

# Notes From the Nut

*With the advent of the Capay Hills Orchard quarterly newsletter, we'll include in this issue news and occurrences of the past three months, along with a forecast of what's happening next. The two main topics of discussion will be two questions frequently asked of us by our customers. The questions are "How is the California drought affecting you?" and "How do pasteurization laws affect you?"*

## The Drought of the Century

Many old-timers and water resource experts are calling this the worst drought California has possibly ever experienced. Since Governor Brown declared a drought State of Emergency in January 2014, conservation efforts have attempted to lower water usage across the state. Farmers like ourselves have no choice but to continuing irrigating their orchards, or plow under the orchards, like some farmers have done. Our conservation effort consists of subsurface drip irrigation, which is the most efficient

system available. Also, we irrigate only when the trees need water, not on a regular schedule. We manage the trees' need for water with a [leaf-testing device](#), which measures the stem water potential. Additionally, helping us through the drought is our well—a relatively deep well which we hope will sustain us throughout this drought.

Factual data about the California drought clearly shows the differences from a normal year. Nearly all reservoirs across California are at least 50% below capacity, with a few already bone-dry. The Sacramento region averages 18-20 inches of rainfall from July to July every year. During this last rainfall year, the Sacramento area received only 9.79 inches of rainfall.



Because of the drought, we have been forced to irrigate our trees during the winter as well. Also, the compost mixture usually spread around each tree has gone much to waste, due to the lack of water needed to soak the nutrient-rich compost into the soil and around the tree's roots. This year a more expensive organic liquid fertilizer will have to be used, to help the nutrients flow to the roots. The crop of almonds this year from our orchard will regrettably be much smaller than last year's.

Due to the lack of rainwater working needed nutrients into the soil, the crop is expected to be half that of last year's. Costs of irrigation and additional fertilizer are expected to double this year, as we try to compensate for the lack of rainwater. Unfortunately, prices on our almonds (and all almonds across California) will rise this year to help alleviate the added costs brought on by the drought.



## Pasteurization and the Law

The only way to receive the full nutritional benefits of almonds is to eat them unpasteurized. In 2007 the Almond Board of California, a pseudo-governmental agency, passed a law (7 CFR Part 981) [3] which requires pasteurization for all California-grown almonds. The requirement is the result of two cases of Salmonella Bacteria poisoning and the desire to protect the industry from a larger outbreak. The cases of salmonella were tied to the unclean, mechanical harvesting practices used by most growers.

Pasteurization is achieved by a fumigant—propylene oxide (listed as an IARC Group 2B carcinogen) or by steam heating. Steam heating destroys most of the health-beneficial enzymes within the almond.

-Therefore, you may see a package of almonds in a store say the almonds are “raw”, but they are pasteurized by law, unless they are grown in a foreign country like Spain or Italy. In 2008 a judge ruled companies can use the term raw even if they are pasteurized. Packaging laws do not require the handler to disclose which method they use for pasteurization. The least expensive form of pasteurization is fumigation. Labeling DOES NOT require which type of pasteurization is used; however only steam is approved for an organic product.



-Part 981.413 and 981.13 exempts growers from pasteurization when they sell via their roadside stand for home use (not for resale) and in quantities not to exceed 100 pounds per customer per day. Our website is an extension of our roadside stand. It is a virtual roadside stand which enables people who do not live near an almond grower to enjoy the nutritional and taste benefits of California almonds [3]. So are our almonds safe from Salmonella? Absolutely! We are unique and harvest onto tarps, thus virtually eliminating any chance of Salmonella poisoning from any pathogens on the ground.

## Other news

Not much happens around an orchard in the heat of summer. However, we've been doing some late pruning of “waterspout” growth. Trees tend to produce new growth constantly and this kind of growth happens in the center area of the tree, sending forth little shoots we call “waterspouts.” Thankfully, it doesn't entail too much work—just clipping out the unwanted growth.

Inevitably during the summer, wildfires shoot up. Fourth of July night, a fire started at the entrance to

Lake Berryessa—15 miles from us as the crow flies. The fire raged in the mountain range for eight full days, eventually destroying 6,500 acres. Thanks to the untiring effort of countless firemen, the fire was finally contained with little to no structure damage and only five injuries.



### **Coming up Next ...**

For the upcoming months of August, September, and October, the news will mainly center on the harvest. The first weekend in August will begin our harvest period—the harvest time coming two weeks earlier this year due to the drought. The nonpareil variety will be harvested first, followed by the Monterey variety 30 days later and the Fritz variety two weeks after that.

After each harvest, the nuts are sundried for one week and then they are hulled and shelled. The hulling and shelling process takes about two weeks to complete. We estimate almonds available the first week of September, possibly earlier.