Cost Analysis of Local Strawberries: Southeastern NC to the US Foods Distribution Center in Zebulon

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NOTE: Proprietary information has been deleted for the public distribution of this presentation
Plan of Work, Spring 2015

Project Scope (Jan-31)
- Define project scope
- Approval from sponsors

Learn the process (Feb-7)
- Map the process followed by US Foods
- Understand concerns

Data Collection (Feb-14)
- Collect Sales, demand and cost data
- Analyze the cost and find improvement opportunities

Interact with Vendors (Feb-21)
- Talk with vendors to understand process

Cost Improvement (Mar-4)
- Logistics improvement to reduce freight cost
- Find economic order quantities

Tracking (Mar-7)
- Understand existing system to differentiate local and non-local produce
- Develop procedure to update systems

Conclusion (Apr-13)
- Present Business case to US Foods
Observations

• North Carolina strawberries are 2-2.5 times more expensive than California product.
• 85% of this cost difference is due to the costs of logistics (i.e., transport from source to US Foods distribution center).
• <=25% of customers are willing to pay a premium of $X for NC strawberries.
• Shorter shelf life of NC strawberries is largely attributable to the varieties grow in NC.
• Conservative anticipated demand of X pallets of local strawberries per week at this price.
• Total of X pallets total strawberry demand during the NC season.

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## Challenges

<table>
<thead>
<tr>
<th>Concern</th>
<th>Local Produce</th>
<th>California Produce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelf Life (from the day received at US Foods)</td>
<td>~5-6 days</td>
<td>~10-12 days</td>
</tr>
<tr>
<td>Seasonality</td>
<td>April- May</td>
<td>Rotating crops</td>
</tr>
<tr>
<td>Frequency</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Demand certainty</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Public relation Risk</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Cost</td>
<td>$\text{X}$ more per case</td>
<td>-</td>
</tr>
<tr>
<td>Insurance</td>
<td>Varies</td>
<td>Available</td>
</tr>
</tbody>
</table>
Value Stream mapping for Strawberries - California

Customer

- Demand from Sales Rep

Order placement to CA Vendor

- ~15 days shelf life

Produce Buyer

Quality check and Load Truck

Vendor

US Foods Truck - 1 day

3PL FTL

QA Inspector

Receive Product at US Foods after QA check

1-2 days

~10 days shelf life

~1 day

1 day

30 min

1 day

2-3 days

½ day

Min 3 days shelf life to customer

~15 days shelf life

~1 day

Demand from Sales Rep

~15 days shelf life

3 days shelf life to customer

~10 days shelf life

~15 days shelf life

3 days shelf life to customer

~10 days shelf life

~15 days shelf life
Value Stream mapping for Strawberries - Local

Customer → Order placement to Local Vendor → Quality check and Load Truck → Receive Product at US Foods after QA check

- Demand from Sales Rep
- ~7 days shelf life
- Order placement to Local Vendor
- 1 Day
- 30 Min
- ½ Day
- ½ Day
- ½ Day
- ~6 Days shelf life

Min 3 days shelf life to customer

Vendor

Vendor LTL

QA Inspector

US Foods Truck - 1 day

1-2 Days
Recommendations to US Foods

– Have been deleted for distribution to the public
Thank you!