

Bacterimycin for the control of Bacterial fruit blotch in Melon

Bacterial fruit blotch has great potential to cause significant economic losses to cucurbit production, and has been responsible for up to 90% losses of marketable yield in some watermelon fields.

Bacterial fruit blotch (BFB) affects the foliage at all growth stages and fruit of a wide range of cucurbitaceous hosts. Symptoms can be initially observed on cucurbit seedlings, between five and eight days after planting; depending on the environmental conditions. For most cucurbits initial seedling symptoms include water-soaking on the undersides of cotyledons

BFB symptoms on watermelon fruits appear just prior to harvest maturity as small (< 1 millimeter in diameter), irregularly-shaped, olive-colored spots on the upper surfaces of the fruit

BFB symptoms on melon fruit also start as discrete dark green spots however, as fruit mature, lesions become small sunken depressions in the rind. In melons that develop a netted rind (e.g., cantaloupe), the netting fails to develop over necrotic areas, resulting in smooth sunken spots. Melon lesions do not expand on the fruit surface, but penetrate through the pericarp (fruit wall) to cause rotten brown cavities

Pathogen Biology

Acidovorax avenae subsp. *citrulli* is a gram-negative, rod-shaped, bacterium with average dimensions of 0.5 x 1.7 μm , and is motile by a single polar flagellum

Bacterimycin

For preventive management, biweekly applications of Bacterimycin 0.2 % are recommended. Preventive sprays are initiated at or before anthesis (flowering) and continue until fruit are mature. If BFB symptoms develop, weekly applications of Bacterimycin are employed. To prevent spread, when the foliage is wet, and field equipment is decontaminated with Bacterimycin 0.2 % before moving between fields.

Seed treatment- Seeds can also soaked with Bacterimycin at the rate of 0.1 % to remove the pathogen in the seed stage before sowing

