
Brown Rot

Monilinia fructicola

I. Introduction: Brown rot is one of the most important diseases of plums in the mid-Atlantic region. Field losses of European and Japanese plums can be extensive if conditions favorable for disease development occur during the blossom period, following shuck fall, or during the preharvest and harvest period.

II. Symptoms: Brown rot on ripening fruit may not occur as distinct spreading lesions as seen on other stone fruits. Instead, infected fruit appear covered with tufts of grayish to tan fungal spores. See the peach and nectarine section for additional information.

III. Disease Cycle: See the peach and nectarine section.

IV. Monitoring: During or after pruning (before the white bud stage), monitor a minimum of 20 sample trees per block for the presence of fruit mummies and cankers. A total of one to ten mummies and/or cankers, and greater than ten mummies and/or cankers represents levels of moderate and high risk, respectively, for blossom infection under the appropriate environmental conditions.

At bloom, monitor the orchard floor under sample trees for the presence of apothecia of the brown rot fungus. These are more likely to occur in the wettest areas of the orchard on mummies partially buried in soil and/or among weeds. Finding any apothecia represents a potential high risk for blossom infection. Remove cankers surgically if possible or prune out the entire diseased area. Monitoring for and removal of cankers



is best done at the same time.

At shuck fall, examine ten shoots on each sample tree for the presence of blossom infection. A total of one to ten blossom infections and greater than ten blossom infections represents moderate and high risk, respectively, for fruit infection during the preharvest and harvest periods.

During the preharvest period, fruit susceptibility to brown rot increases rapidly as fruit begin to color. Monitor ten fruit on each sample tree for disease incidence. Greater than two infected fruit per ten acres (eight trees sampled) represents a high risk for a brown rot outbreak at this time. Monitor approximately every three to five days during the preharvest period. Insect, bird and hail damage to ripening fruit can result in wounds which can be quickly colonized by the rot fungus. Brown rot will show up first in areas near sources of inoculum and where fruit may be physically injured.

Brown rot may develop during storage and shipment if fruit are not handled properly during and after harvest. Monitor daily for developing decay in fruit being temporarily stored by checking fruit throughout a minimum of containers.

V. Management: See the peach and nectarine section for suggested management practices for brown rot.

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