FOOD SYSTEMS
COLORADO STATE UNIVERSITY

The profitability impacts of sales through local food markets for beginning farmers and ranchers

Presentation to the Farm Foundation and USDA ERS Conference: Emerging Research on Beginning Farmers and Rancher

Becca B.R. Jablonski, Joleen Hadrich, Dawn Thilmany, Allie Bauman and Martha Sullins

Colorado State University and University of Minnesota

This material is based upon work supported by the U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture, and the USDA Economic Research Service. The authors have no financial interest or benefit from the direct application of this research. The funders played no role in the decision to submit the paper for presentation. The findings and conclusions in this presentation are those of the authors and should not be construed to represent any official USDA or U.S. Government determination or policy.

Many beginning farmers and ranchers use methods of differentiation

Shares of Agriculture Assets and Receipts, 2012
(percent of U.S. total)

	Beginning Farmers[a]	Years on Current Farm		
		1 to 5	6 to 10	11+
Number of farms	25	11	14	75
Land in farms	16	7	9	84
Cropland harvested	11	5	6	89
Land and buildings	15	6	9	85
Agriculture sales	15	6	9	85
Organic sales	26	9	17	74
Direct-to-consumer sales	22	10	12	78
Government payments	14	6	8	86

[a] *Ten years or less on current farm.*
Source: USDA NASS, 2012 Census of Agriculture.

Size of the local food sector: Data challenges….

