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Fungicides Prevent Defoliation of Cherry Trees in Eastern States

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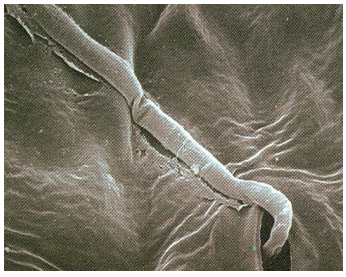
Leaf spot is the most important fungal disease of cherry in the eastern U.S. where it is estimated to infect 80 percent of the orchards and has the potential to reduce yields by 100 percent if not controlled [1]. The disease is caused by a fungus known as *Coccomyces hiemalis*, which overwinters in old leaves on the ground. The first infection of new foliage in the early summer is caused by spores which are discharged from these old leaves. After the fungus develops on the new leaves, more spores are produced that may cause further spread of the disease. On leaves, infections appear as small reddish to purple spots. The individual spots never become large, but they may be so numerous that they coalesce and thus kill large areas of the leaf. The appearance of numerous spots on the leaf is usually followed by rapid yellowing and dropping [2]. Infection of fruit is rare. However, fruit on severely defoliated trees fail to mature normally, and they are light colored, low in soluble solids, soft, and watery [3]. Defoliation from leaf spot reduces the number of flower buds and subsequent fruit set for the following year. Defoliated trees are less cold-hardy and may be killed by low temperatures in winter.

In southern Pennsylvania, early defoliation in 1945 was followed by the death of more than 25,000 trees, which represented 10 percent of the total cherry acreage [2]. All sprayed trees survived. The yield in 1946 averaged 36 pounds per tree on unsprayed trees and 107 pounds per tree on sprayed trees [2]. In experiments in the 1940s, it was demonstrated that poor control of leaf spot could result in 72 percent of the tree branches dying during the winter months. Growers who spray fungicides regularly and thoroughly every year seldom suffer any serious loss from leaf spot. Research has shown that fungicide applications reduced defoliation of cherry trees from 80 to 0.3 percent and from 98 to 3 percent [4],[5].

Cherry leaf spot infection on sweet cherry leaves

Dead cherry tree at left following defoliation from leaf spot

Defoliation of unsprayed trees (at right) from cherry leaf spot



Leaf spot fungus infecting underside of a cherry leaf

References

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