Community economic impacts of food system initiatives

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HUD Webinar

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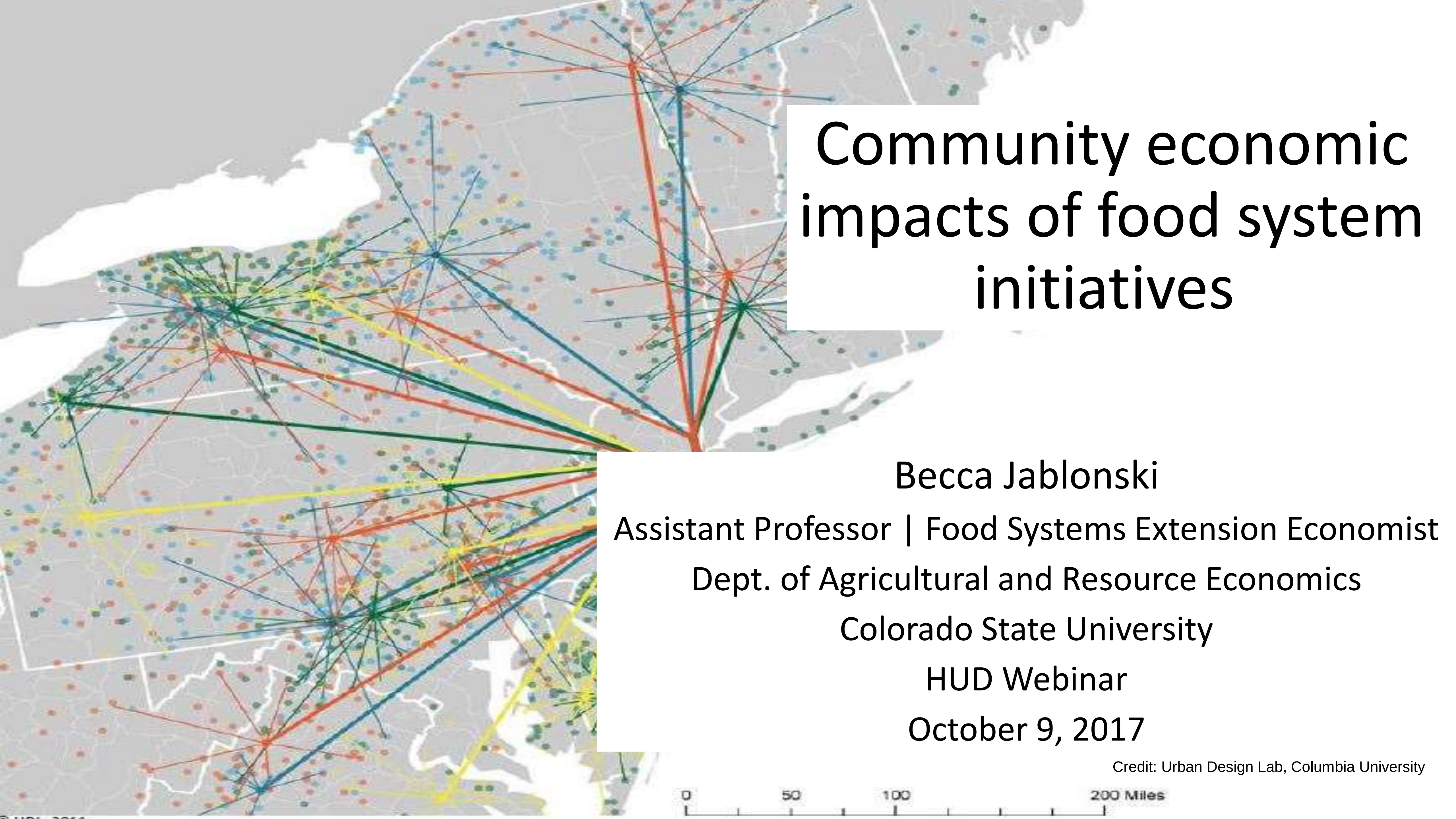
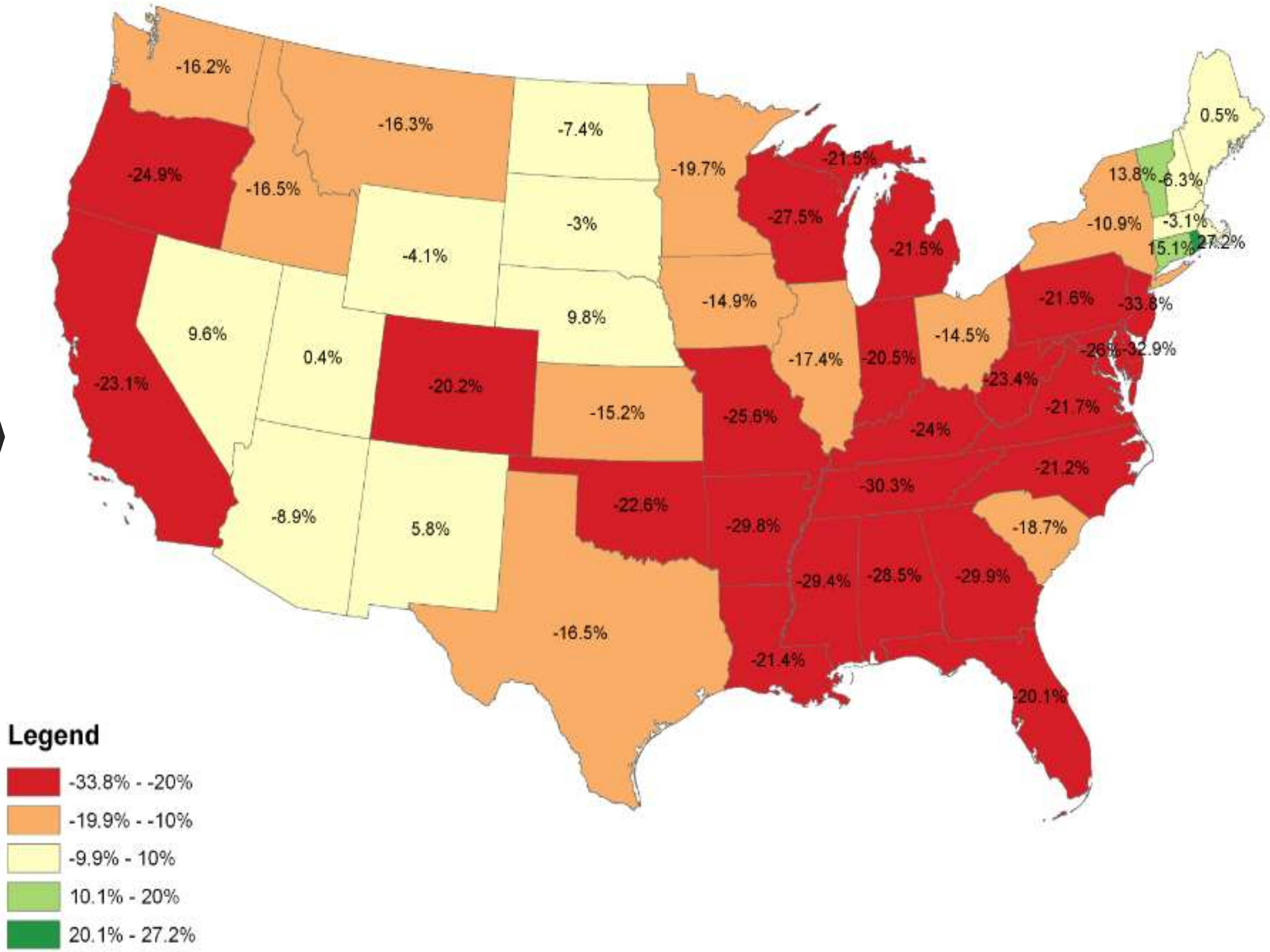


