

TREE PEST UPDATES

75 Santa Barbara Rd, 2nd floor, Pleasant Hill, CA 94523-4215 (925) 646-6540
 Diablo Valley Farm Center, Delta Rd. & 2nd St., Knightsen (925) 427-8532

April 21, 2010

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 cool and variable spring weather has delayed the flight. Most orchards had moth flight and good mating weather for a few days beginning on **April 7th** so I am setting that as a general areawide biofix. A few low population orchards didn't have much flight and suitable mating weather until April 15th – so those orchards should use **April 15th** as their biofix. *Use the date that the flight began in your own orchard AND sunset temperatures were at least 62°F as your own orchard biofix.*

TREATMENT OPTIONS: If the weather remains “normal,” the projected treatment dates are:

Biofix	Degree Day [DD] Date (Calendar Days [CD] after your own biofix)				
	100 DD (CD)	200 DD (CD)	250 DD (CD)	300 DD (CD)	400 DD (CD)
April 7	Apr 20 (13 days)	Apr 29 (22 days)	May 3 (26 days)	May 6 (29 days)	May 13 (36 days)
April 15	Apr 25 (10 days)	May 3 (18 days)	May 6 (21 days)	May 9 (24 days)	May 17 (32 days)

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

Apples/Pears should be **sprayed at 250 degree days (DD)**.

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.

If you have low pressure, wait until the 1B flight (early June) or 2A flight (late June) to apply a spray on walnuts, if needed.

“Reduced Risk” Materials (Delegate, Altacor, Assail, Calypso, Intrepid): These materials are softer on beneficials and less toxic to people and the environment. Delegate and Altacor are the most effective; Assail, Calypso and Intrepid are moderately effective. They should be applied at **250 DD** except for Intrepid which should be applied at the beginning of egg hatch about **200 DD**. 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 your 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 most effective organic spray currently available and effectiveness is further improved by combining with oil. It should be applied at **200 DD** 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** to discourage egg laying. Begin Cyd-X and Oil applications at **200 DD** 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.

CODLING MOTH UPDATE

UC Cooperative Extension
75 Santa Barbara Rd, 2nd floor
Pleasant Hill, CA 94523

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.

Janet Caprile
Farm Advisor

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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.