



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



STEWARDSHIP INDEX FOR SPECIALTY CROPS

Sustainability Partnerships: Standards, Metrics & Markets

Stewardship Index for Specialty Crops

Barbara Meister, SureHarvest

USDA Agricultural Outlook Forum

February 24-25, 2011



Presentation Overview

1. About the Stewardship Index for Specialty Crops
2. Preliminary Findings from Pilot Testing Metrics
3. The Path Ahead for SISC
4. Why metrics?
5. Building Capacity for
Data-driven Continuous Improvement



“My family has been farming this ground for four generations – now that’s sustainability.”

But will your grandchildren be able to do the same? The world they farm in will be very different ...

- More people
- Less land
- More pressure on fewer resources



UNILEVER SUSTAINABLE LIVING PLAN

Small Actions. Big Difference.

OUR TARGETS

By 2020 we will source 100% of our agricultural raw materials sustainably:

- 10% by 2010
- 30% by 2012
- 50% by 2015
- 100% by 2020

Sustainable Food & Agriculture

The food and agriculture sector has a greater impact on our natural world than any other part of our economy. It dictates the use of half the earth's habitable land, uses two-thirds of the world's freshwater resources, consumes more than 10% of all energy, and employs over one billion people.

Sodexo—together with our business partners, clients, and customers—is promoting a food and agriculture system that is in balance with our natural world, supports the health of the people we serve, and treats fairly the people involved in production. At more than 6,000 sites across North America, we offer an increasing selection of affordable, healthy, sustainably-grown and responsibly-traded choices.

- ▶ Message from George Chavel
- ▶ Message from Arlin Wasserman
- ▶ About Us
- ▶ Environmental Performance
- ▶ Sustainable Food & Agriculture
- ▶ Health & Wellbeing
- ▶ STOP Hunger
- ▶ Diversity & Inclusion
- ▶ Business Integrity
- ▶ Awards
- ▶ Better Tomorrow Commitments

sodexo
Making every day a better day

Learn about our work to promote sustainable food & agriculture >>



ABOUT
Values



Supplier Sustainability Assessment: 15 Questions for Suppliers

Our Road Map for a Sustainable Supply Chain



Are we talking the same language?

We need a common language for measuring sustainability.

That common language is **metrics** – the yardsticks that measure performance – not *what* you do (practices) but measuring the *impact* (results) of what you do.

>>>Stewardship Index for Specialty Crops



SISC Goals

“The project will offer a suite of outcomes-based metrics to enable operators **at any point along the supply chain** to benchmark, compare, and communicate their own performance. The Stewardship Index will not seek to provide standards, but will instead provide a yardstick for measuring sustainable outcomes.” --SISC Introduction and FAQ, approved 12/1/2008



Why performance metrics?

- 1. Respond to marketplace demand for more information**
 - >>> Reduce duplicative sustainable reporting systems
 - >>> Data for backing marketing claims
- 2. Drive internal business management strategy**
 - >>> Identify cost reduction opportunities
 - >>> Drive best practices innovation
 - >>> Manage risk
- 3. Reduce regulatory pressure**
 - >>> Solve problems proactively



Stewardship Index Coordinating Council

Bold = Steering Committee

Growers

Community Alliance with Family Farmers • DelCabo • Farm Fresh Direct • Georgia Fruit and Vegetable Association • **National Potato Council** • Torrey Farms • United Fresh Produce Association • Washington Horticulture Association • **Western**

Growers

Buyers

California Sustainable Winegrowing Alliance • California League of Food Processors • Compass Group • Del Monte • Food Marketing Institute • Heinz • **Markon Cooperative** • **Produce Marketing Association** • Sam's Club • Sodexo • SYSCO • Unilever • Wal-Mart • Wegmans •

NGOs & Experts

American Farmland Trust • California Rural Legal Assistance Foundation • Defenders of Wildlife • Environmental Defense Fund • **NRDC** • Organic Center • SureHarvest • **Sustainable Food Lab** • University of Arkansas • World Wildlife Fund



Metrics

PEOPLE	
	Community
	Human Resources
PLANET	
	Air quality
	GHG emissions
	Biodiversity/Ecosystems
	Packaging
	Energy
	Nutrient management
	Pesticides
	Soils
	Waste
	Water use and quality
PROFIT	
	Green procurement
	Fair price



