

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 20, 2015

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 may need to treat this generation.]

BIOFIX 1A: Flight started very early this year (before bloom!) and tree bloom was late and prolonged. It is unlikely that eggs laid during the early flight will survive until you have fruit/nutlets that are at least 3/8"-1/2" at hatch (that's when you apply your spray). So I am setting a practical **areawide biofix of March 31st** which corresponds to petal fall in early apples (Galas) and female bloom in the early walnuts (Sunland). Using this practical biofix will assure that the fruit or nuts are large enough at hatch that the hatching larva could damage your crop. Your own practical biofix may be later than my estimate if you have later blooming apples or walnuts. Wait until the fruits/nuts are 3/8" and the bees are out of the orchard before any sprays go on. Late blooming walnuts may want to wait until the 1B (toward the end of May) or the 2A flight to spray if your harvest damage warrants it.

TREATMENT OPTIONS: Treatment timing will vary depending on the material you use. The box below outlines the optimum degree day timing for the various materials and crops. More detailed information can be found on the UC IPM website for your crop: <http://www.ipm.ucdavis.edu/>. If the weather remains "normal," the projected degree days (DD) and corresponding treatment dates will be as follows:

<u>Degree Days</u>	<u>Estimated Treatment Dates Using:</u>	
	<u>Main BF</u>	<u>Days after your own orchard biofix</u>
200 DD	April 23	23 days
250 DD	April 27	27 days
300 DD	May 1	31 days

Organophosphate (OP) & Pyrethroid Sprays (Imidan, Warrior):

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 DD**, when nutlets are 3/8-1/2 inch in size.

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

"Reduced Risk" Materials (Delegate, Altacor, Assail, Intrepid): These materials are softer on beneficials and less toxic to people and the environment. Delegate and Altacor are the most effective; Assail, and Intrepid are moderately effective. They should be applied at **250 DD** (apples) – **300 DD** (walnuts) 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, Oil): The effectiveness of Entrust and Cyd-X may be improved by combining them with oil. They should be applied at **200 DD** and reapplied at 7-10 day intervals, in 100-200 gallons of water/acre, if continued coverage is needed. Oil alone is only a very mild control and best used as a supplement to Mating Disruption. *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.