Financial Performance Implications of Sales Through Direct and Intermediated Markets: Current Research and Future Needs to Support Extension Programming

Western Extension Committee

Anchorage, AK

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Credit: Urban Design Lab, Columbia University

Collaborators and Partners

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USDA Agricultural Marketing Service

CDA CO COLORADO Department of Agriculture

USDA NIFA

United States Department of Agriculture
National Institute of Food and Agriculture

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Local Food

Est. $8.7B in local food sales in 2015

(USDA NASS 2016)

- 167,009 U.S. farms and ranches

Farms sell directly to:

Consumers *(35 percent of direct sales in 2015)*
Includes sales through farmers markets, onsite farm stores, roadside stands, CSA (Community Supported Agriculture) arrangements, online sales, pick-your-own operations, mobile markets, and other means.

Retailers *(27 percent of direct sales in 2015)*
Includes supermarkets, supercenters, restaurants, caterers, independent grocery stores, and food cooperatives.

Institutions and Intermediary Businesses *(39 percent of direct sales in 2015)*
Includes institutions such as schools, colleges, universities, and hospitals as well as intermediary businesses such as wholesalers, distributors, processors, etc., that market locally or regionally branded products.

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Local Food

Substantial investments made via Farm Bill to support local and regional food systems:

- >$1Billion 2008-2014
- >40,000 local and regional food business infrastructure projects
- 2014 Farm Bill tripled funding for marketing and promotion of local foods
- >$500M in 2015

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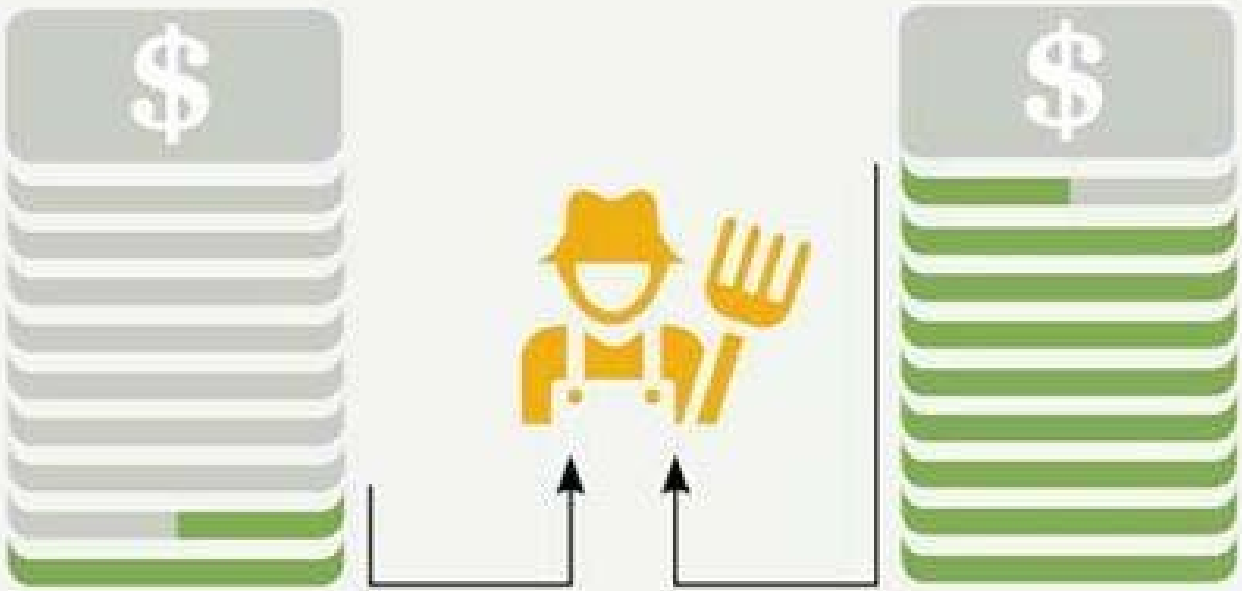
1 Farmers win.



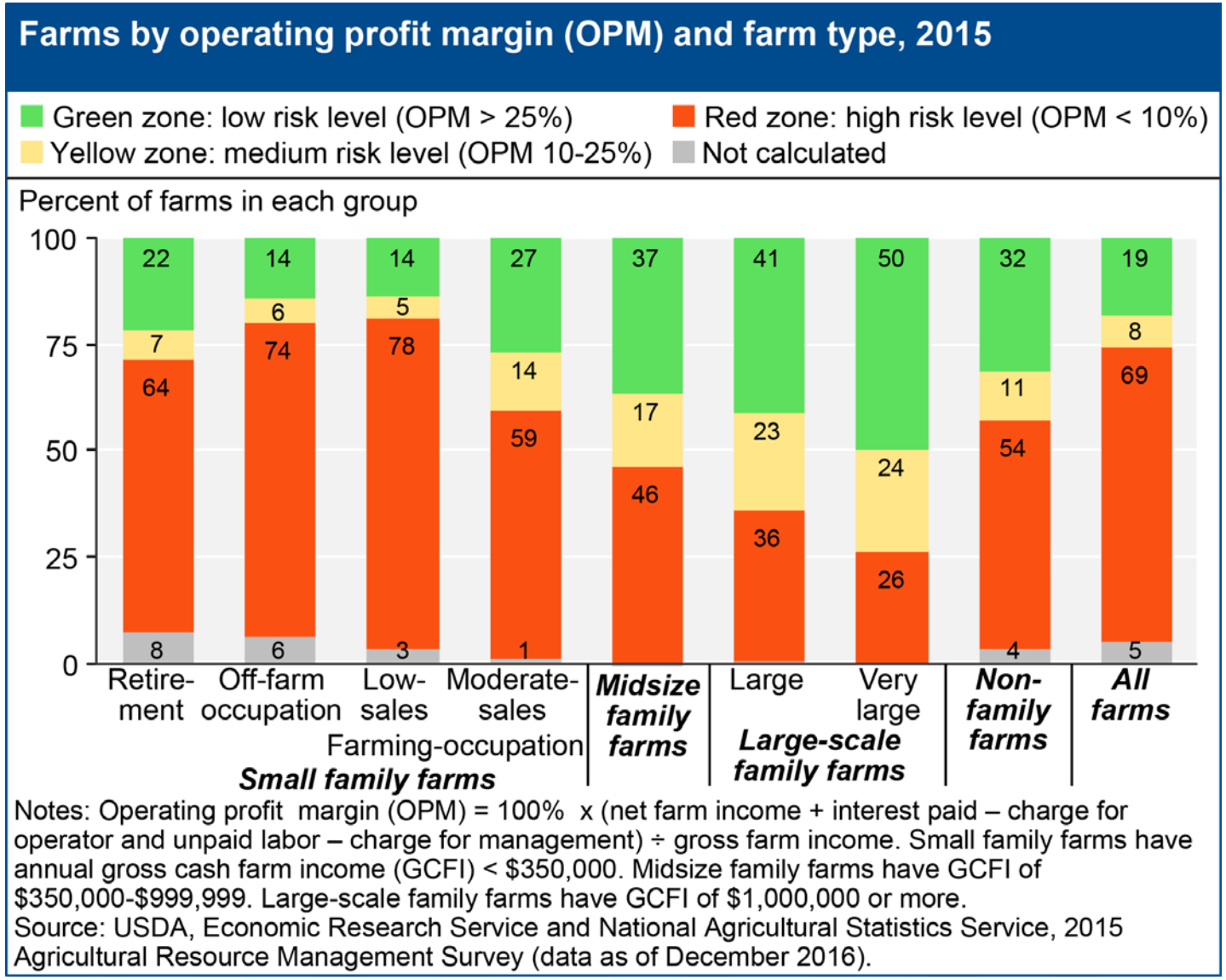
In general, farmers and ranchers only receive $1.55 of $10 spent on food. The rest goes to marketers, processors, wholesalers, distributors and retailers.

