Produce Traceability: A Holistic Approach

“Building social transparency into a supply base often brings with it a philosophical shift away from simply ensuring that suppliers abide by the letter of a contract — or the law — to embracing a company’s own CSR and related philosophy.” - SpendMatters

- Traceability is a tool to track product origin and processing through the supply chain.
- Traceability started because of food safety.
- Also provides transparency to the environmental and social costs and activities of each produce supply chain actor.
- Traceability can provide a safe forum for open discussion to foster innovation in supply chain operations related to social and environmental impact.
Recommendation: Produce Traceability

• Given sustainability challenges at Costco and nature of produce industry we recommend Costco implement a traceability program.

• If legislated from as a food safety tool, Costco can also use this as a tool for environmental and social measurement and improvement.
Costco Background

- Eighth largest retailer in the world, the fifth largest in the U.S
- 550 stores worldwide
- Costco Membership cards are used to for food safety recalls.
  - Great demonstration of concern for traceability and customer communication
- Demographic of customers: generally middle to upper class
  - This segment is more likely to select food based on food source, organic, supplier, etc.
# Sustainability Challenges at Costco: It’s Complicated!

<table>
<thead>
<tr>
<th>Issues</th>
<th>Risks</th>
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<tbody>
<tr>
<td>• Food miles</td>
<td>• Increased transportation costs</td>
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<td>• produce and seasonality</td>
<td>• Destruction of brand equity</td>
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<td>• Food safety</td>
<td>• Consumer preference</td>
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<td>• Fragmentation in Supply Chain</td>
<td>• Energy price volatility</td>
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<td>• Energy usage at store</td>
<td>• GHG constraints</td>
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<td>• important for produce because of short shelf life</td>
<td>• Inventory management</td>
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<td>• 500 retail stores * 142,000 sq ft/ store = 71 M sq. ft to heat</td>
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Produce Supply Chain Web

Image by MIT OpenCourseWare.
Food Safety at Costco

Fast Company Most Innovative Food Company Award 2010

• “You won't see ground-beef recalls or E. coli scandals at this warehouse retailer [Costco]. It's one of the very few in the grocery industry that independently tests its ground beef before selling it to consumers, eschewing suppliers that refuse testing, even if it means skipping a bargain. Costco won major food-safety points last year when Tyson finally agreed to having its meat tested.”
http://www.fastcompany.com/mic/2010/industry/most-innovative-food-companies

• Costco is already providing leadership on food safety testing. Traceability will help quickly identify which supplier a tainted product comes from, to prevent future contamination
Sustainability Framework Applied to Traceability

- Measure before you can manage
  - Traceability sets up the infrastructure to measure energy, water, and environmental impacts of specific products.

- Daly’s Triangle:
  - Human Wellbeing: improves food safety, welfare of farmers.
  - ETPE: measures specific cost indicators, inventory management, improves industry technology.
  - Natural Environment: Can help reduce pesticides, food miles, inefficient agriculture practices, ultimately increases sustainability.
Traceability in the US

- The “Produce Traceability Initiative” was launched this year, a major traceability initiative with the goal of tracing all produce by 2012.

- Why? Food safety and industry accountability. “In March 2009, a watchdog agency tried to trace 40 items from retail stores to the farm where they were grown, but could do so for only 5.”

- Costco is playing a leadership role in this initiative in the industry, but has not yet joined its peers in signing onto the initiative [http://www.producetraceability.org/endorse_pti/index.cfm](http://www.producetraceability.org/endorse_pti/index.cfm).

- The industry initiative focuses solely on food safety and accountability.

- This initiative as proposed is a long-term investment, costly, and requires global participation to be effective, providing challenges to bringing the whole industry in board (is linked to GS1).
Produce Traceability: Best Practices

- **Beef Industry: EAN-UCC System (EU)**
  - Based on a barcode system
  - Traces country of birth, country/countries of fattening, country of slaughter, country/countries of cutting, approval number of the slaughterhouse and cutting hall(s)
  - Mostly focused on food safety

- **Seafood Industry: TraceFish and Seafood PLUS (EU)**
  - Based on a holistic approach to tracing fish for health, safety, consumer behavior, etc.

- **Seafood Industry: Aquatt**
  - Set up for finfish and shellfish
  - Label includes: The identity of the Member State, Name of the Farm or Selling Company, The Durability, Treatment e.g. Gutted / Steaks, Number of fish if Appropriate, Size (weight), Date of Packing, An official approval number, Harvest site or Fish Farm
Produce Traceability Benefits and Results

- Cost savings with a more targeted approach to supply and inventory management
- Stronger relationships with suppliers
- Improved ability to isolate the source of produce safety issues
- Reduced food recall expenses
- Opportunity to market differentiated produce items
- Better perceived service to Costco members
- Competitive advantage against other grocers
Recommendations for Next Steps

- Implement a Produce Traceability system at Costco.
- Develop metrics that encompass food safety, costs, energy, water, and other environmental and social impacts.
- Employ a unaffiliated, neutral, fair, rapid, and responsible third party to protect farmers’, distributors’, packers’, customers’ and Costco’s proprietary information and rights.
- Continue to use Costco membership card information to provide personalized service, e.g. targeted promotions.
- Market surveys will give information on price premiums for fully traceable products.
15.972 Professional Seminar in Sustainability
Spring 2010

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