Almond PMA Newsletter

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Almond
Community Alliance
with Family Farmers
Department of Pesticide Regulation
Almond Board of California
UC Cooperative Extension
Farm Advisors
UC Statewide IPM
Program
Pest Management Alliance

About the
Almond Pest Management Alliance

The Almond Pest Management Alliance project is designed to promote a reduced-risk system of almond production through the use of alternative products, on-site demonstrations and grower education. Demonstration sites are located in Fresno, Merced, San Joaquin and Sutter counties. PMA partners include: Community Alliance with Family Farmers, California Department of Pesticide Regulation, Almond Board of California, UC Cooperative Extension farm advisors and the UC Statewide IPM Program.

Additional Information about the project is available by contacting PMA Project Manager Marcia Gibbs at 530-756-8518, ext. 34 or marcia@caff.org

Almond Pest Management Alliance II Launched with New DPR Grant

The second phase of the Almond Pest Management Alliance got underway this summer with a series of field days at PMA demonstration almond orchards throughout the state.

The California Department of Pesticide Regulation this year awarded the Almond PMA II a $200,000 grant to continue its cooperative effort to demonstrate reduced-risk best management practices in commercial almond orchards.

From left, Madera County UCCE Farm Advisor Brent Holtz talks with growers Allen Stidham and Norman Furtado and Merced County UCCE Farm Advisor David Doll, during a break at the Almond PMA II field day.

The new Pest Management Alliance is a cooperative effort among industry stakeholders including the Almond Board of California, Community Alliance with Family Farmers, UC Statewide IPM Program, UC Cooperative Extension, pest control advisors and growers, DPR and U.S. EPA Region 9. The project works with growers in distinct almond growing regions to establish demonstration orchards that showcase locally effective Best Management Practices to control pests using the latest research and pest control materials.

"PMA II will build on the success of the first Almond PMA to increase the adoption statewide of reduced risk practices that can be successfully and economically applied to almond production," said Program Director Marcia Gibbs of the Community Alliance with Family Farmers, which coordinates the project.

Almond PMA I was funded for five years by grants from the Department of Pesticide Regulation and continued with support from the Almond Board of California and other groups. It was recognized in January 2008 by DPR as an IPM Innovator for its publication of "A Seasonal Guide to Environmentally Responsible Pest Management Practices in Almonds."

The Seasonal Guide, written by the UC Cooperative Extension with funding from U.S. EPA Region 9, provides almond growers with a season-long road map for farming almonds using reduced-risk, environmentally responsible pest management practices. The information in the eight-page guide was gleaned from more than five years of field data and experience demonstrated in Almond PMA I demonstration orchards.

The new DPR grant will support the continuation of the second Pest Management Alliance through May 2010.

As part of PMA II, high visibility demonstration orchards have been established with participating growers, pest control advisers and farm advisors in Fresno, Merced, San Joaquin and Sutter counties.

"We are really excited about the cooperation we are getting and about PMA II," said UC IPM Advisor Walt Bentley, who is helping coordinate the project demonstration sites.

Bentley said the sites will be used to highlight alternative pest and disease management techniques developed largely from the first PMA and extend them to different regions across the state.

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Retired UCCE Farm Advisor Mario Viveros discusses pruning strategies with a group of growers and PCAs at the first Almond PMA II field day at Pik-A-Lok Orchard in Mendota.

Almond Pest Management, from page 1

First Field Days Held

The first PMA II field days were held this summer in Fresno and Sutter counties, featuring demonstrations related to navel orangeworm monitoring and control, almond disease management, new sprayer technologies and other reduced risk practices.

The Fresno County field day at Pik-A-Lok orchard in Mendota and Windfall Farms in Firebaugh, featured talks by Bentley, UCCE farm advisors Brent Holtz and David Doll and retired farm advisor Mario Viveros. In addition, cooperating growers and PCAs discussed their role in the Almond Pest Management Alliance and strategies they are implementing to reduce pesticide risk and support sustainable pest management in their orchards.

Viveros discussed the role of pruning and tying related to yield, pest and disease management and wind damage in the orchard.

