Produce Handling

Presented by:
Diane Tye Zapata
Sr. Mgr of Food Resources
Second Harvest Food Bank of Santa Clara and San Mateo Counties
About Second Harvest Food Bank

- Located in San Francisco Bay Area, covering Santa Clara and San Mateo counties
- 3 locations, including new 75,000 square foot Cypress Center dedicated produce hub
- FY 2012 (July 2011-June 2012) Distributed 45MM pounds of food – OVER HALF was fresh produce
- Expected to distribute over 25MM pounds of produce by end of this fiscal year
KEYS TO SUCCESS

HAVE A PLAN

- Distribution plan
- Handling plan
- Training and feedback plan
What’s your distribution plan?

Produce is highly perishable; rapid throughput is essential

DEMAND PLANNING = *Pipeline for produce flow*

What does your pipeline look like – the one on the left, or the one on the right?
WHAT IS YOUR DISTRIBUTION MODEL AND HOW DOES THAT AFFECT YOUR ORGANIZATION’S ABILITY TO DISTRIBUTE PRODUCE RAPIDLY?

Second Harvest’s experience:

AGENCY / DISTRIBUTION PLAN IS THE DRIVER
“Pull” Distribution Model

Advantages

• For agencies:
  – Desired product mix
  – Flexibility

• For food bank:
  – Less “admin” (menu creation)

Disadvantages

• For food bank:
  – No way to forecast demand
  – Limits ability to adjust produce flow based on availability
  – Promotes “cherry picking” of favorites by agencies

“Agency Ordering” Model
“Push” Distribution Model

Advantages

• For agencies:
  – No need to place order

• For food bank:
  – Control flow of produce mix by season
  – Not just “popular” produce!
  – **KEY**: Predictable demand

Disadvantages

• For food bank and agency:
  – Requires more up-front planning
  – May need to adapt to new product

Pre-set “parameters” for produce (Min/Max in # of bins, cases, or pallets)
What’s your distribution plan?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Fruit Req’d</strong></td>
<td>MIN: 147,123</td>
<td>MIN: 192,261</td>
<td>MIN: 181,435</td>
<td>MIN: 163,528</td>
<td>MIN: 48,534</td>
<td>732,865</td>
</tr>
<tr>
<td>assumed to be 35% of total lbs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Veg Req’d</strong></td>
<td>MIN: 273,240</td>
<td>MIN: 357,956</td>
<td>MIN: 336,946</td>
<td>MIN: 303,639</td>
<td>MIN: 90,135</td>
<td>1,361,073</td>
</tr>
<tr>
<td>assumed to be 65% of total lbs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MAX: 384,290</td>
<td>MAX: 531,747</td>
<td>MAX: 474,496</td>
<td>MAX: 429,042</td>
<td>MAX: 118,836</td>
<td>1,969,905</td>
</tr>
<tr>
<td><strong>By Day of Week</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monday</td>
<td>MIN: -</td>
<td>MIN: 61,822</td>
<td>MIN: 64,426</td>
<td>MIN: 64,761</td>
<td>MIN: 42,985</td>
<td>233,961</td>
</tr>
<tr>
<td>Tuesday</td>
<td>MIN: 113,433</td>
<td>MIN: 133,654</td>
<td>MIN: 120,693</td>
<td>MIN: 114,734</td>
<td>MIN: 95,763</td>
<td>570,497</td>
</tr>
<tr>
<td></td>
<td>MAX: 107,133</td>
<td>MAX: 133,201</td>
<td>MAX: 121,593</td>
<td>MAX: 91,593</td>
<td>-</td>
<td>453,520</td>
</tr>
<tr>
<td>Friday</td>
<td>MIN: 75,183</td>
<td>MIN: 103,102</td>
<td>MIN: 99,711</td>
<td>MIN: 77,248</td>
<td>-</td>
<td>366,244</td>
</tr>
<tr>
<td></td>
<td>MAX: 17,602</td>
<td>MAX: 48,302</td>
<td>MAX: 58,777</td>
<td>MAX: 31,827</td>
<td>-</td>
<td>152,508</td>
</tr>
<tr>
<td><strong>by Program Type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Harvest</td>
<td>MIN: 51,672</td>
<td>MIN: 72,144</td>
<td>MIN: 61,152</td>
<td>MIN: 70,032</td>
<td>-</td>
<td>254,400</td>
</tr>
<tr>
<td>Produce Mobile</td>
<td>MIN: 32,125</td>
<td>MIN: 75,875</td>
<td>MIN: 67,000</td>
<td>MIN: 45,500</td>
<td>-</td>
<td>220,500</td>
</tr>
<tr>
<td></td>
<td>MAX: 44,075</td>
<td>MAX: 102,225</td>
<td>MAX: 93,890</td>
<td>MAX: 63,700</td>
<td>-</td>
<td>368,700</td>
</tr>
<tr>
<td></td>
<td>MAX: -</td>
<td>MAX: 53,840</td>
<td>MAX: 56,600</td>
<td>MAX: -</td>
<td>-</td>
<td>89,640</td>
</tr>
<tr>
<td></td>
<td>MAX: 13,689</td>
<td>MAX: 12,627</td>
<td>MAX: 18,884</td>
<td>MAX: 16,344</td>
<td>2,277</td>
<td>61,821</td>
</tr>
<tr>
<td>PUSH/PM (reg. agency #)</td>
<td>MIN: 159,625</td>
<td>MIN: 150,875</td>
<td>MIN: 181,625</td>
<td>MIN: 173,250</td>
<td>71,250</td>
<td>760,825</td>
</tr>
<tr>
<td><strong>HUB</strong></td>
<td>MIN: 61,000</td>
<td>MIN: 61,000</td>
<td>MIN: 61,000</td>
<td>MIN: 61,000</td>
<td>30,000</td>
<td>238,900</td>
</tr>
</tbody>
</table>
What’s your distribution plan?

