Are Local Food Consumers Civic Minded or Seeking Assurances?
Defining Policy Implications and the Research Agenda

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Overview

• Local food system gaining grounds
  – Increased number of farmers markets and community supported agriculture (CSAs)
  – Conscious consumers making social statements with their purchase decisions

• Research and Educational Grants
  – Priority topics
  – New programs that support food systems

• Colorado State University Projects
  – Local produce consumer study (2006 to 2008)
  – Local, organic, and environmental studies (current)

• Summary and future research directions
Locavores: An Overview

• Many potential factors driving consumer trends
  – Perceptions of quality (nutrition, fresh)
  – Assurances of safety and health benefits
  – Support for the local economy, farms
  – Environmental benefits, farmland preservation

• More broadly, what are private and public attributes consumers seek? Are there research and policy implications?
Research Priorities

• Consumer valuation and behavior
  – Strategic pricing and market access

• Economic and environmental benefits from local and reinvented food systems
  – New Ecosystem agency
  – Rural development and Be Local efforts

• Effective business strategies and target markets for values-based supply chains
Complementary Efforts

• Relationship between local and organic or other food certification programs
• The role of direct markets and market access in local food system development
• Food safety and nutritional aspects of more localized production/consumption
• Building farmers, entrepreneurship and vocational training for producers
Research Programs
New or Recently Focused

• NRI/AFRI
  – Economic Viability of Small & Mid-sized Farms
  – Markets and Trade, Rural Development

• Community Food Projects

• Value Added Producer Grants

• Farmers Market Promotion Program

• Federal State Marketing Improvement

• SARE and WCRME regional grants
Consumer Research Studies
Overview of CSU’s projects

• Buying behavior of Produce Consumers (2006)
• Explore dynamics between organic and local foods, consumer perceptions (2008)
• Case studies of effective values-based supply chains with UC-Davis (2009)
• Past studies from which we drew
  — Colorado Homestead Ranches-natural meats
  — Farm to Chef Distribution
  — Niche meat, agritourism and Building Farmer curriculum
2006 CSU Organic Produce Study

Funding of this research project by USDA/CSREES NRI grants #2005-55618-15634 and 2008-35400-18693 are gratefully acknowledged.
Summary

• National Survey in May 2006
  – Conducted by NFO/My Survey, n=1549
  – Demographics fairly well aligned, dominated by female as directed to primary food shopper

• Cluster Consumers by Similar Buying Behavior and Motivations (1549 respondents)
  • Two clusters, Quality Assurance and Quality and Safety Consumers may be local buyers...
  • Local more highly valued than organic in all groups especially among these two clusters
“You may not feel any healthier right away, but you’ll definitely feel more smug.”
Willingness to pay for melon
(base-priced at $0.59 per pound)

• One melon identified as “locally produced and sold direct by producer
  – Mean reported premium was 38.6%

• Importance of pesticide free & locally grown positively associated with local premia
  – But negative association with convenient location, packaging and value prices
  – The role of transaction costs: may alleviate credence information costs, but consumer may incur additional search costs
Motivators

• Each consumer asked to assign share of premium attributable to various motivators
  – Local purchases as well as Organic & Produce with Unique Color

• There are both private and public good aspects presented as reasons they might pay a premium
Fresh Produce Direct from Producer
Share of Premium attributable to:

- Minimizing food miles/energy dependency 21%
- Economic support for agriculture and the community 30%
- Relationships with perceived produce quality and safety 27%
- Relationship with land and environmental benefits from local farms 22%
Fresh Produce production practices

Share of Premium attributable to:

- Support for local farmers: 36%
- Support organic agriculture’s production practices: 16%
- Relationship with perceived nutritional benefits: 26%
- Relationship with perceived food safety benefits: 22%
Support for ag and local economy seems most important. Food miles does not seem to be driving locavores.
New Red Fire

Vegetables like red leaf lettuce, that contain dietary fiber, vitamin A, and vitamin C may reduce the risk of coronary heart disease and some types of cancer.

Selected for Nutritional Benefits!

Excellent source of vitamin C, an antioxidant nutrient

PRICE: $2.99

PRICE: $2.99
Organic Label and Claims

– Respondents differentiate between products on the basis of label claims
  • The non-specific claim of reducing risk of a human health condition is the most highly valued stand-alone attribute
– Bundling of attributes may add or subtract value depending on the specifics
  • There is positive correlation between valuation of nutritional attributes and organic attributes
– Valuation of claims varies significantly across individuals
Organic, Locality, and Food Miles – Implications for Trade, Supply Chains, Environment, and Consumer Welfare

Yuko Onozaka and Dawn Thilmany McFadden
Initial Results for Fall 2008
Local Foods Survey

• Much higher penetration for local foods (over 80%), than organics (over 50%), with significant share buying both (over one-third)

• County and/or 100 mile radius seem to be majority perception of local

• Expense and availability as most commonly cited “barriers”
What is “Local”?