To develop a wind-resistant canopy in young orchards, Viveros recommends growers head newly planted trees when they reach about 42 inches, eliminating all but 6 or 7 shoots in the top six inches of the tree, including one leader that will grow toward the prevailing wind. Follow up during second leaf and head back shoots to create an even distribution of laterals and tie young trees to keep limbs upright and develop a full canopy that can resist strong winds.

"I'm not saying you will eliminate 100 percent of the wind damage, but you will get the wind to go around the tree instead of through the tree and you will have less damage," Viveros said.

Holtz discussed strategies to reduce hull rot, which is showing up in greater numbers in five- to seven-year-old trees in many almond regions in California. Holtz called hull rot the "good grower's disease" because it largely appears in well-fed, well-watered orchards.

"Hull rot is one of the biggest yield reducers of young vigorous orchards that should be going into their prime," Holtz said. "So it might be time we think about putting some of these trees on a diet."

Holtz said there is an association between hull rot and navel orangeworm because orchards with more hull rot are generally greener and have more stick-tights, which can ultimately lead to increased navel orangeworm pressures.

Reducing irrigation at hull split can help lower the chances of hull rot development. Growers should aim to avoid full irrigations that can increase susceptibility to hull rot even if it means aggravating mites. He said deficit irrigation trials indicate pressure bomb readings of between -10 and -14 bars seemed to produce a happy medium between reducing irrigations enough to prevent hull rot and avoiding excess water stress in the orchard that can flare mites.

The second field day was held July 31 in Sutter County at Spilman Ranch near Live Oak.

UC Farm Advisors Joe Connell, Franz Niederholzer and Carolyn Pickel presented workshops on the regional outlook for navel orangeworm and strategies to prevent NOW crop damage. Rich Rosecrance from Chico State University presented a demonstration and information on the costs and benefits of Smart Sprayer technology.

All Almond PMA field days are open to growers, PCAs and other individuals interested in learning more about almond pest control and the PMA II.

Egg Traps Help Guide NOW Treatments

Egg deposition traps provide the easiest, most accurate way to time navel orangeworm treatments for maximum efficacy, UC IPM Farm Advisor Walt Bentley told a group of 75 growers and PCAs at a recent Almond PMA II field day this summer.

"I want each of you, whether you are a farmer or PCA, to have confidence in this because this really isn't that hard," Bentley said as he explained how to bait and place traps in the almond orchard. "You can learn this and in the end it's cheaper and better."

Selective in-season sprays for navel orangeworm are a cost-effective alternative to broad-spectrum dormant sprays, such as organophosphates, which are under regulatory scrutiny for their impact on surface waterways near almond orchards. Bentley told the group of 75 growers, PCAs and other invited guests at the Almond PMA's first demonstration orchard field day that well-timed, reduced risk alternatives do require monitoring and timely application for maximum effect.

Egg deposition traps for navel orangeworm can help growers time their sprays just as worms are beginning to emerge.

Bait can be bought premanufactured or made by combining 10 pounds of almond meal to a pound of crude almond oil. The small, inexpensive black traps should be filled to about three-quarters full with the bait mixture.

In orchards of fewer than 20 acres, growers should install one trap for each five acres, with no fewer than three traps per orchard. Orchards between 20 and 80 acres should have at least one trap for each 10 acres, and larger orchards should

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Almond Growers and PCAs Establish PMA Demonstrations Orchards

Gary Martin admits to being somewhat of a novice when it comes to farming 125 acres of young almonds. The almond block is the 1,600-acre farm's first move away from row and field crops. As a result, Martin said he jumped at the chance to join the Almond PMA II project as a grower cooperator, opening his Mendota orchard to field days and trials as part of a PMA demonstration orchard.

Martin said that as a relatively new grower in almonds, he hopes that turning a block of his three-year old Butte/Padre almonds into a PMA demonstration orchard will help him learn more about reduced-risk almond production and incorporate sustainable practices into the orchard.

Because Pik-A-Lok is surrounded by canals and other surface waterways, Martin is keenly interested in minimizing any impacts of the family farming operation on nearby waterways. To minimize runoff, irrigations are made on an as-needed basis, according to data from soil moisture monitoring stations. And Martin said the farm already manages pests with softer, alternative pest control products that have fewer water quality implications than organophosphates or pyrethroids.

