CALIFORNIA ALMOND SUSTAINABILITY PROGRAM (CASP) AND THE SUPPLY CHAIN

BRINGING GROWER PRACTICES AND MARKET PRIORITIES TOGETHER

GROWING PRODUCTION IS DRIVING THE NEED FOR TRANSPARENCY

Almonds are California's top agricultural export [1] and largest tree nut crop in total dollar value and acreage (approximately $5.5 billion and over 1.1 million bearing acres estimated as of 2019 [2]). Nearly 70% of California's approximately 7,600 almond farms are 100 acres or less and 91% are family farms. California almond exports continue to increase along with rising awareness of their nutritional benefits, as consumer interest in plant-based diets and healthy snacking expands. At the same time, the market is increasingly demanding more transparency with regard to how food is grown.

CASP CAN PROVIDE TRANSPARENCY

CASP is based on a comprehensive approach, leveraging Almond Board research, education/outreach, and self-assessment of grower practices (developed by researchers, handlers, and production experts). This program allows growers to document and "tell their story" regarding their orchard practices. Through educational workshops and a confidential self-assessment benchmark report, growers can quickly identify strengths and opportunities for continuous improvement.

CREATING SUPPLY CHAIN VALUE

Trust and confidence in grower practices is essential throughout the supply chain – but finding a common language is difficult. In 2017, the Almond Board partnered with the Sustainable Agriculture Initiative (SAI) to benchmark CASP, coupled with applicable state and federal regulations, against SAI's Farm Sustainability Assessment (FSA). The result was "Gold" level equivalence – which demonstrates the comprehensiveness of the CASP program and how it can be used as an equivalent means of assessing sustainable practices relevant to the California almond industry.

CREATING SUPPLY CHAIN TOOLS

The CASP Supply Chain Program was fully launched in 2019 to increase buyer awareness of the industry's long-term commitment to sustainability and transparency. The assessment data, as well as web-based reporting platform, enable growers to share CASP assessment data with their handler(s). Handlers, in turn, receive a report showing the aggregate sustainability performance of their growers. The Supply Chain Program establishes a basis for data-driven supply chain reporting, providing more transparency on CASP performance while maintaining grower confidentiality.

California Almond Sustainability Program Recognized Globally by SAI Platform

WHAT REPORTING IS AVAILABLE

The CASP program and SAI benchmarking is evolving, and is valuable from the orchard to the consumer. But it's important to understand what is available today, and how CASP is changing:

INDUSTRY REPORTING

Approximately 23% of orchards have been assessed under CASP allowing information about key almond practices to be reported on an industry level.
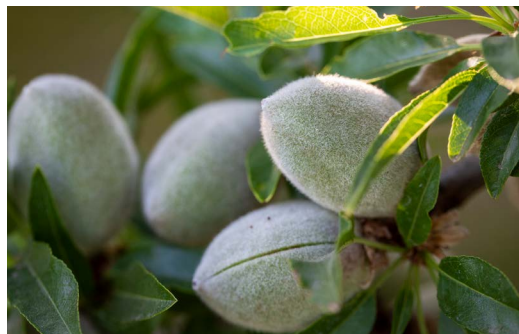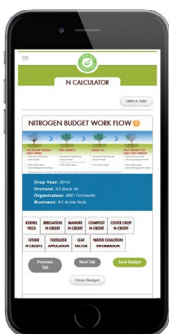
Currently Available

SUPPLY CHAIN REPORTING

Growers can opt-in to share data (only on a consolidated basis) with their handler. *If sufficient growers have agreed to share data,* a handler can generate a report specifically related to their growers' participation in CASP and their collective adoption of sustainability practices.

*Under Development

*Some handlers have opted-in and are beginning to get these reports but at this time customers can't buy from CASP only growers.

[1] CDFA. California Export Data. Table 1 – California agricultural products export values and rankings, 2015-2017. https://aic.ucdavis.edu/wp-content/uploads/2018/11/2017_CDFA_Tables.xlsx

[2] Almond Board of California, Annual Report. Almond Almanac 2019. http://www.almonds.com/sites/default/files/Almanac_2019_Web_0.pdf

WHAT'S NEXT?

