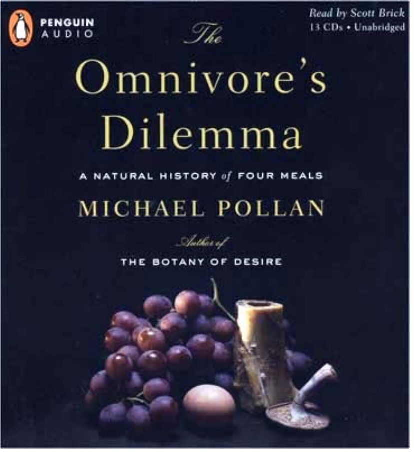
What Is Driving Consumer Demand for Local Foods?

Dawn Thilmany McFadden
Colorado State University

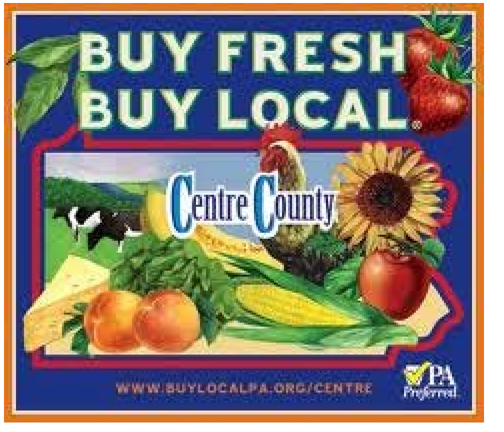
Making Locally Grown Food More Available

USDA Ag Outlook Forum

February 2012



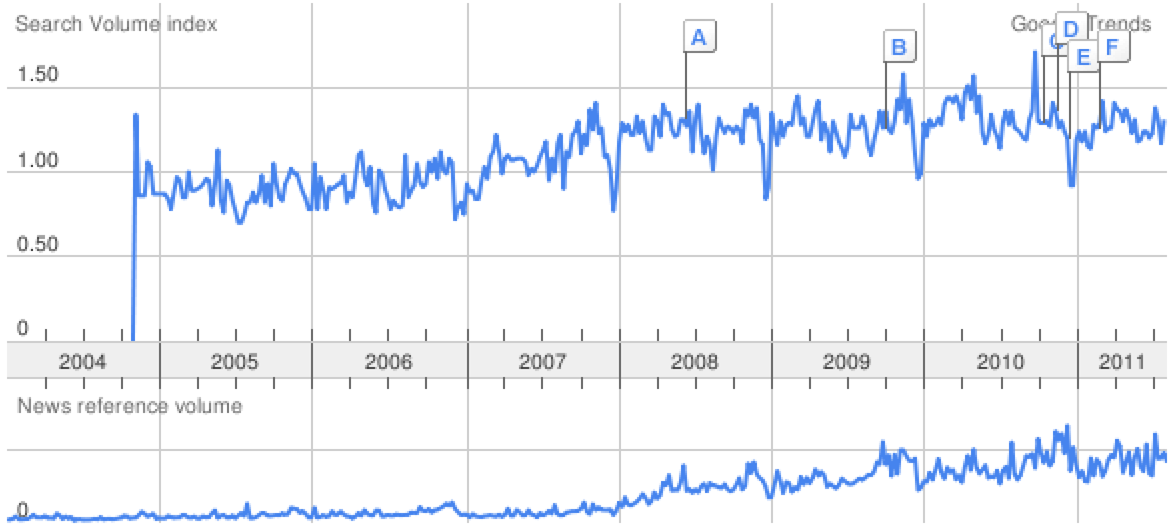
Locavores: An Overview

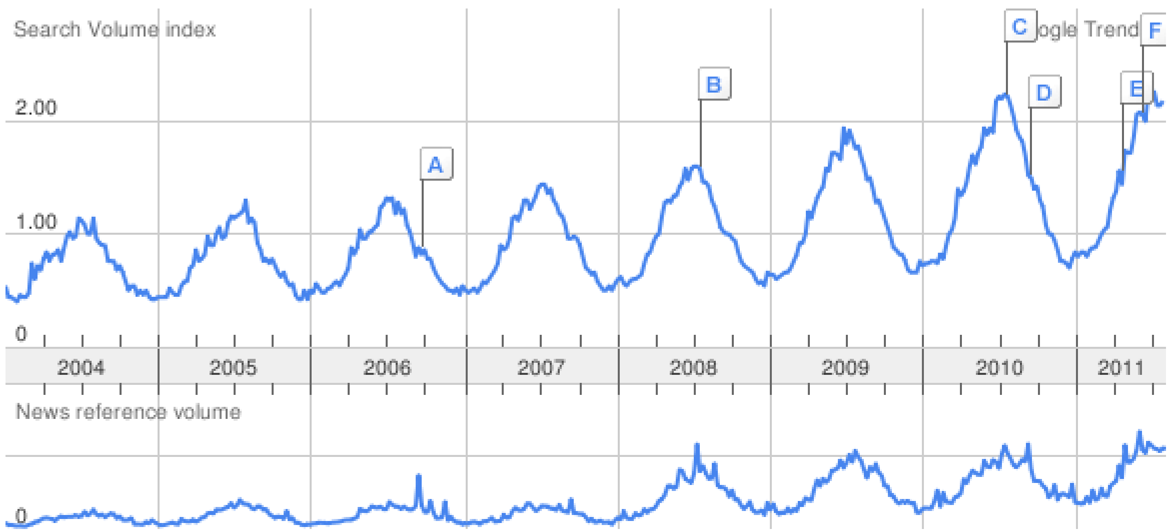


- Many potential factors driving consumer trends
  - Perceptions of quality (nutrition, fresh)
  - Assurances of safety and health benefits
  - Support for the local economy, farms
  - Environmental benefits, farmland preservation
- More broadly, what are private and public attributes consumers seek? Are there research and policy implications?