On-Farm Metrics & Data Elements

Water Use

Applied water
Crop ET

Soil & Nutrients

Fertilizer applied
Soil organic matter

Pesticides

Application info
Product
Rate

Air Quality/Energy

Equipment usage
Pesticide usage
Electricity usage

Waste

Harvest yields
Waste items
Waste streams

Biodiversity

Vegetation types
Weed cover
Crop mgmt practices



2010 Pilot Testing

100+ growers in 17 crops in 14 states

Processing Tomatoes	Fresh market Tomatoes	Winegrapes
Citrus	Potatoes	Stone Fruit
Leafy Greens	Onions	Berries
Herbs (fresh)	Carrots	Almonds
Cherries	Pears	Apples
Green Beans	Sweet Corn	

With funding from the USDA-NRCS Conservation Innovation Grant



Pilot Objectives for 2010

Evaluating:

- Feasibility of data collection
- Data collection costs
- Usefulness and value for participants
- Usefulness and value for buyers/customers

Results will be used to refine the draft metrics.

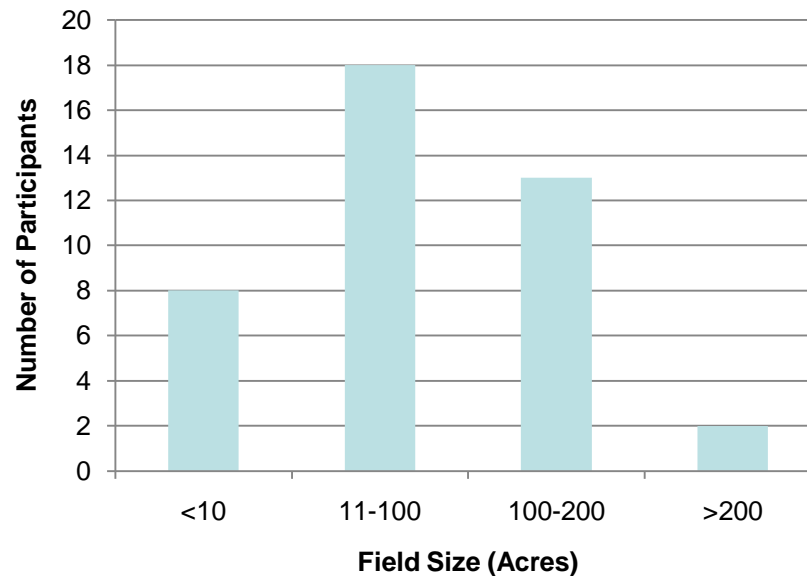


Pilot Participation

- **35*** growers in 18 crops in 8 states
- **58*** data sets (multiple fields, crops & years)
- **15** grower interviews with non-participants

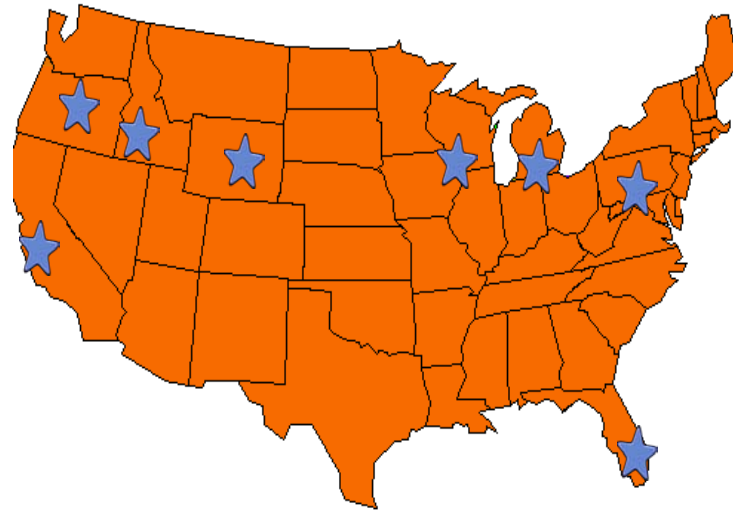
** = data still trickling in... more growers, crops, states*

