

## ALMOND BEAUTY

The most beautiful time of the year came this past February when the orchard began its bloom period—once again a little bit early due to multiple factors, most of them unknown. While not as spectacular as hoped for, this year’s crop should still be promising. After cross-pollination of the blossoms, the petals gradually dropped from the blossoms, leaf-out (the sprouting of new leaves) began, and the new almonds began to take shape. By early March, the almonds are roughly 1/4 of an inch long; by May they have reached their full size and are continuing to develop within the hull. Thankfully we did not experience a freeze this spring, which can be very damaging to the almonds when they are just beginning to form.

This February, at the height of the almond bloom period, our town and the entire Capay Valley hosted its 101st annual Almond Festival. We are especially proud to announce that our very own Jessica (our fourth child and the designer of our logo) was named Miss Congeniality for the 2016 Almond Festival! Here is the Woodland (a city near us) newspaper article: <http://www.dailydemocrat.com/events/20160222/almond-queen-is-talented-esparto-high-senior>. In order to win the name of Miss Congeniality, Jessica participated in an almond pageant that been going on for 101 years. The girls (all seniors in high school) in the pageant must complete essays, interviews, a speech, and they must demonstrate their community involvement. It’s a great program with a rich history and seems to get more involved and harder every year. Judges name an Almond Queen, a runner-up, and the contestants vote amongst themselves for Miss Congeniality. It is quite an honor that Jessica won it. Jessica represented Capay Valley and Capay Hills Orchard very well; she knew more about growing almonds than any of the other contestants. On the day of the Almond Festival, she and the rest of the almond court were driven through the Capay Valley in a limousine as hostesses of this beautiful tradition.

### FEBRUARY - APRIL

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## ALMOND LOSSES

Part of being a farmer means you have to accept that losses will occur. It’s part of the business. Unfortunately, we lose almonds during various stages of development due to both natural causes and human mismanagement. First, if we don’t get enough winter rain and chilling hours, the buds won’t turn into viable blossoms. Freeze can also kill the blossoms and young nuts. Next, blossoms can get a devastating fungus spread by spring rains which further reduces the number of viable nuts. Strong winds can knock down many young nuts. Of course we also need enough bees and a long-enough bloom period to cross-pollinate the blossoms. In addition, if the soil is not healthy, the quality and number of the almonds is diminished. Insect damage takes another toll. Then we have those cute (but extremely damaging) squirrels. Almonds are like candy to squirrels, and so they eat without restraint. Between what they eat and what they gather for winter, each squirrel can take up to 20 lbs.! During harvest, some nuts are left on the orchard floor as it is not practically possible to pick up every nut that didn’t fall on the tarp. Machine damage from the shelling operations can incur more losses. Finally, after all these winnowing processes, we have our product for you. If I could have every bud become a nut, I would be in great shape; unfortunately there are many losses along the way we try to minimize through proper nutrition, pest and disease control, and careful orchard maintenance. Some things are under your control, but many are not. We just do the best we can and leave the rest to God.

## CAPAY HILLS ORCHARD

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Top to bottom: a cluster of developing almonds; young nuts during leaf-out; Miss Congeniality with part of her proud and happy family.

## BUSY LIKE THE BEES

While the trees and bees work hard to develop this year's crop, we keep busy in a variety of ways ourselves. Before the bloom, we pruned the trees—just enough to provide more room for equipment maneuvering and to open up the tree centers for more air movement to prevent fungal growth. We chipped the clippings with a wood chipper, and the chips were returned to the orchard floor to decompose. Next, the hedgerow needed some weeding and trimming to keep those beneficial insects which call the hedgerow home happy. In order to provide natural fertilizer and to keep the vetch cover crop manageable, 114 sheep were introduced to the orchard in March. They came before the vetch goes to seed, which is when the vetch starts using its nitrogen supply instead of fixing it into the ground—which is what we want to happen. The sheep mow the vetch down, and the roots (containing the nitrogen) are allowed to decompose in the soil. The sheep eliminate diesel needed for tractor fuel, time spent weed-whacking, wear and tear on equipment, and they provide free fertilizer. Well before harvest, we remove the sheep per our food safety plan. In a way, this is food safety over-kill since we harvest onto tarps and the almonds never touch the ground anyway. But it's all part of our commitment to maintain the quality of our product. This season, we were also busy injecting liquid compost into the soil through the drip irrigation to aid the development of the trees. In addition, we applied foliar sprays to supplement the trees with vital micronutrients and beneficial fungi. We then took soil and foliar samples for lab tests to see if we were short on any micronutrients (such as zinc, nitrogen, phosphorus, etc.). Thankfully, the test results show we are right on track. Since we inoculated our vetch cover crop with mycorrhizae, we are working with a UC Davis study to ensure the beneficial fungi transfers to the trees. I'm sure you're also interested to hear about our rainy season. Unfortunately a poor rainy season forced us to start irrigating our orchard back in March. This year we received 15 inches of rain, which is more than last year. But 15 inches is still 5-9 inches below an average year's precipitation. And so, we remain in a drought. Lord willing, the next few years will bring us out of this drought.



## STORING YOUR ALMONDS

Many of our customers have asked us questions about storing almonds. UC Davis has done some research on this and here I will summarize their recommendations.

First, we suggest that you don't buy more than you can properly store. However, proper storage is simple. Anything you are going to eat within two weeks you can leave in sealed container at room temperature. If you will not be eating the almonds before then, store them in a zip-lock bag and put them in the refrigerator or freezer. Vacuum-sealing is not necessary, but do make sure to get out as much air as possible. Moisture in the bag can reduce the flavor of the almonds. The ideal environment to store the almonds has less than 70% humidity and less than 50 degrees temperature for long-term storage. Under those conditions, you can safely store the almonds for a whole year. Even if you forgot these directions and left your almonds out at room temperature for a couple months they would probably have minor degradation in flavor but they would not be rancid. All our almonds are stored either in our long-term storage facility in the Sierra Nevada Mountains (where it is naturally cold and there is very low humidity year-round) or in our short-term facility here on site which is mechanically and automatically controlled for temperature (40-45 degrees) and humidity (60-65%). Thankfully, almonds are a very easy product to store and enjoy!