



University of California Cooperative Extension

WALNUT NEWS

Stanislaus County

March 2009



University of California Cooperative Extension
39th Annual Tri-County Walnut Institute

Tuesday, March 17, 2009
Stanislaus County Ag Center
3800 Cornucopia Way
Corner of Service and Crows Landing Roads, Modesto
8:00 a.m. – 12:00 p.m.

7:30 Registration & Refreshments

8:00 Codling Moth Mating Disruption Using “Puffers” & Other New Dispensers

Joe Grant, Farm Advisor, UCCE San Joaquin County

New Developments in Walnut Husk Fly Management

Bob Van Steenwyk, Entomology Specialist, UC Berkeley

Update on Retain[®] and Hold[®] Trials

Kathy Kelley Anderson, Farm Advisor, UCCE Stanislaus County

California Walnut Marketing Board Annual Report

Dennis Balint, CEO/Executive Director, California Walnut Marketing Board &
Jennifer Getz, Assistant Marketing Director, California Walnut Marketing Board

Break

Walnut Rootstock Susceptibility to Crown Gall

Janine Hasey, Farm Advisor, UCCE Sutter & Yuba Counties

Management of Phytophthora Crown and Root Rot

David Doll, Farm Advisor, UCCE Merced County

Drought Management Strategies

Allan Fulton, Farm Advisor, UCCE Tehama County

Recent Advances in Walnut Blight Control

Jim Adaskaveg, Professor/Plant Pathologist, UC Riverside

12:00 Adjourn



2.5 continuing education credit hours pending

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Walnut blight. Blight is caused by bacteria that live over the winter in dormant buds. As the shoot elongates, the bacteria are distributed along the emerging shoot and flowers. Rain spreads the bacteria and aids in the infection process. Control depends on the timely application of protective copper sprays to the developing nuts before rain events. Spray timing will vary among orchards depending upon the history of disease and weather conditions each year. Rain and temperature are the driving environmental factors in disease development. The ideal temperatures for blight development are between 54°F and 63°F, which usually occur in April and May.

Copper-maneb sprays provide better and more consistent control than fixed copper sprays alone. Check with your Ag Commissioner's office to see if a Section 18 allowing Manex[®] use is in effect for your county. Research on the appropriate initial spray timing is ongoing. At this time, it appears the first spray should be applied sometime between budbreak and the first pistillate bloom. The earlier timing looks suitable in orchards with histories of blight during rainy weather. Budbreak is when the tip of the shoot has emerged about an inch, but before the leaves unfold (figure 1). Estimate budbreak within the orchard and not on the outside trees. Treat when there are enough buds open to make it economically feasible. If rain is expected, it may be economical to spray at 10-20% budbreak in orchards with a history of blight. If no rain is expected, spray between 30-40% budbreak and first pistillate bloom. The pistillate flowers are the small nutlets that form after a few leaves emerge.



Figure 1. terminal budbreak
(photo by Rick Buchner)

Apply subsequent sprays before rain for best results. In orchards with histories of walnut blight damage, protective treatments at 7- to 10-day intervals during protracted spring rains are necessary for adequate protection. In areas or years with less intensive rainfall or little history of blight, spray intervals can be stretched, and weather forecasts can help with spray timing. The total number of sprays required depends on the judgment of the grower based on disease history and climatic conditions. The success of alternate

row spraying during early bloom and leafing depends upon the ability of the sprayer to deliver sufficient copper material with good coverage to trees of both target rows.

Codling moth. Hang codling moth pheromone traps in the southeast quadrant of the trees in mid-to late-March to detect first moth emergence. Traps placed high in the tree canopy catch more moths, which is particularly useful in orchards with low populations. In the spring, the biofix is the date when both consistent trap catches and sunset temperatures above 62°F occur. Begin accumulating degree-days on this date using a lower threshold of 50°F and an upper threshold of 88°F. Degree-days help growers predict codling moth development and more accurately time spray treatments. Monitor orchards individually because the codling moth emergence date and activity will vary among orchards. Mating disruption should be in place before moths start emerging. Specific details on calculating degree-days and more in-depth information on managing codling moth is available on the UC IPM website at <http://www.ipm.ucdavis.edu>.