Martin also uses smart sprayer technology to decrease the amount of applied pesticides and runoff in young orchards by targeting sprays directly to the canopy. Martin estimates he reduced by 75 percent the amount of pesticide sprayed on first-leaf trees and reduced sprays by about 20 percent on third-leaf trees.

"With these savings in the first three years we are certainly paying for our equipment," he said.

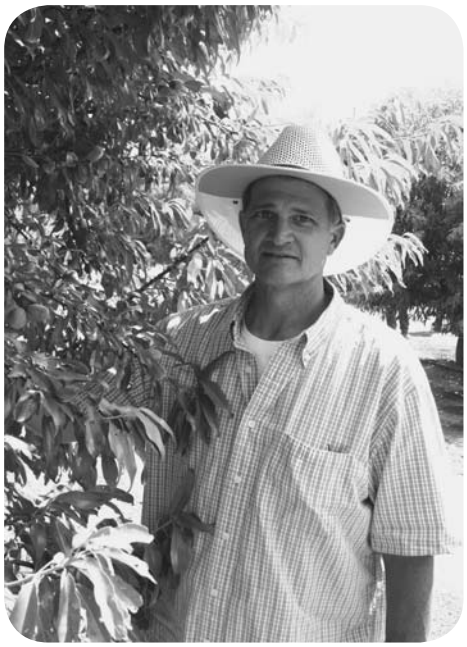
Frank Williams with Windfall Farms in Firebaugh said he too has moved away from broad-spectrum insecticide management on his 500 acres of almonds in recent years and increased his reliance on monitoring, beneficial insects and selective materials including pheromone mating disruption and insect growth regulators.

Almond Grower Frank Williams with Windfall Farms in Firebaugh, right, and his PCA Jim Ledford, share reduced risk pest management strategies with growers at a summer field day of the Almond Pest Management Alliance II.

Williams is dedicating about 15 acres of an eight-year-old block of nonpareil almonds to facilitate side-by-side trials on different pest management strategies for the Almond Pest Management Alliance II project. As a grower in a similar Sustainable Cotton Project, Williams said Almond PMA fits into his overall farming philosophy and also helps validate the practices he is using in the orchard.

In the end, both Martin and Williams say the exchange of ideas is good for the industry and good for them as individual growers.

"This field day is fantastic for us," Martin said. "To have people who know a lot more about farming almonds than we do come out here and tell us what they think is invaluable," he said.



Almond grower Gary Martin of Pik-A-Lok Orchard in Mendota said he hopes to gain insights as a grower cooperator with the new Almond PMA II that will help him farm profitably and sustainably while minimizing impacts on the environment.

In addition to the Fresno County demonstration sites, the Almond Pest Management Alliance has established similar partnerships with growers and PCAs at commercial orchards in Merced, San Joaquin and Sutter counties where similar demonstrations and field days are showcasing locally effective Best Management Practices.

NOW Egg Traps, from page 2

have at least one trap for each 20 acres. Traps should be placed about 6 to 7 feet off the ground and about 1 to 3 feet inside the drip line of the tree canopy.

Begin placing baited egg traps in orchards in early March, ahead of the first moth egg laying, and check them once a week for evidence of eggs, Bentley said. Egg-laying will begin and increase to multiple peaks during mid-April to mid-May. When growers see eggs on 75 percent of their traps they should begin saving some eggs and observe until they hatch and then treat at the first egg hatch.

Mid-season treatments should be based on June/July egg trap data. Treatments should be timed when eggs are deposited at about 1 to 5 percent hullsplit in nonpareil almonds.

"The key is to be ready for that hullsplit spray," Bentley said.

Bentley said once trap counts have been established, treatment decisions should be made based on the grower or PCA's experience with NOW damage in the orchard during the previous three years. In selecting insecticides, also consider NOW pressures from nearby orchards and the success of winter sanitation at removing mummies to fewer than two per tree. Also select spray materials based on preharvest treatment intervals, the potential for flaring mites and proximity to nearby waterways and residential areas.

UC IPM Advisor Walt Bentley demonstrates how navel orangeworm egg traps should be baited and hung in orchards during a Fresno County Almond PMA II field day in June.

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