For every $10 spent on local food, **farmers get closer to $8–9.**

American Farmland Trust

BUT, agents were asking for evidence of these patterns and for support in helping guide producers' market channel decisions

Profit Margin Increases with Farm Size



Notes: Operating profit margin (OPM) = 100% x (net farm income + interest paid – charge for operator and unpaid labor – charge for management) ÷ gross farm income. Small family farms have annual gross cash farm income (GCFI) < $350,000. Midsize family farms have GCFI of $350,000-$999,999. Large-scale family farms have GCFI of $1,000,000 or more.
Source: USDA, Economic Research Service and National Agricultural Statistics Service, 2015 Agricultural Resource Management Survey (data as of December 2016).

But, are there strategies producers can choose that counteract this trend for scale?

Documented consumer willingness to pay a premium for local food

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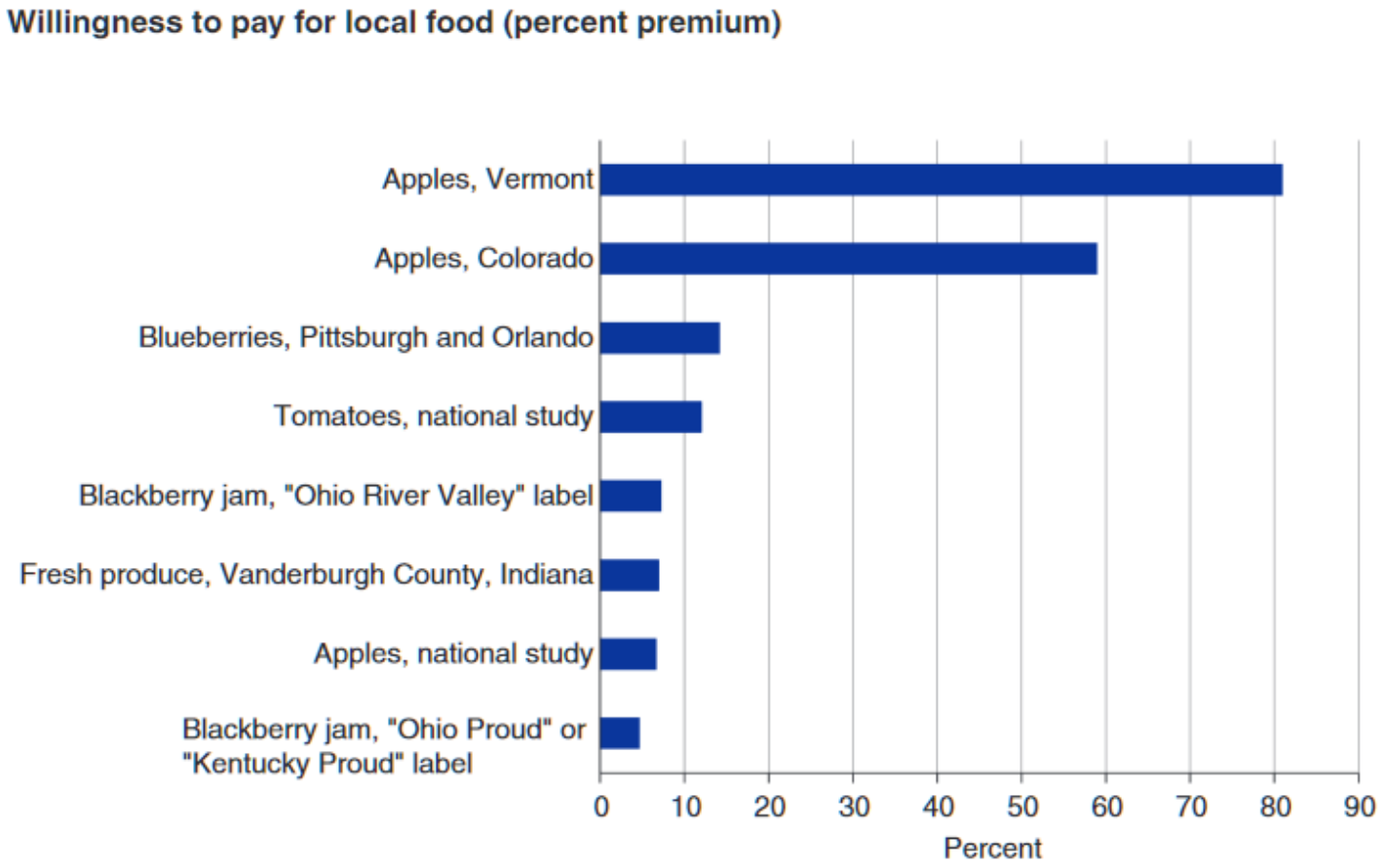

Source: Willingness to pay as a percent of base price calculated from reported results from the following: Apples/ Vermont from Wang et al., 2010, averaged over respondents that had and had not purchased organic food. Apples/ Colorado from Costanigro et al., 2011. Blueberries from Shi et al., 2013. Tomatoes/national and Apples/national from Onozaka and Thilmany, 2012. Blackberry jam from Hu et al., 2012. Fresh produce/Vanderburgh County from Burnett et al., 2011.

Low et al. 2015

Enhanced Availability of Farm Level Data

- Farm Management Associations, Farm Credit and other partners have recognized the importance of financial data for decades
  - Yet, availability of data varied by type of farm
- We use data sets that now allow us to segment out farms participating in direct and intermediated markets
  - And within subsamples, we can divide further into quartiles, as there may no longer be an “representative” or average producer

