# Field Evaluation of Almond Varieties

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## PROJECT SUMMARY

### Objectives:

To evaluate the characteristics of the most promising almond varieties developed in the almond breeding programs at UC Davis, the USDA Agricultural Research Service as well as commercial introductions in an orchard setting.

- Collect 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.

2016 was the first year for complete data collection at the next generation almond variety trials that 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 completed McFarland trial. Nonpareil is planted in every other row in all three trials. Trees are planted at a density of 110, 130 and 173 trees per acre in the Butte, Stanislaus and Madera trials respectively. Fourteen of the pollinizer test varieties in the trials are self-compatible and come from the University of California, USDA Agricultural Research Service, and commercial nurseries. In 2015, missing trees were replanted.

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. Yields averaged from 100 to 800 kernel pounds per acre in the third leaf at the Butte and Stanislaus trials and up to 2000 kernel pounds per acre in the Madera trial. The yields at the Madera trial are among the highest we have seen for a third leaf orchard.

Studies are also relating yield and production efficiency by using new technology and equipment (mobile platform 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.

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**Project Cooperators and Personnel:** Phoebe Gordon, UCCE - Madera County, David Doll, UCCE - Merced County, Dani Lightle and Luke Milliron, 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 91, Exhibit Hall A + B during the Almond Conference; or on the web (after January 2018) at Almonds.com/ResearchDatabase
- 2016 - 2017 Annual Reports (16-HORT2-Lampinen) on the web at Almonds.com/ResearchDatabase
- Related project: 17HORT1-Gradziel