Credit: Urban Design Lab, Columbia University

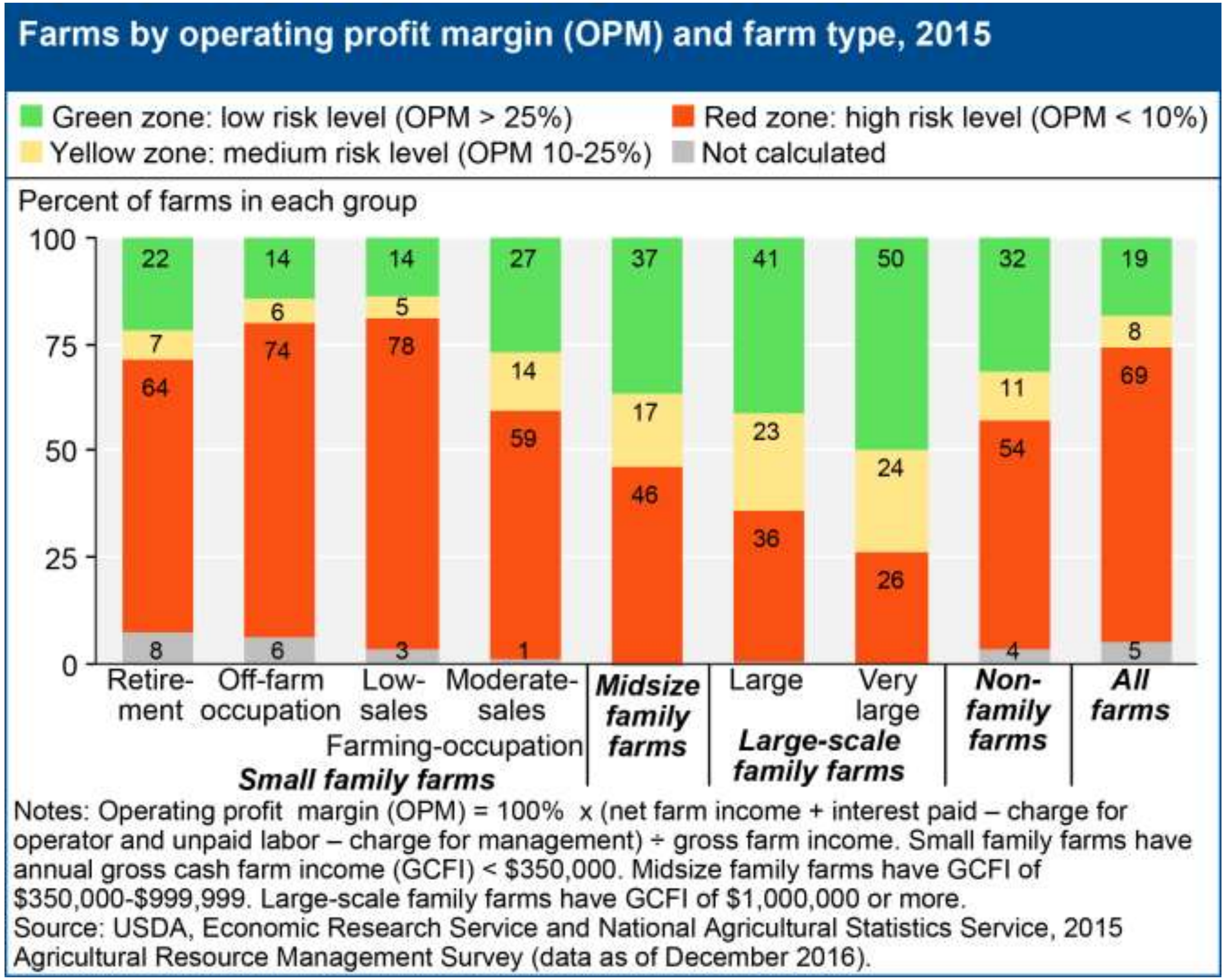
Yes, changing consumer demand, but why should communities care?

