Agri-food Supply Chain Sustainability Initiatives: Driving Business Partner Intimacy

Andrew Arnold, SureHarvest

San Luis Obispo
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Agenda

• Supply chain drivers for sustainability information
• Examples of supply chain initiatives
• Benefits for growers and supply chain partners
• Trends and final thoughts
The three “E’s” of Sustainability

- Environmentally Sound
- Economically Viable
- Socially Equitable

People

Profit

Planet
A Changing World…More With Less

Impact on the agrifood, fiber and fuel industries?

Fish vs. Farms
Urban vs. Rural
Fuel vs. Food
Supply Chain Information Needs

On-farm Information

Food Safety

Food quality & Nutrition
Supply Chain Information Needs…
And now there is a sustainability thread

Traceability & Transparency & Risk Management
Food Safety
Food quality & Nutrition
Sustainability

On-farm Sustainability Information:
• Practices
• Performance Metrics
Businesses Addressing Sustainability

Walmart’s “Live Better” initiatives are making a difference

Save money. Live better. These are the words we live by at Walmart. Our “Every Day Low Cost” strategy helps people save money, stretch their paychecks, and provide a better life for their families. But the work we do to help people live better goes far beyond our store walls. It extends into our communities and around the world and affects the lives of people we will never meet.

We believe we have an opportunity and a responsibility to make a difference on the big issues that matter to us all. Issues like preserving the environment, fighting hunger, empowering women and providing access to healthy, affordable food. Walmart is driving meaningful change in a way that no other company can. And we’re committed to using our size and scale to help the world live better.
url is http://gmsustainability.com
Our Company

OVERVIEW

MISSION, VISION & VALUES

THE COCA-COLA SYSTEM

OUR WORKPLACE

HUMAN & WORKPLACE RIGHTS

LEADERSHIP

THE COCA-COLA SYSTEM

COMMUNITY REQUESTS

THE YEAR IN REVIEW

SUSTAINABILITY REPORT

'The Father of Modern Design'
How Raymond Loewy Gave Coca-Cola a Modern Look in the 1940s
Sustainably-farmed, estate vineyards in Paso Robles, Monterey and Napa Valley
Cargill’s CEO Dave MacLennan…

“There is no getting around it. This is tough, challenging work. It’s also our new normal.”

*Financial Times Commodities Global Summit, April 21, 2015*
Sustainable Sourcing for High-Impact Commodities

Published April, 2015: Developed by FMI’s Sustainability Executive Committee, this resource offers top-line information and questions to consider when sourcing products that have sensitive social, environmental or economic impact.

Download the free Sustainable Sourcing report

Making the Business Case for Sustainability: A Guide for Practitioners

This tool was created by FMI’s Sustainability Executive Committee to assist sustainability leaders in making the compelling business case for sustainability with senior leadership. It provides a practical approach, links to key resources and dozens of specific company examples.

Download the free business case toolkit
Supply Chain Information Challenge

Grower | Packer Shipper | Retailer/Foodservice | Consumer

Which data? metric(s)?

Data Data Data
Data Data Data
Data Data Data
Data Data Data

M1 M2 M3

How do I understand these?
How do I use these?

Which data? metric(s)?

Data Data Data
Data Data Data
Data Data Data
Data Data Data

M1 M2 M3
**Existing Sustainability Initiatives & Programs**

- Initiatives active in defining appropriate metrics & key buyer programs (partial list only)

<table>
<thead>
<tr>
<th>Sustainability Areas</th>
<th>TSC Ag Product Typical Profile</th>
<th>SYSCO</th>
<th>Whole Foods Responsibly Grown</th>
<th>SISC</th>
<th>SAI-SAP</th>
<th>Global Reporting Initiative</th>
<th>UN FAO SAFA</th>
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**Includes addressing efficiency of production (e.g. yield per standard production unit)**

Taken from SureHarvest’s **5Ps of Sustainability™** process framework
Where Do On-Farm Metrics Fit In?

Hot Spots

Metrics

Data

Farm Activities

DATA COLLECTION

GHGs

Water Quality

Water Quantity

N Usage

P Usage

H2O Usage

Energy

Nutrient Mgmt

Water Mgmt

Pest Mgmt

Planting, Harvesting

Labor Mgmt
Supply Chain Sustainability Initiatives

And others…
The Sustainability Consortium

- The Sustainability Consortium (TSC) is developing product category sustainability profiles
- Key Performance Indicators (KPIs) to address supply chain hotspots (water, energy, labor, etc.)
TSC & Walmart Questionnaire Connection

- Driving supply chain “intimacy” around key sustainability topics
- Supply chain hot spots were used to determine KPIs for product categories
- A number of KPIs are based upon how much suppliers know about THEIR suppliers
- This is the early stage of supply chain sustainability reporting
3. FERTILIZER APPLICATION - GROWING OPERATIONS

What was the nitrogen use efficiency and phosphorus surplus associated with fertilizer application for the growing operations where your crops were produced in the last twelve months?

