

# TREE PEST UPDATES

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## CODLING MOTH

### HOST CROPS: Apple, Pear, Walnut

*[Not all walnut orchards need treatment every year or every generation. If you had greater than 3% worm damage last year and/or are catching high numbers in your traps, you probably need to treat this generation.]*

**BIOFIX 1A:** The moths began flying early this year and I'm setting an areawide biofix of **March 20**. This is the first day that we had flight in most orchards and consistent weather suitable for mating to occur. *Use the date that the flight began in your own as your own orchard biofix.*

**TREATMENT OPTIONS:** If the weather remains "normal," the projected treatment dates are:

*Organophosphate (OP) & Pyrethroid Sprays* (Guthion, Imidan, Lorsban, Penncap, Warrior, Supracide):

Apples/Pears should be sprayed at 250 degree days (DD). This should occur about **April 15 OR 27 calendar days after your own orchard biofix**. You may need to reapply in 14-21 days if flights are extended and population pressure is high in your orchard.

Walnuts have more lenient damage standards and can wait until 300-400 DD, when nutlets are 3/8-1/2 inch in size. This should occur about **April 20-29 OR 32-41 days after your own orchard biofix**. If you have low pressure, wait until the 1B flight (mid May) or 2A flight (early June) to apply a spray on walnuts, if needed.

*"Reduced Risk" Materials* (Assail, Calypso, Intrepid, Success): These materials are soft on beneficials and less toxic to people and the environment. Assail, Calypso and Intrepid are the more effective materials. Intrepid and Success should be applied at the beginning of egg hatch about 200 DD. This should occur about **April 10 OR 22 days after your own biofix**. Assail and Calypso should be applied at the traditional OP timing (above). All these materials may need reapplication after 10-18 days if flights are extended and population pressure is high.

*Mating Disruption:* Dispensers should have been hung in the orchards **before March 20** OR your own orchard biofix. If they went up afterwards, you may want to consider a supplemental control for the first generation.

*Organic Sprays* (Entrust, Cyd-X, Surround, Oil): Entrust is the organic formulation of Success. It is the most effective organic spray currently available and effectiveness is further improved by combining with oil. It should be applied at 200 DD which should occur about **April 10 OR 22 days after your own biofix** and reapplied at 10 day intervals, if continued coverage is needed. Oil, Cyd-x, and Surround are milder controls and best used as a supplement to Mating Disruption. They should be re-applied every 7-14 days in 100-200 gallons of water/acre. Begin Surround applications at 100 DD (**March 30 OR 11 days after your own biofix**) to discourage egg laying. Begin Cyd-X and Oil applications at 200 DD (**April 10 OR 22 days after your own biofix**) to suffocate eggs. *Do not apply oil within a few weeks of a sulfur application.*

*Not all these materials are registered on both pome fruits and walnuts. Check the label before application!*

Note: The above information is provided to serve as baseline data for East Contra Costa County. For best results compare with traps and observations in your own orchards. Depending on pest pressure, sprays may not be necessary. Projected treatment times are based on historical weather data.

**FOR MORE DETAILED INFORMATION ON TREATMENTS AND TIMING, CALL FOR A COPY OF OUR MOST RECENT CODLING MOTH IPM GUIDELINES FOR APPLES, PEARS, OR WALNUTS.**

*Many thanks to Suterra for providing BioLure traps for the Contra Costa County Tree Pest Update Program.*

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**What's a Biofix?:** It's just the beginning of the flight for each new generation. We usually have 3 generations for codling moth in this area. We use the Biofix to begin degree day calculations for each generation so we know when egg laying, hatchout, and other lifecycle events will happen. This helps us to time our treatments most effectively.

**What's a Degree Day?** Insects develop faster or slower depending on the temperature. Degree days are a measure based on the maximum and minimum temperatures for each day which allow us to figure out how fast the insects are developing. You may see them abbreviated as DD or °D. If you have the daily maximum & minimum temperatures for your orchard, you can look the degree days up on a chart. If you have access to the Internet, you can get Brentwood weather data and do a degree day calculation from the UC IPM Program home page. This page also lets you calculate the projected degree days based on historical weather data so you can make projections for treatment windows (this is how I do it!). The address is <http://www.ipm.ucdavis.edu>. Give me a call if you would like a degree day chart or more information.