FARM/ RANCH VIABILITY

Principle Operators on Farm Less than 10 Years, Percent Change 2007 to 2012
(USDA NASS)



Profit Margin Increases with Farm Size

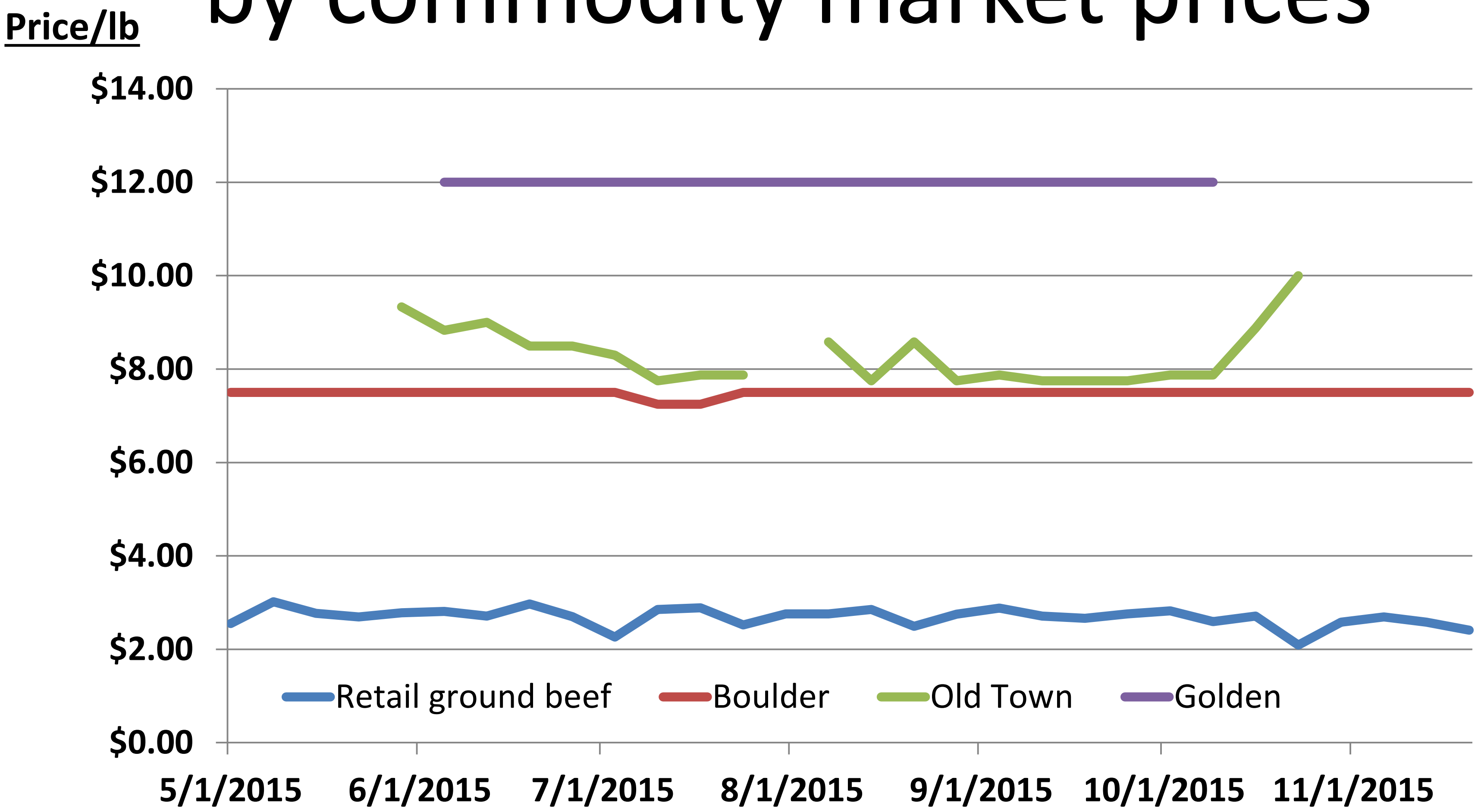


In local food channels do farmers retain more of the food dollar? New pricing reports

2011 Food dollar: Marketing bill (nominal)

Source: USDA, Economic Research Service, Food Dollar Series.

Ground beef prices at farmers markets not impacted by commodity market prices



Non-significant, but negative relationship between USDA retail ground beef prices and Larimer (Old Town) market prices; r (20) = -.415, p<.05

Note: Weekly average retail ground beef prices from https://www.marketnews.usda.gov.

Sullins et al. 2016

Farm business survivability

- Ag Census definition: A farm business is considered to have *survived* if its operator reported positive sales in consecutive censuses.

Business survival rates 2007-12 by initial farm size and marketing arrangement

	All operations		Beginning farmer in 2007	
2007 sales category	No direct sales in 2007	Direct sales in 2007	No direct sales in 2007	Direct sales in 2007
$1-9,999				
Survival rate, 2007-12	0.453	0.549***	0.416	0.507***
Observations	484,211	51,535	177,392	22,170
$10,000-49,999				
Survival rate, 2007-12	0.581	0.667***	0.521	0.611***
Observations	268,758	23,729	68,053	7,647
$50,000-249,999				
Survival rate, 2007-12	0.656	0.738***	0.593	0.649***
Observations	194,563	11,270	35,364	2,661
$250,000+				
Survival rate, 2007-12	0.728	0.791***	0.66	0.704***
Observations	178,515	5,450	27,115	800
All				
Survival rate, 2007-12	0.553	0.609***	0.474	0.543***
Observations	1,126,047	91,984	307,924	33,278

Notes: Asterisks denote rejection of the null hypothesis that the difference in means is zero at the (*) 10%; (**) 1%; and (***) 0.1% statistical significance levels. Sample includes all operations with positive sales in 2007. The survival rate is defined as the share of 2007 Census respondents with positive sales who reported positive sales in the Census in 2012.

Source: USDA, NASS, Census of Agriculture, 2007, 2012.

Source: Low et al. 2015

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Percent change in sales 2007-12 by initial farm size and marketing arrangement

	All operations		Beginning farmer in 2007	
2007 sales category	No direct sales in 2007	Direct sales in 2007	No direct sales in 2007	Direct sales in 2007
$1-9,999				
Arc percent change, 2007-12	36.9	31.8***	41.5	35.4***
Observations	225,862	28,981	76,121	11,521
$10,000-49,999				
Arc percent change, 2007-12	2.8	-12.1***	2.1	-16.7***
Observations	158,367	16,057	35,902	4,736
$50,000-249,999				
Arc percent change, 2007-12	12.1	-3.3***	14.6	-6.5***
Observations	128,175	8,350	20,941	1,736
$250,000+				
Arc percent change, 2007-12	12.3	3.9***	11.5	-9.8***
Observations	130,434	4,336	17,936	559
All				
Arc percent change, 2007-12	19.3	13.5***	25.6	17.9***
Observations	642,838	57,724	150,900	18,552

Notes: Asterisks denote rejection of the null hypothesis that the difference in means is zero at the (*) 10%; (**) 1%; and (***) 0.1% statistical significance levels. Sample includes all operations with positive sales in 2007. The percent change for farm *i* is defined: $100^*(x_{it+1} - x_{it})/0.5^*(x_{it+1} + x_{it})$.