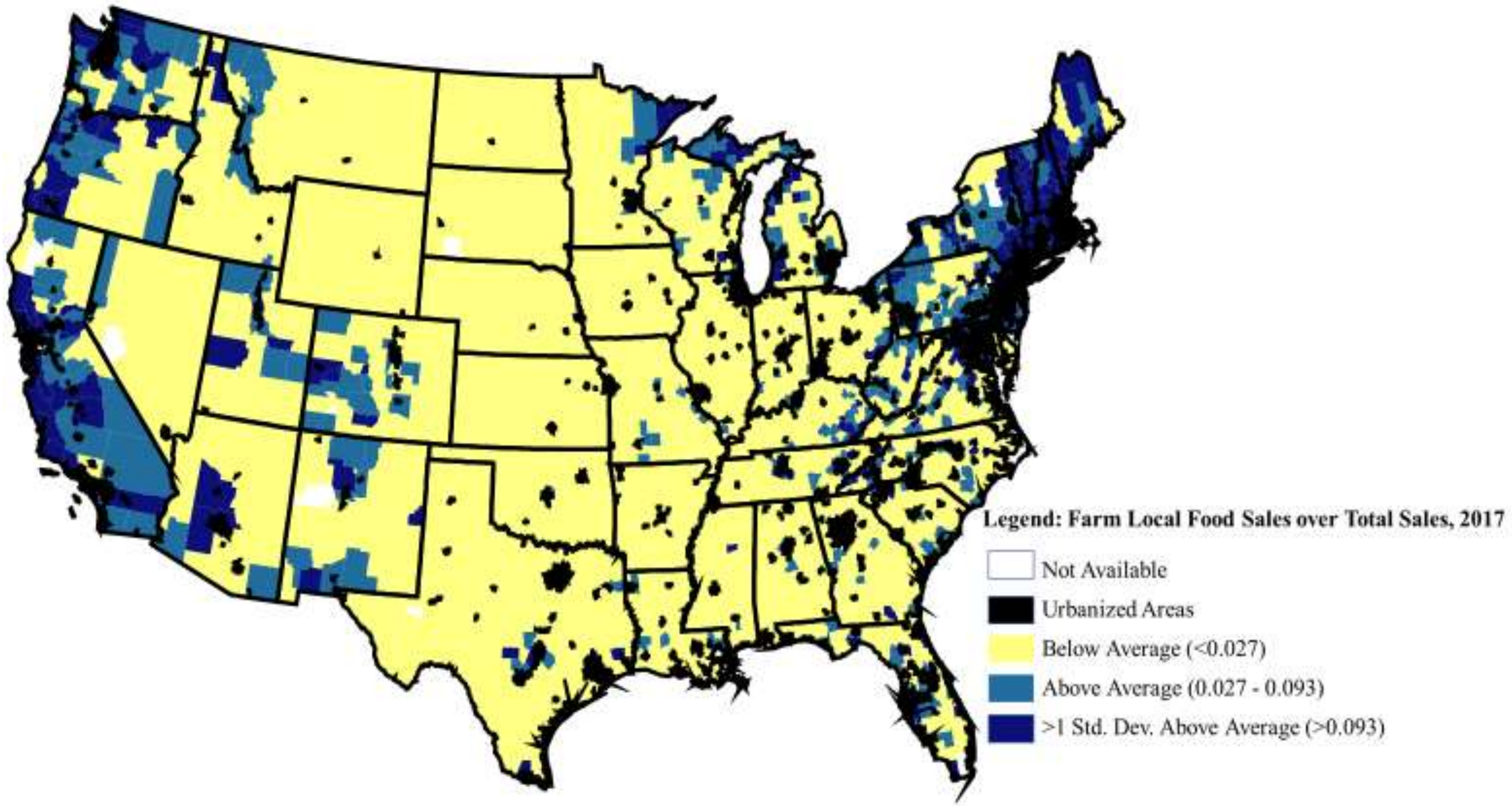
FOOD SYSTEMS
COLORADO STATE UNIVERSITY

Table 2. Direct-to-Consumer (DTC) Farms and Sales for Commodities and Value-added Products, 1992–2017

		DTC Farms			DTC Sales (billion 2017 USD)		
Year	Survey	Unprocessed Products	Processed Products	Processed and Unprocessed	Unprocessed Products	Processed Products	Processed and Unprocessed
1992	Ag. Census	86,432			$0.7		
1997	Ag. Census	93,140			$0.9		
2002	Ag. Census	116,733			$1.1		
2007	Ag. Census	136,817			$1.4		
2012	Ag. Census	144,530			$1.4		
2015	LFMPS	58,560	74,738	114,801	$1.7	$1.5	$3.1
2017	Ag. Census			130,056			$2.8

Citation: O'Hara, J. K., & Benson, M. C. (2019). Where have all the direct-marketing farms gone? Patterns revealed from the 2017 Census of Agriculture. *Journal of Agriculture, Food Systems, and Community Development, 9*(1), 31–37. https://doi.org/10.5304/jafscd.2019.091.046

Direct To Consumer (DTC) and Non-DTC Sales
as a Share of Total Sales by Farms and Ranches



Data Source: 2017 Census of Agriculture. National average of food sales to total sales in 2017 was 0.03

Thilmany, D., E. Canales, S. Low and K. Boys. 2020. Local Food Supply Chain Dynamics and Resilience During COVID-19. Forthcoming, *Applied Economic Policy and Perspectives* Special Issue on COVID

FOOD SYSTEMS
COLORADO STATE UNIVERSITY

Direct Farm Sales of Food, by Type of Buyer, 2015

	$ billion	%
Consumer	3.0	35
Retailer	2.4	27
Institution and local intermediary business	3.4	39
Total	**8.7**	**100**

Source: USDA NASS, 2015 Local Food Marketing Practices Survey.

167,009 U.S. farms sold $8.7B in edible food directly to consumers, retailers, institutions and local distributors in 2015.