MANAGE EXPECTATIONS!
Produce will never be 100% perfect

Define the acceptable “defect level”
• 50/50? 80/20? 90/10? Be clear, be consistent
• Require agency to do some quality sorting
• Embed expectations in to agency agreement

Emphasize that food bank produce is donated
• Cosmetic differences
• Odd sizes

**TAKEAWAY**: Produce demand forecasting begins with a well-defined plan. Programs and Services buy-in is crucial. Estimated demand has to be captured so that you match inbound flow to demand.
What's your handling plan?

CRITICAL POINTS

*MUST have standard process for each step customized to produce*
What’s your handling plan?

SOP: RECEIVING

- Quality inspection on the dock
- Standard inspection process for produce by St. Mary’s (Frank Bonner)
  - Visual inspection of condition
  - Temperature
- Know optimal temperature range by produce type
- Record trailer temperature
- Take pulp temperature (refrigerated produce)
- Define decision makers for evaluating questionable quality
## Produce Temperature and Handling Grid

<table>
<thead>
<tr>
<th>Item</th>
<th>Max Temp</th>
<th>Refrigeration Req'd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>40</td>
<td>🍉</td>
</tr>
<tr>
<td>Banana</td>
<td>58</td>
<td>🍉</td>
</tr>
<tr>
<td>Bell Pepper</td>
<td>49</td>
<td>🍉</td>
</tr>
<tr>
<td>Blueberries</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Broccoli</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Cabbage</td>
<td>36</td>
<td>🍉</td>
</tr>
<tr>
<td>Cantaloupe</td>
<td>41</td>
<td>🍉</td>
</tr>
<tr>
<td>Carrots</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Celery</td>
<td>36</td>
<td>🍉</td>
</tr>
<tr>
<td>Cherries</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Corn</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Cucumber</td>
<td>54</td>
<td>🍉</td>
</tr>
<tr>
<td>Honeydew</td>
<td>50</td>
<td>🍉</td>
</tr>
<tr>
<td>Kiwi</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Lettuce</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Mango</td>
<td>55</td>
<td>🍉</td>
</tr>
<tr>
<td>Mushroom</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Nectarines</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Onion</td>
<td>36</td>
<td>🍉</td>
</tr>
<tr>
<td>Orange</td>
<td>36</td>
<td>🍉</td>
</tr>
<tr>
<td>Peaches</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Pears</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Potato - Sweet</td>
<td>59</td>
<td>🍉</td>
</tr>
<tr>
<td>Potato - White</td>
<td>50</td>
<td>🍉</td>
</tr>
<tr>
<td>Salad Mix</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Squash - Winter</td>
<td>55</td>
<td>🍉</td>
</tr>
<tr>
<td>Stone Fruit</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Strawberries</td>
<td>33</td>
<td>🍉</td>
</tr>
<tr>
<td>Tomato</td>
<td>65</td>
<td>🍉</td>
</tr>
<tr>
<td>Watermelon</td>
<td>59</td>
<td>🍉</td>
</tr>
</tbody>
</table>