Participant Field Size





Pilot Participation – Geography and Crops



<p>California: berry-nursery, carrots, herbs, lettuce, onions, oranges, peaches, raspberry, strawberry, processing tomatoes, walnuts, winegrapes,</p>	<p>Oregon: Onions</p>	<p>Idaho: Potatoes</p>
<p>Colorado: Potatoes</p>	<p>Wisconsin: Potatoes, green beans, sweet corn</p>	<p>Michigan: Potatoes, lettuce</p>
<p>Florida: Peppers</p>	<p>Pennsylvania: Potatoes</p>	



Pilot Participation – Challenges

- **Voluntary initiative** - pilot testing SISC metrics was not top of the to-do list, even when buyer called repeatedly for the data submission.
- Even for growers committed to sustainability programs, was **difficult to engage their time** commitment.
- For many, there was **not a clear perceived benefit** to the grower and concern that metrics would only advantage buyers.
- Concerns over **data confidentiality** overwhelmed perceived benefits of participation.



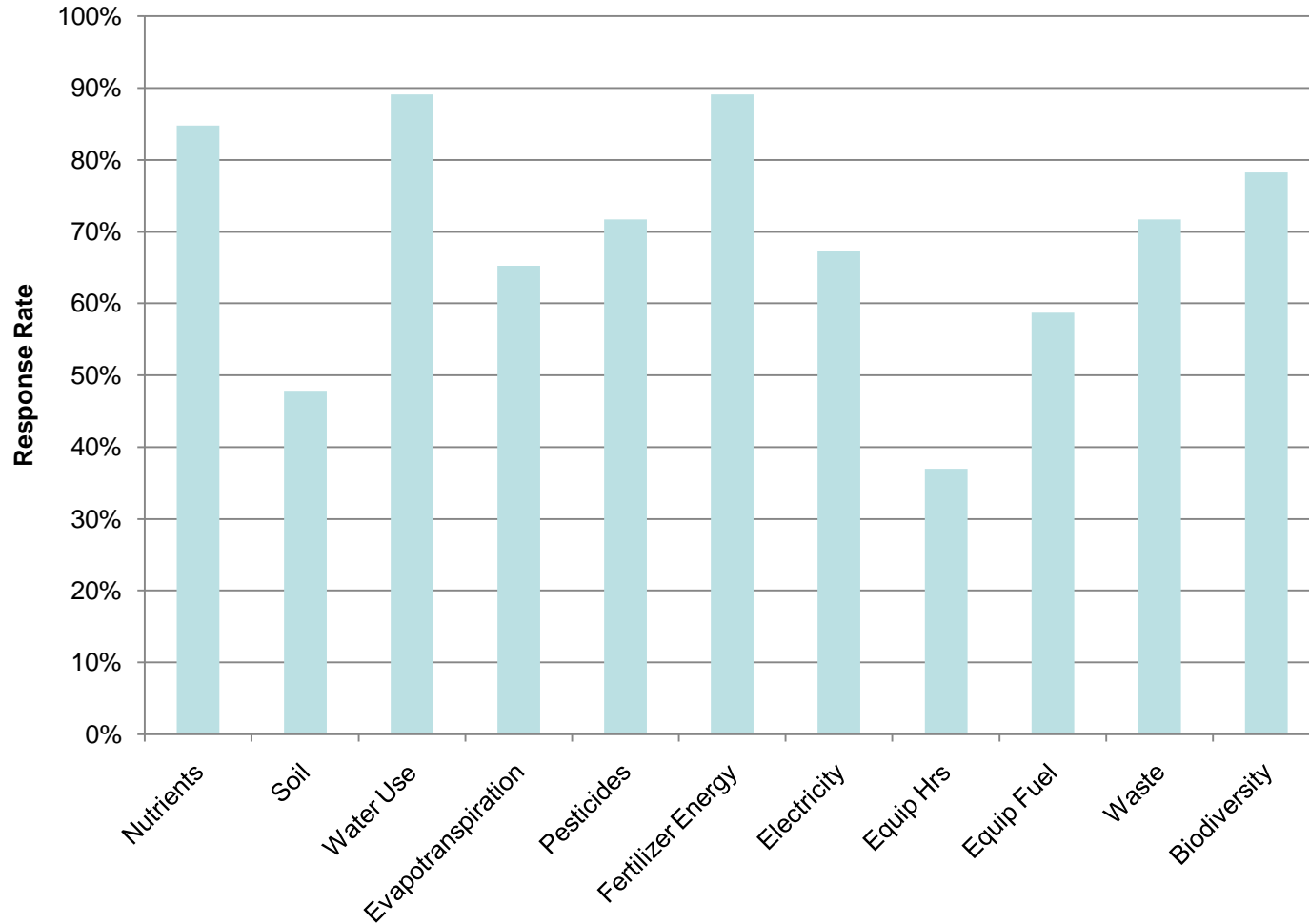
Pilot Quotes

- “Establishing **baseline** is helpful.”
- “If you can demonstrate that we will **benefit from being able to track this information**, then I am all for it. We aren’t equipped to take it on right now.”
- “I found out **how many kw** it takes to irrigate crop and **accurate \$\$ figure** in field.”
