

ALMONDS in a Nutshell

Almonds are a Top-Ten crop in California. All the almonds purchased in the United States come from California! And about 80% of almonds purchased in the world come from our great state!

A Season of Almonds



WINTER - Dormancy

- Trees are dormant or resting.
- All leaves have dropped.
- Trees are storing up nutrients.



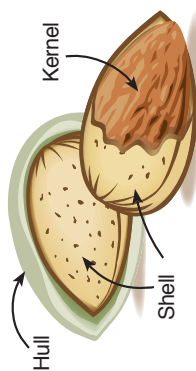
- Almonds are used as a protein source for natural disaster victims.
- Almond extract is not made from almonds. It usually comes from apricot or peach pits.



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- Bees can fly 22 miles per hour and fly five miles round trip
 - Bees have five eyes.



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SUMMER - Growth

- Almonds continue to mature with the shell hardening and the kernel developing.
- Hulls begin to split, allowing the inner shell to begin to dry.
- When the almonds are ready to be harvested, the hull will begin to open. This is called the hullsplit.



FALL - Harvest

- The **grower** shakes the trees with a machine called a shaker. The almonds fall to the ground.
- After the almonds have dried for about a week, they are swept into rows by a machine called a sweeper.
- Almonds are picked up by a harvester and trucked to a processing plant to be packaged and shipped throughout the world!



CAREER: Apiarist/Beekeeper

Shannon Wooten (pictured with his wife, Glenda), is an entrepreneur who has been stung the spring time, you can get stung 50-100 times per day!

What is your job? I raise and sell queen bees; which is time consuming and technical, so most beekeepers don't do it.

What is something interesting about your job? I handle my bees without a suit or gloves. If you handle the bees gently, they won't sting you. In a colony is a box of bees with about 40,000 bees and 1 queen.

What is something interesting about your job? I have my bees ready to pollinate trees. I feed them protein and carbohydrates to get them strong and ready for **pollination**.

Anything else you'd like to share? As early as January, I start 500 to 600 bees per day.

Source: Almond Board of California.

Source: Almond Board of California, www.almonds.com; University of California Cooperative Extension, fruitandnuts.ucdavis.edu/data/store

Bee Activity:

Because of a problem called Colony Collapse Disorder or CCD, bees are disappearing across the country. Farmers have to 'rent' bees to pollinate their trees.

Almond farmers depend on bees, but there has been a shortage in the United States. Talk to your local Cooperative Extension or write a letter to your local beekeeper and find out how we can save the bee population. Research online about how to keep bee colonies healthy. Present your findings to your class.

STEM Activity

Design an Orchard

Orchards are planted in different patterns with different spacing. A common pattern is square with spacing of 22 feet x 22 feet. Plan out your own orchard with a scale drawing. Calculate how many trees you will plant per acre and then using graph paper, map out where your trees will be. Use one inch graph paper and show your calculations.

Steps

1. Make calculations:
1 acre = 43,560 square feet
Tree spacing = 22 ft x 22 ft = 484 square feet per tree
43,560 square feet / 484 square feet = 90 trees
2. Using 1 inch graph paper, scale your drawing to 1 inch = 22 feet
3. Map out where your trees will be, can you get 90 trees on your page? If not, you will need to show less than 1 acre.
4. Add your math calculations, scale, and any labeling.
5. Decorate your orchard, name your ranch, and color.
6. Challenge: Research other orchard planting patterns and spacing. Do another scale drawing.

CA Standards: ELA: CCSS: W.3-5.4, 7, SL.3-5.4, W.6-8.4, 7, SL.6-8.4, RST.6-8.1, WHST.6-8.4, 7, Math CCSS: 3.0A, 3.MD, 4.OA, 4.MD, 5.G.2, 6.NS.2, 3, 6.G.1, 7.NS.2, 3, 7.EE.3, 7.G.1, 7.G.6; NGSS: 3-LS1.B, 4-LS1.A, 5-ESS3-MS-LS1.B, MS-LS2.A.