

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 collect data on bloom, maturity, and harvest at the Billings Ranch, near McFarland in eastern Kern County, the site of almond regional variety trial planted in 2004.
- Continue to analyze and summarize the data collected from the McFarland trial, so that the information can be prepared for dissemination.
- Complete planning for 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 trials look closely at time of bloom and hull-split, 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 (lightbar) 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.

Yields at the McFarland trial continue to be quite high averaging just above 3000 kernel pounds per acre for the past 5 years. There are also differences in Nonpareil clone yields developing over time. The pollinizers with the highest cumulative yield in this trial are selection 2-19e and Winters.

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 Hansen536 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 UC, USDA/ARS, and commercial nurseries, are self-compatible.

Project Cooperators and Personnel: Gurreet Brar, UCCE - Fresno/Madera Counties, Joseph H. Connell, UCCE - Butte County; Roger Duncan, UCCE - Stanislaus County; David Haviland and Mario Viveros, UCCE - Kern County; Tom Gradziel, Mary Ann Thorpe, Sam Metcalf and William Stewart, University of California, Davis; Craig Ledbetter, USDA/ARS, SJVASC, Parlier; Commercial Nurseries

For More Details, Visit

- Poster location 45, Exhibit Hall A + B during the Almond Conference; or on the web (after January 2015) at Almonds.com/ResearchDatabase
- 2013-2014 Annual Reports CD (13-HORT2-Lampinen); or on the web (after January 2015) at Almonds.com/ResearchDatabase
- Related projects: 14-HORT1-Gradziel; 14-HORT13-Lampinen