**Information Source:** PMA (Produce Marketing Association) website, PMA.com, "I Know Produce"  
*Onions can be refrigerated, but recommended location is in a cool, dry location with lots of air flow (fans)*

**Key:**  
- 🍉: Must be refrigerated  
- 🍉: Refrigeration recommended  
- 🍉: Please avoid refrigeration
SOP: PUTAWAY AND STORAGE

Store in appropriate temperature (refer to storage and handling grid)

Minimize temp fluctuations (in & out of cooler?)

Continual inspection
  • Several times a day, by several people if possible
  • Empowered to waste questionable product
What’s your handling plan?

**SOP : VOLUNTEER SORT**

Safe handling practices

- Minimize time out of ideal temperature
- Sanitary – gloves, masks, etc.

Easy to understand instructions (5 minutes or less)

Appropriate containers for repack (produce boxes – air flow?)

Hand holes for easy handling? Recloseable?
What’s your handling plan?

SOP : PICKING AND OUTBOUND

Picking
• Inspect!
• Empower pickers to question quality and ask for a second opinion
• Pick by FEFO (preferably) or at least FIFO
• Minimize time out of ideal temperature

Outbound
• Inspect again!
• Empower drivers to make a final decision on quality.
TAKEAWAY:

Handling “best practices” must be followed to ensure produce quality. Any team member involved in a “touch” (critical point) must be empowered to stop distribution if quality is in question, or at least escalate to a decision maker.
What’s your training plan?

TRAINING AND FEEDBACK

Key personnel should be trained in food safety
  • ServSafe or other third party training lends credibility

Training should be provided to all team members part of “critical points” of produce handling

Agency partners need training
  • Embed into agency agreement

Training should be continual and ongoing

Feedback: crucial to capture possible misses in process or failure to execute
What’s your training plan?

TRAINING AND FEEDBACK

Issue log?
Capture key data
• Date of distribution
• Nature of issue
• Pictures if possible

Traceability
• How old was product distributed?
• Can you capture “path” to see if handling was compromised?

Utilize feedback
Continual improvement on quality
Reinforce expectations with agency partners
<table>
<thead>
<tr>
<th>Created</th>
<th>Item</th>
<th>Assigned To</th>
<th>Type</th>
<th>Priority</th>
<th>Summary</th>
<th>Resolution</th>
<th>Resolved</th>
<th>Resolution</th>
<th>Revised</th>
<th>Resolution</th>
<th>Reporter</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/6/2013</td>
<td>CS-1-667</td>
<td></td>
<td>🍗</td>
<td></td>
<td>Missed pick-up and miscommunication donor pick-up O'Connell Hospital, Cash and Carry</td>
<td>Unresolved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/6/2013</td>
<td>CS-1-665</td>
<td>Nancy Taylor</td>
<td>🍘</td>
<td></td>
<td>Tegla FH # 16505</td>
<td>Unresolved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/30/2013</td>
<td>CS-1-549</td>
<td>Nancy Taylor</td>
<td>🍐</td>
<td></td>
<td>#2021 Mountain view-rotten Spaghetti squash and gaunt issues</td>
<td>Unresolved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/24/2013</td>
<td>CS-1-627</td>
<td>Nancy Bravo</td>
<td>🍟</td>
<td></td>
<td>Mail delivery not being consistent week of Jan 22 for BE-SCC</td>
<td>Unresolved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/23/2013</td>
<td>CS-1-638</td>
<td>Nancy Bravo</td>
<td>🍉</td>
<td></td>
<td>16048 Rebekah Children Services, Green Bag with rosters and supplies was not delivered on time</td>
<td>Unresolved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/11/2013</td>
<td>CS-1-497</td>
<td>Nancy Taylor</td>
<td>🍎</td>
<td></td>
<td>#2021 Mountain View-Lower quantity count per item for Plantains.</td>
<td>Unresolved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Questions?