- “Very difficult to define these things. The **value is in awareness of the various factors and a consciousness of them when making decisions.**”
- “Crop production **data** is spread across different parts of business & **hard to find...**”
- “Overall impression is good, benefit by possibly **using less** water which will **save on energy costs** and fertilizer/chemigation applications.”



Pilot Participation – Data Areas

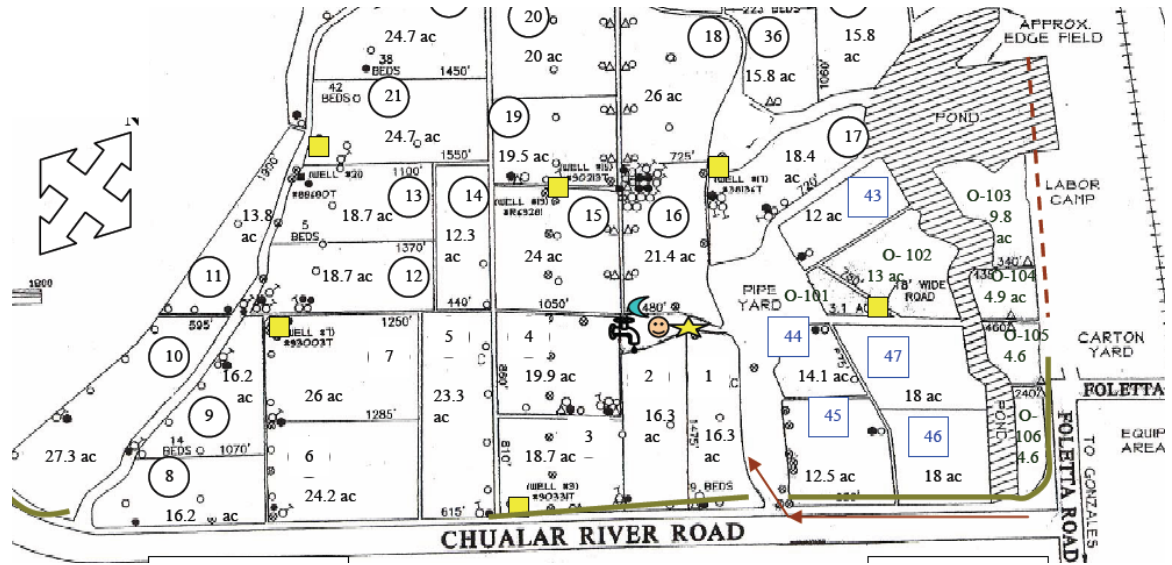
Response Summary



Response rate = those data sets that provided data for the metric areas listed



Findings –data collection complexity



Fast-paced veg production:

Lots of variables in each field = **Complexity!**



Key Findings – Data collection readiness

- Some pioneering growers collecting most of the data as requested, but the **majority of growers are not**.
- Data is **generally available, but not accessible** in the requested format.
- Some data not collected in ways that allow for **allocation** to individual fields.
- Some data incomplete; **differences in data collection** methods affected data quality.
- Data collection methods, costs, and time requirements varied.



Key Findings – Feedback on draft metrics

- The metrics are generally acceptable.
- Simplify where possible.
- Guidance on data inputs needs further revision.
- Several cross-cutting issues need to be addressed.
- The value proposition was unclear to some participants.



