

January 2015

Register now for 2015 Pistachio Day!

The Statewide Pistachio Day will be held on Wednesday, January 21, 2015 at the Visalia Convention Center in Visalia, California. This will be a full-day session, adjourning at 4:30 pm with a hosted lunch break. Pistachio Day is designed to deliver the latest research-based production practices in a format that enables prospective or current pistachio growers, production managers, and pest control consultants to better achieve their pistachio-growing goals. The agenda appears below.

Hopefully you have already registered! The registration fee was \$40.00 per person until January 5, 2015. Since January 5 has come and gone the current registration fee is \$60.00 per person. *On-site registration is \$80.00 per person.*

For more info and how to register see: <http://ucanr.edu/sites/pistachioday/>

Updated Agenda for 2015 Statewide Pistachio Day

Wednesday, January 21

8:00 AM – 4:30 PM

Visalia Convention Center, 303 East Acequia Ave., Visalia

Session 1

Moderator: Elizabeth Fichtner, Cooperative Extension Advisor, Tulare County

8:00 a.m. Welcome

8:15 **Industry Update** - Bob Klein, Manager, California Pistachio Research Board

8:30 **Pistachio Bushy-Top Syndrome** - Jennifer Randall, Dept. of Entomology, Plant Pathology, and Weed Science, New Mexico State University, Las Cruces, NM

9:00 **Update on Foliar and Fruit Diseases of Pistachio** - Themis Michailides, Cooperative Extension Plant Pathologist, Dept. of Plant Pathology, UC Davis

9:30 **Pollination Requirements, Fruit Set and Blanks** - Gurreet Brar, Cooperative Extension Advisor, Fresno County

10:00 *BREAK*

Session 2

Moderator: Kris Tollerup, Cooperative Extension Advisor, IPM Program

10:30 **Nutrient Management in Pistachio** - Patrick Brown, Professor, Dept. of Plant Sciences, UC Davis

11:00 **Groundwater Quality, Availability and Upcoming Regulation** - Ken Schmidt, Principal, K.D. Schmidt and Associates

11:30 **Saline Irrigation Effects on Soil Quality and Yield and its Mitigation** - Blake Sanden, Cooperative Extension Advisor, Kern County

12:00 - 1:30 PM LUNCH

Integrated Pest Management for Pistachios

Sponsored by the UC Statewide Integrated Pest Management Program

Moderator Welcome - David Haviland

Management of Navel Orangeworm in Pistachios

1:40 **Phenology and Monitoring Techniques** - David Haviland, Cooperative Extension Advisor, Kern County

2:00 **Winter Sanitation and Chemical Control** - Brad Higbee, Director, Entomology Research, Paramount Farming Company

2:40 **Using the Past to Predict the Future: Trends from Harvest Data Analysis** - Joel Siegel, Research Entomologist, USDA-ARS

3:00 *Break*

'Bug' Management in Pistachios

3:30 **Phytocoris: Friend or Foe?** - Bob Beede, Emeritus Farm Advisor, Cooperative Extension, Kings County

3:50 **Management of Leaf-footed Bug and Stink Bugs** - Kris Tollerup, Cooperative Extension Advisor, IPM Program

Pistachio Diseases

4:10 **Pistachio Diseases: Diagnosis and Demonstrations** - Themis Michailides, Cooperative Extension Plant Pathologist, Dept. of Plant Pathology, UC Davis

4:30 Closing and Adjourn

Register today for Statewide Pistachio Day to hear Dr. Randall's latest research as to a cause of Pistachio Bushy-Top Syndrome

Pistachio bushy-top syndrome is a problem found, initially, in young rootstocks. Symptoms of pistachio bushy-top syndrome include shortened internodes, stunted growth, swollen lateral buds, bushy/bunchy growth, and twisted roots with minimal lateral branching. Rootstocks with bushy-top syndrome are more difficult to bud. During the second and third years of growth, commonly, many

trees in affected orchards exhibited large stem galls and unusual cracking observed around the bud union. Due to the slow and odd top and root growth habit of these bushy-topped rootstocks and the trees grafted to this rootstocks, thousands of trees demonstrating symptoms of pistachio bushy-top syndrome have been removed from affected orchards, often, with devastating financial impacts to the grower through lost time and large additional costs in purchasing new rootstocks, planting, staking, training, budding etc. In a number of orchards, the syndrome was so prevalent that it appeared to be more cost-effective to the owner to remove the entire orchard than attempt individual tree by tree evaluation, especially since the cause and possible transmissibility of the problem were unknown or unproven.

