

Fungicides Required for Blight Prevention in Pistachios

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The pistachio is a native plant of Asia Minor. California entered the world pistachio market in 1976. Within a decade, the California industry grew to become the second largest producer in the world, second only to Iran.

Panicle and shoot blight (*Botryosphaeria*) was first discovered in a commercial orchard in the Sacramento Valley in 1984. In the orchard, as well as a few other orchards in Butte and Tehama counties, yield losses from 40 to 100 percent were not uncommon [1]. Since its initial discovery in 1984, panicle and shoot blight has become a disease of major importance for pistachios grown in California. Surveys demonstrated that over the five-year period of 1994 through 1999, orchards with panicle and shoot blight produced an average of 23 percent less than orchards without the disease [2]. The disease was particularly damaging in 1998 when the average yield was reduced by 54 percent in orchards with the disease. Total production loss in 1998 was estimated at 20 million pounds.

When buds are infected by the fungus, they either will not emerge (total blight) or emerge but the resulting flower or shoot eventually dies. Symptoms appear as dark lesions. Shoots originating from heavily infested buds grow to a short length, become black, and die. Infected leaves begin to drop in July and severe defoliation can occur by late summer. Infections on current season shoots develop into cankers. These cankers are the major source of spores that are released in the winter and spring when rains occur. Cankers produce viable spores for at least six years [1].

Growers have reported that fungicide use reduced panicle and shoot blight incidence from 75 to 100 percent among untreated trees to less than 1 percent among treated trees.



Blight infected



Fungicide treated

References

1. Michailides, T.J. and D.P. Morgan. 2004. *Panicle and Shoot Blight of Pistachio: A Major Threat to the California Pistachio Industry*. APSnet.org. Available at: <http://www.apsnet.org/online/feature/pistachio/pistachio.pdf>.
2. California Pistachio Commission. 2000. *Economic Impact of Botryosphaeria on California Pistachio Growers*.