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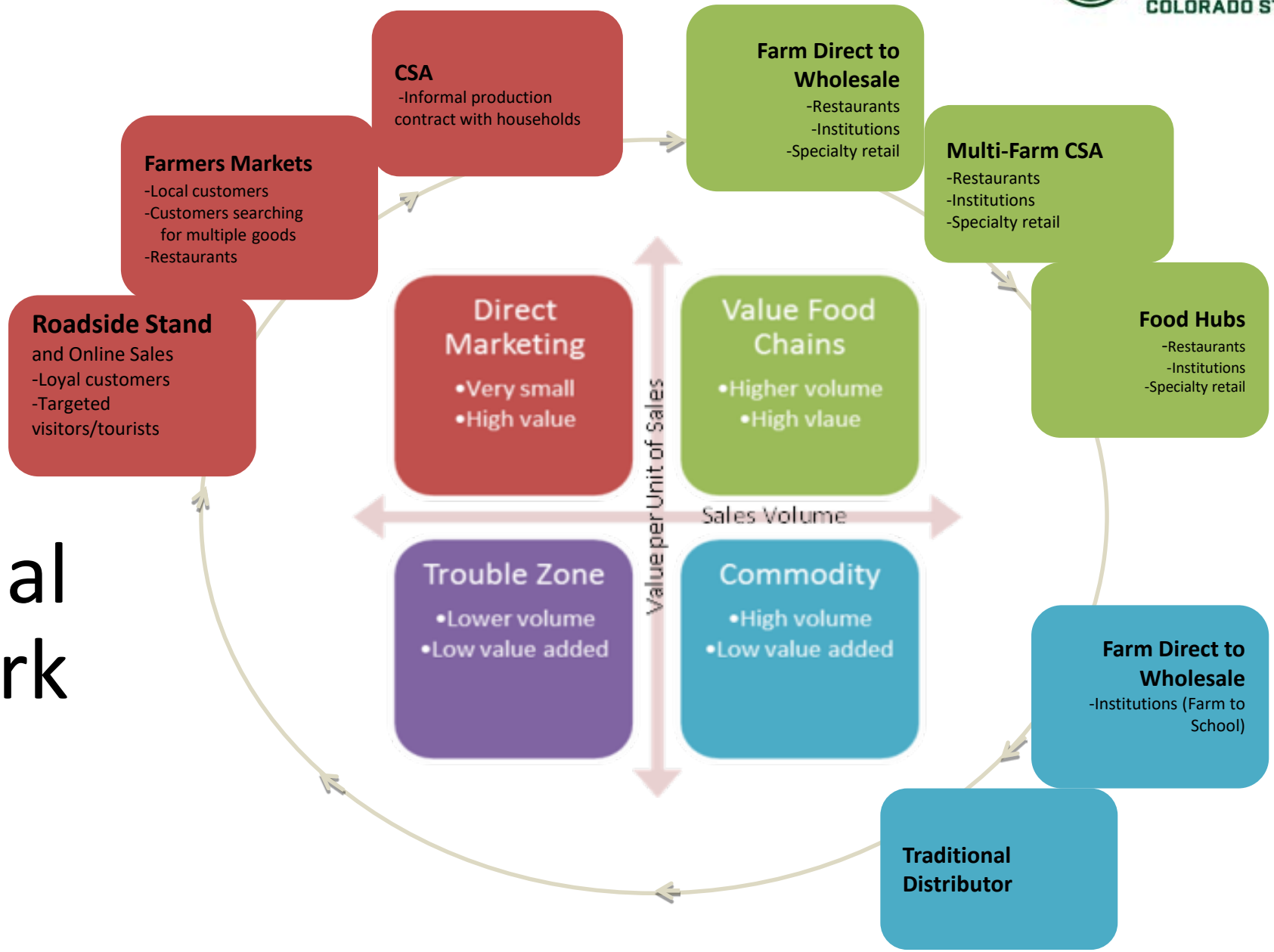
Conceptual Framework



Market typology advantages and disadvantages

Fact sheet: http://webdoc.agsci.colostate.edu/DARE/EDR/EDR15-01.pdf

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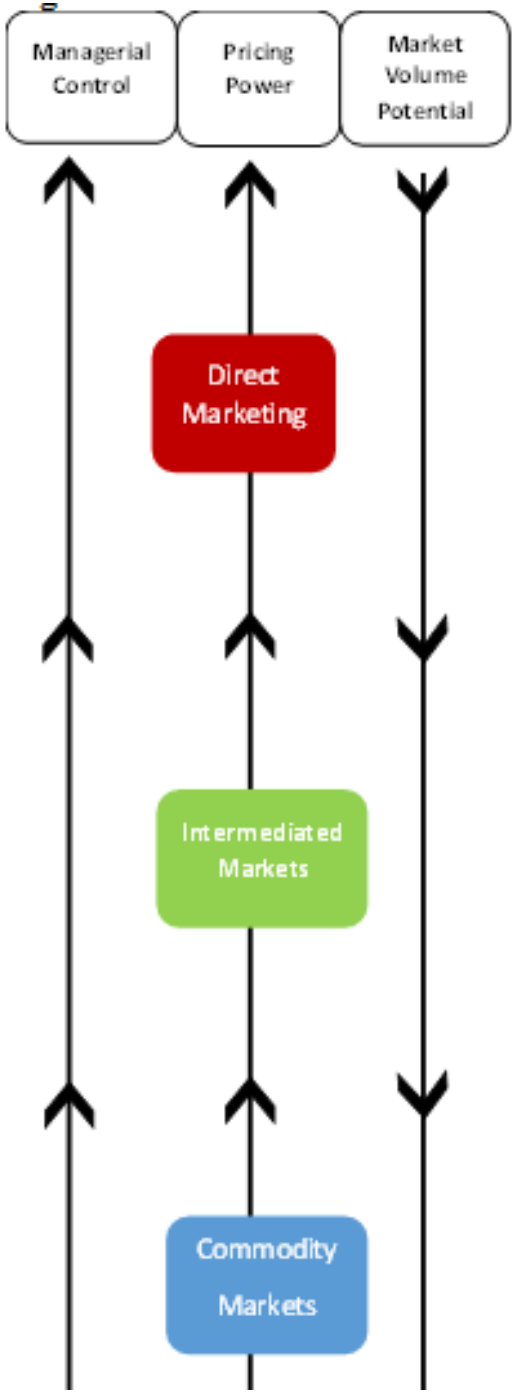
Market Orientation	Customers	Managerial Control	Pricing Power	Market Volume Potential
Roadside Stand and Online Sales	Local, traveling and national households	Full control	High	Low to high
Farmers Markets	Local households, travelers	Full control	High	Low to medium
CSA	Local households	Full control	Medium	Low
Farm Direct to Wholesale	Local, independent businesses, institutions	Full control	Medium	Medium
Multi-Farm CSA	Local households and businesses	Shared control	Medium	Medium to High
Food Hubs	Local businesses and institutions	Shared to limited control	Medium	Medium to High
Traditional Distributor	All buyers	Limited control and pricing power		



There is a likely tradeoff between volume of sales and two key management factors:

1) Managerial control retained by producers

2) Pricing power of producers

Is there an “optimal” place on continuum for an operation?

What pricing power do farmers have in local food channels? The example of farmers markets…

2011 Food dollar: Marketing bill (nominal)

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

USDA Agricultural Marketing Service

Market News | Rules & Regulations | Grades & Standards | Services | Resources | Selling Food to USDA

Home > Market News

Stay connected:

Market News

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Related Websites

- Foreign Agricultural Service (FAS)
- National Agricultural Statistics Service (NASS)
- Economic Research Service (ERS)
- Farm Service Agency (FSA)
- Market Information Organization of the Americas

SHARE

Local & Regional Food Market News

USDA Market News works with State Departments of Agriculture and local and regional food systems to provide prices, volume, and other information on agricultural commodities sold at local and regional markets throughout the United States.

