



Navel Orangeworm Egg Trap Use in Almonds and Their Value in Determining Timing for Chemical Treatment or Early Harvest

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The following information details monitoring Navel Orangeworm egg deposition and outlines treatment guides.

1. The decision whether or not to treat for NOW should be based on:
 - a) whether significant loss occurred in the previous three years?
 - b) can orchard be infested from nearby orchards, including pistachios, particularly at hullsplit?
 - c) was winter sanitation done (<2 mummies per tree)?
2. Trap placement and maintenance.
 - a) Place traps 6-7 feet above ground; 1-3 feet inside tree drip line—see photo.
 - b) Keep traps in shade and out of sprinkler water.
 - c) Inspect 1-2 times/week.
 - d) Clean out traps and replace with fresh bait every 2 months or after rain.
3. Trap density in orchard.
 - a) 1-20 acres: 1 trap/5 acres, but never less than 3 traps/orchard.
 - b) 20-80 acres: 1 trap/10 acres, but never less than 3 traps/orchard.
 - c) Over 80 acres: 1 trap/20 acres.
4. Timing of early season treatment based on April-May egg trap data.
 - a) Moth egg laying will start and increase to multiple peaks during this mid-April to mid-May period. During this period you need to determine when egg laying occurs consistently on 50% of the traps over 3-5 consecutive days.





Black trap within tree canopy.



NOW eggs, enlarged.

- b) Save these eggs and continue to observe developing eggs until they hatch.
 - c) Treat orchard when the first egg hatches among eggs collected.
5. Timing of mid-season treatment based on June-July egg trap data (minimum of 3 traps/orchard). Treatment is based on 1-5% hullsplit of Nonpareil almonds; wait until eggs are deposited on traps prior to initiating treatment. (See graph on page 3.)
6. Spray materials:
- a) Select chemical to meet legal requirements for preharvest treatment intervals.
 - b) Consider mite population or potential buildup and the additional need of a miticide.
 - c) Thorough spray coverage is essential either low or high volume sprays.
 - d) Consider use of reduced risk insecticides in areas near waterways and homes.



NOW eggs on white trap.

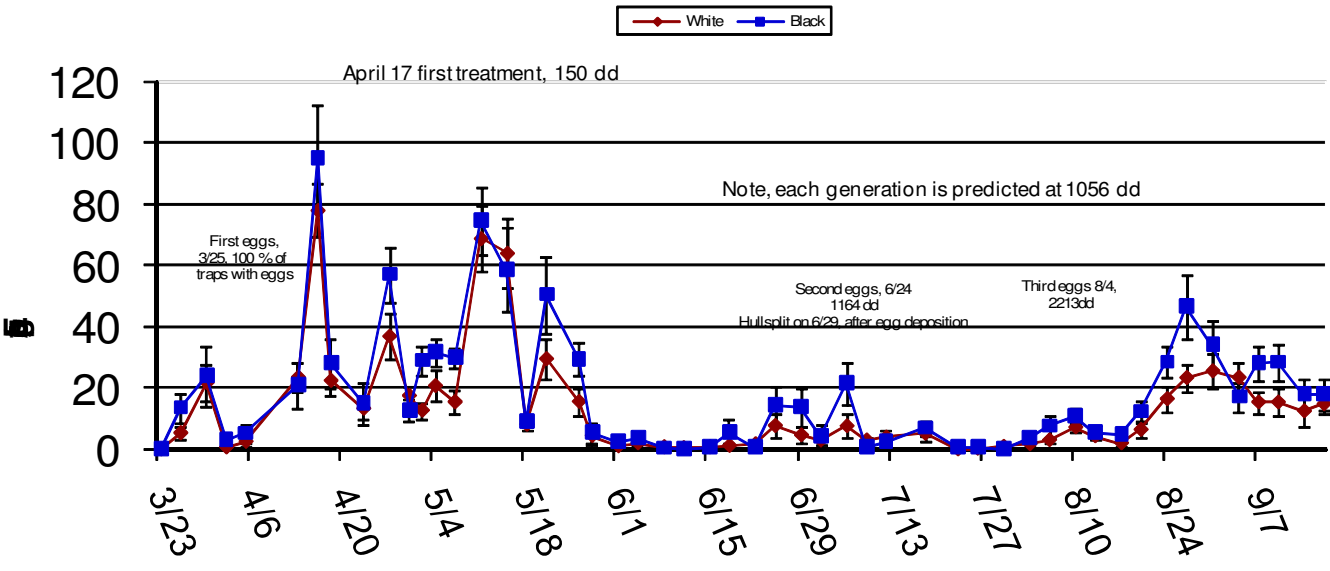
Bait for NOW Egg Traps

10 lbs almond meal

3-10% crude almond oil (weight by weight)

Mix thoroughly. Store in plastic bag in a cool place. Fill traps 50-60% full so that the organdy screen is covered no more than half way.

Navel Orangeworm seasonal egg laying activity, Almonds, Bakersfield, Ca.



Navel Orangeworm Eggs, Butte Co., 2007