Needless to say, determining the cause of pistachio bushy-top syndrome and what corrective and defensive actions might be necessarily taken by affected and currently unaffected nurseryman and growers is of great importance to the pistachio industry and, likely, will require working together, and concerted ongoing research efforts in future years. Dr. Randall, plant pathologist at New Mexico State University, will be discussing her research results related to Pistachio bushy-top syndrome, at Statewide Pistachio Day on January 21, 2015.

Irrigation in a Drought Year – A full soil profile in the spring may be money in the bank

While it is difficult to predict future rainfall, especially in rain-shadowed Kern County, it looks like our drought may continue a little longer. While we can hope for the best, it may pay to assume the worst. Sometimes water that was hard to come by during the summer is easier to come by from some districts during the winter. Additionally, wells that did not have the capacity to keep up with peak summer demand, still produce economically useful quantities of water. It may be prudent, if some winter water does become available, to use some of it to fill up the soil profile, just in case. While pistachio is famous for survival on little water, good production requires substantial amounts of water. The first critical period related to water availability is during flowering and early fruit set. If no irrigation water is available in April and May, and it does not rain appreciably, the new crop will be totally dependent on stored soil water. In a case like this, if there is not enough soil water to cover minimal crop evaporation and transpiration in April and May, flowers will not be pollinated effectively and young, developing nuts will drop from the tree. If the crop is lost in April and May, it doesn't matter how much water is available later in the season.

Depending on the age of the trees and the depth and type of soil, surprising quantities of water can be stored in the soil profile, because pistachio is a deep rooter and a wide rooter. In a clay loam soil, the profile can hold 2 to 2.6 inches of available water per foot. Assuming older trees and an 8 foot deep rooting depth, soil-water storage can amount to 20 inches of water or so. While I can't guarantee that the trees will be able to pull all the water to a depth of 8 feet, it certainly suggests that a full profile will get you through the first six weeks of production easily, while various governmental and associated agencies determine how much water you may or may not get during the rest of the season. A further benefit of a full profile in early winter, is that any winter rain will act as a soil leaching fraction, which in a fair percentage of Kern County plantings is needed to help push salts below the root zone.

We need more winter brrr....

As of this writing, and hearing about predictions of temperatures hitting 70 ° F in the second week of January 2015, it looks like lack of chill will be an issue again for pistachio growers. After last season's results, I have pretty well abandoned the method of calculating chill based on simple additions of hours below 45 ° F. The 'chill portion' model, which includes adjustments for warm winter temperatures, appears to make much more sense for our area. You can download estimates of accumulating chill portions from the U.C. Davis Fruits and Nuts website at:

http://fruitsandnuts.ucdavis.edu/Weather_Services/. The website also lets you know how to use an excel file designed so that you can calculate your own chill portions from the temperature recorder you have in your orchard. As of this writing there appears to be a problem with the Shafter CIMIS station, which seems to be accumulating much more winter chill than other Kern County weather stations.

The not so good news about having a better way to estimate chill is that it is not clear about what to do to ameliorate or correct for low chill. Emeritus U.C. Farm Advisor Bob Beede, grows on the islands of Rhodes in the Mediterranean, and Australian growers have reported some good results with dormant oil applications made from late January to the third week in February in the northern hemisphere and in the third week of October in the southern hemisphere. In cooperation with interested growers, we have some plans to make some experimental oil applications during this window in Kern County, since it appears to be an excellent opportunity to further test efficacy of dormant oil under low-chill San Joaquin Valley conditions with the major male and female cultivars grown here.

Obviously, as my assignment with U.C. cooperative extension includes citrus, so let's hope for more pistachio chill but still keep the winter brrr... above 32 ° F.

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