Information gathered from Farmers Markets, Farmers Auctions, Food Hubs, Direct to Consumer sales, Retail advertisements, and Farm-To-School programs is currently available for select locations. More reports and locations will be added in the future.

Farmers Markets

- Alabama
- Colorado
- Illinois
- Iowa
  - Iowa Farmers Market

Contact Market News

News & Announcements

- 11/19 USDA Sets Deadline for Proposals for the 2015 Specialty Crop Multi-State Program
- 10/05 USDA Awards $113 Million to Support Specialty Crop Production, Grow Opportunities for Rural Communities
- 10/02 USDA Awards $34.3 Million to Support Communities' Local Foods Infrastructure, Increase Access to Fruits and Vegetables Funding Supports Local Food Systems, Farmers Markets and Healthier

Reports archived at: http://wr.colostate.edu/ABM/marketreports.shtml.

Rationale-why is this important?

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- Farmers markets are business incubators for farm (and food) businesses
- Difficult to obtain:
  - Local and regional pricing information
  - Signals regarding types and timing of new products in markets around the state

- FSA, USDA loan programs and bankers with diverse lending portfolios can better understand how pricing dynamics may impact farmers' revenue streams
- Whole farm revenue insurance requires product pricing data

Overview & methodology

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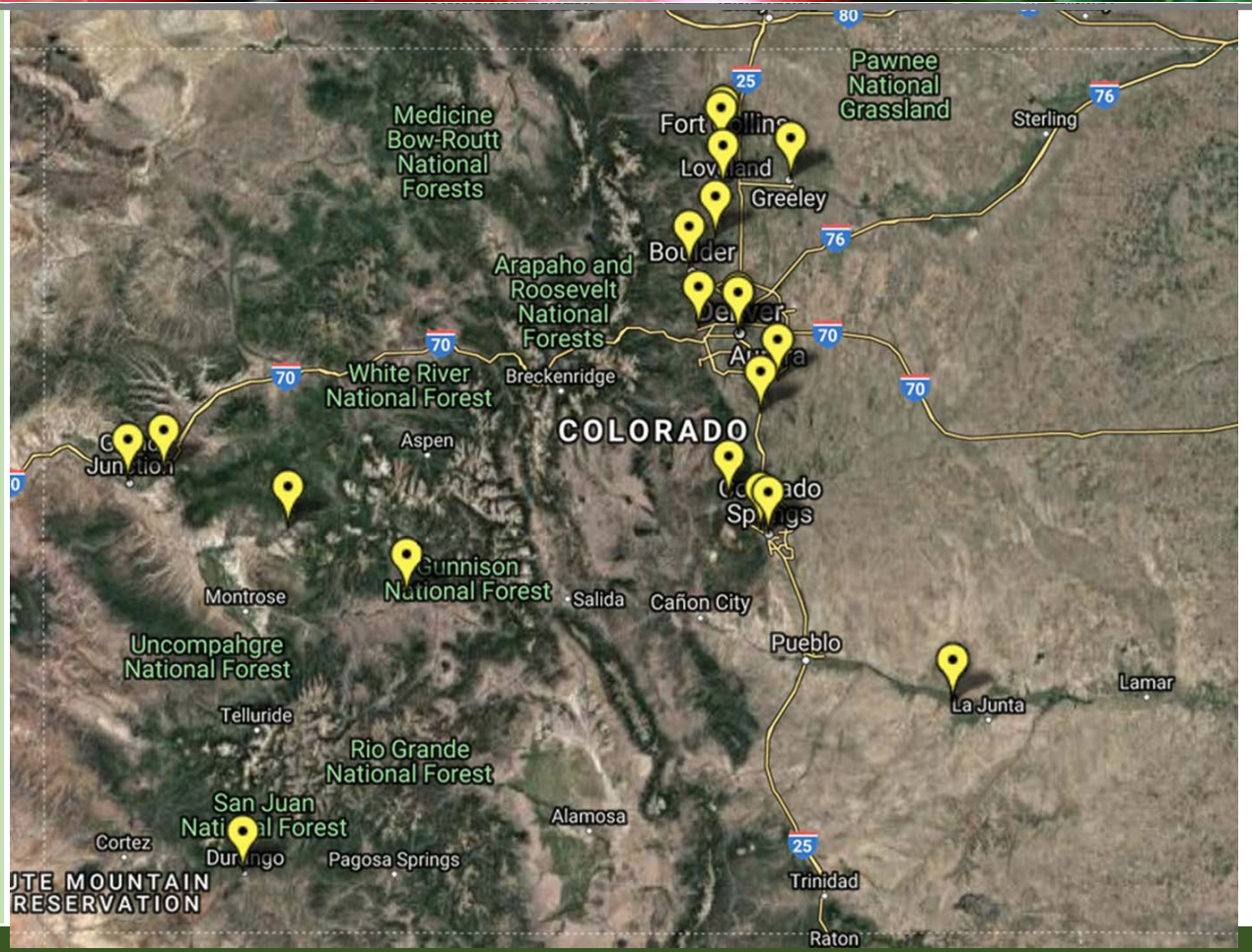
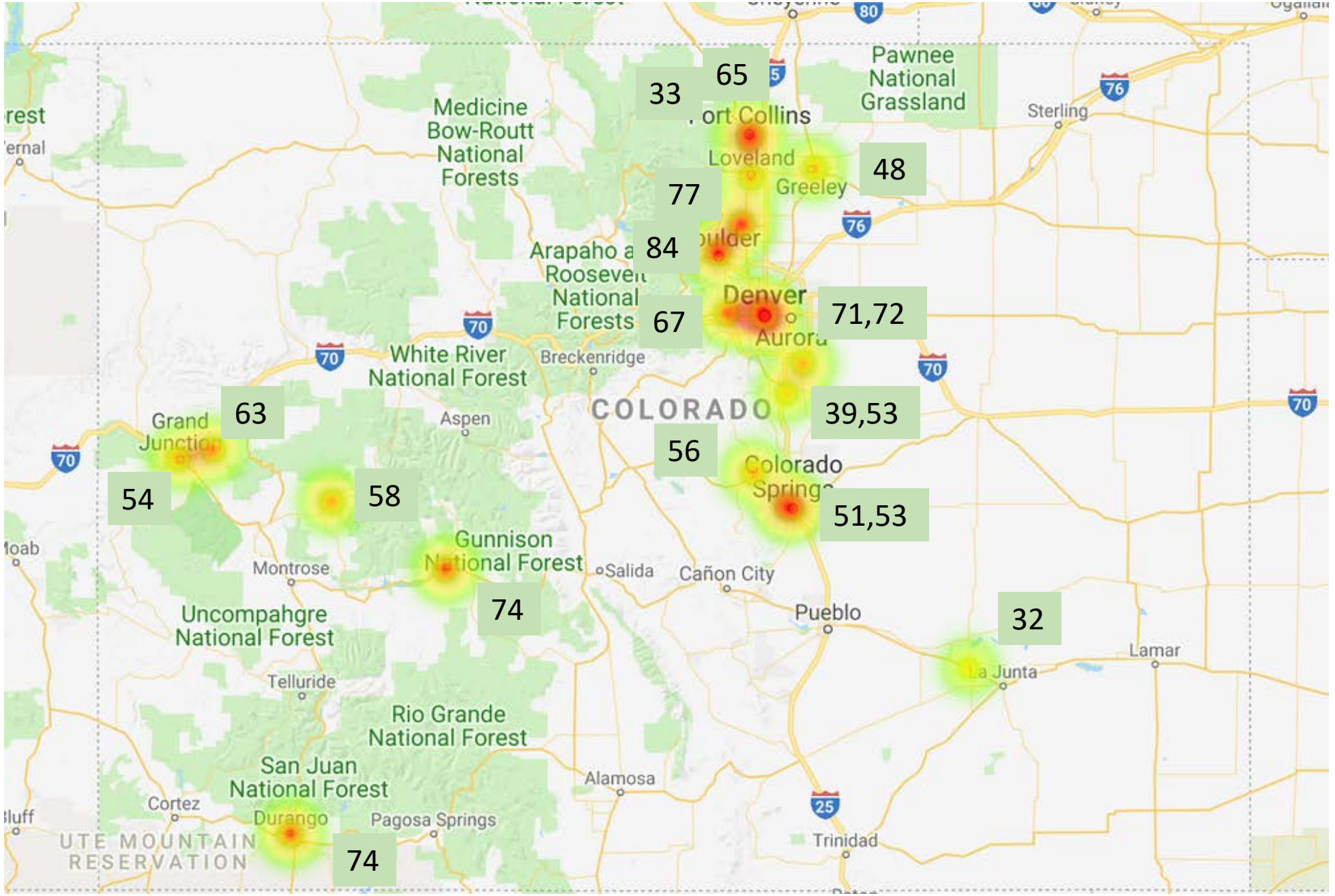
Farmers markets (2011-2018):

