Pacific Spider Mite Control in the Lower San Joaquin Valley

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PROJECT SUMMARY

Objectives:

Provide overall improvements in IPM for spider mites in almonds by:

- Demonstrating the differences between a treatment program that is based on preventative May and hull split sprays to one that utilizes monitoring and treatment thresholds.
- Continuing to screen new miticides and other insecticides for their effects on spider mites.
- Determine how new miticides fit into a season long mite management program.

Background:

Pacific spider mite (*Tetranychus pacificus*) is one of the most common insect pests of almonds in the lower San Joaquin Valley. Standard practice for most growers is to spray once for mites in the spring around May, and to spray a second time at hull split along with a navel orangeworm spray.

May treatments with abamectin (Agrimek) have become the norm because abamectin works best while leaf tissue is still soft – generally before June – and provides long term control. However, at this time of year it is not clear whether mites are present or not. Thus, the use of abamectin is a prophylactic treatment.

Hull split miticide sprays may or may not also be used preventatively. Since mite densities can get high during harvest, and hull split is usually the last opportunity to spray, a miticide is often included (whether or not mites are present) in order to ensure a mite-free harvest period from August through September or October.

A range of new miticides have been registered for use in almonds in California. Based on research conducted over the past several years, as well as grower experience, some of the most utilized are Envidor, Fujimite, Onager, and Zeal, as well as Acramite and oil.

The first objective of this project is to determine if these new tools can allow growers and pest control advisors to effectively use a threshold-based treatment decision program rather than a calendar-based preventative program. Threshold population levels for when to treat are established. This project documents threshold-based treatment decisions are effective and provide timely treatment with the array of new miticides available.

The second objective of the project is to continue to screen new miticides for their efficacy against Pacific spider mite.

The effects on predatory mites as well as Pacific spider mite populations of insecticides used to control other almond insect pests are also being assessed.

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Project Cooperators and Personnel: Brad Higbee, Paramount Farming Comp.; Stephanie Rill, UCCE-Kern County

For more details

- Poster location 32, Exhibit Hall, Session 2; or on the web (after January 2011) at AlmondBoard.com/AICposters
- 2009-10 Annual Report CD (09-ENTO6-Haviland); or on the web (after January 2011) at AlmondBoard.com/ResearchReports