Field Evaluation of Almond Varieties

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PROJECT SUMMARY

Objectives:

To assess the characteristics of the most promising almond varieties developed in the almond breeding program in the orchard.

- Continue to analyze and summarize the data collected from the McFarland trial, so that the information can be prepared for dissemination.
- Begin collecting data on the next round of almond Regional Variety Trials (planted in the winter of 2014).

Background and Discussion:

Regional almond variety trials provide both almond growers and researchers with a valuable information resource.

This ongoing research project, conducted at McFarland and now expanded to three other newly planted sites, involves the long-term evaluation on an annual basis of newer almond varieties compared to industry standards in a commercial setting.

The ongoing McFarland trial, planted in 2004, includes eight varieties and eight Nonpareil clones, with replications of each. The trial is designed to look closely at time of bloom and hullsplit, yield potential, nut quality characteristics, and tree growth. It also ascertains susceptibility to noninfectious bud failure and pests and diseases, including hull rot.

Studies are also relating yield and production efficiency by using new technology and equipment (light bar) that measures light intercepted by tree canopies. This allows separation of the effect of rate of growth from the amount of productivity per unit light intercepted.

The next generation almond variety trials were planted in the spring of 2014 in Butte, Stanislaus and Madera Counties. The Butte, Stanislaus and Madera trials were planted on Krymsk86, Nemaguard and Hansen 536 rootstocks, respectively. In the current generation trials, there are four replications of each of 30 pollinizers – an experimental improvement initiated with the current McFarland plot. Nonpareil is planted in every other row. Many of the pollinizer test varieties from the University of California, USDA Agricultural Research Service, and commercial nurseries are self-compatible. In 2015, missing trees were replanted. Data collection for bloom, hullsplit and harvest will be undertaken in 2016.

In 2016, bloom and hullsplit data were collected at all 3 replicated trials. Light interception data was collected at the trials as well using the mobile platform lightbar. In addition, the trials were harvested for the first time in 2016.

Project Cooperators and Personnel: David Doll, UCCE - Merced County, Dani Lightle, UCCE-Butte/Glenn/Tehama Counties; Roger Duncan, UCCE - Stanislaus County; Joseph H. Connell, UCCE - Butte County, Tom Gradziel, and Sam Metcalf, UC Davis; Craig Ledbetter, USDA/ARS, SJVASC, Parlier; Commercial Nurseries

For More Details, Visit

- Poster location 43, Exhibit Hall A + B during the Almond Conference; or on the web (after January 2017) at Almonds.com/ResearchDatabase
- 2015 - 2016 Annual Reports CD (15-HORT2-Lampinen); or on the web (after January 2017) at Almonds.com/ResearchDatabase
- Related projects: 16-HORT1-Gradziel; 16-HORT13-Lampinen