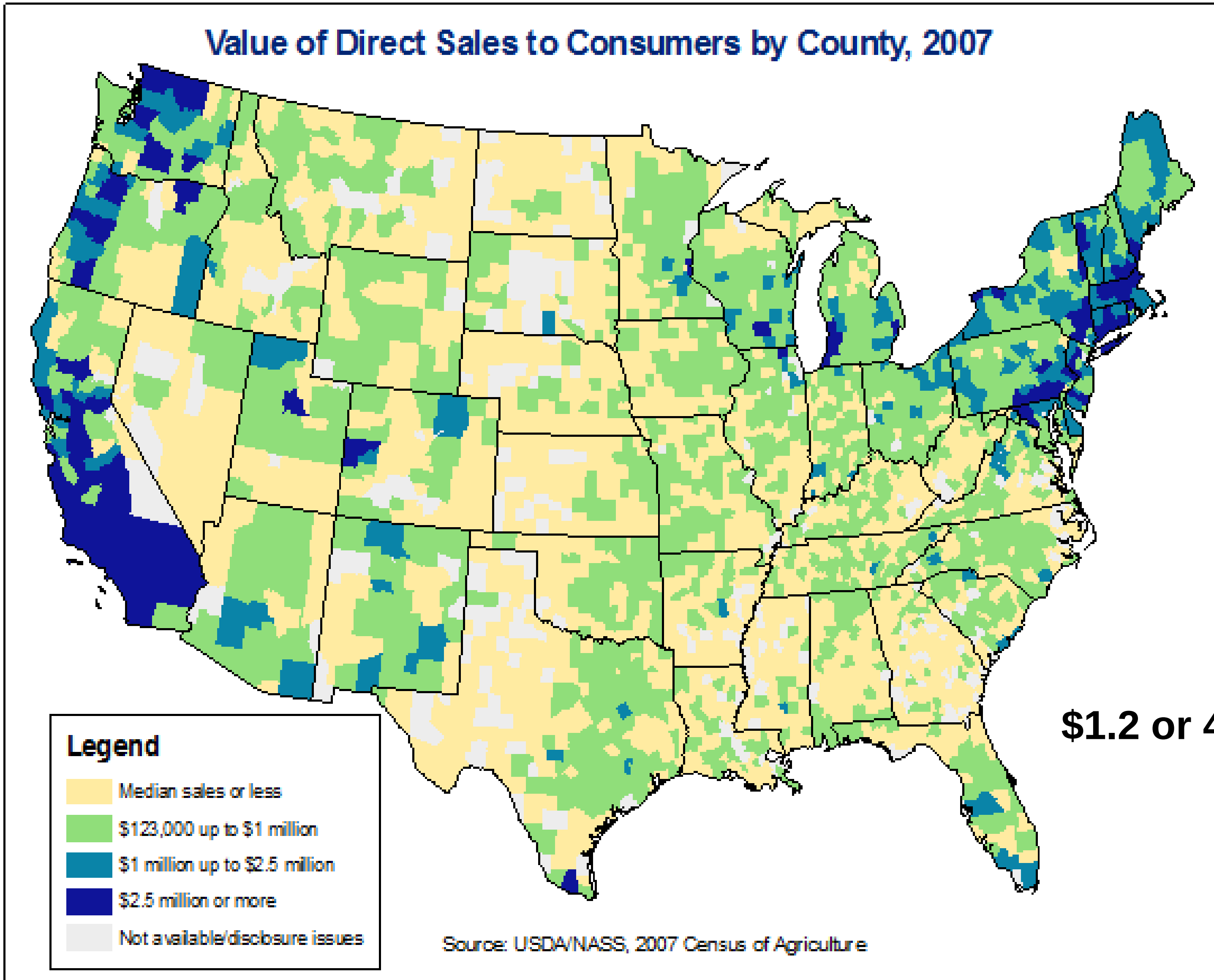
Local Food and Farmers Markets

Worldwide, interest has grown





Farmers markets more seasonal but increasing as well



$1.2 or 4.8 billion?

U.S. National Map of Community Supported Agriculture

Source: Local Harvest, 2010. Available at: http://www.Localharvest.org

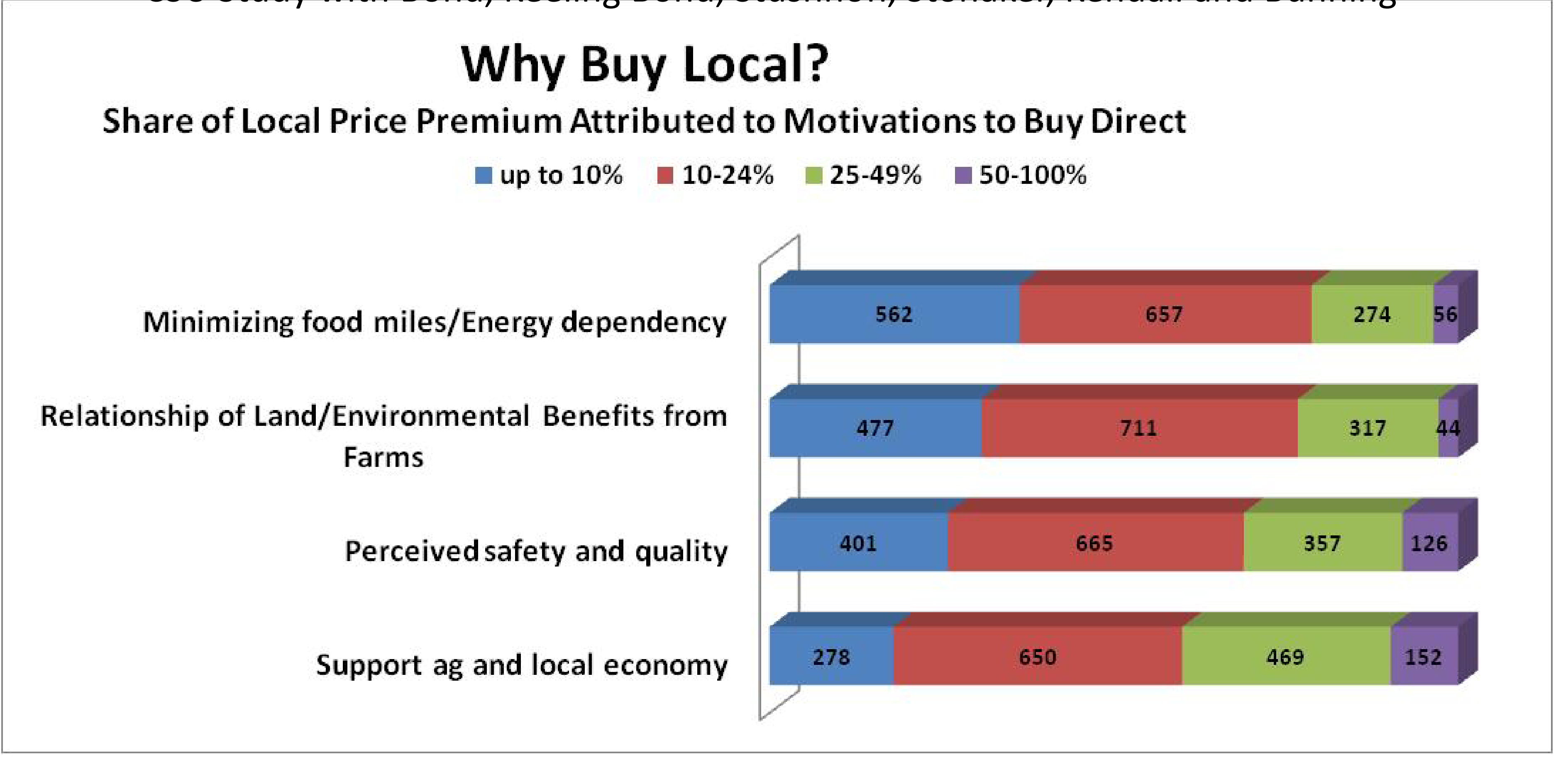
Why Target Local?

- Very high profile topic with a very engaged audience but fairly “ill-defined”
- A myriad of outcomes are seemingly promised
  - Environmental impacts, quality, public health benefits, economic impacts
  - Nearly impossible to evaluate many outcomes
  - Explore how local became so closely associated with direct channels…

A Survey on Organic and Local

National Survey in May 2006, Conducted by NFO/My Survey, n=1549

CSU Study with Bond, Keeling Bond, Stushnoff, Stonaker, Kendall and Bunning



Support for ag and local economy seems most important.
Food miles does not seem to be driving locavores

Organic, Locality, and Food Miles – Implications for Trade, Supply Chains, Environment, and Consumer Welfare

Yuko Onozaka and Dawn Thilmany McFadden

Defining Sustainable Food Market Segments: Do Motivations and Values Vary by Shopping Locale?
YUKO ONOZAKA, GRETCHEN NURSE, AND DAWN THILMANY MCFADDEN

Does Local Labeling Complement or Compete with other Sustainable Labels?

