

CALIFORNIA ALMOND HULLS



In 2020, the California almond industry is estimated to produce **3.0 million tons** of almond hulls.



Non-GMO dried almond hulls from California are an energy and fiber feed that have been a staple for California dairies for a century. They're an all-natural, minimally processed ingredient that is a perfect complement to alfalfa and beet pulp, at about half the cost. California dried almond hulls can improve milk production, herd health, and your dairy's bottom line.

DRIED ALMOND HULLS

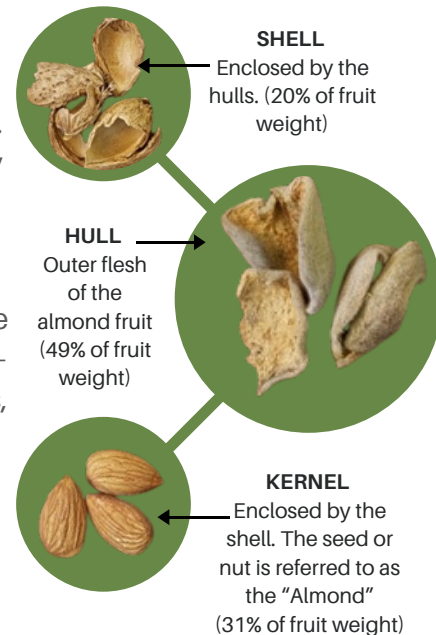
The California almond crop is harvested starting in late July. The almond fruit is shaken off the tree, dried on the orchard floor, and picked up for transport to the huller/sheller. The almond fruit goes through the hulling and shelling process, which mechanically separates the fruit into its three constituent products: hulls, shells and kernels.

FEEDING DRIED ALMOND HULLS

When incorporated into a ration for lactating dairy cows, dried almond hulls have the potential to increase milk production, with an increase of income over feed cost – especially in areas where available forage quality and quantity is limited. In these areas, dried almond hulls provide the following benefits:

- HIGHLY PALATABLE ENERGY SOURCE
- EASILY DIGESTIBLE CARBOHYDRATES
- ROUGHAGE SUBSTITUTE
- FEED EFFICIENCY FOR DAIRY OPERATIONS
- EXCELLENT SOURCE OF SUGAR

The physical characteristics of whole dried almond hulls promote rumen health, resulting in enhanced milk production and reduced feed costs. Research shows dried almond hulls can be incorporated into a baseline feed ration for a lactating dairy cow at levels as high as 20 percent. Almond hulls provide similar nutritional content to more expensive alternative feed ingredients and with an overall nutritional value equal to mid-grade alfalfa hay.



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STANDARDS AND QUALITY

California commercial feed standards are regulated by the California Department of Food and Agriculture (CDFA), which sets commercial standards and defines the three basic quality classes of almond hull products:

- Almond Hull - max 15% fiber (commercially identified as "prime")
- Almond hull & shell - max 29% fiber (commercially identified as "hull & shell")
- Almond shell - over 29% fiber (commercially identified as "shell")

All California almond products are non-GMO.



NUTRITIONAL PROFILE

The high level of soluble sugars in dried almond hulls are particularly attractive to dairy cattle nutritionists since soluble sugars are readily fermented in the rumen of the cows, but do not lead to accumulation of lactic acid, which can create a rumen condition called lactic acidosis.

Dried almond hulls are classified as a feedstuff with a moderate neutral detergent fiber (NDF), low crude protein (CP) and high soluble carbohydrate - leading to a moderate net energy for lactation levels.

California is the largest milk producer, and the only almond producer, in the United States. In a survey of California Dairies, 81 percent (118 dairies) of respondents indicated that they feed almond hulls, by far the highest percentage of all by-product feeds used. With anticipated production of 3.0 million tons, California dried almond hulls have the potential to make a significant impact on Asian dairies that are challenged with limited availability of poor quality local forage options and expensive imported fiber and energy feeds. To learn more about almond hulls, visit AlmondAlliance.org/Almond-Hulls/

ABOUT THE ALMOND ALLIANCE

The Almond Alliance is a trusted non-profit trade association solely dedicated to advocating on behalf of the American almond industry. As a membership-based organization, our members include almond processors, hullers/shellers, growers and allied businesses.

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