- 15-20 markets reporting weekly around the state. Expanded to include farm stands in locations where farmers markets are not as prevalent.
- Focus on fresh fruits and vegetables, meats (2 cuts each species), eggs, honey.
- 100+ products.
- Trained enumerators record pricing information in common units. Supervisors proof data.





Number of unique products offered at each market (2017)

Product differentiation is important

1. USDA Certified Organic
   - Carries USDA NOP certification
2. Other certifications
   - No pesticides, herbicides, hormones, antibiotics…(1st party)
   - Food Alliance, Animal Welfare Approved, American Humane Certified, Certified Naturally Grown (3rd party)
3. Non-certified
   - Conventionally produced

Tomatoes-certifications command higher prices

(mean price/unit, all markets, 2017)

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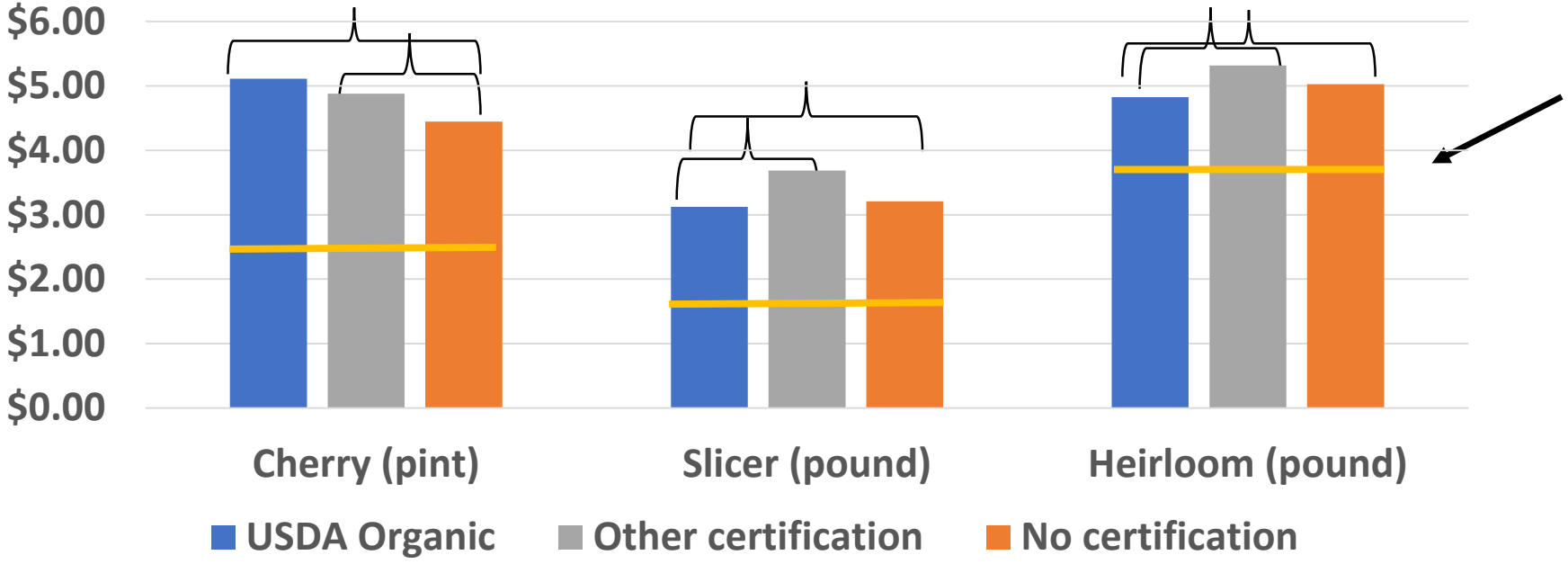

Average retail price, all practices (USDA, AMS)

	Small, cherry	Slicer, plum	Heirloom
USDA Organic	5.11	3.12	4.83
Other certification	4.88	3.69	5.32
No certification	4.44	3.21	5.03
Average retail	3.44	1.65	3.84

Denotes mean prices by product that are significant at 0.05 by production practice

Greens-USDA Certified Organic has become a differentiator (mean price/unit, all markets, 2017)