YUKO ONOZAKA AND DAWN THILMANY MCFADDEN

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

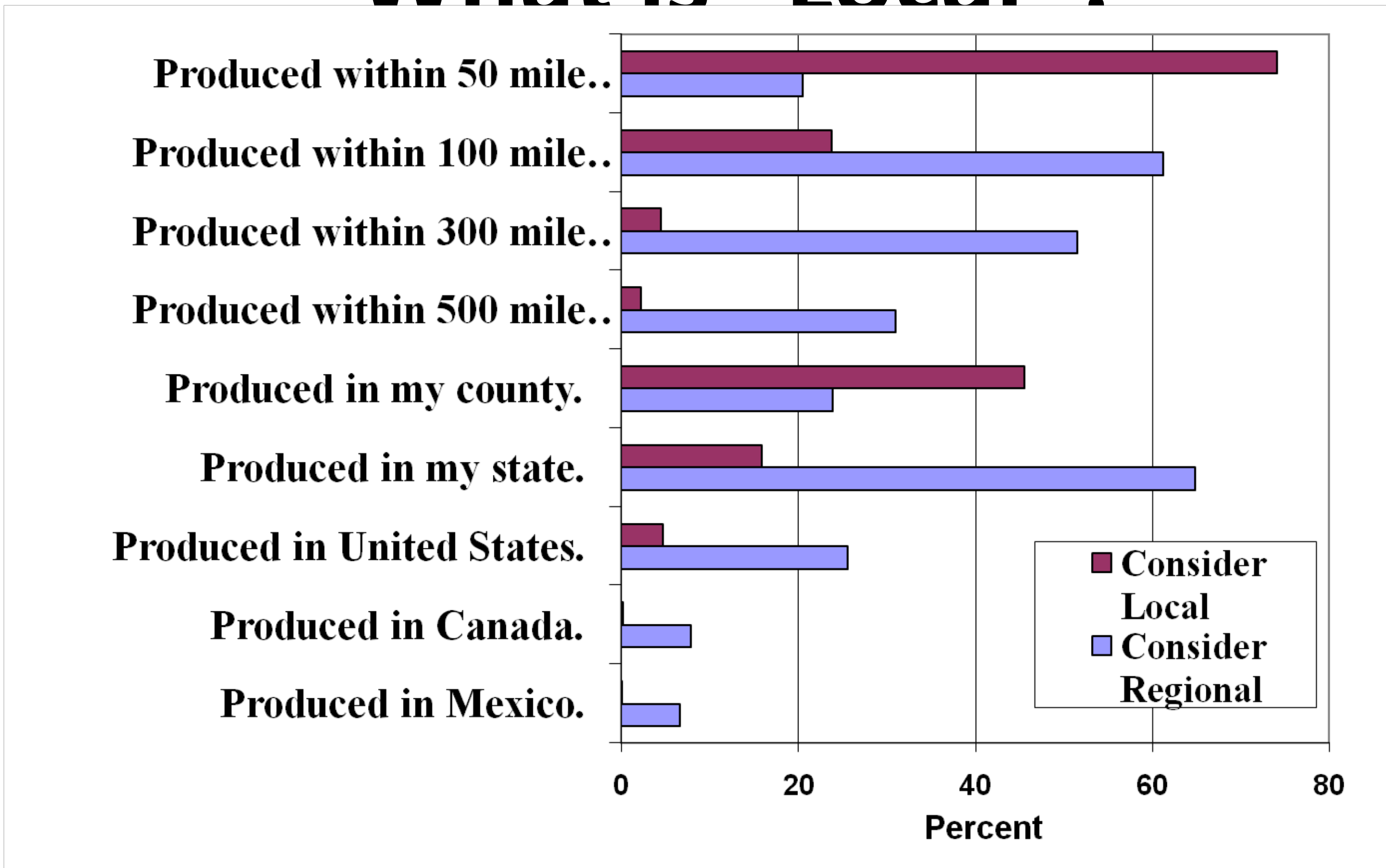
The Role of Consumers

- We were curious to see how consumers are choosing among an increasingly large number of labels and programs
- Lusk and Briggeman (2009) on food values
  - safety, nutrition, taste and price were among the most important to consumers.
  - Yet, they report diversity across consumers:
    - naturalness, fairness and the environment food values were significantly related to preferences for organic food
- Our research shows diversity in WTP and underlying consumer motivations by marketing channel
  - Onozaka, Nurse and Thilmany, 2010 ; Onozaka and Thilmany, 2011

Consumer Behavior

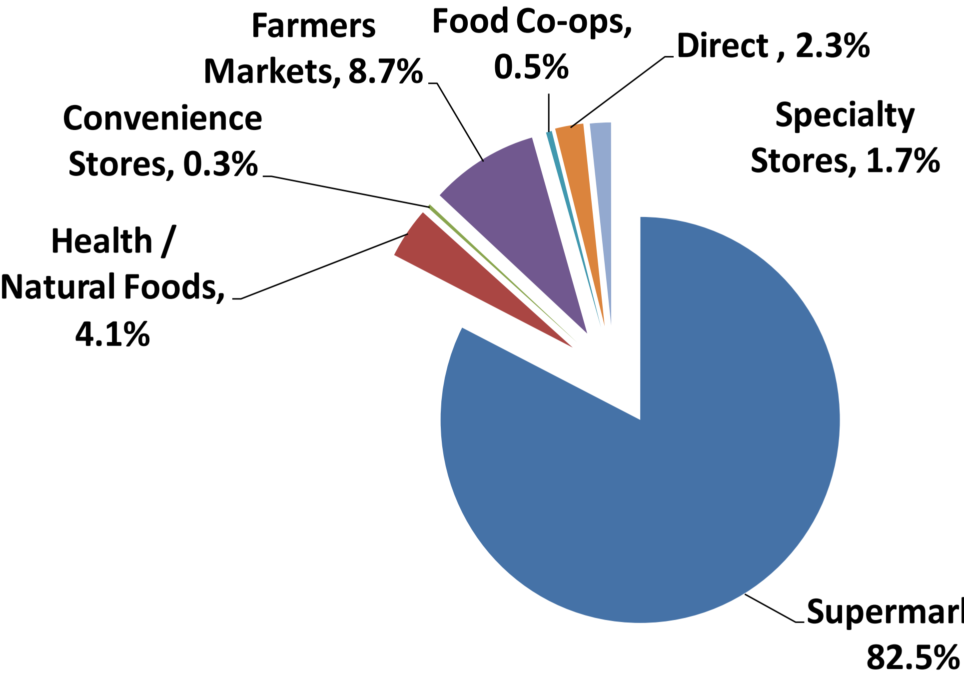
- Consumers are more savvy in using their money to make a public statement of activism and pursue “sustainable” consumption
  - Vermeir and Verbeke (2006), among others
- Farmers Markets role in enhancing “perceived consumer effectiveness” (PCE)
  - Extent to which the consumer believes that their personal efforts can contribute to the solution of a problem