Source: USDA, NASS, Census of Agriculture, 2007, 2012.

Source: Low et al. 2015

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Source: USDA, NASS, Census of Agriculture, 2007, 2012.

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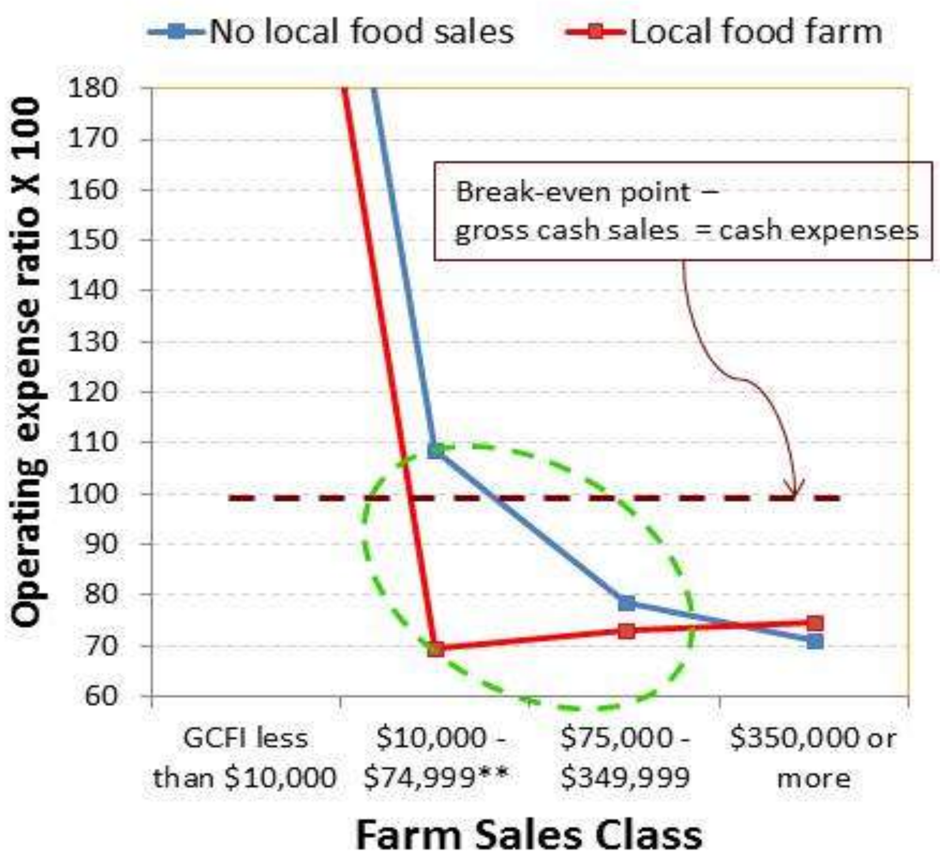
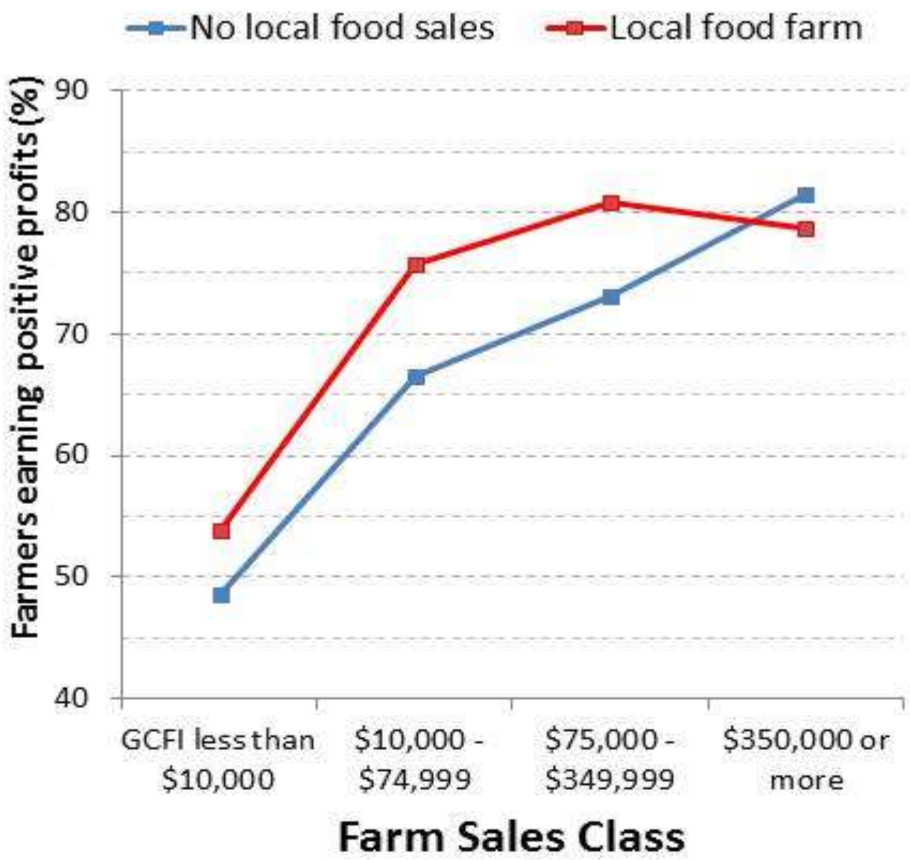
Evidence that small scale operations benefit from local food sales