Diane Tye Zapata, Sr. Mgr of Food Resources
Second Harvest Food Bank of Santa Clara and San Mateo Counties
(408) 694-0046
Dzapata@SHFB.org
Challenges to Providing Perishable Produce in a Safe and Efficient Manner

Presented by the San Francisco and Marin Food Banks
San Francisco and Marin Food Banks
“Push” Distribution Model

- More than doubled distribution in 10 years – from 20 million pounds to 45 million, made possible because of the availability of fresh produce

- Developed a “Push Model” by building a network of over 230 weekly distributions (pantries) run entirely by community partners

- This pantry network distributes 73% of our product, 53% of which is fresh produce

- Developed a strong network of volunteers contributing enough hours to equate to 70 FTE’s
Cross-Functional Coordination Enabled This Growth

Produce grew from 3 to 25 million pounds during this time.
Safe and Efficient Handling of Produce

Speed of handling

reduce number of touch points

Distribution sites

ready
willing
able
Volunteer shifts are aligned with incoming produce loads
- Opportunities for volunteerism increase during produce season
Volunteers are given orientation on every shift

Description of crop          Safe handling

Culling parameters

- Size
- Color
- Mold detection
- Pest Detection
Volunteer Shift Managers work closely with the volunteers and make the final decisions on product quality.
Safe and Efficient Handling of Produce

- Reduce number of touch points
- Distribution sites: ready, willing, able
- Speed of handling
Operations is key to moving out as many full tote quantities to our pantry network and central feeding agencies on the day of receiving or next day.

Have the ability to run a report that outlines product exclusions, units of service, and pantry’s ability to take full totes and rpc’s.

Have a working knowledge of all 230 pantries including ethnic preferences and pantries willingness to cull and glean.
A pantry site capable of taking full tote quantities enjoys the benefits of freshness and produce that has not been handled since leaving the packing house.
During the morning of April 5th 45,000 #s of cabbage, mandarins and lettuce were successfully cross docked.
Safe and Efficient Handling of Produce

- Reduce number of touch points
- Speed of handling
- Distribution sites: Ready, Willing, Able
The Pantry Model

We identify a community agency and work with them to set up a weekly farmers-market style distribution program.

Pantries (which include schools, churches and low-income housing sites) conduct outreach to clients, recruit and organize volunteers, and set up and take down the distribution. Food Bank staff provide training and ongoing technical assistance.

Right before the distribution time, we deliver enough produce to serve the agency’s clients.

Distribution sites
Ready
Willing
Able
In addition to nutrition education at the pantry sites we also provide education around potentially questionable produce.

**Sprouted Onions**
- Onions that have sprouted and are safe to eat
- You can use the green sprouts as a substitute for green onions
  The sprouts can be used in soups, salads and garnishes

**Storing Onions**
- Store onions in a cool dark place
- Do not store onions in a plastic bag or container
- Store onions away from other ripening fruits and vegetables to help them last longer
Pantry Network samples produce that may not look desirable, comports moldy produce and accepts loads that are 70% consumable.
Safe and Efficient Handling of Produce

- Reduce number of touch points
- Distribution sites: ready, willing, able
- Speed of handling
Questions?

Please contact

Barbara Abbott
Food Resource Manager
San Francisco and Marin Food Banks

babbott@sffb.org
415 282 1907 Ext. 364