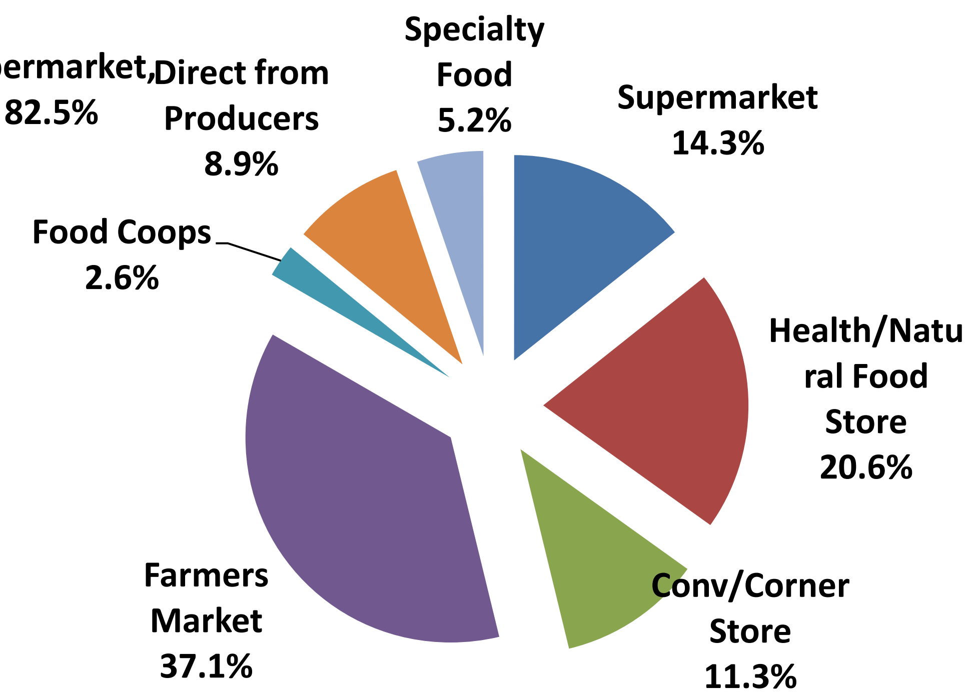
What is “Local”?



- Much higher penetration for local foods (over 80%), than organics (over 50%), with significant share buying both
- Expense and availability most commonly cited “barriers”

Fresh Produce Source

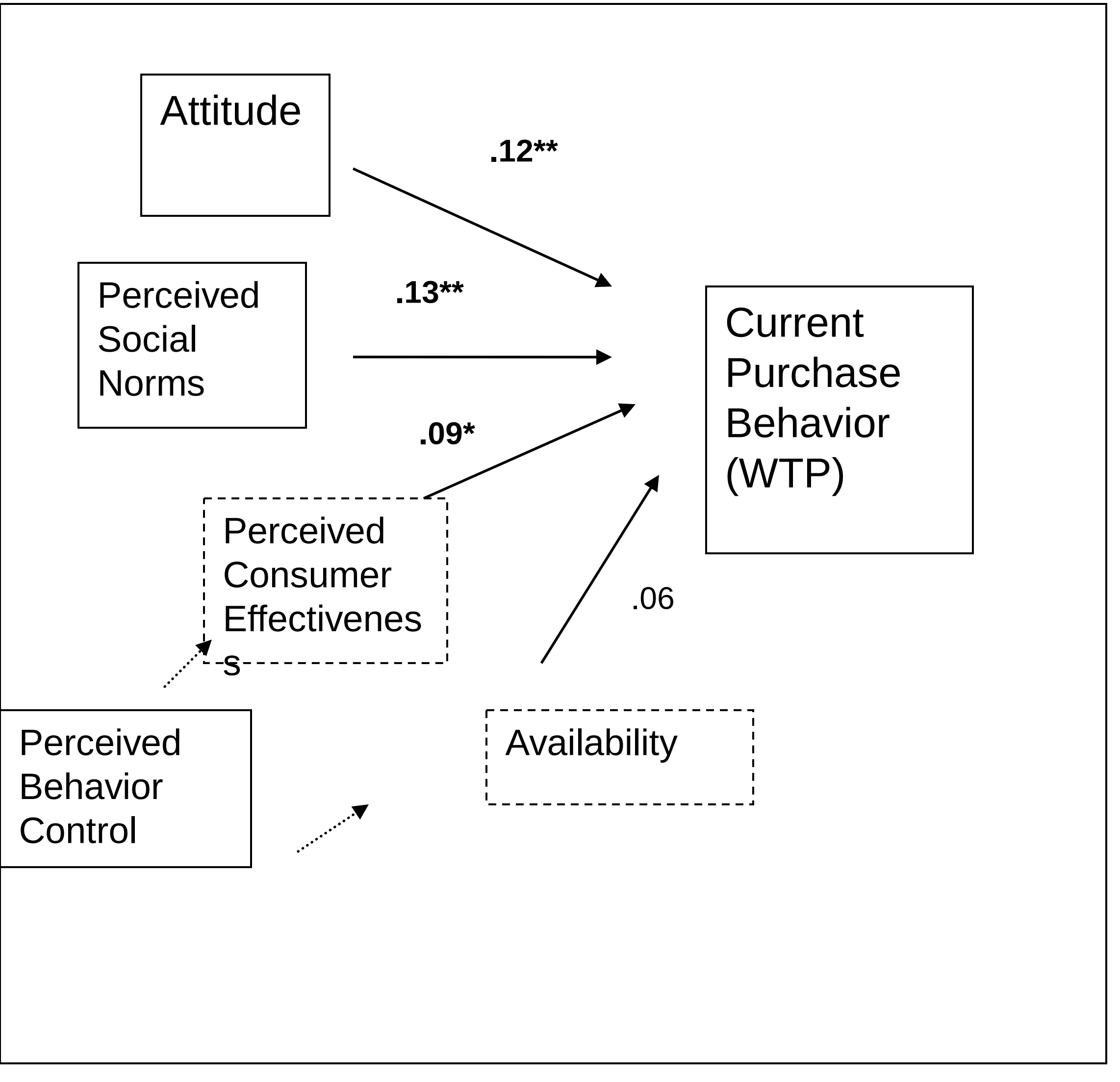




Exploring Motivations

"You may not feel any healthier right away, but you'll definitely feel more smug."

What Does Consumer Psychology Say?