The SAI Platform FSA benchmarking of CASP creates an opportunity for efficiencies and recognizes common values from the orchard to the market. The next steps for the California almond industry are to build on this foundation, creating a Supply Chain Program that responds to customer and consumer needs.

The next chapter of the CASP sustainability journey will include targeted efforts to enhance supply chain-level reporting and its relevance to buyer sustainability requirements. For example, ABC has already announced a collaboration with Pollinator Partnership, a leading North American non-profit organization dedicated to improving conditions for all pollinators, to align their Bee Friendly Farming program and the CASP Bee Health module.

Ultimately, CASP and the Supply Chain Program are unique in that they represent a perspective specific to almond production as it relates to sustainability, the most recent science and statistically validated data. In this way, there is a lot of value for buyers to glean from the California almond industry's sustainability story in the form of CASP. Buyers are encouraged to ask their handler about CASP and share the almond industry sustainability story with their customers.

EXAMPLE OF CASP REPORTING

California Almond Sustainability Program

This confidential report was prepared for:
Name: Jessie Santos
Handler Business: Acme Example Handler
Address: Turlock, California
Phone: (209) 555-1212
Email: casp@sureharvest.com

Full confidentiality is maintained for all information provided and generated this report. Individual assessment results have not been shared with other individuals or organizations.

Date of data extract: **February 19, 2019**
Assessment years: **2017 and 2018**
Number of orchards opted in*: **100**
Number of planted almond acres opted in*: **10,235**

*The term "opted in" refers to those orchards with information in the CASP online platform who have opted to share information with their handler. Data presented here is only from those orchards that opted in.

Module Assessment Summary

The nine CASP assessment modules are designed to document production practices while providing an opportunity to verify that grower's techniques are up-to-date, practical, efficient and sustainable.

Assessments are from the 2017 and 2018 assessment years.
Number of orchards with data in any assessment module: **80**
Total planted acreage of orchards with data in any assessment module: **7,471**

Orchards Opted-in by Module	No. of Orchards
01- Irrigation Management	79
02- Nutrient & Soil Management	70
03- Air Quality	73
04- Energy Efficiency	72
05- Pest Management	77
06- Ecosystem Management	71
07- Financial Management	70
08- Workplace & Communities	71
09- Bee Health & Pollination	80

Irrigation Continuum Summary

The CASP online system includes the Irrigation Improvement Continuum with 22 questions that describe irrigation practices. The table to the right shows the number of orchards scoring 1.0 or better. Some of the opted in orchards might not have completed the Irrigation Continuum.

See http://www.almonds.com/irrigation or Almond Irrigation Improvement Continuum for more information.

Opted in Orchards Scoring 1.0 or Better on the Irrigation Continuum		
	Assessment Year	
	2017	2018
Orchard Water Requirements	24	42
Irrigation System Performance	1	45
Applied Water	24	53
Soil Moisture	24	39
Plant Water Status	24	45
All Measurements: 1.0 or Better	1	27

SAI Platform Farm Sustainability Assessment (FSA)

The table to the right shows the number of orchards in each SAI FSA category including Not Yet Attempted*, Not Yet Bronze, Bronze, Silver and Gold.

For more information about SAI FSA see: http://www.fsatool.com/

*Not Yet Attempted means that the orchard has not answered all relevant CASP questions to calculate FSA V2.1 score.

Opted in Orchards for SAI FSA Scoring		
	Assessment Year	
	2017	2018
Not Yet Attempted*	3	11
Not Yet Bronze	0	9
Bronze	0	9
Silver	24	29
Gold	0	0

Summary of Response Rates for Opted-In Orchards According to Module

Summary only for questions with responses of Yes*, No, or Not Applicable. Categorical or numeric data not shown.

*Summary of response rates only includes questions where "Yes" represents a positive or beneficial practice. There are a few questions where "Yes" is neutral or negative that were not included here.