Sustainable Agriculture: Opportunities and Challenges for the Citrus Industry

Kevin Ogorzalek
Program Officer, Agriculture Department
WWF-US
Global Trends, Business Trends

- Population—3 billion more
- Consumption will double by 2050
- Energy demand will double by 2050
- Agricultural commodity demand will triple by 2050
- Focus on carbon and water footprints
- Supply chains becoming value chains
- Companies racing for green position
Why WWF and Agriculture?

33% of earth’s surface in crops or grazing but 55% of habitable area
How WWF Approaches agriculture

- WWF is a global, science based organization
- Focus on the key impacts
- Seeks performance-based production improvement
- Commodity roundtables
- Bi-lateral partnerships
- Place-based initiatives
A Latte

208 liters per cup

Lid

Water

Cup

Sugar

Energy

Milk

Wrapper

Coffee

1 liter

142.8 liters

Not What to Think, But How to Think
Investors
"So use point of leverage here"

Consumers

Primary producers/extractors

Retailers / Brands Manufacturers Traders Processors

Need to reduce the threat!

Persuade >6B shoppers?

Engage with >1B producers

WWF Global Priorities

So use point of leverage here
Accelerating Better Practice Adoption

Performance Curve

Performance Shift

Best Performance
Better Management Practices

- Today’s BMP is tomorrow’s norm
- Only a few activities produce 60-80% of the impacts of greatest concern
- There are no “best management practices” only better ones – and better is far better than worse
- BMPs are the means to the end, not the end
- Focus on results and let producers find the best way to achieve them – don’t be prescriptive
Industry Working Towards Sustainability

- GE
  - Ecomagination
- McDonald’s
  - MSC
- Unilever
  - Certified Tea
- Wal-Mart
- Chiquita
  - Rainforest Alliance Certification
  - Operational discipline that increased yields and decreased costs
- Monsanto
  - Cropland commitment
Certification does not mean lower productivity.

The Costa Rican example:

<table>
<thead>
<tr>
<th>Producer</th>
<th>Boxes/Ha*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chiquita</td>
<td>2663</td>
</tr>
<tr>
<td>Comp X</td>
<td>2249</td>
</tr>
<tr>
<td>Comp Y</td>
<td>1871</td>
</tr>
<tr>
<td>Others</td>
<td>2018</td>
</tr>
<tr>
<td>Total</td>
<td>2155</td>
</tr>
</tbody>
</table>

- Chiquita is the only company to certify with RFA.
- These figures include local producers as well (Chiquita has about 60% local producers, 40% owned operations).
- Have been in 1st place 3 years in a row.
- They became better farmers.

*Source: Corbana 2005 Annual Report*
Citrus Industry Accomplishments

- Integrated Pest Management
- Drip irrigation and fertigation
- Yield increases
- Labor commitments
- By-product use
- Year-round delivery of healthy food
- Important industry for employment
- Highly technified industry

![Orange Yield Kg/Ha Graph](image)

FAO 2007

- Orange Juice 44.81%
- Frozen Cells 2.67%
- Essential Oils 1.79%
- D'Limonene 0.92%
- Oil/Water Phases 0.57%
- Citrus Pulp Pellets 49.24%

NSW DPI

Abecitrus
Sustainability Challenges for the Industry

- Maintain pollination
- Land availability
  - Conversion to other crops
  - Loss of land to urbanization
- Pest Pressures
- Input availability
- Water use
- Climate Change
  - Impacts on rainfall
  - Altered disease and pest pressure and resistance
  - Storm frequency
Opportunities

- Carbon credits
  - Trees
  - Biofuel production
  - Improved input use

- Ecosystem Service Markets
  - Water management
  - Biodiversity markets

- Certification
  - Product differentiation
  - Risk management
  - Meet consumer demand

- Florida Ranchlands Ecosystem Services Project (FRESP)
  - Water retention
  - P retention
Stepping Towards Sustainability

- Indicators
  - Comparative water use
  - Comparative soil degradation
  - Comparative pesticide toxicity by region and pest pressure
  - Fertilizer use per unit of output
  - Pesticide toxicity per unit of output

- Maybe a standard setting roundtable
  - Industry
  - Growers
  - Processors
  - NGOs

- Already existing roundtable models
  - BSI; RSPO; RTRS; BCI
Commodity Roundtable Structure

- External Stakeholders
- Technical Working Groups
- Full Dialogue
- Advisory Groups
- Steering Committee

Interconnected flowchart showing the relationships between these components.
Key Supply Chain Lessons—Be Strategic

- Start with specific issues (current pressures)
- Commodities/ingredients with largest impacts and opportunities
  - By volume or risk—basic questions, maybe both
  - Identify current levels and regions of production
  - Connect to the planet/places—Where do they come from?
  - Connect to people—How do they fit in
  - Key environmental and social impacts—actual and perceived
  - Global trends affecting production/impacts of increasing production
- Identify point in the value chain to intervene with the least risk & most impact
- Develop a plan and a budget
- Involve procurement staff and others
- Identify global norms and producers that are better than the norm
- Communicate after having done something
- Measurable conservation results reduce reputational risks for all