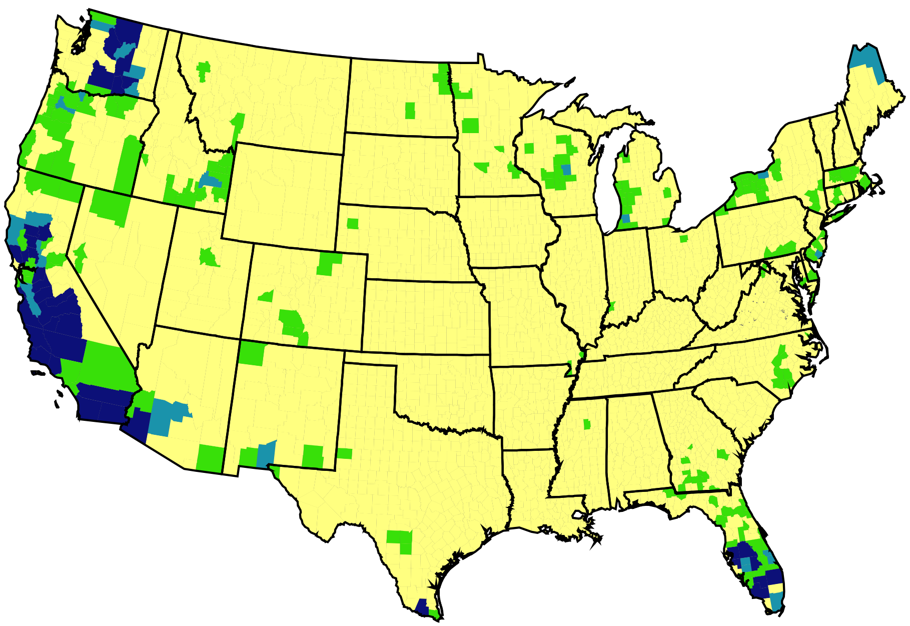


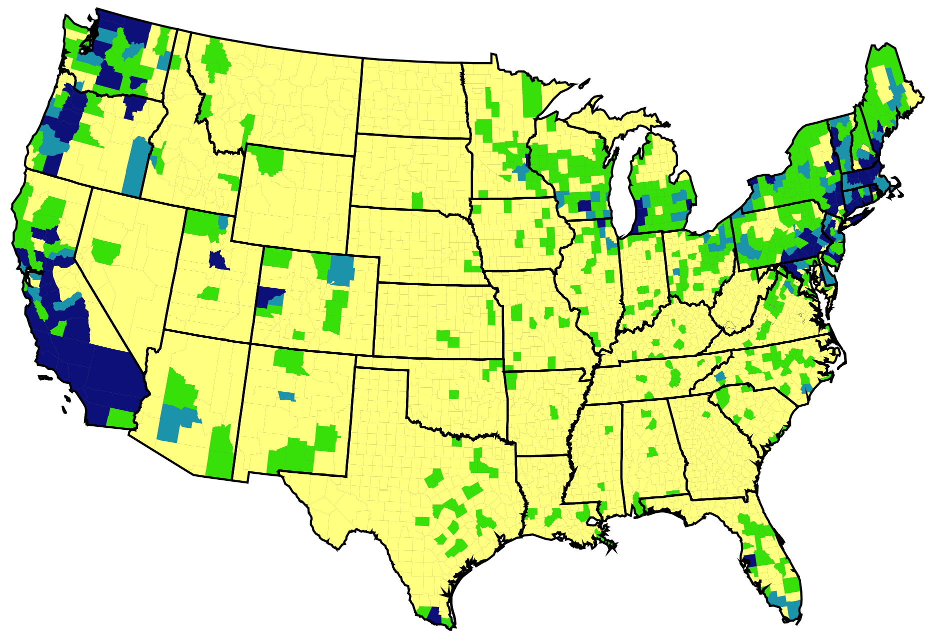
Dimension	**Mean**
Health	5.43
Impact local economy	5.08
Positive effect on society	4.74
Positive impact on environment	4.33
Statement for social fairness	4.09

Customer PCE score by Primary Source of Fruits and Veggies

Location	N	PCE Mean	S.D.
Food Co-op	**5**	**6.28[a]**	**1.03**
Specialty (gourmet)	16	5.44	1.24
Health/natural foods	**42**	**5.31[a]**	**1.15**
Farmers Market	**88**	**5.14[a]**	**1.10**
Convenience Store	3	5.13	.503
Direct from producer	22	4.92	1.87
Supermarket	**831**	**4.63[b]**	**1.14**

$F(1,6)=7.38$, $p<.01$, $eta^2=.042$





Fruit and Vegetable Sales, 2007

County Average: $10.289M

Standard Deviation $82.043M

Below Average

Average to 1 St. Dev above

1-2 St. Dev above average

>2 St Dev above average

Direct Sales, 2007

County Average: $0.373M

Standard Deviation: $0.965M

Pearson correlation coefficient

US County Totals

	Obesity, % of adults	Cardiovascular disease mortality rate
Direct Sales*	**-0.21**	**-0.15**
Number of CSAs*	**-0.19**	**-0.16**
Number of Farmers' Markets	**-0.27**	**-0.14**
Fruit and vegetable sales over total farm sales*	**-0.18**	**-0.09**

Sources: * data from Census of Agriculture (2007)

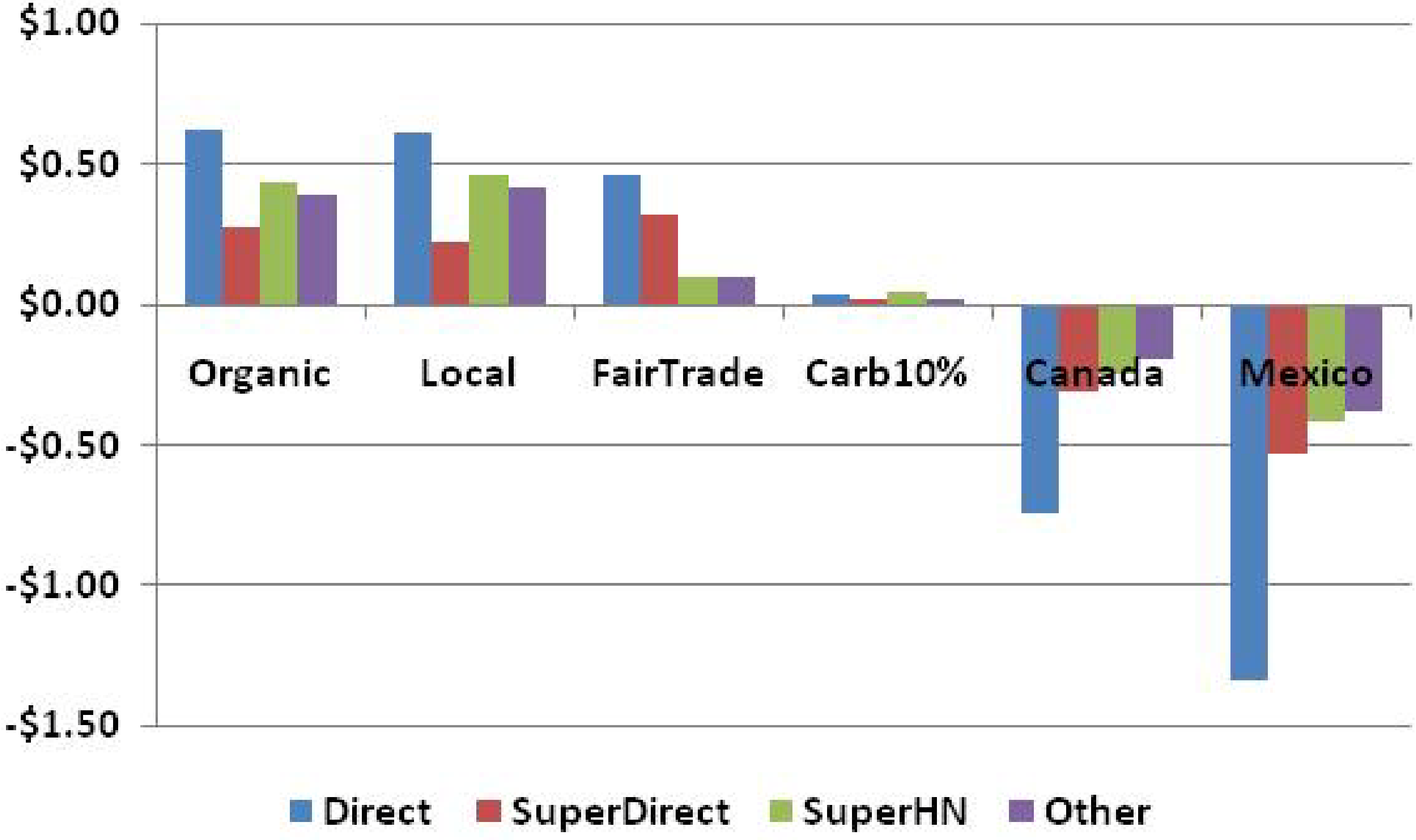
Number of farmers' markets from USDA-ERS Food Environment Atlas (2010)

