

ALMOND CONVENTIONAL WISDOM - Past and Current (Joe Traynor, 11/18/13)

As times change, farming practices change. This is particularly true in almond farming. The Conventional Wisdom (CW) of 40 years ago, no longer applies today as new information and new technology becomes available. Most such information is provided by U.C. Extension personnel, much of it from studies funded by the Almond Board. Following are examples of some changed thinking in almond culture.

Soils: Old CW: Almonds require deep soils for maximum production. Current CW: Almonds can thrive on shallow soils (e.g., the U.C. Nickels test plot) under micro-irrigation. Shallow soils have a dwarfing effect on trees, making them easier to shake for harvest and for mummy removal.

Dormant Sprays: Old CW, dormant sprays are essential to control NOW. Current CW: mummy removal is far more effective than dormant sprays.

Planting Distances: Old CW: 24'X24' is optimal. Current CW: 18'X22' gives more efficient sunlight interception resulting in greater yields.

Areas suitable for almonds: Old CW: Avoid Kern County due to insufficient chilling hours. Current CW: Kern County is ideal for almonds due to better bloom-time weather. Old CW: avoid planting on the west-side, since high soil boron will eventually kill trees. Current CW: Almond trees will thrive on the west side as long as a good root system can be maintained in the top 3' (where B levels are low).

Post-harvest irrigation: Old CW: Use caution in applying water after harvest as it could trigger new growth that will be killed by frost. Current CW: a post-harvest irrigation (when fruit buds are developing) is extremely important.

Potassium: Old CW: As long as leaf levels are over 1%, K nutrition is good. Current CW: almonds remove massive amounts of K from soils; leaf levels should be maintained above 1.2%.

Leaf Analysis: Old CW: take samples in the summer. Current CW: spring and fall samples can provide useful information.

Pruning: Almonds require annual pruning to maintain yields. Current CW: Almonds do not need annual pruning to maintain yields. Rain can spread fungal spores into pruning cuts causing tree damage.

Varieties for pollination: Old CW: For optimum pollination, orchards should have early-blooming, mid-blooming and late-blooming varieties. Current CW: All varieties in an orchard should bloom within 2 days of each other. Old CW: Two or more rows of the main variety (usually Nonpareil) should alternate with one or more rows of a pollinizer variety. Current CW: Every other row should be a different variety (don't plant 2 consecutive rows of any one variety).

Nitrogen and Water: Old CW: you can't give almonds too much N or too much water. Current CW: excess N and water are wasteful and greatly increase the chance of significant hull-rot damage. Excess N contributes to ground-water contamination.

Water: Old CW: CA has enough water to sustain a million acres of almonds.
Current CW: Maybe not.

Bees: Old CW: Use 2 hives of bees per acre. (Real old CW: UC Circular 103, 1947, recommends 1 hive/acre – no frame specifications). Current CW: Hives are the wooden structures that house bee colonies. 12 to 16 frames of bees per acre housed in 1 to 1.5 hives are recommended.

Breeding better trees: Old CW: Grow thousands and thousands of seedlings, come back in a few years, and select those with the traits you desire. Current CW: Use molecular biology to find genetic markers associated with a desired trait, then transfer this information to develop new varieties

Late blooming varieties: Old CW: development of varieties that bloom 10 days after Nonpareil is neither practical nor necessary, and may not be possible. Current CW: development of varieties that bloom 10 days after Nonpareil is neither practical nor necessary and may not be possible.