

Control of Powdery Mildew in Almond

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PROJECT SUMMARY

Objectives:

- Determine which registered fungicides provide the best control for Powdery Mildew on Almond.
- Assess the best application timing for disease control.
- Develop a disease management program that avoids developing fungicide resistance not only with this species of powdery mildew but the other fungal diseases typically sprayed during the same timing period such as Anthracnose, Alternaria, and Scab.

Background:

Severe powdery-mildew-like symptoms have been observed in the south-east portion of Madera County in almond orchards near locations where Granny Smith Apples were once grown. Almond growers in these locations believe that yields have been reduced by as much as 30% due to the occurrence of these symptoms. A higher percentage of nut kernels appear aborted due to powdery mildew like symptoms on the hull.

Two species of powdery mildew have been reported on almond, the apple powdery mildew fungus, *Podosphaera leucotricha*, and the peach powdery mildew fungus *Sphaerotheca pannosa*.

Because the powdery mildew fungi are obligate parasites they cannot be isolated or grown in culture like other fungi. Fungicide trials were conducted from 2005-2009 to see if observed symptoms could be correlated to fungicide applications.

Discussion:

All trees with powdery-mildew-like symptoms had reduced rates of disease after application of post-bloom fungicides. These results indicate that powdery mildew is the likely culprit.

All the fungicide treatments provided some level of control of powdery mildew. A number of combinations of materials in rotation were very successful at minimizing the powdery mildew symptoms.

In terms of timing, the applications at 2-5 weeks after petal fall were more successful than those at bloom and at petal fall.

The results from these trials have been incorporated into the UC-IPM pathogen efficacy tables for almonds (<http://www.ipm.ucdavis.edu>).

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For More Details, Visit

- 2009-10 Annual Report CD (09-PATH7-Holtz); or on the web (after January 2011) at AlmondBoard.com/ResearchReports