

## COLD AND WET?

In the last newsletter, we concluded with a hopeful note that we could report rainfall by this time. The months of November, December, and January are the critical rain months in an orchard. Thankfully, a total of 11.5 inches was measured during November and December. However, all of January has been as dry as July. While 11.5 inches is two inches more than last year, we still need another eight to ten inches to reach a season average. While January has been dry, some rain is expected for February. In the meantime, grass that sprouted after the flood-like proportions in December has started to become golden-tipped and late spring grasses are already appearing, in addition to a few early daffodils. For those of you that were praying that California would receive rain, your prayers were answered in December, but please don't get off your knees yet.



After the December rains, the small creek in the back of our property filled to the top.

The lack of rain brings up another issue. As before mentioned, the critical months for rain are November through January. This next month is February, and the almond buds will soon be in full bloom. Rain that comes during this time might create conditions conducive for bud diseases. Any more rain that was going to come should have come in January.

Another winter issue we are experiencing concerns a freeze requirement. This requirement stipulates that roughly 300-600 hours of temperature below 45 degrees before January 15th is needed for the almond buds to develop properly. We have only had 302 hours below 45 degrees, which is close to the requirement but not close enough. It is hard to say now how this will affect production.

### NOVEMBER - JANUARY

#### In this issue:

- Cold and Wet?
- December Work
- Busy Times
- On That Note ...



## DECEMBER WORK

Late this last November, we planted a cover crop on the orchard floor. We have done this twice before but neither seeding was successful, in large part due to the drought. So this year, in hopes of a better rainy season, we planted a cover crop of radish, mustard, and vetch. The planting begins by disking the earth and then the seeds are scattered on the ground through an attachment to the back of the tractor. Rain quickly followed the sowing and the seedlings emerged healthy and green by the beginning of December. These plants will grow to heights of 3-4 feet, and then in the spring will be mowed down and disked into the earth. University research points out the need to turn the cover crop under to promote nutrient movement into greater depths of the soil. This will add important nutrients to the orchard, primarily nitrogen, and will help the trees to produce bountifully and remain healthy and strong. In addition to adding nutrients, when the plants' roots are cut by the disk, the dead roots decay and the remaining holes will help to carry moisture and nutrients into the soil.



After every harvest, there are inevitably almonds that are still on the tree called "mummies". Before February 1st we must knock them off. The mummies must be knocked because they become wintering homes for the damaging navel orangeworm.

## CAPAY HILLS ORCHARD

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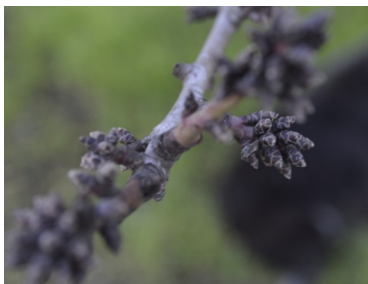
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Top to bottom: Brian pruning the front orchard; the dormant, spur stage of the almond; and the bud stage of the almond.

## BUSY TIMES

January is another busy month in the orchard. This month saw us pruning back unwanted growth on all 1400 almond trees. Pruning is not an art, it's a science. We prune only for a reason, not for beauty. Branches are removed that obstruct tractor and harvest operations or that target dense areas or middle areas. Middle growth is discouraged in organic orchards because it inhibits air flow through the tree, which can create humid conditions for disease and fungus.

We also use a fancy air-blast sprayer to spray mined minerals (copper, sulfur, zinc, etc.) to help with nutrient uptake and disease prevention. All these products are organic certified.

Another task is drip irrigation maintenance. Our subsurface drip sometimes gets plugged up and we need to dig down and insert another emitter... about 100 times over. Winter is the best time to do this because the ground is generally soft.

As previously mentioned, while the winter months are considered an orchard's dormant period, in reality, an orchard is quite busy during these months. In addition to seeding of cover crops, mummy knocking, spraying, and pruning, the tree itself is in a critical and quiet period of growth. Shortly after the fall harvest, the almonds of next year's harvest begin to form. The first stage of this growth occurs in the late fall and early winter. The almonds at this point are called spurs and resemble tiny polished pinecones. By late January and early February, the spurs have developed into their delayed-dormant period of the bud. The buds at this time are a velvety pink-and-green with a brown base. From a distance, the orchard is a gentle pink-silver, the pink of the buds and new tree growth blending peacefully with the silver-gray of the trunks and branches. While this is a beautiful time in the orchard, only a week or two more will see the orchard in its full, blooming beauty.



## ON THAT NOTE ...

If you would like to learn more about the unique growth of an almond, you can visit this website: <http://thealmonddoctor.com/2009/06/22/the-seasonal-patterns-of-almond-production/>. It gives wonderful detail and descriptions about the almond growth process.

As to almond growth in general, we hope that our own almonds are developing as they should be and that we will see a more bountiful harvest than the previous year. As you know, we had such a small harvest last fall that we were completely sold out of almonds by December. The next harvest will not be until August of this year.

The next three months of February, March, and April are the spring months of new growth. Trees will be in full bloom, and the tractor will be in full use with mowing and disking. Hopefully, we will also receive more rain during this time.

And so we conclude this winter newsletter with a request we have for you. We love to find out how our customers discover us, whether it be through Internet searches, word-of-mouth, or other methods. Would you please email us how you have found our orchard website? We would love to hear from you!