

# EVOLUTION OF CASP

## INDUSTRY LED DEFINITION OF SUSTAINABILITY

Sustainability has always been in the DNA of the California almond industry – 91% of almond farms are family farms and nearly 70% of California’s approximately 7,600 almond farms are 100 acres or less. The California Almond Sustainability Program (CASP) was launched in 2009 following a multi-year effort on the part of the California almond industry to define the term ‘sustainability’ in the specific context of California almonds. CASP was the industry’s approach to developing a program for growers, defined by them, with input from key stakeholders, including researchers, handlers, and production experts, incorporating the many decades of research on almond production.

## BY THE INDUSTRY, FOR THE INDUSTRY – WITH THIRD-PARTY EXPERT INPUT

CASP started with a focus on education and outreach based on best management practices. CASP launched with 2 modules—Irrigation Management and Nutrient Management—growing over time to include 9 modules with over 500 self-assessment questions. The content for the modules was developed by experts and researchers working across a number of world-renowned institutions, including the University of California Cooperative Extension, University of California and California State University systems, and the U.S. Department of Agriculture. The assessment module content was further peer reviewed by the U.S. Environmental Protection Agency, the California Department of Pesticide Regulation and other state regulatory agencies.



## SUSTAINABILITY

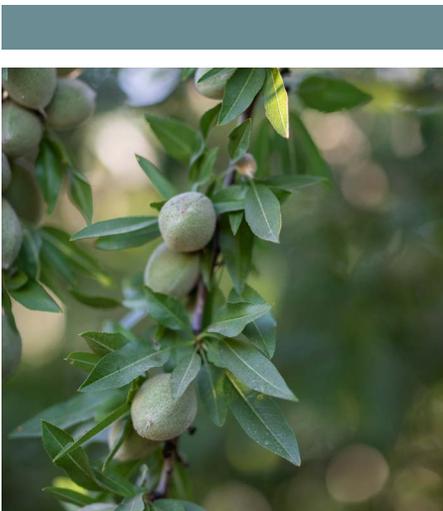
Sustainable almond farming utilizes production practices that are economically viable and based upon scientific research, common sense and a respect for the environment, neighbors and employees. The result is a plentiful, healthy and safe food product.

## WITH GUIDANCE FROM AN INDEPENDENT FOOD AND AG LEADER, SUREHARVEST

Since CASP’s inception, SureHarvest has worked with the Almond Board as a trusted third-party to support program development, including the web-based assessment and reporting platform. SureHarvest brings over two decades of experience working on technology-enabled sustainability solutions with a variety of grower groups, industry associations and agribusinesses. A critical component of SureHarvest’s role in CASP is to function as steward of the CASP dataset. This involves confidentially and securely managing data from CASP assessments and conducting ongoing analysis and interpretation of the data.

## CONTINUOUS IMPROVEMENT LEADS TO GREATER PARTICIPATION

- ▶ One of the key innovations that drove industry participation in CASP was a shift from paper-based self-assessments to a web-based assessment and reporting platform in 2012.
- ▶ Decision support calculators were developed and released in 2014 to complement the self-assessment modules and provide growers with turn-key regulatory compliance reports, such as Nitrogen Management Plan reports required by the California Irrigated Lands Regulatory Program<sup>1</sup>.
- ▶ The Supply Chain Program launched in 2019, the 10-year anniversary of CASP, offered a means for growers to anonymously share aggregated self-assessment data with their handlers, who in turn, can share the aggregated results with their customers.



<sup>1</sup>As of 2020, the CASP calculator that generates this report has been updated to become the “Irrigation and Nitrogen Management Plan” reflecting regulatory updates.

## GAINING THIRD-PARTY RECOGNITION OF CASP

As part of the Supply Chain Program, the Almond Board collaborated with the highly regarded Sustainable Agriculture Initiative (SAI), a global network comprised of over 100 leading food and agriculture organizations, to align CASP with their widely accepted, international Farm Sustainability Assessment (FSA). CASP, in combination with the US and California regulatory systems, was benchmarked to the FSA and achieved a FSA Gold-level equivalency with the result validated through an independent review process.

## WHAT'S NEXT

CASP provides a foundation for the industry and almond growers to “tell their story” based on statistically significant data related to their orchard management practices. Current and future developments build on that foundation in linking the supply chain, providing decision support tools to growers, and continuing to convey the almond sustainability story by using CASP as the basis for translation to other global initiatives.



## 2017

### FSA Gold-Level Equivalency

CASP achieved a Gold-level equivalency status with the Sustainable Agriculture Initiative Platform's Farm Sustainability Assessment, Version 2.0 (updated in 2018 to Version 2.1).

- ▶ The independently validated benchmarking process recognized the comprehensiveness of CASP and the California regulatory environment.

### Development of the Irrigation Improvement Continuum based on the Irrigation Management module

## 2009

### CASP begins!

#### First modules completed at ABC-led meetings

- ▶ Irrigation Management
- ▶ Nutrient Management

## 2013

### First CASP Report

- ▶ Released to industry at The Almond Conference, the report analyzed all self-assessment data from the past five years and looked at strengths and opportunities for improvement within the industry.

## 2010

### Handlers host CASP workshops for grower attendees

## 2015

### ABC Adds 3 Modules to CASP

- ▶ Financial Management
- ▶ Ecosystem Management
- ▶ Workplace and Communities

### Nitrogen Management Plan Reporting, Mapping Tool Debuts

- ▶ Growers can drop pins to plot well locations and discharge points. They can also create the report required for Part D of ILRP's Farm Evaluation Plan and for their Nitrogen Management Plan.

## 2018

### ABC Launches Supply Chain Program

- ▶ Growers can voluntarily share CASP data with their handlers, who receive a consolidated report on how their growers' practices compare with the state average and may share those reports with buyers to answer their sustainability questions.

## 2011

### ABC Adds 3 Modules to CASP

- ▶ Energy Efficiency
- ▶ Air Quality
- ▶ Pest Management

## 2012

### ABC launches online CASP assessment portal [SustainableAlmondGrowing.org](http://SustainableAlmondGrowing.org)

## 2014

### Nitrogen Budgeting Calculator debuts

- ▶ Tool advises how much and when to apply nitrogen fertilizer to meet yield-based demand. Growers can use this tool to generate part of their Nitrogen Management Plan report required by the Irrigated Lands Regulatory Program.

## 2016

### ABC Adds 1 Module to CASP:

- ▶ Bee Health and Pollination

### Irrigation Scheduling Calculator Debuts

- ▶ Generates irrigation run time schedules
- ▶ Advises the amount, timing of irrigations based on local ET and one's individual orchard and irrigation system

[SustainableAlmondGrowing.org](http://SustainableAlmondGrowing.org) optimized for mobile devices

## 2019

### Industry Celebrates CASP 10 Year Anniversary

#### CASP data serves as the baseline metric for many Almond Orchard 2025 Goals

#### Over 7,000 CASP modules completed since 2009

Source: California Almond Sustainability Program, 2018.

### Irrigation and Nitrogen Management Plan (INMP) debuts

- ▶ Consolidates information needed for ILRP reporting