



Online Decision Support Tools for Avocado Production: An Almond Example

Cliff Ohmart, PhD| SureHarvest

Senior Scientist



WHO IS SUREHARVEST?

- Formed in 1999
- A sustainability solutions company working in the agri-food value chain delivering:
 - ✓ practical strategies
 - ✓ proven technologies
 - ✓ exceptional services
- Solutions accelerate:
 - √ financial profitability

INDEX FRESH

- ✓ environmental stewardship
- √ social progress
- Services often coupled with farm mgt. and sustainability program mgt. software technologies



WHAT DOES SUREHARVEST OFFER?



Current Technology and Service Solutions:

- Sustainable Sourcing
- Sustainability Programs & Diffusion of Innovations
- Compliance Management
- Certification Management
- Verification Services
- Farming Information Management







FARMING MIS



- Deployed on more than 140,000 acres of premium winegrapes and other fruit, nut, vegetable, and field crops
- Plan, schedule, record, analyze and report on all farming activities























SUSTAINABILITY MIS



- Supports more than 2,200 agri-food operations managing upwards of 450,000 acres
- Serves winegrapes, almonds, hazelnuts, mushrooms, cut flowers, stonefruit, citrus



















PROFESSIONAL SERVICES

- Working with more than 60 clients spanning the US Food and Agriculture value chain
- Designing and executing sustainability performance management



- Strategic consulting and facilitation
- Program evaluation

















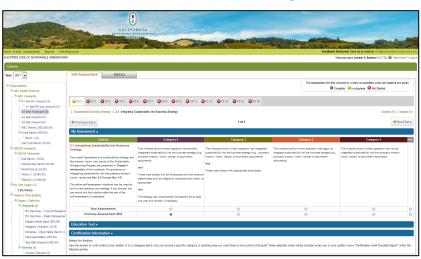


HOW DID SUREHARVEST GET INVOLVED IN DECISION SUPPORT TOOLS?

O C 4 O NIES O N

- Developed user friendly software platform for sustainability program management
- Original tool was practice self-assessments initial crop was winegrapes & wine









HOW DID SUREHARVEST GET INVOLVED IN DECISION SUPPORT TOOLS?



- As wine program matured a need for metrics calculators became apparent
- Calculators were installed in SMIS for a one stop shop for user tools

Calculated Metrics			Totals
-	Energy Intensity Take Action	0.00 kWh per acre 0.00 kWh per ton	0.00 kWh
~	GHG Intensity Take Action	Direct Emissions 0.0 lbs CO ₂ e per acre 0.0 lbs CO ₂ e per ton Embedded Emissions 0.0 lbs CO ₂ e per acre 0.0 lbs CO ₂ e per ton Total Emissions 0.0 lbs CO ₂ e per acre 0.0 lbs CO ₂ e per acre 0.0 lbs CO ₂ e per ton	0.0 lbs C0 ₂ e
4	Water Use Efficiency Take Action	0.00 Acre-Inches per acre applied 0.00 Acre-Inches per ton	0.00 Acre-Inches
¥,	Nitrogen Applied Take Action	0.00 lbs N per acre 0.00 lbs N per ton	0.00 lbs N





HOW DID SUREHARVEST GET INVOLVED IN DECISION SUPPORT TOOLS?

- Water and nitrogen management became an important focus for the California Almond industry
- Calculators were installed in California Sustainable Almond Program's SMIS for a one stop shop for user tools for Almond Board of California members





lome Assessments

Tools

HOMF

QUICK LINKS

Assessments

Go to Assessments
Clone Assessments

Tools

N Calculator

Irrigation Calculator

Orchards/Facilities

Add an Orchard
Go to Profiles
Go to Maps

Reports

Action Plan Notes
Assessment Answers
Assessment Comparison
ILRP Compliance Map

Irrigation Improvement Continuum
Nitrogen Management Plan

Events

Help

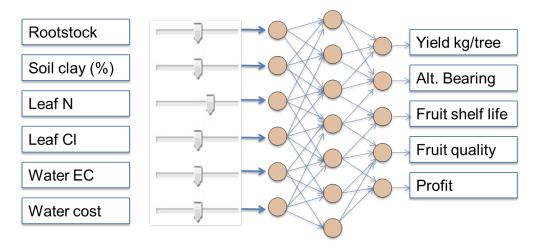




WHAT DOES SUREHARVEST INTEND TO DO WITH THE CALIFORNIA AVOCADO COMMISSION PROGRAM?



Build David Crowley Team's Decision Support Tools into an Avocado SMIS





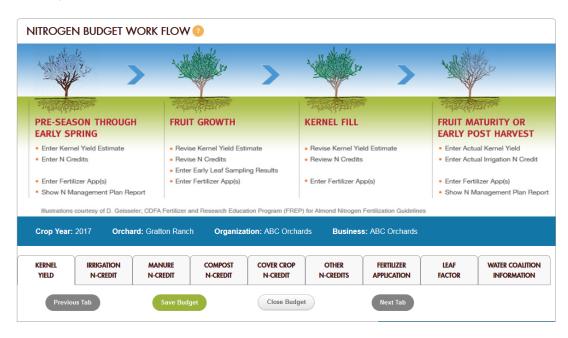


DEMONSTRATION OF THE CASP NITROGEN CALCULATOR BASED ON RESEARCH BY DR PATRICK BROWN & TEAM



N CALCULATOR











Go to Almond N Calculator





SEMINAR — SERIES —



Thank You

Questions ??

