

# 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 may need to treat this generation.]*

**BIOFIX 1A:** We had very early flight and good mating weather from about Mar 17-24. Then the weather got too cold for mating for the next 9 days and didn't become suitable again until April 3<sup>rd</sup>. So I am setting an **Early Area-wide Biofix (BF) of March 19** and a **Main Area-wide Biofix of April 3**. It is unlikely that eggs laid during the early flight will survive unless you have fruit that is at least 3/8"-1/2" at hatch (that's when you apply your spray). So unless you have early blooming apples and a high codling moth population, most folks should probably use the second biofix. *The best biofix to use is the date that flight began in your own orchard AND sunset temperatures were at least 62°F AND your fruit is at least 3/8" (and bees are out of the orchard).*

**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:

<b>Degree Days</b>	<b>Estimated Treatment Dates Using:</b>		
	<u>Early BF</u>	<u>Main BF</u>	<u>Days after your own orchard biofix</u>
200 DD	April 10	April 23	22 days (early BF) or 22 days (later BF)
250 DD	April 16	April 27	28 days (early BF) or 25 days (later BF)
300 DD	April 21	May 1	33 days (early BF) or 29 days (later BF)

*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 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, 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** (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.*

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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.