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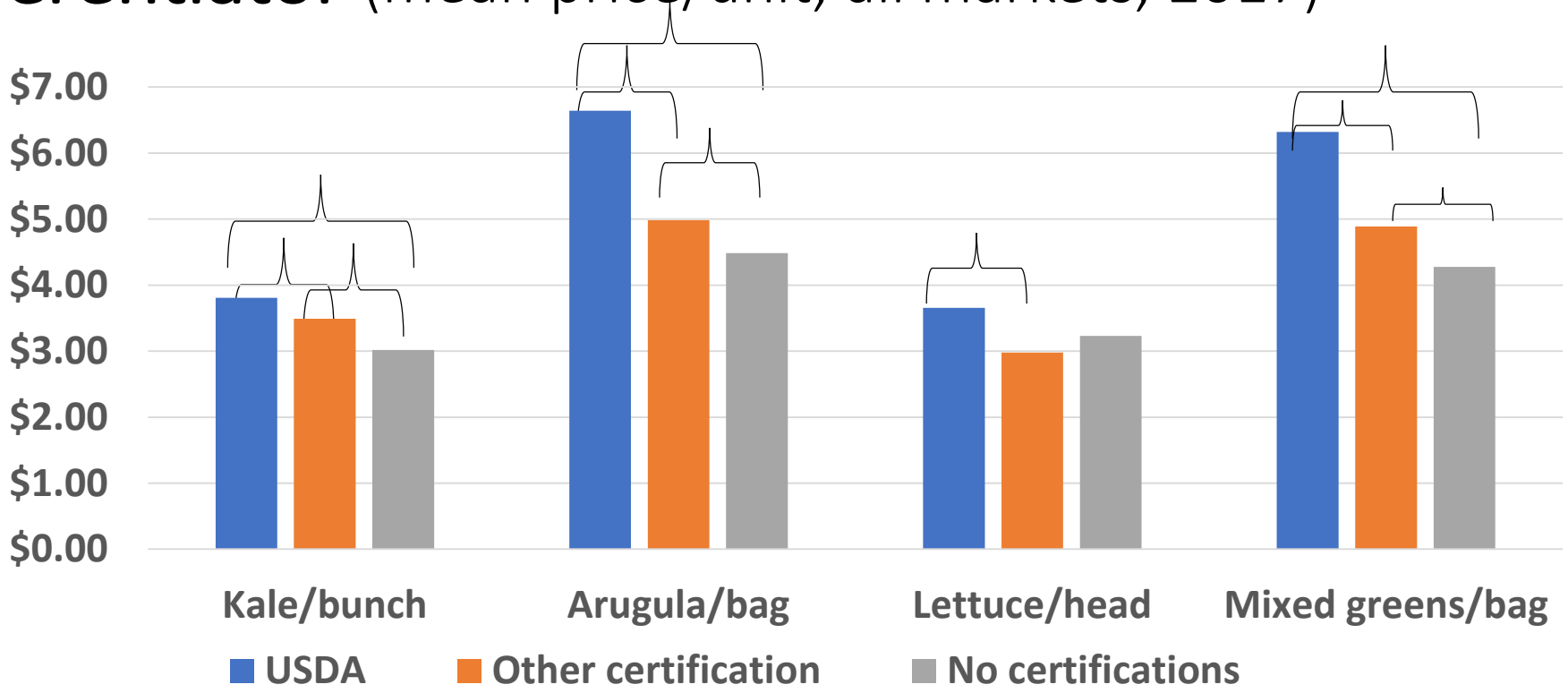

	Kale/bunch	Arugula/bag	Lettuce/head	Mixed greens/bag
USDA Organic	3.81	6.64	3.65	6.32
Other certification	3.49	4.98	2.98	4.89
No certification	3.02	4.48	3.23	4.27

Denotes mean prices by product that are significant at 0.05 by production practice

USDA Certified Organic provides premia for meat products, 2014-2017

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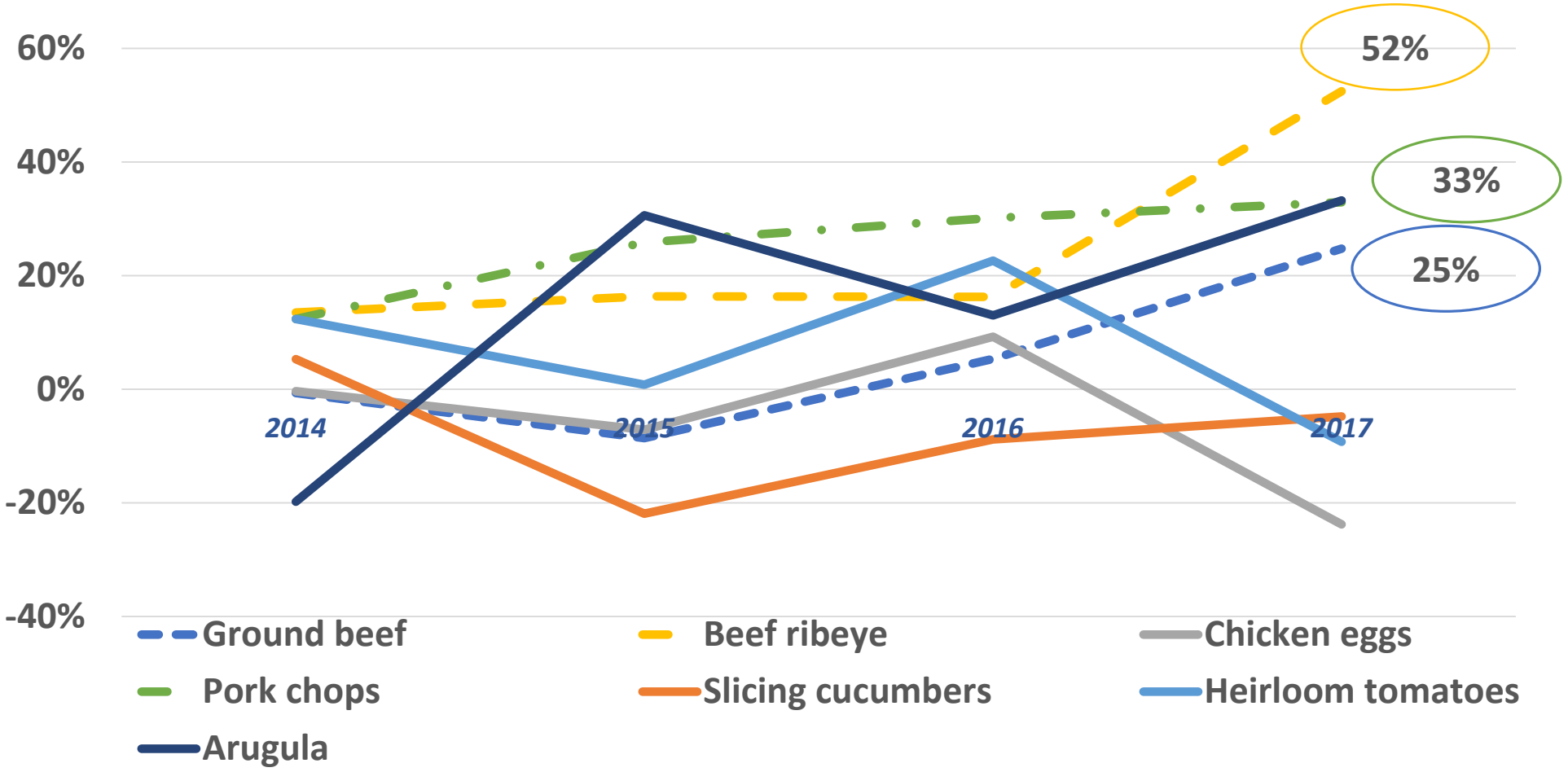