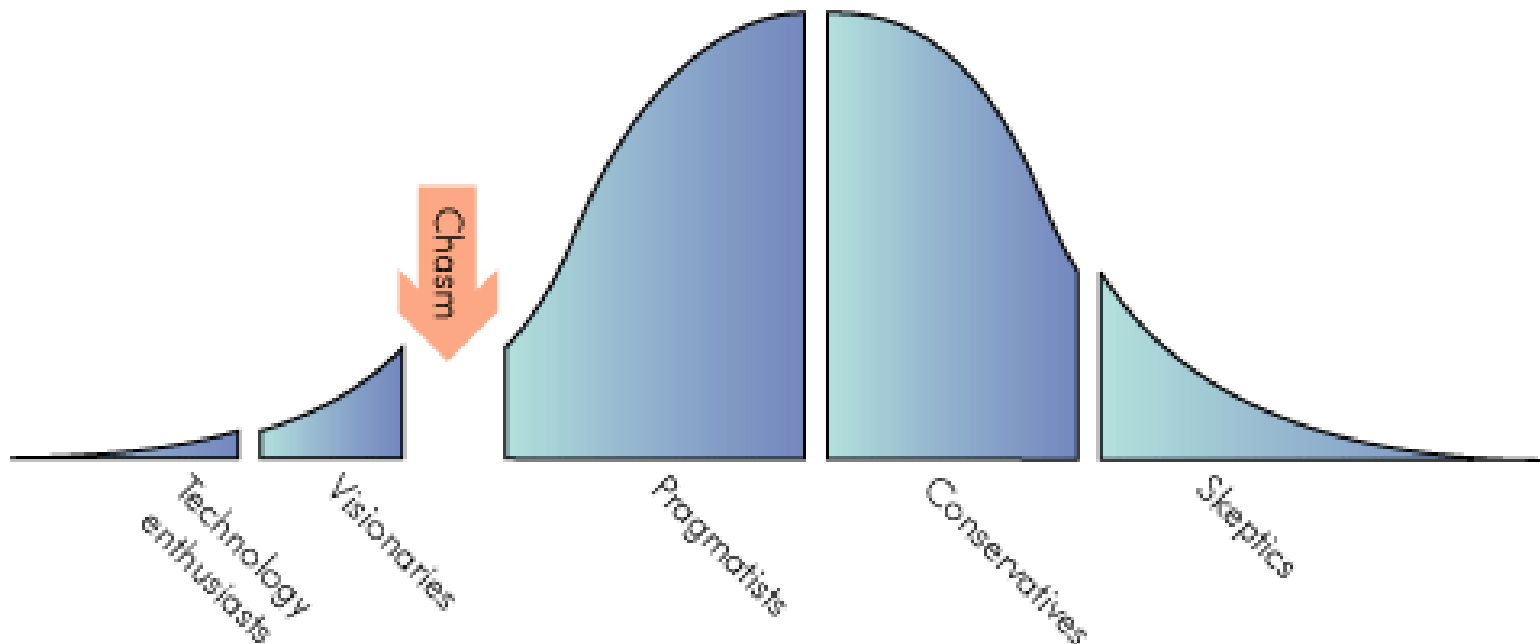
The Path Ahead

1. Release Beta version of 3-4 metrics by May 1.
 - Involve pilot growers in refining metrics.
 - Which metrics? Most useful to growers, most important to consumers and where growers have data.
2. Continue to develop and pilot test the remaining metrics.
3. **Build the capacity for growers** – through their **trade associations** - to
 - collect data for monitoring sustainability performance
 - adopt continuous improvement “measure to manage” business strategies.
4. Begin work on data aggregation software platform with needs assessment, but as a secondary priority until more farm-level data collection capacity is built.



Performance Metrics & Early Adopters

Correlation to technology/change adoption phenomenon?





Why metrics? What's in it for me?

Another buyer mandate!@#!...*or something more?*

Sustainability as a business management strategy:

>>> Do more with less.

>>> Cost savings.

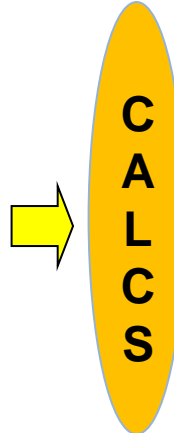
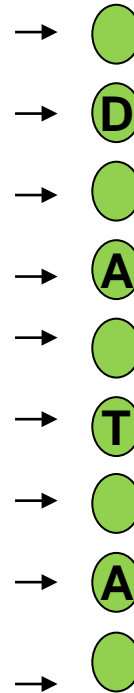
>>> Process of continuous improvement.

