Maintaining UC IPM Pest Management Guidelines for Almonds - 2012

Project No.: **12-ENTO3-Al-Khatib**

Project Leader: Kassim Al-Khatib
Statewide IPM Program
University of California, Davis
One Shields Avenue
Davis, CA 95616
530.752.8350
kalkhatib@ucdavis.edu

Introduction:

The Pest Management Guidelines are the University of California's official guidelines for managing agricultural pests in California. The *UC IPM Pest Management Guidelines: Almond* includes information to manage pest arthropods, nematodes, weeds, and plant diseases. The publication series includes practical recommendations for pest control, including nonchemical methods and pesticides, and how to use these tactics in an effective, integrated program. With the year-round IPM program for almond, the guidelines describe a multidisciplinary, monitoring-based IPM program. Additionally, the guidelines include crop-specific tables such as a comparison of relative toxicities of pesticides used in almond production to natural enemies and honey bees.

The Pest Management Guidelines are the UC's primary extension publication for growers. University of California scientists conduct research and develop IPM methods for managing pests in California crops. Since the mid-1980s, this information has been incorporated into the peer-reviewed UC IPM Pest Management Guidelines.

The Pest Management Guidelines are a well-established tool to extend the most current pest management science. More people have computers and access information online. The Pest Management Guidelines are published on the Web to be easily available to growers, pest control advisors, and others in the almond industry. The Pest Management Guidelines series receives about 2 million Web accesses a year. The Pest Management Guidelines for almond receives an average of 7,564 hits per month with a total of 90,763 hits in the last year.

Our proposal requested funding to maintain and improve the guidelines through partial support of a full-time coordinator whose responsibility is to support the Pest Management Guidelines. This is the most effective way of soliciting, incorporating, editing, peer reviewing, and publishing the guidelines on a regular schedule to make sure current management information is readily available to the almond industry. UC IPM was without a coordinator for two years in 2009 - 2011. That loss of funding and staff instigated the current request for support since UC IPM was not able to update the guidelines sufficiently with a part-time coordinator.

Procedures:

Crop Team and Authors. Romy Basler coordinates the process and edits material for clarity, completeness, and to conform to format and style. The Crop Team helps to manage the overall direction of the Pest Management Guidelines and, with the authors, provides scientific content.

Crop Team	*Authors*
Romy Baser (PMG Coordinator)	Jim Adaskaveg
Walt Bentley (Crop Team Leader and IPM Facilitator)	Walt Bentley
Jim Adaskaveg	Joe Connell
Joe Connell	Roger Duncan
Roger Duncan	Doug Gubler
Frank Zalom	David Haviland
	Brent Holtz
	Mike McKenry
	Carolyn Pickel
	Jim Stapleton
	Bob Van Steenwyk
	Frank Zalom

The Almond Pest Management Guidelines were updated.

- The authors submitted changes and the Coordinator worked to incorporate. The Coordinator wrote and edited informative text and tables based on information supplied by authors, reading of trade journals and other scientific literature, participation in UC scientific workgroups, or knowledge of pesticide label changes.
- The Coordinator made these changes, reconciling them to one another and going back to the authors for clarification, editing the manuscript for flow and style.
- The resulting manuscript was returned to authors for review. Authors reviewed the updated manuscript and made additional changes. They were incorporated by the Coordinator and reviewed by the authors again; this process continued until the authors approved.
- The Coordinator submitted the manuscript to the UC ANR Office of Pesticide Information and Coordination to ensure the pesticide information was accurate.
- The Coordinator worked with the UC IPM Production Team to get the manuscript prepared as a PDF and posted to the UC IPM Web site. The update was published in November 2012.
- In January 2013 and June 2013 corrections were published. In July 2013, a New Disease in California section was linked to bacterial spot information.

Results:

UC IPM Pest Management Guidelines: Almond (UC ANR Publication 3431), the University of California's official guidelines for managing pests in almonds, was updated—http://www.ipm.ucdavis.edu/PMG/selectnewpest.almonds.html

2012 - 2013 updates include:

- **Insects and Mites:** Leaffooted plant bug, leafrollers, navel orangeworm (monitoring and timing updated to protect natural enemies), oriental fruit moth, peach silver mite, peach twig borer, stink bugs, tree borers, webspinning spider mites.
- **Diseases:** Alternaria leaf spot (new severity model), anthracnose, brown rot blossom blight, green fruit rot, hull rot, powdery mildew, rust, scab, shot hole, bacterial spot preliminary information.
- **Weeds:** weed management in organic orchards, susceptibility of weeds to herbicide control, herbicide treatment table.
- **General:** dormant spur sampling (improved and new first-year twig sampling), relative toxicities of pesticides to natural enemies and honey bees, general properties of fungicides, fungicide efficacy, treatment timings for key disease, fungicide resistance management.