For some products, farmers market pricing may pose a constraint over time

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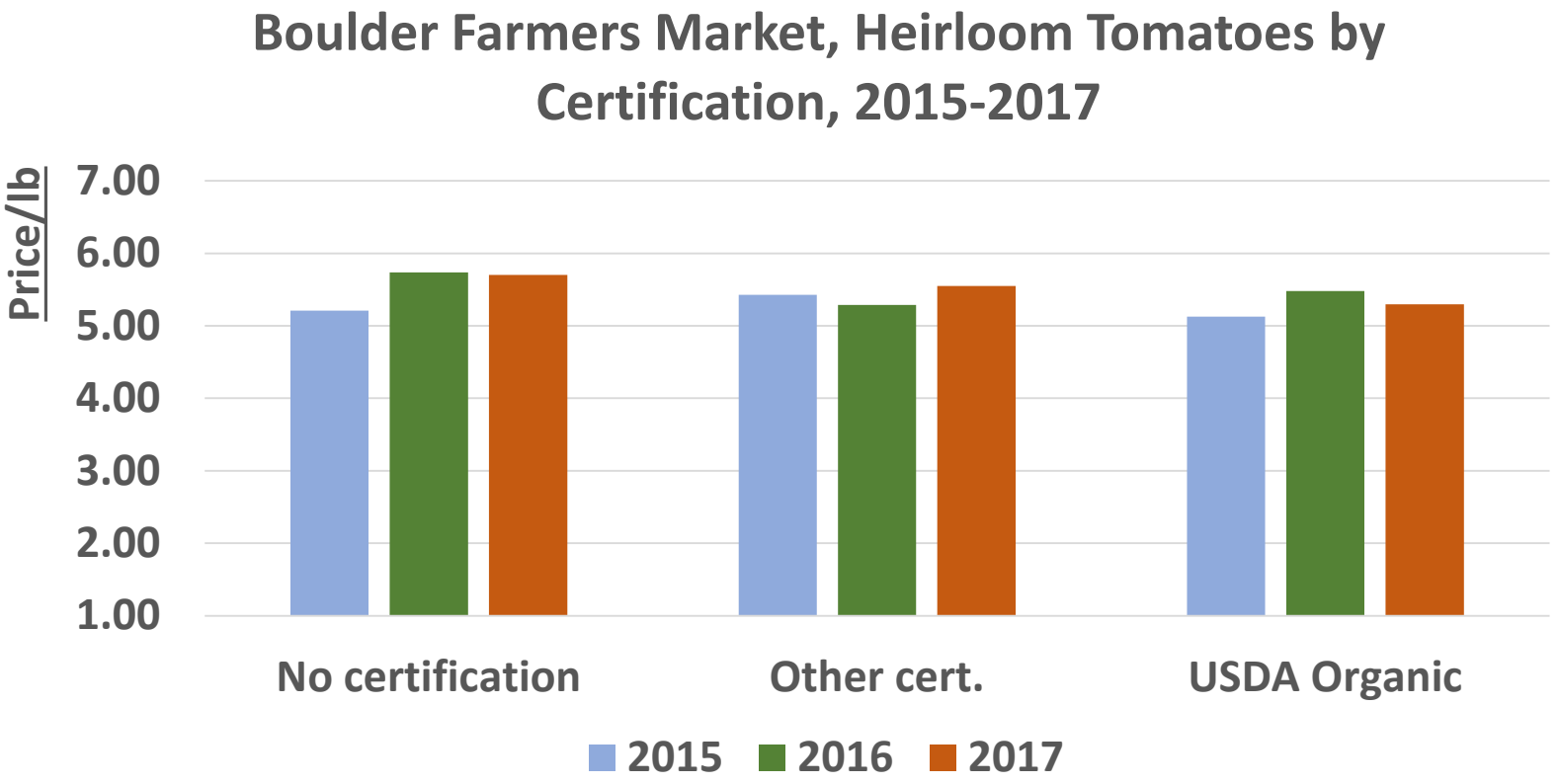

Changes in average prices 2015-2017

	Farmers market	Ave retail
No certification	9%	21%
Other certification	2%	--
USDA Organic	3%	7%

Source: https://www.marketnews.usda.gov/mnp/fv-home for average retail prices (from Weekly Advertised Fruit & Vegetables Retail Prices)