Obesity rate from CDC (2006-2008)

Cardiovascular mortality calculated using CDC Mortality Tape (98-00 and 03-05)

Note: Correlations for 2990 US counties for which data were available

Median WTP Comparisons (Tomatoes)

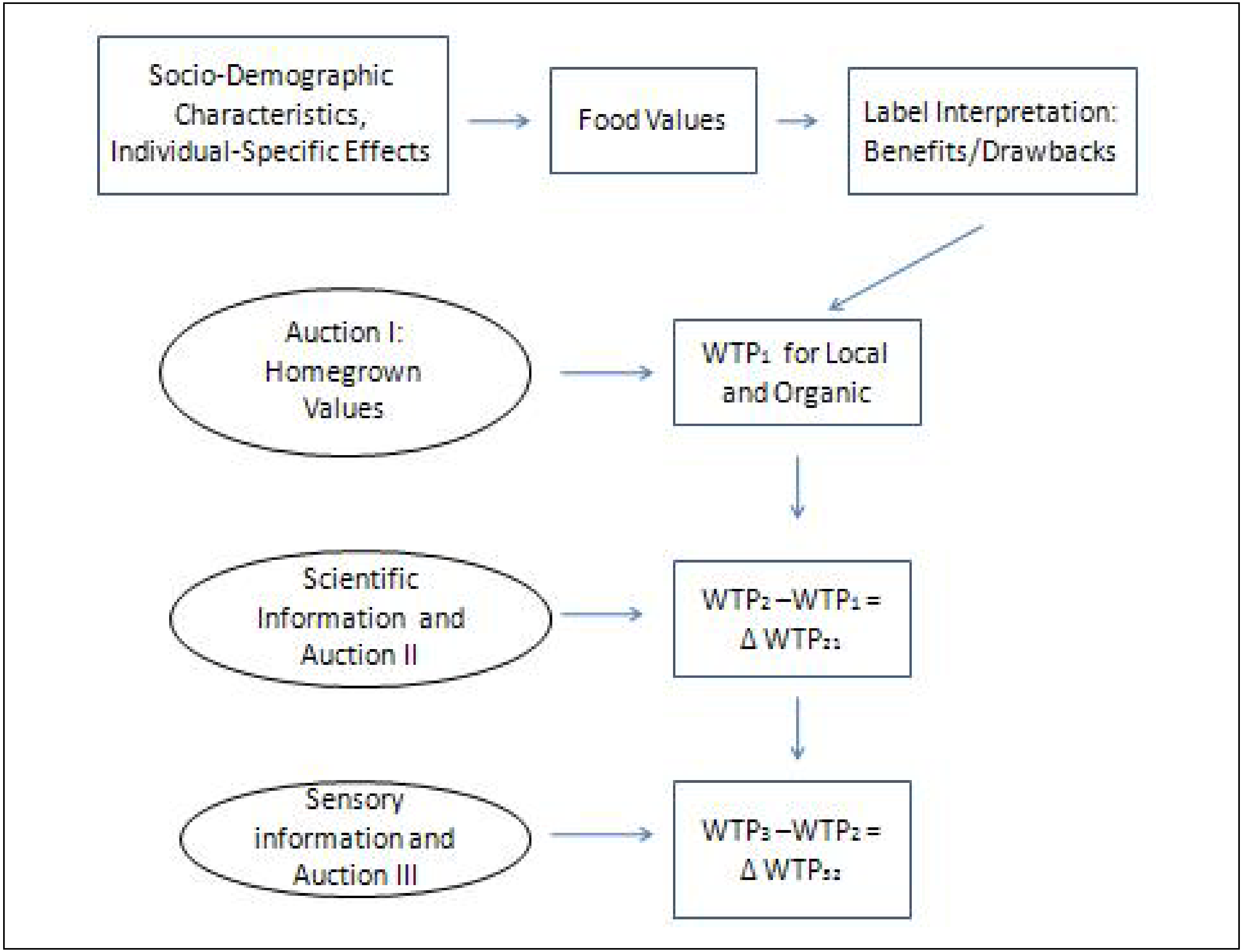


