below the rind, a firm brown discoloration of the flesh develops leading to rapid decomposition.



Ron F Walcott, www.apsnet.org

Initial seedling symptoms include water-soaking on the underside of cotyledons



David B Langston, www.bugwood.org

'V' shaped water soaked lesions, usually at the edge or tip of the leaf are a key symptom



Gerald Holmes, www.bugwood.org

Mature fruit with lesions and cracks starting to appear





What can it be confused with?

Fruit symptoms may be difficult to detect visually because they often appear as small sunken lesions that can be easily mistaken for insect injury. Also there are a range of agents, including mineral imbalances that can cause leaf lesions and localised necrosis.

How does it spread?

BFB can be introduced into cucurbit fields through a variety of sources including contaminated seed, infected transplants or by natural spread from alternate hosts such as wild cucurbits. The pathogen can survive for extended periods of time outside a host allowing it to be spread on plant material, people, tools, through irrigation and possibly by insect vectors. BFB may also over-winter on wild cucurbits, alternate hosts, or infected plant debris.

Where is it now?

Bacterial fruit blotch has been detected several times within production areas of Queensland Australia. It is also widespread overseas throughout America, Brazil, China, Costa Rica, Israel, Japan, Nicaragua, Taiwan, and Thailand.

How can I protect my farm from Bacterial fruit blotch?

Use seed and transplant material from a reputable producer. Propagation material testing is the best way to control spread along with routine crop rotations. Early detection and disposal (by burning or burying) of infected seedlings can prevent infection of the entire field.

Eliminate any wild and volunteer cucurbits that are near production fields to reduce the risk of bacteria overwintering and infecting healthy plants.



Fruit with small water soaked lesions which are beginning to crack

Gerald Holmes, www.bugwood.org



Mature watermelon showing lesion, cracking and foaming bacterial ooze

Gerald Holmes, www.bugwood.org

Check your vineyard frequently for the presence of new pests and investigate any sick plants for unusual symptoms and ensure that all staff and visitors adhere to on farm biosecurity and hygiene practices.

If you see anything unusual, call the Exotic Plant Pest Hotline

**EXOTIC PLANT PEST HOTLINE
1800 084 881**

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