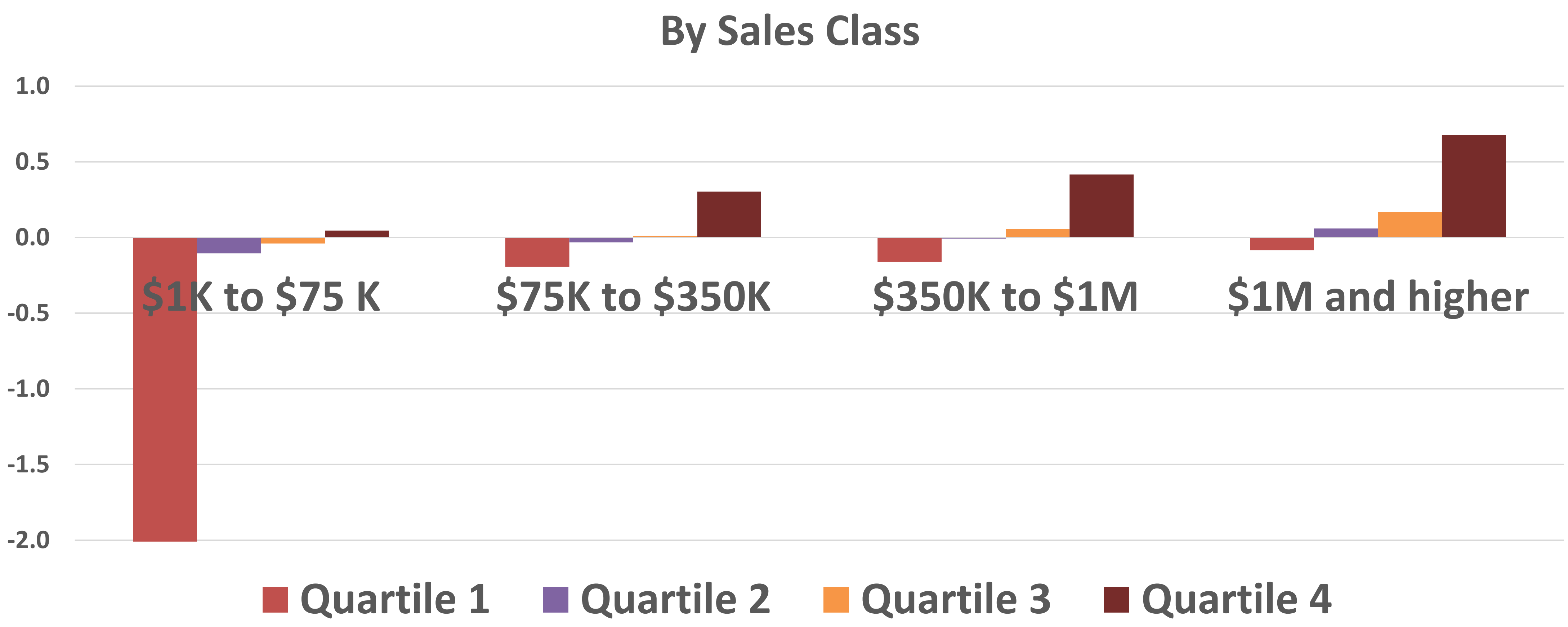


Difference in estimates: ** p-value < 0.05.
GCFI = gross cash farm income. Source: USDA, ERS/NASS, ARMS, 2008-2011.

Source: Vogel, Jablonski, and Schmit 2016

Local food farms at all scales with positive return on assets

*Quartile 4 is the most profitable



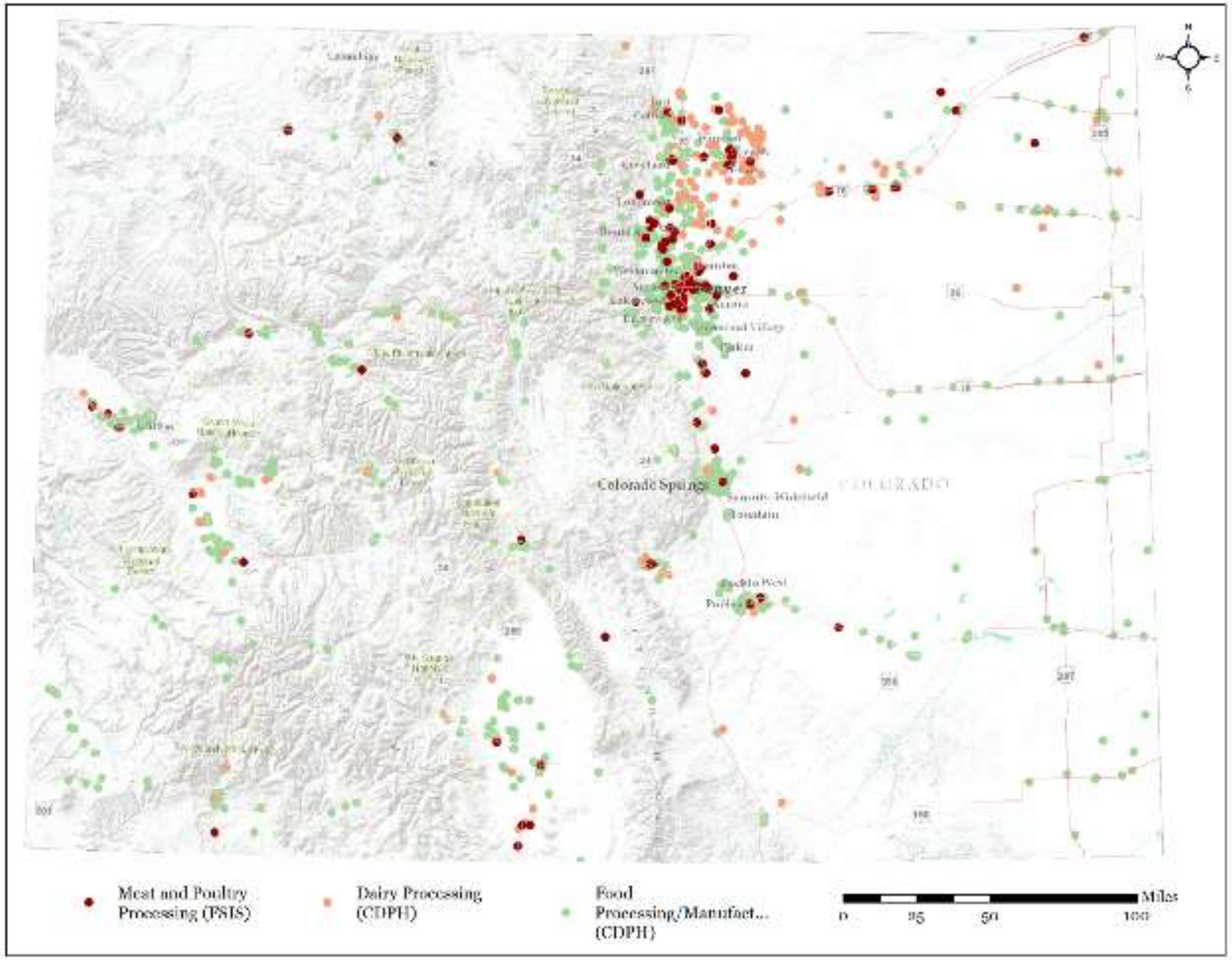
Source: USDA ARMS 2013; analysis by Thilmany McFadden, Bauman and Jablonski