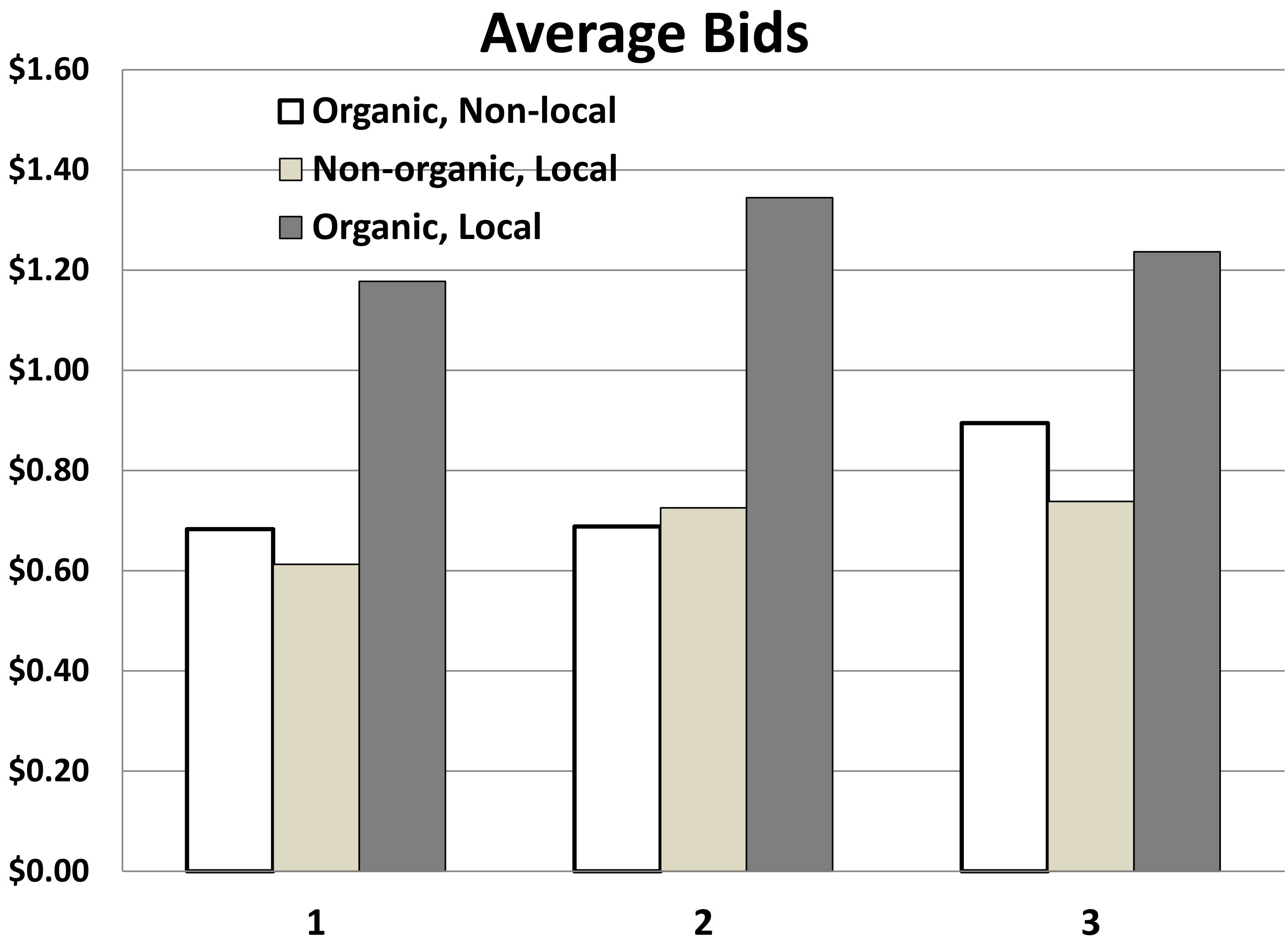
Integrating Sensory Analysis in a Valuation Study of Credence Attributes:

Joint Sensory and Economic Analysis Session

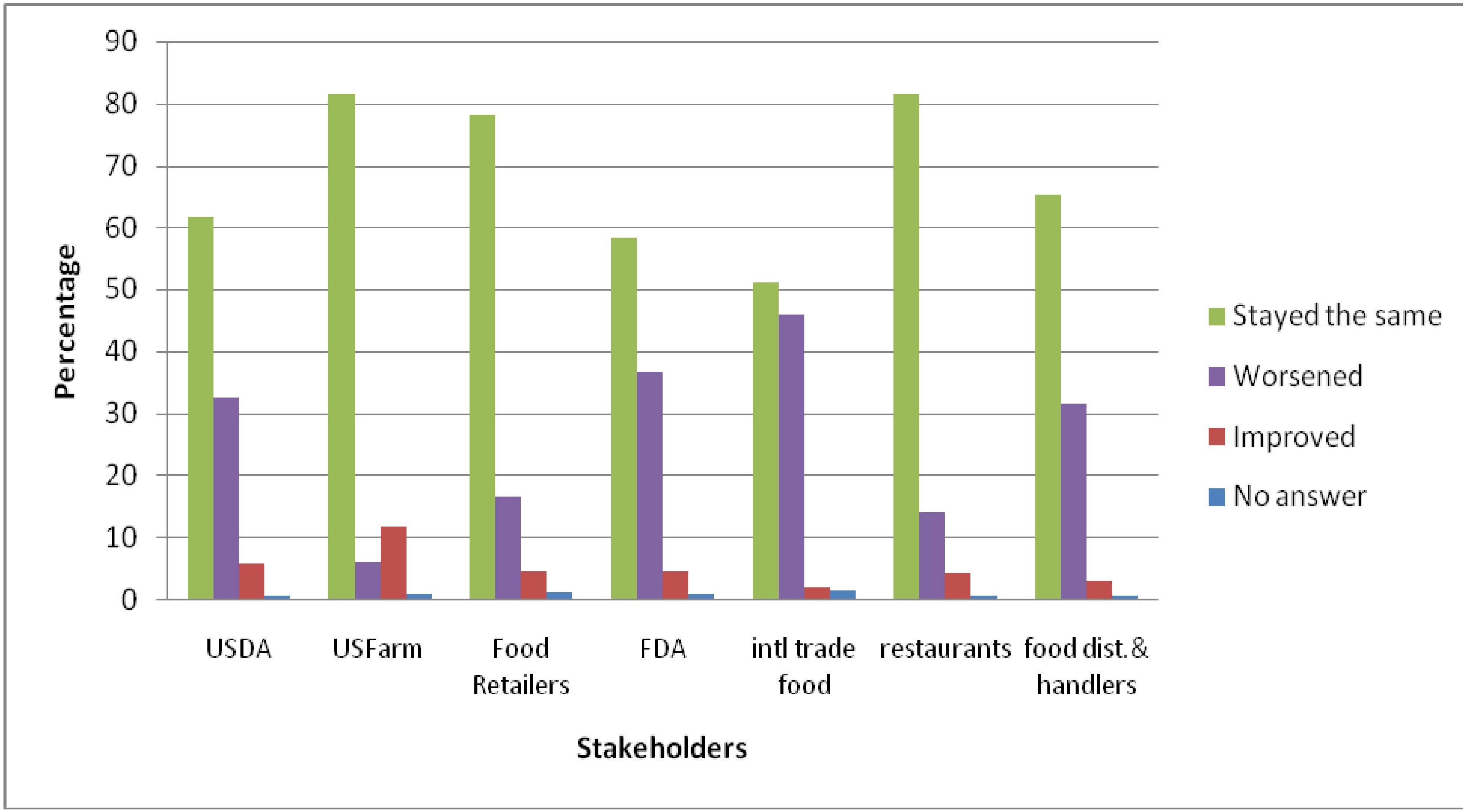
Dawn Thilmany McFadden, Marco Costanigro and Stephan Kroll
Colorado State University