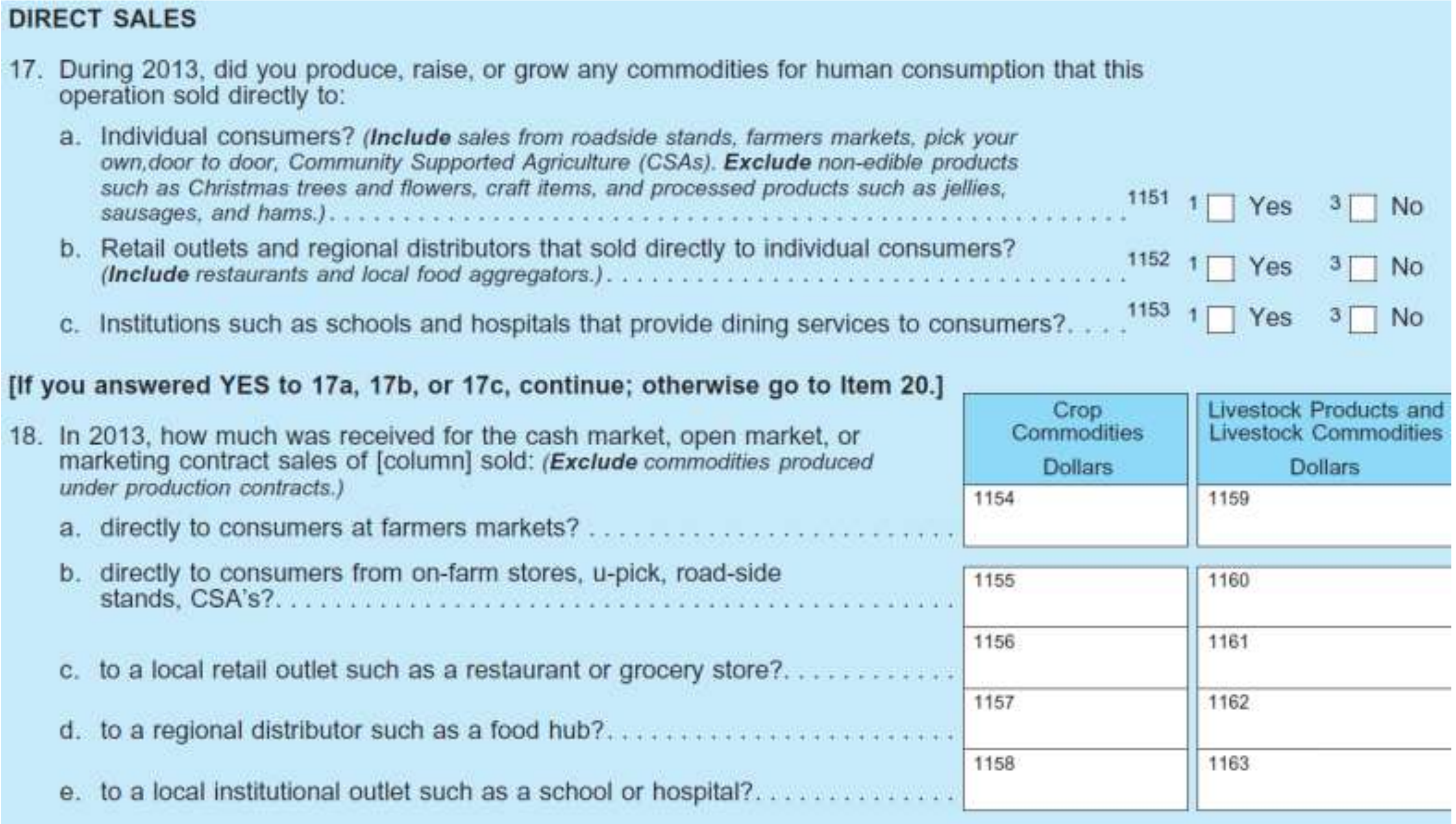
Research Question

What role do local food market channels play in the profitability outcomes of beginning farmers and ranchers?

Data

- USDA Agricultural Resource Management Survey (ARMS), 2013-2016
  - Primary source of information on economic well-being of U.S. farms and ranches
  - Included questions about local sales in 2008, but additional disaggregation of markets in 2013.
- Sample with positive local food sales = 3,908
- Beginning farms defined in two ways:
  - Any operator beginning farmer
  - *All operators beginning farmers*
- Treatment of data:
  - Outliers are winsorized at the 1st and/or 99th percentiles.
  - No sampling weights are used due to unique aspects of this sample.