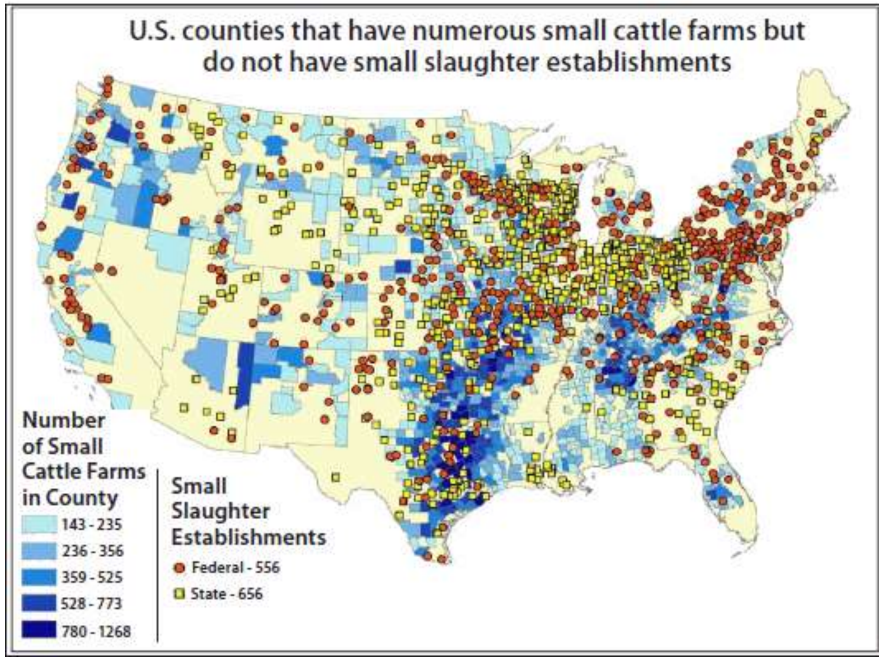
Regional Economic Development

Changes in Agriculture

Change in ag over the last 30 years marked by innovation, diversification and new market opportunities…but as ag practices are modernized to increase efficiencies, we require fewer and fewer farmers (USDA).

Many rural communities have underutilized assets!





Brother's Custom Processing, Inc.

Brother's Custom Meats

Craig, Colorado

‘Untraditional’ ownership structures
Walsh Community Grocery Stores

Food Systems led economic development is an opportunity to strengthen rural-urban linkages

2012 CENSUS OF AGRICULTURE
COUNTY PROFILE

Denver County
Colorado

	2012	2007	% change
Number of Farms	10	24	- 58
Land in Farms	143 acres	609 acres	- 77
Average Size of Farm	14 acres	25 acres	- 44
Market Value of Products Sold	(D)	$561,000	
Crop Sales (D)			
Livestock Sales (D)			
Average Per Farm	(D)	$23,356	

Denver Mayor Michael Hancock set the city's 2020 sustainability goals:

Acquiring at least 25 percent of food purchases through Denver's municipal government supply chain from sources produced entirely within Colorado.

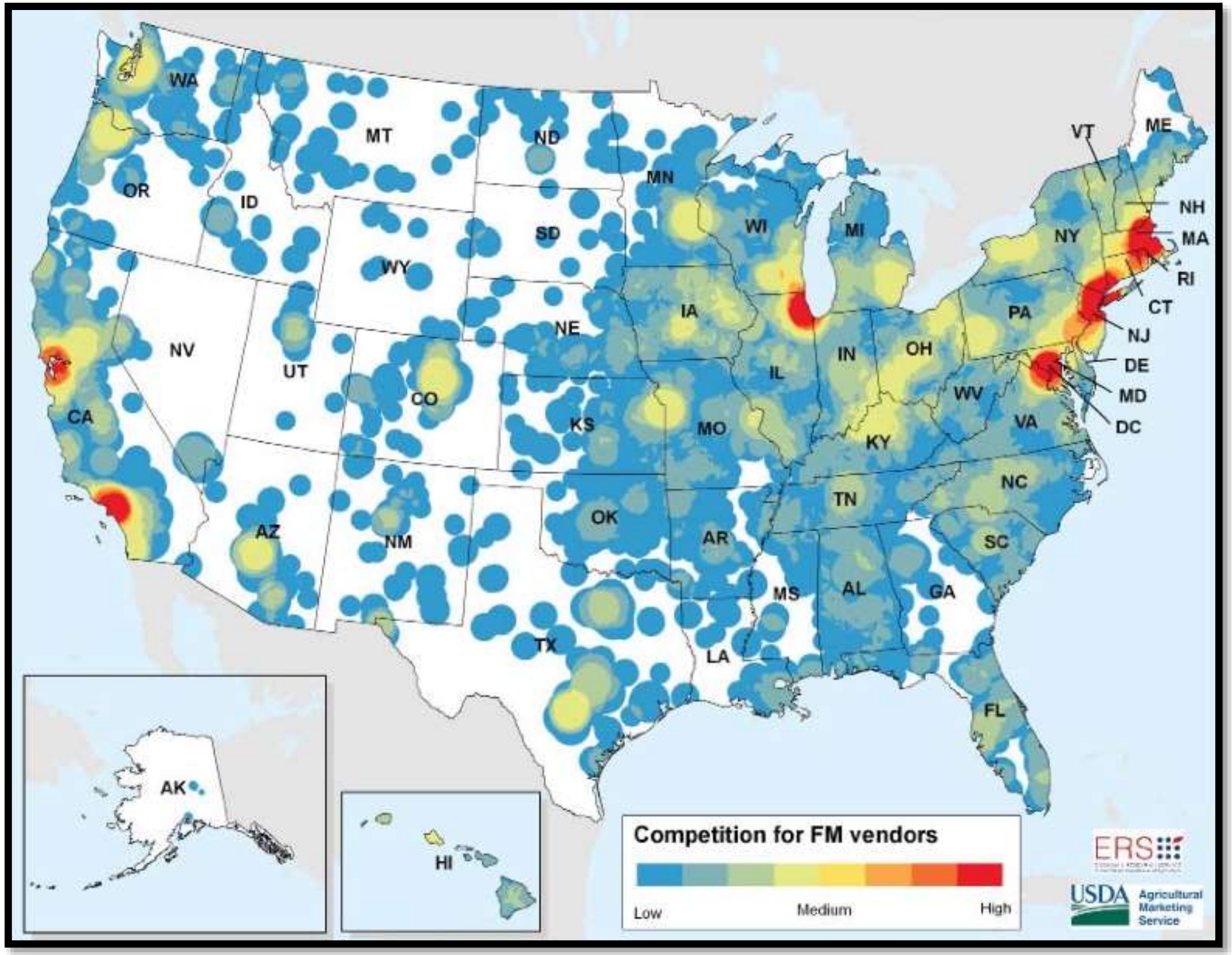
Words of caution in thinking about economic impacts

