Managing Navel orangeworm: Monitoring and Control

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San Joaquin Valley Perspective
Sanitation is the foundation
As food quality decreases, development time increases.
Mummies: 1,050 DD
New Almonds: 700 DD
New Pistachios: 500-600 DD
Weather to date
NOW seasonal dynamic dynamic
Pheromone vs Egg traps
Coverage and Sprays
Heat
## Degree Days through May 23

<table>
<thead>
<tr>
<th>County</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresno (Parlier)</td>
<td>1,103.9</td>
<td>939.8</td>
<td>832.5</td>
</tr>
<tr>
<td>Kern (Lost Hills)</td>
<td>1,075.6</td>
<td>970.8</td>
<td>870.0</td>
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<tr>
<td>Kings (Stratford)</td>
<td>1,085.7</td>
<td>965.4</td>
<td>858.6</td>
</tr>
<tr>
<td>Madera (Firebaugh)</td>
<td>1,015.3</td>
<td>897.1</td>
<td>840.0</td>
</tr>
<tr>
<td>Tulare (Delano)</td>
<td>1,083.3</td>
<td>1,034.4</td>
<td>930.5</td>
</tr>
</tbody>
</table>

http://www.ipm.ucdavis.edu/WEATHER/index.html
Development will be faster, potential for an extra generation, peaks will come sooner, almonds split earlier
Treatment Strategy
Tradeoff between Population Dynamics and Nut Susceptibility
Almonds

Weekly Capture per Trap vs. Degree Days from January 1

2 weeks
Timing-Population
Pheromone Traps
The new kid in town
Why focus on the dumbest part of the population?
Life on the Interface
Eggs
Coverage and Navel Orangeworm
Jack Dibble’s Barrier
2 MPH
Spray reduction at 2.5, 3.25 MPH vs 2.0 MPH

Percent loss compared to 2.0 MPH

- Loss at 2.5 MPH
- Loss at 3.25 MPH

Height

6 8 10 12 14 16 18 20
2 nozzles per vane
2 mph, PTO 200 gal/ac vs Engine Driven 150 gal/ac,
Large Almonds, Fresno County

- 200 gal/ac single
- D 2/40 150 gal double
PTO 200 gpa
Vs
Engine Driven 100 gpa
Testing this Summer
The future will be better tomorrow

Dan Quayle