



**University of California**  
 Agriculture and Natural Resources  
 Cooperative Extension



# WALNUT NEWS

STANISLAUS COUNTY

FEBRUARY 2015

University of California Cooperative Extension  
**45th Annual Quad-County Walnut Institute**  
**Thursday, March 12, 2015**  
 8:00 a.m. - 12:00 p.m.  
 Harvest Hall, Stanislaus County Ag Center  
 Corner of Crows Landing and Service Roads, Modesto

- 8:00 **Coffee and refreshments**
- 8:30 **Walnut Botryosphaeria Disease Update**  
 Kathy Kelley Anderson, UC Cooperative Extension, Stanislaus County
- 9:55 **Current Status and Future Directions in Codling Moth Mating Disruption**  
 Joe Grant, UC Cooperative Extension, San Joaquin County
- 9:20 **Training Young Trees without Heading: Trials in Merced/Contra Costa Counties**  
 David Doll, UC Cooperative Extension, Merced County  
 Janet Caprile, UC Cooperative Extension, Contra Costa County
- 9:45 **Irrigation Effects on Walnut Tree Growth and Nut Quality**  
 Dr. Bruce Lampinen, UC Walnut and Almond Extension Specialist
- 10:10 **Walnut Nitrogen Management**  
 Katherine Pope, UC Cooperative Extension, Yolo, Solano, Sacramento Counties
- 10:35 BREAK
- 11:00 **Considerations for Re-developing Walnut Orchards: Land Prep, Rootstocks and Tree Care**  
 Bob Beede, UC Cooperative Extension, Emeritus
- 11:30 **State of the California Walnut Industry**  
 Dennis Balint, Carl Eidsath and Jennifer Olmstead, California Walnut Board

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**Ground squirrels:** Ground squirrels inhabit burrow systems where they can safely live and raise their young. Burrows are 5 to 30 feet in length and 2 to 4 feet deep; they typically have more than one opening. They breed once a year, usually in February through April in the Central Valley, and average 7-8 offspring per litter.

Controlling adult ground squirrels before they reproduce in the spring is a critical part of good management. Burrow fumigants (gas cartridges and aluminum phosphide tablets) are the most effective since the animals are not feeding on grain early in the season. For best control, use fumigation about 3 weeks after the first squirrels emerge from hibernation. The best timing is early morning or evening when ground squirrels are most likely to be inside the burrows. Fumigation is generally only effective when the ground is moist. When using a fumigant, make sure to treat all active burrow systems in and around the orchard. Re-check all areas a few days after fumigation and re-treat any that have been reopened. As always, read and follow all label directions when using a pesticide.

Recent studies have shown a 97% - 100% reduction in ground squirrel populations and a 100% reduction in gopher populations with aluminum phosphide. Aluminum phosphide is a restricted use material that requires a permit from the Ag Commissioner. The use of aluminum phosphide is strictly prohibited within 100 feet from all residences.

Gas cartridges are relatively easy to use. Use one or two cartridges for each active burrow. A large burrow system may require more than two. Quickly shove the ignited cartridges into the burrow using a shovel handle or stick and seal the burrow entrance with soil. Watch nearby burrow entrances; treat and seal any that begin to leak smoke. The larger and more complex the burrow system, the more smoke it takes to be effective.

**Orchard sanitation:** Preventing navel orangeworm (NOW) infestations is the most reliable approach to managing the pest. Over the winter, NOW larvae live inside mummy and trash nuts in the orchard and around hullers and dryers. Pupation begins in March and may continue through early May. They are the source of this season's infestation.

Reduce the population by first removing mummy nuts in trees. Rain and windy weather (and crows) often cause mummy nuts in the trees to fall. This year I have seen more mummy nuts remaining in the trees than usual. Pole or shake these nuts off the tree. Blow mummy nuts into the middles and flail mow to kill the NOW. To be effective, 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.

*Kathy*

Kathy Kelley Anderson, Farm Advisor  
UCCE Stanislaus County

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