2013 ARMS III CRR Questionnaire



DIRECT SALES

17. During 2013, did you produce, raise, or grow any commodities for human consumption that this operation sold directly to:

a. Individual consumers? (***Include*** *sales from roadside stands, farmers markets, pick your own,door to door, Community Supported Agriculture (CSAs).* ***Exclude*** *non-edible products such as Christmas trees and flowers, craft items, and processed products such as jellies, sausages, and hams.*) . . . . . 1151 1 ☐ Yes 3 ☐ No

b. Retail outlets and regional distributors that sold directly to individual consumers? (***Include*** *restaurants and local food aggregators.*) . . . . . 1152 1 ☐ Yes 3 ☐ No

c. Institutions such as schools and hospitals that provide dining services to consumers? . . . . 1153 1 ☐ Yes 3 ☐ No

[If you answered YES to 17a, 17b, or 17c, continue; otherwise go to Item 20.]

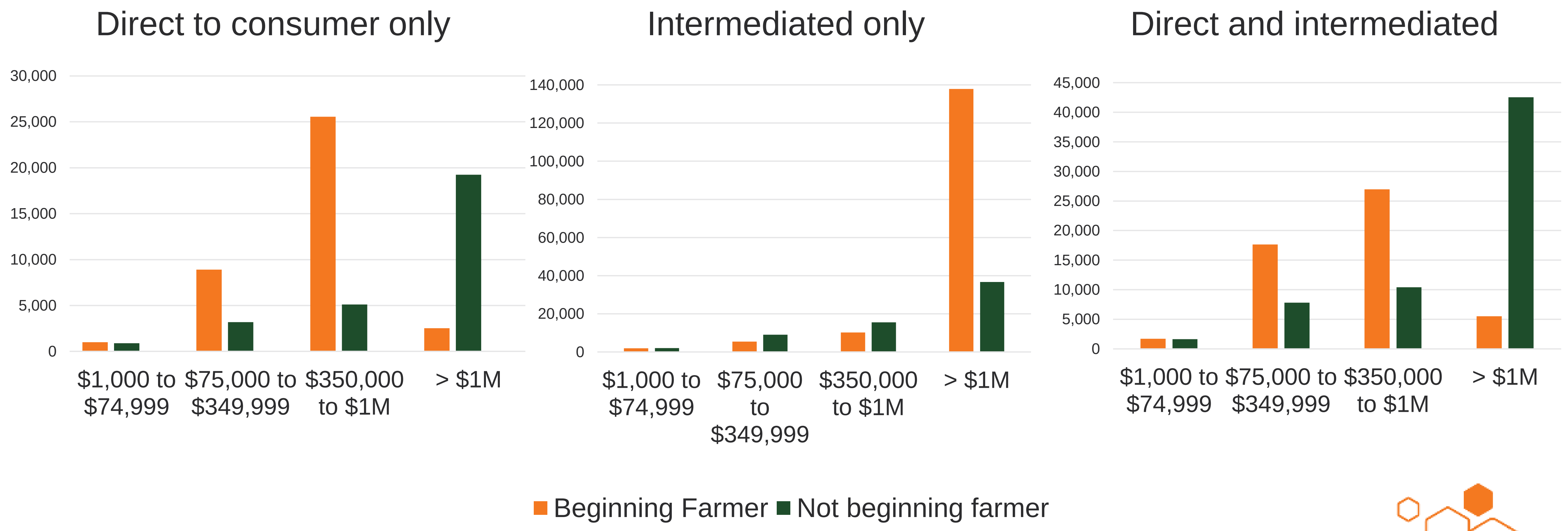
18. In 2013, how much was received for the cash market, open market, or marketing contract sales of [column] sold: (***Exclude*** *commodities produced under production contracts.*)

	Crop Commodities Dollars	Livestock Products and Livestock Commodities Dollars
a. directly to consumers at farmers markets?	1154	1159
b. directly to consumers from on-farm stores, u-pick, road-side stands, CSA's?	1155	1160
c. to a local retail outlet such as a restaurant or grocery store?	1156	1161
d. to a regional distributor such as a food hub?	1157	1162
e. to a local institutional outlet such as a school or hospital?	1158	1163

Beginning Operations: Summary Stats

- Operate on fewer acres (except $350k-$1M), with higher gross cash farm income per acre.
  - More likely to lease than own acres on which they operate.
- Maintain lower operating/variable expenses.
  - Yet labor expense as a percent of total variable expense more mixed.
- Each of these findings suggests that beginning farmers are actively managing the the tradeoff between capital and labor/management invested in the operation.
  - Labor and management are more available or perceived as more advantageous.

