

# Insect and Mite Research

## Project Leader: Frank Zalom

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## PROJECT SUMMARY

### Objectives:

- Determine treatment timing of bifenthrin, methoxyfenozide, spinetoram, chlornitraniliprone, and flubendiamide for NOW control in spring based on comparison of male trap captures using the Suterra NOW pheromone lure and egg-laying using the traditional black egg traps baited with almond presscake.
- Evaluate residual efficacy of bifenthrin, methoxyfenozide, chlornitraniliprone, and flubendiamide.
- Determine if low temperatures delay mating or oviposition by NOW females.

### Background and Discussion:

This project continues to address the most significant chronic insect pests of almonds, including navel orangeworm, peach twig borer and Pacific spider mite, and localized pests such as Tenlined June beetle. The research continues decades of finding ways for integrated pest management to work in almonds under changing environmental, regulatory, and market conditions.

A current focus is evaluating efficacy and treatment timing for the navel orangeworm (NOW) and the peach twig borer (PTB) at the May spray timing. Two field studies were conducted that indicated a number of registered and soon-to-be registered products can control either or both insects at this time. The recommended May spray timing overlaps sufficiently such that a well-timed spray using a degree-day model for both insects can render control of the first generation larvae for each.

An associated laboratory study provided evidence that NOW eggs can be somewhat controlled by either Altacor or Intrepid when eggs are on residue of either product. There was little control afforded by treating older eggs with either product, indicating that perhaps only newly laid eggs are affected. There was also evidence of ovi-larvicidal activity against the hatching larvae as they chew out of the egg.

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**Project Cooperators and Personnel:** Franz Niederholzer, UCCE - Sutter/Yuba and Colusa Counties; Joel Siegel, USDA-ARS, Parlier

### For More Details, Visit

- Poster location 16, Exhibit Hall A + B during the Almond Conference; or on the web (after January 2015) at [Almonds.com/ResearchDatabase](http://Almonds.com/ResearchDatabase)
- 2012-2013 Annual Reports CD (12-ENTO7-Zalom); or on the web at [Almonds.com/ResearchDatabase](http://Almonds.com/ResearchDatabase)
- Related projects: 14.ENTO11.Siegel/Walse; 14.ENTO6.Haviland; 14-ENTO13-Tollerup