A. We are unable to determine at this time.

B. **Risk assessment or fertilizer tracking** are used to monitor and reduce the impacts from fertilizer use and the following metrics can be reported for our supply over the last twelve months:

   B1. ________ kg nitrogen per metric tonne of crop supply harvested.

   B2. ________% of our crop supply, by mass purchased in the last twelve months, is represented by the number reported in B1.

   B3. ________ kg phosphorus surplus per metric tonne of crop supply harvested.

   B4. ________% of our crop supply, by mass purchased in the last twelve months, is represented by the number reported in B3.

Nitrogen use efficiency and phosphorus surplus estimates for crop cultivation can be calculated from primary data or from regional data based on crop type and growing location.

Please refer to Sustainable Agriculture Initiative Sustainable Performance Assessment (SAI-SPA) for more information about the phosphorus metric and **Stewardship Index for Specialty Crops (SISC)** for more information about both metrics.
SISC Metrics V1.0

Water:
Acre inches applied / ton harvested

Nutrients:
Pounds of N applied / ton harvested
Pounds of P applied - Recommended P / ton harvested

Energy:
Total BtU / ton harvested

Soil:
Soil organic matter / Soil organic matter potential
# Example of SISC Metric Data Requirements

<table>
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<tr>
<th>Nitrogen Use</th>
<th>Pounds N added to system</th>
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<tr>
<td></td>
<td>Ton of product harvested</td>
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</table>

**Notes:**
- *N inputs include:*

\[ N \text{ applied}_{\text{synthetic}} + N \text{ applied}_{\text{organic}} + N \text{ applied}_{\text{irrigation water}} + N \text{ fixed}_{\text{leguminous crops}} \]

-Includes all fertilization events from the end of the previous harvest to the current harvest (non-cash cover crops applied to subsequent cash crop).
-For educational purposes, metric can also be presented on a per-acre basis as: Pounds N added to system /acre planted

**Data Needed**

- Area planted
- Harvest dates and yields
- Types and amounts of fertilizers applied; N in irrigation water; cover crop info
Aggregating Supplier Data

Supplier specific

Farming operation specific

Metrics
Lettuce Supply Chain Design Project
Lettuce Supply Chain Design Elements

Value Drivers

- Grower Value
- Shipper Value
- Retailer Value

Shared Value
Supply Chain Design – Value Examples

Value Drivers

- Benchmark water and nitrogen use
- Have metric results to easily answer buyer questionnaires
- Potential savings on input costs
- Use sustainability data for marketing purposes
- Maintain/improve market access
- Understand supply risks and potential supply disruption

Grower Value

- Benchmark water and nitrogen use
- Have metric results to easily answer buyer questionnaires
- Potential savings on input costs

Shipper Value

Retailer Value

- Use sustainability data for marketing purposes
- Maintain/improve market access
- Understand supply risks and potential supply disruption

Shared Value

- Understand supply risks and potential supply disruption
- Help tell ag sustainability story to buyers
Central Coast Local Initiative

Testing the use of performance metrics on the Central Coast to *improve water and nutrient efficiency* and demonstrate *environmental benefits of management changes*

- Performance-based Incentives for Conservation in Agriculture (PICA)
- 2013-2015 Pajaro Valley pilot with 20 strawberry growers from 6 different shippers

*In partnership with:*
- Preservation Inc.
- UC Cooperative Extension
- USDA – Natural Resources Conservation Service

Participating growers and shippers
PRO*ACT’s Greener Fields Together Program: Telling the Story

Greener Fields Together Case Study Summary
Rainier Fruit Company: Energy – Prosser Organic Facility

Greener Fields Together Case Study Summary
Naturipe: Water Management of California Blueberry Operations
Sustainability Information & Multiple Needs

“What’s in it for me?”

Grower

Public

Policy Makers

Markets

Walmart
Sysco
Costco
Whole Foods
Tesco
Marks & Spencer
Integrating Sustainability & Business

1. **Drive internal business management strategy**
   - Identify cost reduction opportunities
   - Drive best practices innovation (continuous improvement)
   - Manage risk

2. **Respond to marketplace demand for more information**
   - Reduce duplicative sustainable reporting systems
   - Data for backing marketing claims

3. **Reduce regulatory pressure**
   - Solve problems proactively
Supply Chain Sustainability Trends

• Broader interest in on-farm activities in a supply chain context

• Becoming more transparent and quantitative – footprinting, metrics

• More buyer-driven sustainability surveys

• Farm-level offset programs and ecosystem services…future but gaining momentum

• Increasing integration of sustainability thinking into business strategy and management planning
Thank You. Questions?