Water use efficiency practices and irrigation management are central to the success of California's Central Valley almond growers. Advanced production practices over

the past 30 years have helped almond growers improve their water efficiency by 33% for every pound of almonds

grown today¹.

When it rains

almond growers reduce the water they apply to their orchards.

Almond trees need water throughout their growing season, typically

February into October, depending on the variety.

In addition to rainfall,

almond trees receive water from other sources like surface water and/or groundwater.

growers take what water they do receive and prorate application throughout the season.

In drought years



CIMIS stations are automated, local weather stations growers use to track water loss. These stations allow them to tailor each round of irrigation to the trees needs.

Micro irrigation: 70%

of almond orchards use micro irrigation systems³, decreasing water runoff, putting water in the root zone and allowing for precise timing and rate of irrigation.

The two types are:

Drip line:

Emitters on the hose target water application directly to where the tree needs it.

Micro sprinkler:

Distributes water in a circular pattern directly above roots.

Soil-Centric System Planning:

of growers use soil maps when designing irrigation systems that best meet the soil characteristics of their orchard to improve water distribution and infiltration².

Agricultural water use

is on the decline while the value of California agriculture is increasing. Revenue for California ag increased about 85% between 1967 and 2010. During that period, total applied water to crops was reduced by more than 5%5.

The Future

Applicatio

The Almond Board of California invests almost \$2 million a year researching production and environmental issues. Current research projects include:



The Almond Board started researching traditional almond breeding in 1974. Over the years, this research has added focus on almond tree and root traits that require less water and can withstand higher salinity. Progress in this area is long term.



Soil can vary significantly – therefore the Almond Board is funding research to manage irrigation and production practices that can match the different soil types within one orchard.



Ongoing research will increase irrigation efficiency by improving understanding of complex factors like tree size that impact evapotranspiration (water lost through soil, air and leaves).

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Practices