Managing Through a Crisis
Will Daniels, Senior Vice President Operations & Organic Integrity

JIFSAN Advisory Council 2011 Spring Symposium
• First call from the Calif. Dept. of Health Services (CDHS) to alert us of possible *E. coli* outbreak

• Several participants on the call with CDHS and FDA – all brands identified by ill consumers

• We immediately activated our **Incident Management Team** to decide next steps
September 15, 2006

• With information still coming in from Center for Disease Control and the FDA, we opted to go to a voluntary recall because it was the right thing to do for our customers and public safety.

• Next Step: Notify Key Stakeholders
Key Stakeholders

- Customers
- Media
- Employees
- Growers
- Vendors
- Government
A Good Incident Management Plan

- Guiding principles for appropriate communications responses (to customers, media and employees)
- An effective mechanism for assessing the seriousness of the incident
- Basic checklist and tools to ensure our response was coordinated and conducted properly
Expressing sympathy for victims

• Letters sent out immediately to customers with information on recall
• Working with the media to get message out about contaminated products and instructions of how to handle them
• 1-800 number for questions and claims
• Offer to pay costs for medical bills and lost wages
Responsibility

Traceback to the source

• Work with investigators to find the source
• It’s in the best interest of the public and your company to give them the information they need
• Remember: Public Safety is the top priority
Restitution

Taking care of immediate needs

- We made an offer early-on to reimburse any out-of-pocket medical expenses from anyone who had been affected by the outbreak.

- We gave our retail customers specific assurance that we would give full credit for recalled products and offered to cover cost of returning product and disposal.
October 3, 2006

- FBI Raids facility
  - Bioterrorism/Interstate commerce
  - Media event
  - Criminal intent
  - Personally

- Weeks and Months that followed
  - Meetings with US District Attorney
Food Safety Protocols before the Outbreak
Our Safety Programs Were Industry Standard State-of-the-Art

- Our growers and harvesters follow our strict, contractually mandated Good Agricultural Practices (GAP) program based on FDA guidelines.
- Good Manufacturing Practices (GMP) as outlined in the Code of Federal Regulations and verified by daily audits.
- We maintain a strict Hazard Analysis and Critical Control Point (HACCP) program.
  - Verified by our voluntary participation in the USDA’s Qualified Through Verification (QTV) program – unannounced inspections
What did we learn and where are we now?
## Food Safety Protocols: Earthbound Farm vs. LGMA

Earthbound Farm’s program exceeds the protocols required by LGMA

<table>
<thead>
<tr>
<th>Food Safety Protocol</th>
<th>Earthbound Farm</th>
<th>LGMA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Field</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensive ranch assessment prior to planting; mitigation recommended based on assessment if risks noted</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Water source tested for generic <em>E. coli</em></td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Water source tested for pathogens <em>E. coli</em> 0157:H7, EHEC, and <em>Salmonella</em>; frequency based on risk associated with water source</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Seeds tested for the pathogens <em>E. coli</em> 0157:H7, EHEC, and <em>Salmonella</em> required</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>All fertilizers, composts, and other inputs tested for the pathogens <em>E. coli</em> 0157:H7, EHEC, and <em>Salmonella</em></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Animal-based inputs tested for <em>E. coli</em> 0157:H7</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Minimum buffers required between growing fields and various potential risks; buffers vary depending on risk</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Pre-harvest ranch audit</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Harvest GAP audit</td>
<td></td>
<td>✔</td>
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</tbody>
</table>
### Food Safety Protocols: Earthbound Farm vs. LGMA

The LGMA does not address food safety in the facility – Earthbound Farm adds 10 significant hurdles.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Earthbound Farm</th>
<th>LGMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-site micro lab, run by IEH laboratories performs <em>E. coli</em> O157:H7, EHEC, <em>Salmonella</em>, and <em>Shigella</em> testing</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td><strong>Raw Product Test &amp; Hold:</strong> incoming greens are tested for <em>E. coli</em> O157:H7, EHEC, <em>Salmonella</em>, and <em>Shigella</em>. Greens implicated by a positive test are destroyed.</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Weigh belts on mixing lines ensure wash system is not overloaded</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Laser sorters on all mixing lines replaced human inspectors to keep foreign material out of product stream</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Dunk reels on all wash lines for maximum contact time</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Wash line filtration enhanced, creating an environment in which the sanitizer is maximally effective</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td><strong>Finished Goods Test &amp; Hold:</strong> packaged products tested for <em>E. coli</em> O157:H7, EHEC, <em>Salmonella</em>, and <em>Shigella</em>. Production implicated by a positive test is destroyed.</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Added handling instructions by commodity to our consumer website</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Added a time stamp to each bag and box for more enhanced traceability</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Finished goods testing of mini-peeled carrots, sliced apples, melons, green onions and tomatoes.</td>
<td>✔</td>
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</tr>
</tbody>
</table>
Beyond Leafy Greens: Other Items in Test & Hold

- Earthbound Farm Organic Mini Peeled Carrots
- Earthbound Farm Organic Apple Slices
- Earthbound Farm Organic Green Onions
- Three Large Tomatoes
- Cantaloupe
• Raw Material Test & Hold program lab-tests all greens for pathogens at receiving.
• All greens are held until results return negative for pathogens.
• Only cleared product is released for processing.
- 100% Finished Goods Test & Hold program, lab-tests products for pathogens a second time
- All salads are lab-tested and held until results return negative for pathogens.
- Only cleared product is released for shipping and, ultimately, use by the consumer.
## Test & Hold:
**Field, Raw & FGS SJB 2007 thru SJB 2010**