Consider codling moth damage history over the last several years when developing a management plan. Growers who estimate codling moth damage by cracking out harvest samples have an advantage over those that rely on grade sheets because the latter report combined damage from both codling moth and navel orangeworm. Infestation history and field observations along with trap count numbers, determine how aggressive management strategies should be. A program implemented in an orchard with substantial damage last

year and high trap counts this year will differ from one where little or no problem exists. Tailor your program to fit the situation in your orchard.

Ground Squirrels. Controlling adult ground squirrels before they reproduce in the spring is a critical part of good management. Burrow fumigation is the method of choice at this time of year when squirrels feed on green vegetation and are not interested in baited grains. A fumigant program followed by anticoagulant baiting in the summer can control 90% of the population. Squirrels typically breed from late January to early March, but the time can vary with the weather and location. During the winter, squirrels with good fat reserves hibernate in sealed burrows. Other squirrels, usually the spring born juveniles, forage above ground even in cold weather. For the best results, use burrow fumigants about three weeks after the first squirrels emerge from hibernation. Zinc phosphide tablets, a restricted use material, is an effective substance. Save supply and labor costs by treating only active burrows. Cover burrow openings and treat only those that are re-opened. Fumigate following rain or irrigation since soil moisture is necessary to release the gas. The best timing is early morning or evening when ground squirrels are most likely to be inside the burrows. Check all treated burrows a few days after fumigation and treat any that have opened. Do not treat burrows that are near or under buildings. More information can be found on the UC Ground Squirrel Best Management Practices website at <http://groups.ucanr.org/gsbmp>.

Orchard Sanitation. Preventing navel orangeworm (NOW) infestations is the most reliable approach to managing the pest. Over the winter, NOW live in mummy and trash nuts in the orchard and around hullers and dryers. They are the source of this season's infestation. Reduce the population by removing mummy nuts in trees and off berms and flail mow the orchard middles. The shells must be shattered to kill the larvae. Disking, irrigation or letting nuts decay in the cover crop are minimally effective in reducing the population. Destroy any trash nuts around hullers and bins.

Check stakes. Limb or trunk damage from rubbing against stakes is very common in this area and negatively affects growth and scaffold development. Prevent damage and economic losses by inspecting trees and removing or pulling stakes away from trunks and limbs.

Newly planted tree care. Paint the trunks of newly planted trees with white interior latex paint to prevent sunburn. Be sure to paint to ground level; new trees usually settle leaving a small, unprotected area at base where temperatures are the highest. When staking is necessary, angle stakes slightly into the wind about 8 to 12 inches away from the trunk. Tie loosely to avoid shoot and trunk injury; this also allows the tree to move with the wind increasing trunk size.

Zinc. Zinc foliar sprays are most effective in correcting deficiency when applied to new spring shoot growth. Zinc can be included with most copper materials (check the label). The effectiveness of zinc foliar sprays drops off significantly later in the season when the cuticle thickens.

Pest Hotline. The Tree and Vine IPM Pest Hotline for the 2009 season began on Tuesday, February 24. Information on degree-days, flight activity and treatment timing for codling moth, peach twig borer, Oriental fruit moth and omnivorous leafroller is available 24 hours a day by calling 525-6841. Information is based on monitoring by farm advisors in local orchards. The information will be updated every Tuesday.



IPM Breakfast Meetings Resume

Old Mill Café 600 9th Street, Modesto, 7:00-8:00 am

Beginning March 4, 2009

1st & 3rd Wednesdays, March-June

Roger Duncan and I will hold our integrated pest management breakfast discussions for tree and vine crops again this season beginning March 4. The meetings will be held every first and third Wednesday, March through June, from 7:00 a.m. to 8:00 a.m. **Please note: the location has changed to the Old Mill Café located at 600 9th Street in Modesto.**

The meetings are open to any growers or PCA's of tree and vine crops in the area. The meetings are for casual discussions of current pest management issues occurring in the field. Bring your insect or disease infested samples for identification or show and tell if you like! One hour of continuing education credits are offered at each meeting. Any company who would like to sponsor the \$45 cost for offering education credits at each meeting should call Marie at (209) 525-6800.

Kathy

Kathy Kelley Anderson, Farm Advisor
UCCE Stanislaus County



Wheelchair accessible facilities available.
With advance request, efforts will be made to
provide accommodations for persons with
disabilities.