Food Distribution Research Society

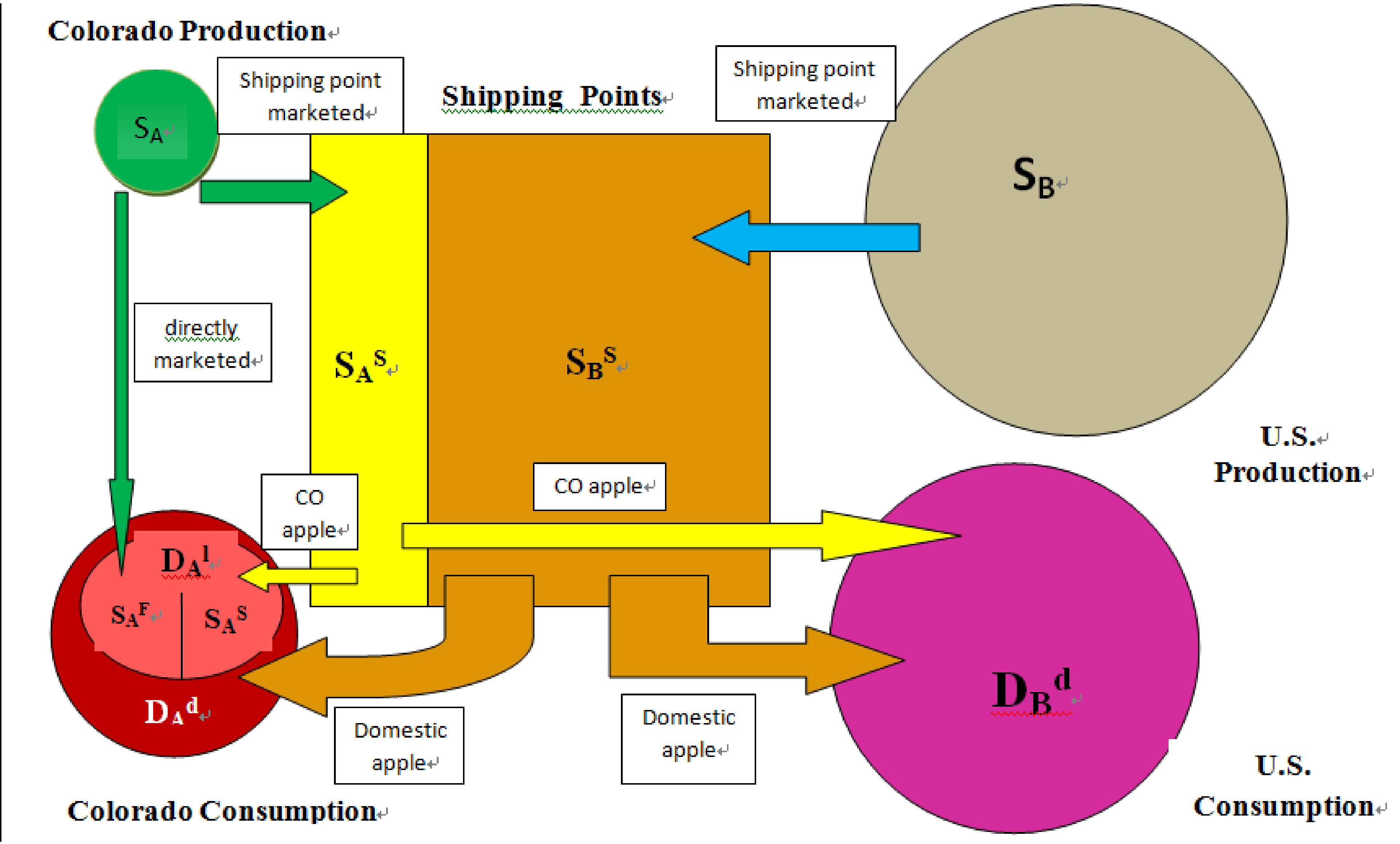

Socio-Demographic Characteristics, Individual-Specific Effects
Food Values
Label Interpretation: Benefits/Drawbacks
Auction I: Homegrown Values
WTP1 for Local and Organic
Scientific Information and Auction II
WTP2 – WTP1 = Δ WTP21
Sensory information and Auction III
WTP3 – WTP2 = Δ WTP32


Average Bids
$1.60
$1.40
$1.20
$1.00
$0.80
$0.60
$0.40
$0.20
$0.00
Organic, Non-local
Non-organic, Local
Organic, Local
1
2
3

Changes in Perceptions of Food System Partners after 2008 Food Safety Events



U.S. Apple Market



How is the Market Affected?

- In the long run, consumers would shift their demand toward local apples
  - More Colorado produced apples marketed directly as producers shift from wholesale shipping points
- Producer Surplus
  - In the short run, Colorado producers would **lose $300**
  - In the long run, Colorado producers would **gain $263,000**
- Future work
  - Role of carbon footprint in consumer valuation and welfare impacts….what does that mean for sustainability?
  - Consumer surplus estimates
  - How to handle the segmented supply chains by season

Behavioral Findings and Implications

- Consumers' perception of the efficacy of their actions affect the valuations of labels
- Effective message

  → communicate the "linkage"
- Challenges in communicating the "linkage" between purchase and intended outcomes
  – greater with more "agents" between source and buyer

Setting the Research Agenda

- Marketing Research on Local Foods
  - Consumer Attitudes, Behavior and WTP
  - Price behavior and relationships
    - Tracking sales and market conditions by outlet
  - Structure and marketing channel performance
- Local Foods Interface with Policy
  - Does information, confidence and/or perceived quality gains offset any efficiency losses?
  - Challenges for economic contribution, impact and business performance analysis at community and economy-wide level

Research and Market Development

- NIFA
  - Economic Viability of Small & Mid-sized Farms
  - Markets and Trade, Rural Development
  - SARE and WCRME regional grants
  - Community Food Projects
  - Beginning Farmer and Rancher Development
- Rural Development:
  - Value Added Producer Grants
- Ag Marketing Service:
  - Farmers Market Promotion Program
  - Federal State Marketing Improvement


BUY FRESH
BUY LOCAL.
Centre County
WWW.BUYLOCALPA.ORG/CENTRE
PA Preferred.

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)

	Supermarket	Health/Natural Foods	Farmers Markets	Direct	Overall
$0 - $20	67%	42%	63%	74%	65%
$21 -$40	23%	27%	24%	17%	23%
$41 - $60	7%	15%	5%	9%	7%
$61 - $80	3%	8%	3%	0%	3%
$81 - $100	0%	2%	0%	0%	0%
> $100	1%	6%	4%	0%	1%

Income by Primary Produce Source

	Supermarket	Natural Foods	Farmers Markets	Direct
<$25,000	19.0%	12.5%	26.1%	21.7%
$25,000-$39,999	18.2%	21.9%	20.7%	8.7%
$40,000-$74,999	35.3%	20.3%	32.6%	39.1%
$75,000-$124,999	19.8%	31.3%	13.0%	17.4%
>$125,000	7.9%	14.1%	7.6%	13.0%

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 1. Summary Statistics for the Demographic Variables (n = 1549)

Variable Name	Description (Coding)	Mean	Standard Deviation
Age	In years	51.07	14.70
Gender	1 if female, 0 if male	0.74	0.44
Weekly Grocery Expenditures	1 = < $50, 2 = $50 - $99 3 = $100 - $149 4 = $150 - $199 5 = $200 - $299 6 = $300 or more	2.36	1.01
Market Size (persons)	1 = Under 100,000 2 = 100,000 - 499,999 3 = 500,000 - 1,999,999 4 = 2,000,000 and over	3.03	1.08
Household Income	1 = < Under $30,000 2 = $30,000 - $49,999 3 = $50,000 - $74,999 4 = $75,000 and Over	2.49	1.17
Race	1 if Caucasian, 0 if otherwise	0.90	0.30
Spanish Origin	1 if Spanish Origin, 0 if otherwise	0.03	0.16
Household Size	Actual number in household, range: 1 to 7 members	2.41	1.34
Life Stage	1 if single, no children, 0 otherwise	0.26	0.44
	1 if couple, no children, 0 otherwise	0.40	0.49
	1 if couple, at least one child in household	0.32	0.47

Label Descriptions

Label	Name	Current Status
	Certified Organic What does it mean?	Exists
	Certified Fair Trade What does it mean?	*International*: Exists *Domestic*: Under consideration
	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