
Powdery Mildew of Cherry

Podosphaera clandestina

I. Introduction: Powdery mildew of cherry and plum is not normally an economically important disease. On occasion, problems do arise in tart cherry orchards but are rarely encountered in sweet cherry orchards. Powdery mildew is, however, a serious disease in the nursery. Trees can become severely stunted and defoliation on older trees can occur as a result of infection. *Podosphaera clandestina* has also been reported to cause powdery mildew on peach, apricot, apple, pear, quince, persimmon, and a few ornamental plants. This discussion is limited to the disease on tart and sweet cherries and plums.

II. Symptoms: The fungus attacks leaves and twigs, producing symptoms much like powdery mildew on apple. On young leaves, the fungus appears as whitish, feltlike patches (photo 2-72). Newly developed leaves on new shoot growth become progressively smaller, are generally pale in color, and somewhat distorted. Severely infected leaves curl upward, become brittle with age, and may drop prematurely. By mid-season, the whitish fungal growth can be seen abundantly growing over the leaves and shoots, sometimes in patches and other times covering most of the new growth. These symptoms are especially common in nurseries.



photo 2-72 - J. W. Travis

III. Disease Cycle: The fungus may overwinter on diseased, fallen leaves, but it does so more commonly in infected buds, as in the case of apple powdery mildew. When infected buds expand in the spring the new growth becomes completely colonized by

the fungus. Much of the visible white growth consists of masses of conidia, which are spread by wind to other new leaf and shoot growth. Warm temperatures without rain, but with sufficient moisture such as high humidity, morning fogs, dews, or intermittent rains, are ideal for rapid increase of the disease.

IV. Monitoring: From shuck fall through midseason, monitor ten terminals on each sample tree for the presence of white, mycelial growth on young leaves (photo 2-72). A total of one to ten infections and greater than ten infections represents moderate and high risk, respectively.

V. Management: Where powdery mildew is a problem in tart cherry orchards, the disease can be managed with fungicides. Begin spray applications at petal fall or shuck split and continue at 7- to 10-day intervals until harvest. Cultural practices to reduce mildew include annual tree pruning and removing hedgerows located close to orchards to facilitate drying of fruit and foliage to create a less favorable microclimate for disease development.

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