

TIMELY INFORMATION

Agriculture & Natural Resources

Mummy Berry Disease in Blueberry

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Mummy berry, caused by the fungus *Monilinia vacciniicorymbosi*, is an important fungal disease of blueberries that can cause yield losses of up to 50% when conditions are favorable for disease development. The pathogen can infect shoots, flowers (Figure 1) and fruit (Figure 2). The fungus overwinters in the previous year's berries that have fallen to the ground. In early spring a mushroom-like spore cup emerges from the infected berries near the soil surface. Fungal spores are released from these structures when bud swell begins and green tissue is present. Spores are spread via wind and rain. Early detection and control is necessary to reduce the impact of this disease on a crop.



Figure 1. Mummy berry affected blueberry flowers



Figure 2. Shriveled blueberry fruit as a result of mummy berry infection

Symptoms and disease development

Early season infection of flower buds and stems is promoted by wet conditions and cooler than normal temperatures. The earliest symptoms of mummy berry include drooping of developing leaves and shoots in the spring followed shortly by browning of the upper side of bent shoots, midribs and lateral veins of leaves (Figure 3). The bend in twig tips can resemble a shepherd's crook (Figure 4). Vegetative shoots, leaves and infected flowers are killed within four days after discoloration begins. After initial infection, the pathogen produces conidial spores that appear as tan-gray tufts on blighted shoots. Conidia are then dispersed by wind, rain and insect pollinators to healthy flowers. Once the fungus has been introduced to the flower, it will germinate with the pollen and infect the developing fruit. Evidence of blossom infection does not appear until the fruit begins to ripen. As normal berries ripen, the infected berries begin to shrivel and turn a pinkish color (Figure 2). Shriveled berries drop to the ground. Infected stems turn brown-to-black and infected foliage wilts and turns brown.



Figure 3. Browning along the major leaf veins



Figure 4. Bended twig tips symptoms resemble shepherd's crook

Control Strategies

An integrated pest management program including both cultural and chemical control strategies is needed for best results.

For new orchards, select resistant varieties or late blooming cultivars, if available. Also avoid wet sites and/or improve drainage to reduce conditions that favor mummy berry development. Remove wild blueberries or unwanted plants from the vicinity of the orchard to reduce overwintering inoculum. If mummy berry is detected in an orchard try to remove or destroy infected fruit at the end of the harvest season. This could include covering mummies with at least 2 inches of soil or mulch. Limit or delay overhead irrigation until petal fall during the growing season. Follow a fungicide spray program that is effective for controlling mummy berry from green tip until petal fall.

For additional information see the Southeast Regional Blueberry Integrated Management Guide:

http://www.smallfruits.org/SmallFruitsRegGuide/Guides/2010/2_19_10BlueberrySprayGuide.pdf

Apply all pesticides according to label rates and instructions.