- Produced within 50 mile: Consider Regional
- Produced within 100 mile: Consider Local
- Produced within 300 mile: Consider Regional
- Produced within 500 mile: Consider Local
- Produced in my county: Consider Regional
- Produced in my state: Consider Local
- Produced in United States: Consider Regional
- Produced in Canada: Consider Local
- Produced in Mexico: Consider Regional
Fresh Produce Source

- Supermarket, 82.5%
- Farmers Market, 37.1%
- Conv/Corner Store, 11.3%
- Specialty Store, 1.7%
- Specialty Food, 5.2%
- Direct from Producers, 8.9%
- Food Coops, 2.6%
- Health/Natural Foods, 4.1%
- Convenience Stores, 0.3%
- Direct, 2.3%
- Food Co-ops, 0.5%
- Direct from Producers, 8.9%
- Specialty Store, 1.7%
- Specialty Food, 5.2%
- Supermarket, 14.3%
- Health/Natural Food Store, 20.6%
- Conv/Corner Store, 11.3%
- Farmers Market, 37.1%
Sample Choice Set

Apple 1

$2.69/lb
Product of Chile

I will buy this apple.

Apple 2

$3.49/lb
Locally Grown

I will buy this apple.

Neither.
## Initial WTP Estimates ($ per lb)

<table>
<thead>
<tr>
<th></th>
<th>Certified Organic</th>
<th>Certified Fair Trade</th>
<th>Carbon Footprint</th>
<th>Locally Grown</th>
<th>Imported</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gala Apples</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Mean</td>
<td>0.14</td>
<td>0.17</td>
<td>-2.85</td>
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<td>Median</td>
<td>0.07</td>
<td>0.19</td>
<td>-3.04</td>
<td>0.14</td>
<td>-0.63</td>
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<tr>
<td>St. Dev.</td>
<td>0.40</td>
<td>0.18</td>
<td>1.82</td>
<td>0.25</td>
<td>0.72</td>
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<tr>
<td>Maximum</td>
<td>1.52</td>
<td>0.60</td>
<td>2.25</td>
<td>0.85</td>
<td>0.72</td>
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<tr>
<td>Minimum</td>
<td>-1.13</td>
<td>-0.26</td>
<td>-8.95</td>
<td>-0.46</td>
<td>-2.27</td>
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<tr>
<td>N</td>
<td>527</td>
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<tr>
<td><strong>Red Round Tomatoes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0.29</td>
<td>0.13</td>
<td>-0.37</td>
<td>0.17</td>
<td>-0.56</td>
</tr>
<tr>
<td>Median</td>
<td>0.28</td>
<td>0.14</td>
<td>-0.33</td>
<td>0.15</td>
<td>-0.55</td>
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<tr>
<td>St. Dev.</td>
<td>0.29</td>
<td>0.21</td>
<td>0.34</td>
<td>0.37</td>
<td>0.44</td>
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<tr>
<td>Maximum</td>
<td>1.21</td>
<td>0.68</td>
<td>0.40</td>
<td>1.19</td>
<td>0.51</td>
</tr>
<tr>
<td>Minimum</td>
<td>-0.66</td>
<td>-0.35</td>
<td>-1.42</td>
<td>-0.84</td>
<td>-2.01</td>
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<tr>
<td>N</td>
<td>554</td>
<td>554</td>
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</tbody>
</table>
More Survey Results

– Food miles is not commonly known term (less than 20%) while carbon footprint and climate change well known (over 60%)

– Assurances on “outcomes” (preserving farmland, fair returns to producers, supporting local economy) were of greater interest than broader claims (organic, local)

– Local does well in perceptions on support of local economy, but fairly ambiguous in terms of carbon footprint
Changes in Perceptions of Food System Partners after 2008 Food Safety Events

The bar chart illustrates the perceptions of various stakeholders regarding food safety after the 2008 food safety events. The chart categorizes perceptions into four groups:

1. Stayed the same
2. Worsened
3. Improved
4. No answer

The stakeholders include USDA, US Farm, Food Retailers, FDA, International Food Trade, Restaurants, and Food Distributors & Handlers. The chart shows the percentage of each category for each stakeholder.
Marketing and Policy Implications

• Diverse consumer perspectives and buying behavior within local, direct markets
  – Not closely aligned with organic movement
  – 3\textsuperscript{rd} party vs. Direct from source verification?
  – Support for ag and local economy and perceived environmental benefits

• Will farmers markets grow or will conventional supply chains try to emulate their culture of producer interactions?
Future Directions for Local Foods Research

• Exploring the mixed public and private good aspects of food products and shopping venues

• What role do farmers markets and other direct venues have in the dynamics of the food supply chain?