Gross cash farm income per acre, by market channel



Results

FOOD SYSTEMS
COLORADO STATE UNIVERSITY

Summary statistics for local food producers by market channel

Variable	Farmers' market, N = 1,592	Other direct, N = 2,190	Retail, N = 988	Distributor & institution, N = 639
Gross cash farm income				
Beginning farmer	96,443 (202,622)	122,255 (321,652)	202,993 (470,899)	677,176 (1,512,105)
Not beginning farmer	378,329 (1,027,125)	462,117 (1,326,727)	951,016 (2,146,338)	1,426,227 (2,719,314)
Gross cash farm income per acre				
Beginning farmer	5,046 (22,888)	4,731 (23,044)	7,219 (22,784)	28,986 (114,462)
Not beginning farmer	6,892 (52,350)	4,051 (24,187)	15,179 (82,846)	10,549 (40,723)
Net farm income				
Beginning farmer	17,776 (84,039)	22,272 (210,914)	25,351 (293,434)	160,648 (645,185)
Not beginning farmer	77,585 (370,725)	94,039 (411,651)	207,507 (660,292)	321,804 (854,164)
Net farm income per acre				
Beginning farmer	995 (7,856)	786 (7,403)	1,198 (12,059)	10,780 (47,929)
Not beginning farmer	2,040 (26,686)	977 (11,797)	4,550 (44,817)	2,773 (14,518)
Return on assets				
Beginning farmer	-18.3(43.2)	-19.6 (44.3)	-19.3 (48.7)	-9.18 (53.7)
Not beginning farmer	-7.09(29.4)	-5.66 (27.9)	-1.44 (31.0)	3.80 (33.3)

Results

FOOD SYSTEMS
COLORADO STATE UNIVERSITY

Summary statistics for local food producers by market channel

Variable	Farmers' market, N = 1,592	Other direct, N = 2,190	Retail, N = 988	Distributor & institution, N = 639
Gross cash farm income				
Beginning farmer	96,443 (202,622)	122,255 (321,652)	202,993 (470,899)	677,176 (1,512,105)
Not beginning farmer	378,329 (1,027,125)	462,117 (1,326,727)	951,016 (2,146,338)	1,426,227 (2,719,314)
Gross cash farm income per acre				
Beginning farmer	5,046 (22,888)	4,731 (23,044)	7,219 (22,784)	28,986 (114,462)
Not beginning farmer	6,892 (52,350)	4,051 (24,187)	15,179 (82,846)	10,549 (40,723)
Net farm income				
Beginning farmer	17,776 (84,039)	22,272 (210,914)	25,351 (293,434)	160,648 (645,185)
Not beginning farmer	77,585 (370,725)	94,039 (411,651)	207,507 (660,292)	321,804 (854,164)
Net farm income per acre				
Beginning farmer	995 (7,856)	786 (7,403)	1,198 (12,059)	10,780 (47,929)
Not beginning farmer	2,040 (26,686)	977 (11,797)	4,550 (44,817)	2,773 (14,518)
Return on assets				
Beginning farmer	-18.3(43.2)	-19.6 (44.3)	-19.3 (48.7)	-9.18 (53.7)
Not beginning farmer	-7.09(29.4)	-5.66 (27.9)	-1.44 (31.0)	3.80 (33.3)

Labor expense as a percentage of total variable expense, by market channel

*54% of producers with local food sales report positive expenditures on labor

Discussion & Next Steps

- Lots of great data!
- Next steps:
  - Investigating type of beginning farm operation to explore differences:
    - Any operator beginning farmer (multi-generation)
    - All operators beginning farmers (1st generation)
  - Role of land tenure – explore if and how beginning farmers own and manage their land in a different way
  - Role of nontraditional sources of capital in supporting beginning operations:
    - Access to family financial and human capital resources;
    - Nontraditional government programs (outside of USDA Farm Service Agency); and,
    - Alternative marketing strategies may provide cash flow and “trade credit”