- Finite resources (e.g., land, consumers dollars, public dollars) so every decision involves a choice.

- Incorporated into economic impact assessments by estimating the **net** rather than the **gross** impact of changes in a local/regional food system.

- Can be on supply (production) or demand (consumer) side, or both.

Competition for Vendors at Farmers Markets

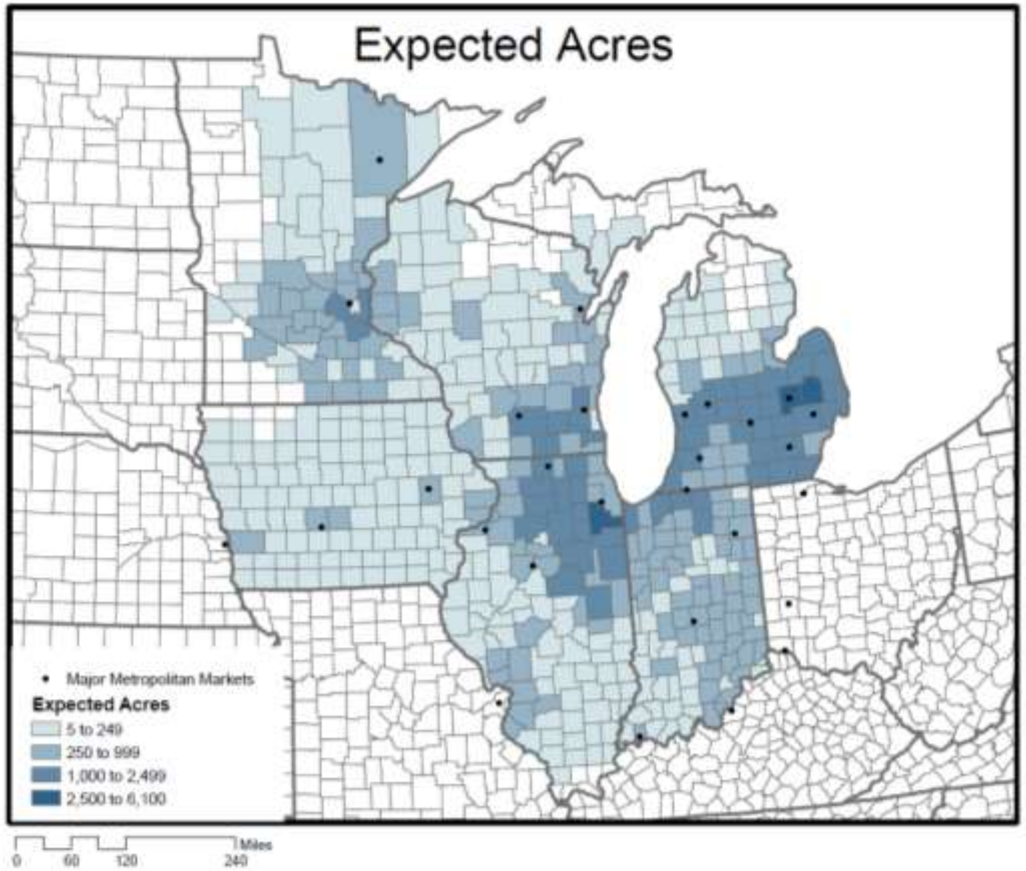


Source: Lohr and Diamond 2011

Arable land is likely already in production!

Study from Midwest estimates county-level fresh fruit and vegetable production potentials and expected sales based on current population.

- Corn and soybean are the dominant crops in these states, and net impacts would occur from shifts to fruit and vegetable.
- Land needed to satisfy regional fruit and vegetable demand is small, production consequences would be nominal.



Source: Swenson, D. 2011. The Regional Economic Development Potential and Constraints to Local Foods Development in the Midwest. Iowa State University