“Save money and farm better.”

**Metrics >> data-driven, on farm
continuous improvement.**

OUTCOMES???

What are the results on People, Planet, Profitability???



METRICS

H ₂ O
N & P
Soil C
Energy
GHG
Air Qual
Biodiver
Labor

Data Collection & Mgmt Platform

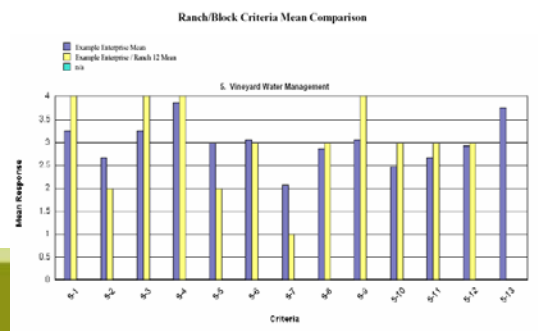
Sustainable Winegrowing Program

2001 - present

Growing and winemaking practices that are sensitive to the **E**nvironment, responsive to the needs and interests of society-at-large (social **E**quity), and **E**conomically feasible to implement and maintain.



With funding from USDA-NRCS Conservation Innovation Grants and USDA Specialty Crop Block Grants.



Self Assessment Workshops

Self Assess

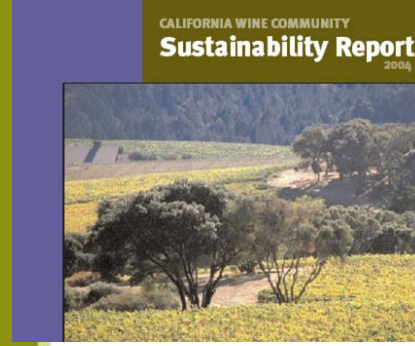
Customized Reports



Implement Change

SWP CYCLE OF CONTINUOUS IMPROVEMENT

Interpret Performance



Action Plan

Develop Action Plan to Improve

Targeted Education Workshops



ACTION PLAN				
Workbook Chapter	Criteria Number	Criteria and Area of Concern	Plan of Action	Timetable for Action
Pest Management	Criteria 6-1	Vineyard Monitoring for Insect and Mite Pests Category 1: My vineyard is rarely if ever monitored.	Monitor every two weeks.	Next growing season
Pest Management	Criteria 6-37 Page 6-68	Pesticide Emergency Response Plan Category 1: I maintain minimum legal requirements or less for a pesticide emergency response plan.	Contact Ag Commissioner's office; a typical emergency response plan looks like how to make it work on my ranch; train both tractor drivers; post plan by the sprayer fill-up.	Immediately

