

Blueberry Mummy Berry

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Mummy berry is caused by the fungus *Monilinia vaccinii-corymbosi*.

Life Cycle

Primary infection occurs in spring when tiny mushroom-like structures called apothecia arise from overwintered mummies. Apothecia release spores which are carried by wind to the leaf buds. Shoots that grow from infected buds eventually become blighted and the fungus produces conidia (a secondary type of spore) on leaf surfaces. The conidial mat exudes sugars, which are believed to attract pollinators. Foraging pollinators pick up conidia and carry them to mature flowers, where they germinate upon contact with the stigma. Like a pollen tube, the germ tube grows down through the style and into to the ovary. The ovary may thus be infected prior to pollination. The fungus colonizes the developing fruit and eventually forms a black sclerotium inside. Infected berries shrivel and fall to the ground around harvest time. A winter chilling period is required for the sclerotium to produce apothecia.



Signs and Symptoms

Frost may increase susceptibility of blueberry shoots to infection. The first symptom of this disease is browning along the major leaf veins on newly emerging leaf clusters. The leaves wilt quickly and bend to resemble a shepherd's crook. A light gray powdery layer of spores develops at the leaf base. These spores go on to infect flowers and fruit. Infected green berries appear healthy but cutting them open reveals a white fungal



growth inside. When berries start to ripen, infected berries appear pinkish tan and slightly ridged. They feel rubbery and contain a gray to black fungal mass inside. Infected berries eventually become faded, shrivel up, and fall to the ground. After the fruit skin has weathered off, the berries look like tiny black pumpkins.

Management

Monitoring: Consult scouting records from previous years to determine if build-up of this disease is indicated. Monitor weather conditions to identify likely infection periods. Scout fields beginning at budbreak for symptomatic tissue. This timing often coincides with Forsythia bloom.

Control strategies

Cultural/Biological:

- Plant resistant varieties whenever possible. Those that are most resistant to the shoot blighting phase of the disease include Bluejay, Darrow, Duke, Elliot, and Toro. Cultivars that are consistently resistant to the fruit infection phase include Northsky, Reka, Northblue, Bluegold, Bluejay, Weymouth, and Patriot. Resistance to fruit infection appears to be unrelated to resistance to shoot blight, and weather factors can also affect cultivar response.
- Prune bushes to open the canopy to light, air, and spray penetration.
- Cultivate beneath plants in fall and again in early spring to disrupt overwintering inoculum.
- Apply a 3-4" layer of mulch material over the soil surface in early spring before apothecia emerge to create a physical barrier to spore release.

Chemical:

- Apply recommended fungicides at budbreak if scouting and weather monitoring indicate risk of infection.
- Time fungicide applications closely to frost/freeze events that predispose tissue to infection.
- Repeat fungicide applications at recommended intervals if weather conditions are conducive to infection.
- Rotate fungicide materials from different FRAC groups to avoid promoting the development of resistant strains of this disease.