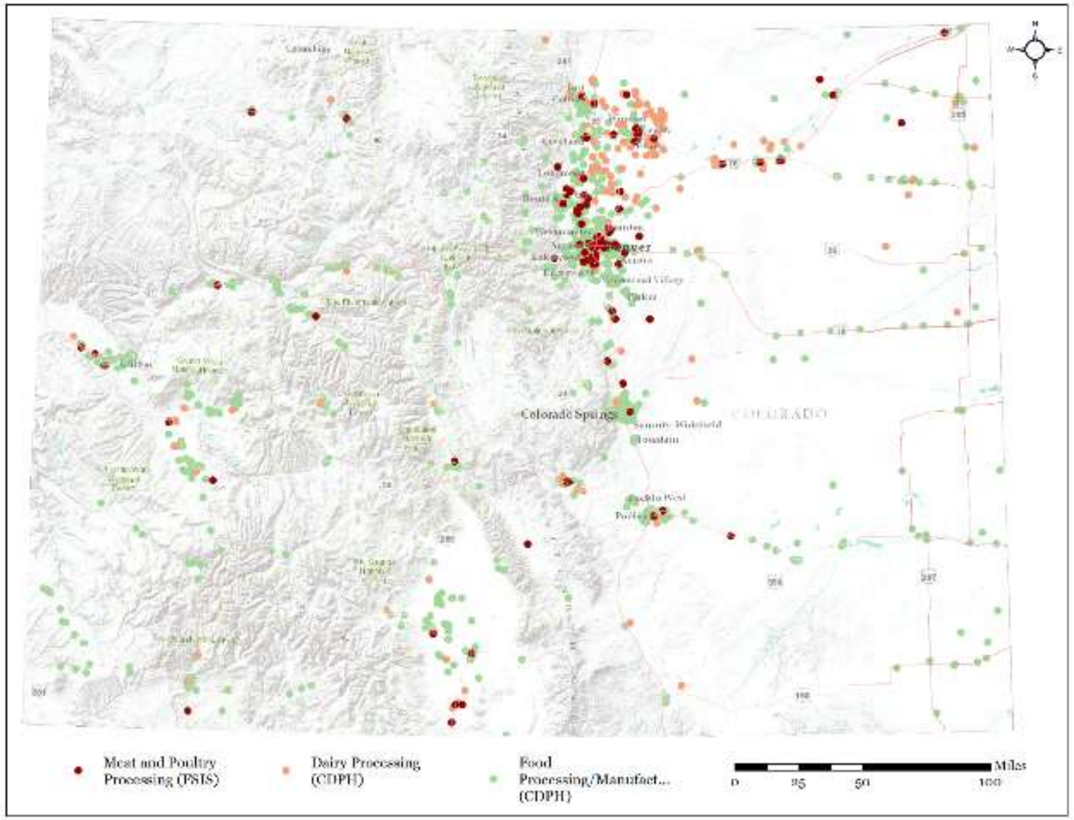
Don’t always need new bricks and mortar!
Example Economic Impact Assessment Food Hub

- Surveyed 305 of Regional Access’ customers
  - 49% purchased less from other sources due to purchases from RA
  - Average reduction >23%
- Opportunity Cost associated with $1 increase in final demand for food hub sector ~ $0.11
- Reduced Total Output Multiplier from 1.82 to 1.63 (>10%)

Source: Jablonski, Schmit, and Kay 2016

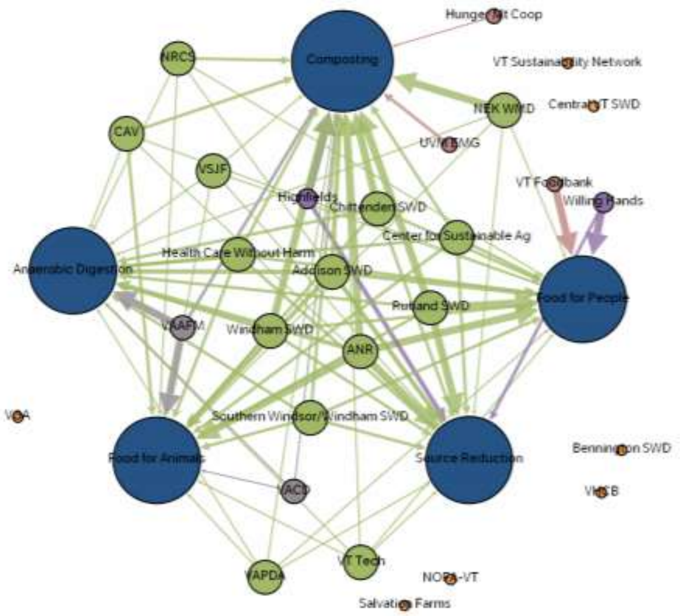
Where to start?
Asset Mapping

Community-based asset mapping



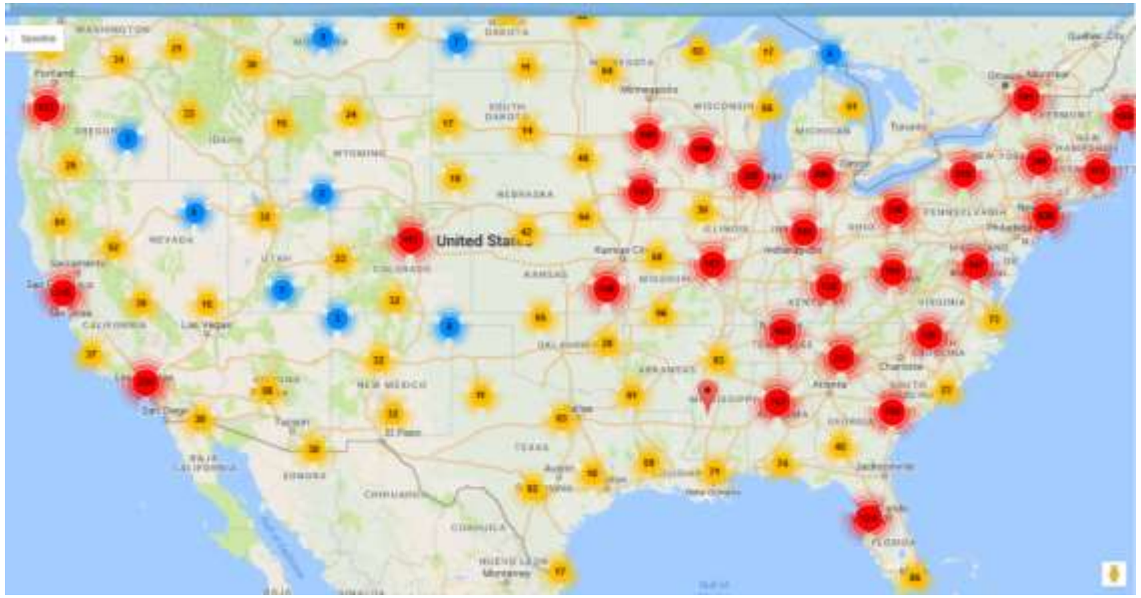
Organization asset mapping

ORGANIZATION ASSET MAPPING TO ADVANCE ORGANICS DIVERSION AND FOOD RESCUE WITHIN THE FOOD SYSTEM



Where to start?
Comparative Advantage

Cluster analysis/mapping: clusters of farmers' markets in the U.S.



Location Quotient: measure of industry concentration

FOOD SYSTEMS
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