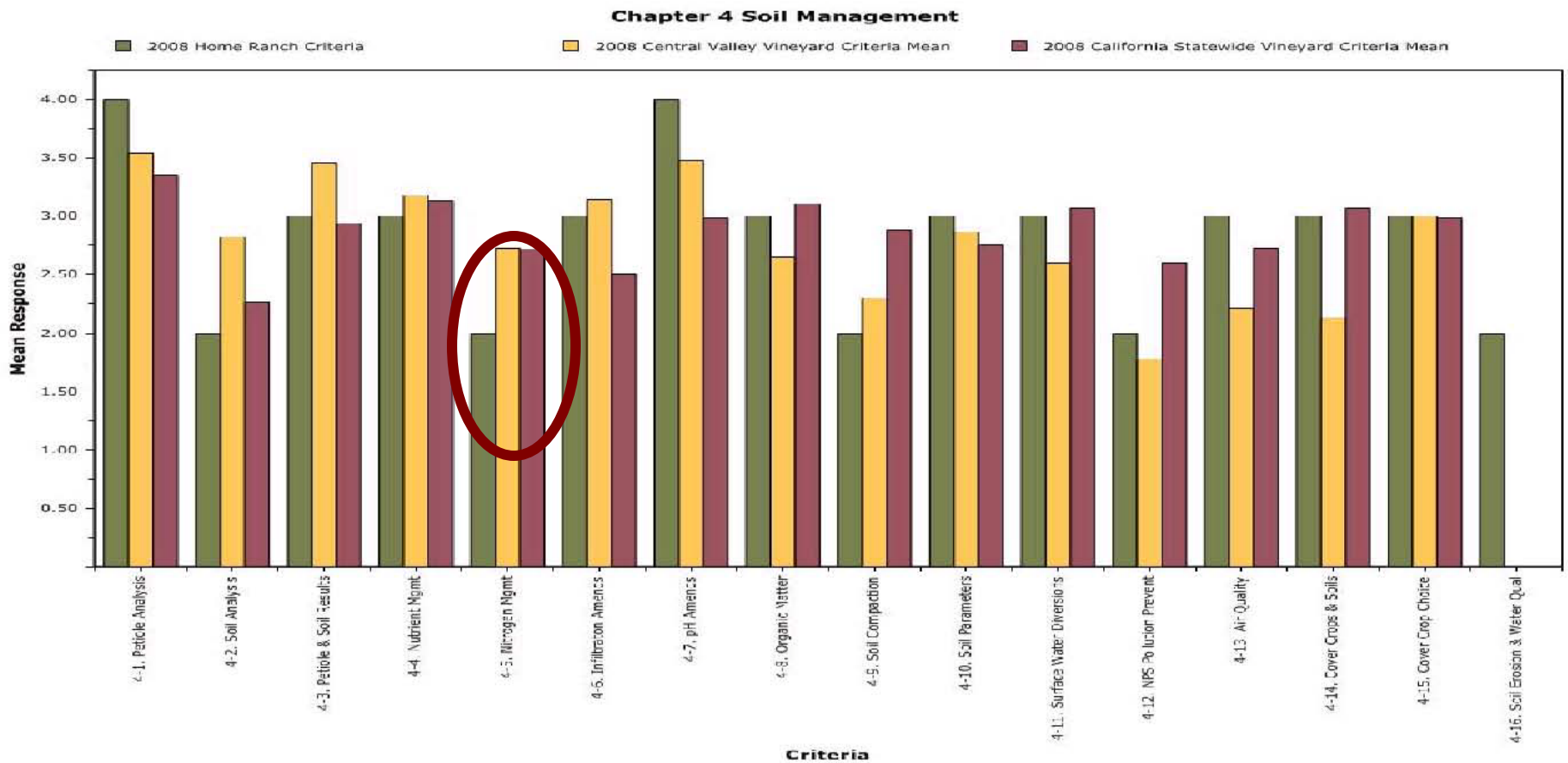
1. Decide what issues you can address.

2. Specify the issue and your area of concern

3. Determine an appropriate plan of action.

4. Create a realistic timetable for carrying out the action.

Farm-level benchmark reports help growers and their associations assess performance and identify targets for improvements.



10 years of data demonstrating continuous improvement



Participating Vineyard Organizations	1,320 organizations	
Acres Farmed by the 1,320 Organizations	366,386 acres	69.6% of 526,000 statewide acres
Acres Assessed by the 1,320 Organizations	252,297 acres	48.0% of 526,000 statewide acres
Organizations Submitting Results	906 organizations	68.6% of 1,320 organizations
Assessed Acres in Database	224,927 acres	42.8% of 526,000 statewide acres



Why metrics matter for growers –

For data-driven continuous improvement

>>> Save money and Farm Better

The 5Ps of Sustainability:

- Principles:** Strategy drives company direction.
- Processes:** Management areas (farming, packing, cooling, HR, etc.)
- Practices:** What gets done and how. (drip irrigation, scouting, employee benefits, etc.)
- Performance:** Using metrics to assess impact on 3Es.
- Progress:** Making change and evaluating improvements over time.



What's next for SISC?

1. Release Beta version of 3-4 metrics by May 1.
2. Continue to develop and pilot test the remaining metrics.
3. **Build the capacity for growers – through trade associations - to**
 - **collect data for monitoring sustainability performance**
 - **adopt continuous improvement “measure to manage” business strategies.**
 - >>> **organize peer groups of growers to implement Beta version of metrics and continue pilot testing.**
 - >>> **build programs for self-assessment, benchmarking, targeted education, peer-learning.**
4. Begin work on data aggregation software platform with needs assessment, but as a secondary priority until more farm-level data collection capacity is built.



You're invited to join us on this journey.

www.stewardshipindex.org

www.sureharvest.com