• How could future marketing/certification effectively leverage and verify these consumer perceptions to secure value?
Appendix
Fall 2008 Survey

• Administered October 17 to November 20, 2008 by Knowledge Network Inc., a contracted third party.
  – 1,269 people in consumer panel solicited; 1052 usable responses. Oversampled people in intermountain region (CO, AZ, UT)
<table>
<thead>
<tr>
<th>Income Range</th>
<th>Supermarket</th>
<th>Health/Natural Foods</th>
<th>Farmers Markets</th>
<th>Direct</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 - $20</td>
<td>67%</td>
<td>42%</td>
<td>63%</td>
<td>74%</td>
<td>65%</td>
</tr>
<tr>
<td>$21 - $40</td>
<td>23%</td>
<td>27%</td>
<td>24%</td>
<td>17%</td>
<td>23%</td>
</tr>
<tr>
<td>$41 - $60</td>
<td>7%</td>
<td>15%</td>
<td>5%</td>
<td>9%</td>
<td>7%</td>
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<tr>
<td>$61 - $80</td>
<td>3%</td>
<td>8%</td>
<td>3%</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>$81 - $100</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
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<tr>
<td>&gt; $100</td>
<td>1%</td>
<td>6%</td>
<td>4%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Income by Primary Produce Source

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Supermarket</th>
<th>Natural Foods</th>
<th>Farmers Markets</th>
<th>Direct</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$25,000</td>
<td>19.0%</td>
<td>12.5%</td>
<td>26.1%</td>
<td>21.7%</td>
</tr>
<tr>
<td>$25,000-$39,999</td>
<td>18.2%</td>
<td>21.9%</td>
<td>20.7%</td>
<td>8.7%</td>
</tr>
<tr>
<td>$40,000-$74,999</td>
<td>35.3%</td>
<td>20.3%</td>
<td>32.6%</td>
<td>39.1%</td>
</tr>
<tr>
<td>$75,000-$124,999</td>
<td>19.8%</td>
<td>31.3%</td>
<td>13.0%</td>
<td>17.4%</td>
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<tr>
<td>&gt;$125,000</td>
<td>7.9%</td>
<td>14.1%</td>
<td>7.6%</td>
<td>13.0%</td>
</tr>
</tbody>
</table>
Data and Methods

• 2006 National Consumer Survey conducted by National Family Opinion (NFO)
  – 1549 responses, 48.86% response rate
  – May 2006, may be some seasonal bias

• Demographic data as well as purchasing habits and attribute preferences for food and produce
  • Fairly representative, low on Hispanic buyers
## Summary Statistics for the 2006 Survey

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Description (Coding)</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>In years</td>
<td>51.07</td>
<td>14.70</td>
</tr>
<tr>
<td>Gender</td>
<td>1 if female, 0 if male</td>
<td>0.74</td>
<td>0.44</td>
</tr>
<tr>
<td>Weekly Grocery</td>
<td>1 = &lt; $50, 2 = $50 - $99, 3 = $100 - $149, 4 = $150 - $199, 5 = $200 - $299, 6 = $300 or more</td>
<td>2.36</td>
<td>1.01</td>
</tr>
<tr>
<td>Market Size</td>
<td>1 = Under 100,000, 2 = 100,000 - 499,999, 3 = 500,000 - 1,999,999, 4 = 2,000,000 and over</td>
<td>3.03</td>
<td>1.08</td>
</tr>
<tr>
<td>Household Income</td>
<td>1 = &lt; Under $30,000, 2 = $30,000 - $49,999, 3 = $50,000 - $74,999, 4 = $75,000 and Over</td>
<td>2.49</td>
<td>1.17</td>
</tr>
<tr>
<td>Race</td>
<td>1 if Caucasian, 0 if otherwise</td>
<td>0.90</td>
<td>0.30</td>
</tr>
<tr>
<td>Spanish Origin</td>
<td>1 if Spanish Origin, 0 if otherwise</td>
<td>0.03</td>
<td>0.16</td>
</tr>
<tr>
<td>Household Size</td>
<td>Actual number in household, range: 1 to 7 members</td>
<td>2.41</td>
<td>1.34</td>
</tr>
<tr>
<td>Life Stage</td>
<td>1 if single, no children, 0 otherwise, 1 if couple, no children, 0 otherwise, 1 if couple, at least one child in household</td>
<td>0.26</td>
<td>0.44</td>
</tr>
</tbody>
</table>

*Table 1. Summary Statistics for the Demographic Variables (n = 1549)*
## Label Descriptions

<table>
<thead>
<tr>
<th>Label</th>
<th>Name</th>
<th>Current Status</th>
</tr>
</thead>
</table>
| ![USDA Organic](image) | Certified Organic  
*What does it mean?* | Exists |
| ![Fair Trade](image) | Certified Fair Trade  
*What does it mean?* | International: Exists  
Domestic: Under consideration |
| ![Carbon Footprint](image) | Carbon Footprint  
Carbon emission level (grams of carbon emissions per pound of product)  
*Larger number means more damages to the environment*  
*What does it mean?* | Under consideration |