### Field MC

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<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Total Field Incidents</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>11</td>
<td>2</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>1 Acre Total Samples</td>
<td>1473</td>
<td>500</td>
<td>2458</td>
<td>1074</td>
<td>2017</td>
<td>904</td>
<td>896</td>
<td>9322</td>
</tr>
<tr>
<td>% of Field MC Incidents</td>
<td>0.07%</td>
<td>0.00%</td>
<td>0.33%</td>
<td>0.00%</td>
<td>0.55%</td>
<td>0.22%</td>
<td>0.22%</td>
<td>~</td>
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</table>

### Raw MC

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Total Ram MC Incidents</td>
<td>32</td>
<td>13</td>
<td>86</td>
<td>8</td>
<td>242</td>
<td>12</td>
<td>187</td>
<td>580</td>
</tr>
<tr>
<td>Total Samples</td>
<td>41325</td>
<td>29148</td>
<td>48297</td>
<td>26684</td>
<td>49862</td>
<td>29337</td>
<td>30981</td>
<td>255634</td>
</tr>
<tr>
<td>% Raw MC Incidents</td>
<td>0.08%</td>
<td>0.04%</td>
<td>0.18%</td>
<td>0.03%</td>
<td>0.48%</td>
<td>0.04%</td>
<td>0.60%</td>
<td>~</td>
</tr>
</tbody>
</table>

### FG MC

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<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total FG MC Incidents</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>0</td>
<td>10</td>
<td>2</td>
<td>6</td>
<td>28</td>
</tr>
<tr>
<td>Total Samples</td>
<td>22549</td>
<td>14232</td>
<td>24408</td>
<td>10951</td>
<td>23204</td>
<td>14480</td>
<td>32885</td>
<td>142709</td>
</tr>
<tr>
<td>% FG MC Incidents</td>
<td>0.004%</td>
<td>0.014%</td>
<td>0.029%</td>
<td>0.00%</td>
<td>0.043%</td>
<td>0.014%</td>
<td>0.018%</td>
<td>~</td>
</tr>
</tbody>
</table>
Heat Index vs Raw & Field MC’s

Heat Index vs Raw/Field Z Pattern MCs

MC Incidents vs Heat Index

[Graph showing the relationship between Heat Index and MC Incidents over time]
Data Summary
Ranch MC-Event 2008

Ranch MC vs Lbs Rec

- Ranch MC
- Total SJB MC
- Ranch Lbs Rec

Graph shows the comparison between Ranch MC and Lbs Rec from P3 to P12, with peaks at certain points indicating significant events or changes.
Product Traceability

We know where every leaf comes from in every salad we produce. We know all the farmers, and we can also tell you which farms your salad greens came from and how they were packaged just by looking at the code on each package.

Y341A10 04:41

A B C D E

A. This letter tells us which facility the salad was packed in.
B. This number tells us the date the salad was packed.
C. This letter tells us which shift packed the salad.
D. This number tells us which line produced the salad.
E. This number tells us exactly what time the salad was packed.

If we need to trace back through the facility to the farm for any reason at all, we can do it instantly because of the information contained in this code.
“For nearly two decades, Public Enemy No. 1 for the food industry and its government regulators has been a virulent strain of E. coli bacteria that has killed hundreds of people, sickened thousands and prompted the recall of millions of pounds of hamburger, spinach and other foods. But as everyone focused on controlling that particular bacterium, known as E. coli O157:H7, the six rarer strains of toxic E. coli were largely ignored. Collectively, those other strains are now emerging as a serious threat to food safety.”

Earthbound Farm, the nation’s largest producer of organic salad greens, is one of the few companies that does screen for the full range of toxic E. coli, and it has found a worrisome incidence of the rarer strains. Out of 120,000 microbial tests last year, about one in 1,000 showed the presence of unwanted microbes, mostly the six strains.

“No one is looking for non-O157 to the level we are,” said Will Daniels, Earthbound Farm’s senior vice president for food safety. “I believe it is really going to emerge as one of the areas of concern.” Earthbound Farm was not involved in the April outbreak.
Food Safety Matters to Consumers

• Just read that you test for all 6 toxic E. coli strains. Voluntarily. Wow!! I can enjoy your wonderful produce with less worry!! Thank you, thank you, thank you!! You must advertise this!! Too bad our government agencies aren't working as hard to protect the consumer. Sandra Roberts – Lexington, KY

• I read the article in the NY Times this morning about the virulent strains of e-coli that remain untested and can cause serious problems. The article noted that your company does test for all the strains. Although I generally buy non-organic due to price, and because I do not believe that organic means "healthier" or "better," from now on I will buy all my salad products from Earthbound Farms, and will be advising my friends to do the same. Shelley Stangler – Springfield, NJ

• Today I read an article written by the New York Times regarding E-Coli breakouts and testing related to strains other than the O157. I will now make it a point to only buy your products at the Grocery Stores. Last year I had two nephews in New Mexico that became ill with E-Coli that then turned into H.U.S. Because of God's grace on our family the boys are now happy and healthy with full capacity of their kidneys. I will share this knowledge with all my friends and family as well. Thanks again and God Bless. James Wilson – Menifee, CA
What is next?

- Wash Sanitizer Study with NCFST
- Small Farm GAP project with Familyfarmed.org
- Data Mining - Possible collaboration with FDA and NASA
- New detection methods?
- Voluntarynet
“Our mission is to bring the benefits of organic food to as many people as possible and serve as a catalyst for positive change.”

Thank you

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