Ground beef prices-little variation in response to retail market prices

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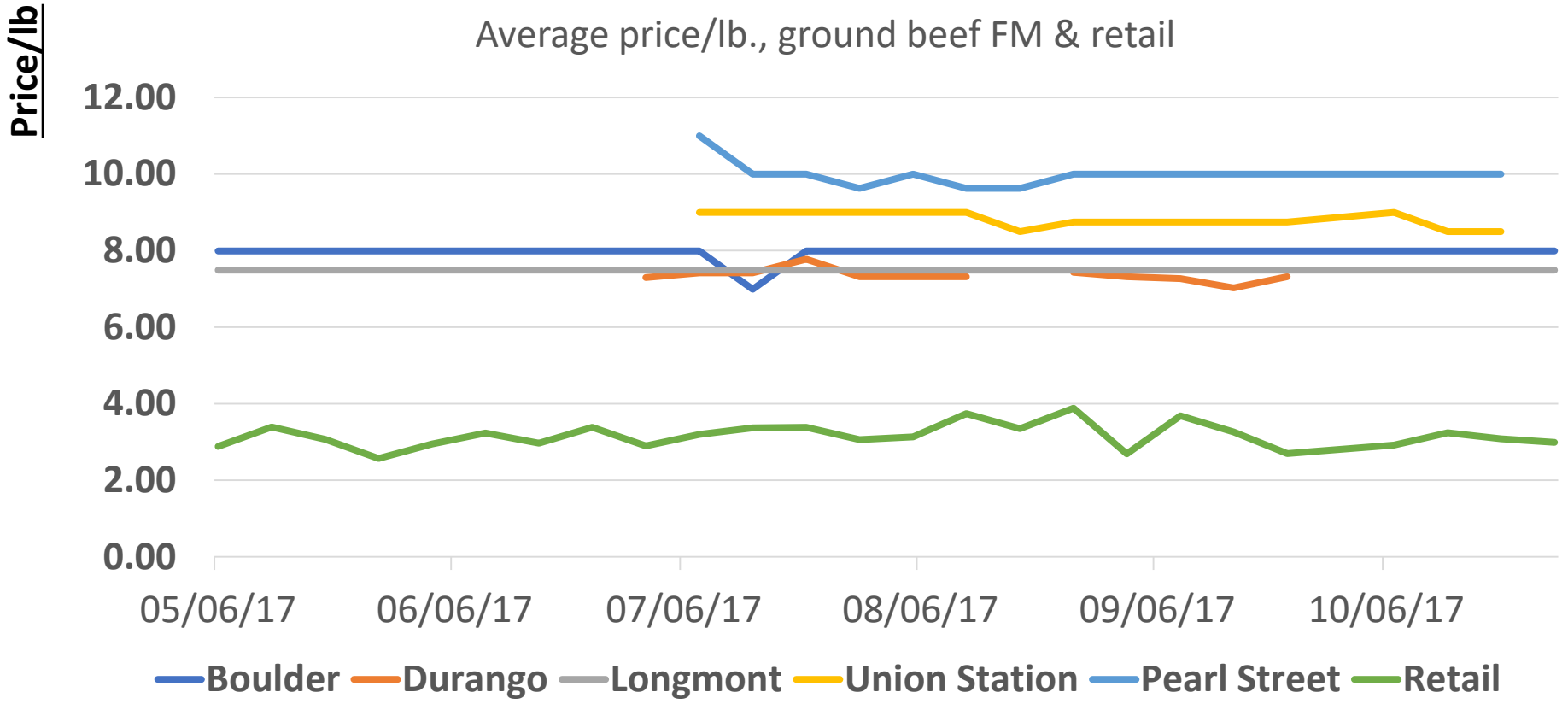
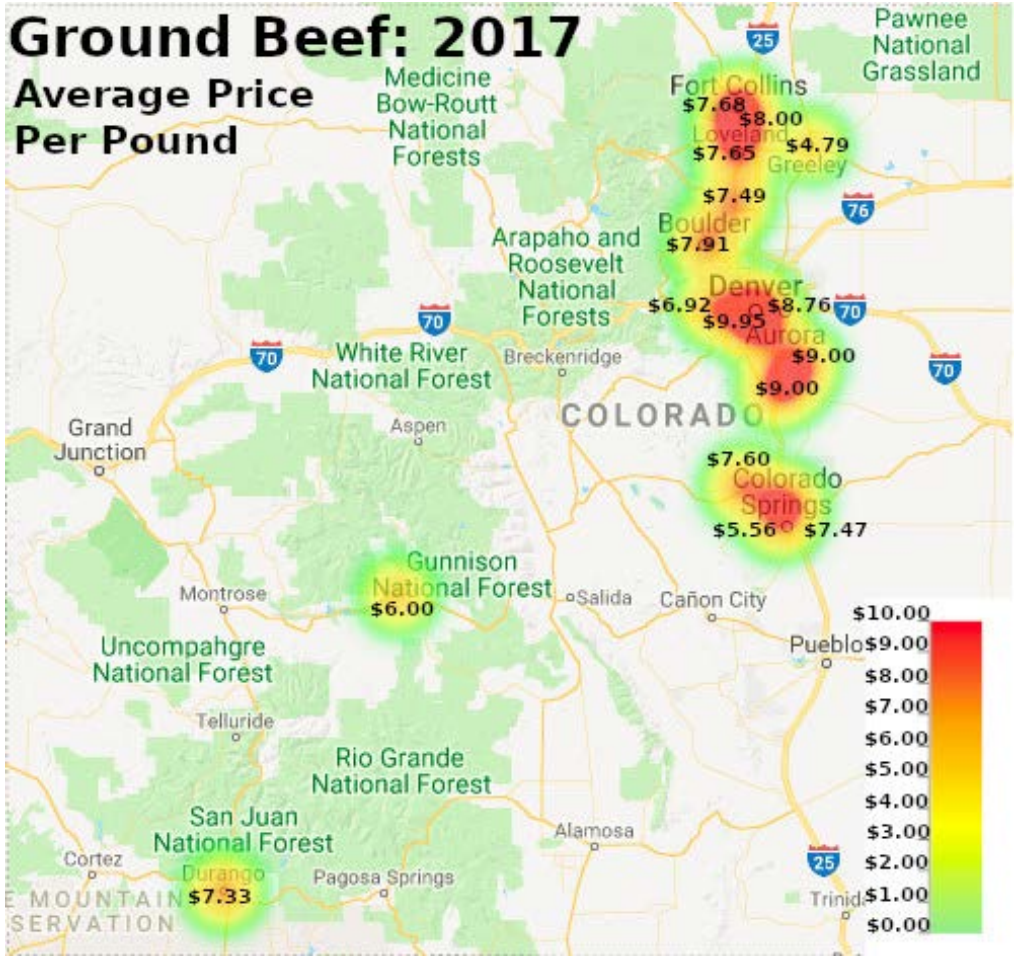
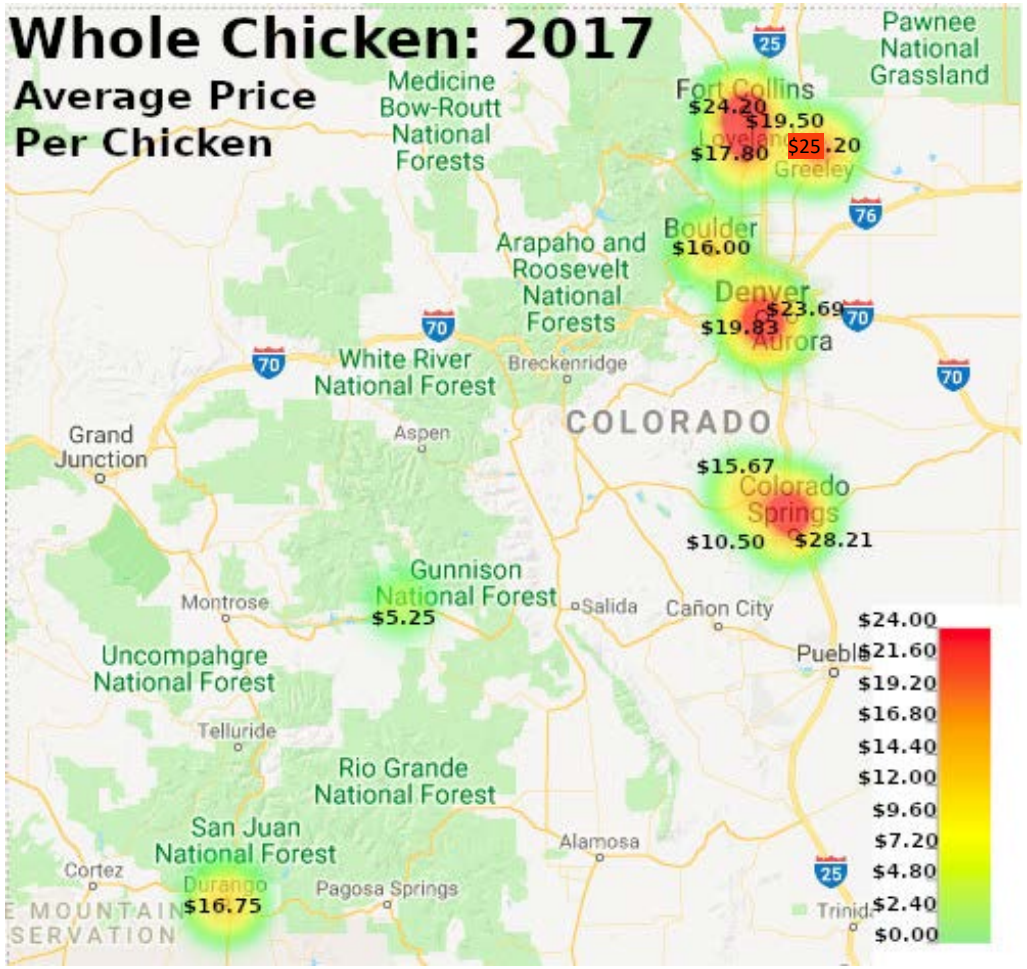


Market	Coefficients of variation (2017)
Longmont	0.0%
Union Station	2.3%
Boulder	2.5%
Durango	3.0%
Pearl Street	3.2%
Retail	10.2%

Source: https://www.marketnews.usda.gov/mnp/fv-home for average retail prices (from Weekly Advertised Fruit & Vegetables Retail Prices)

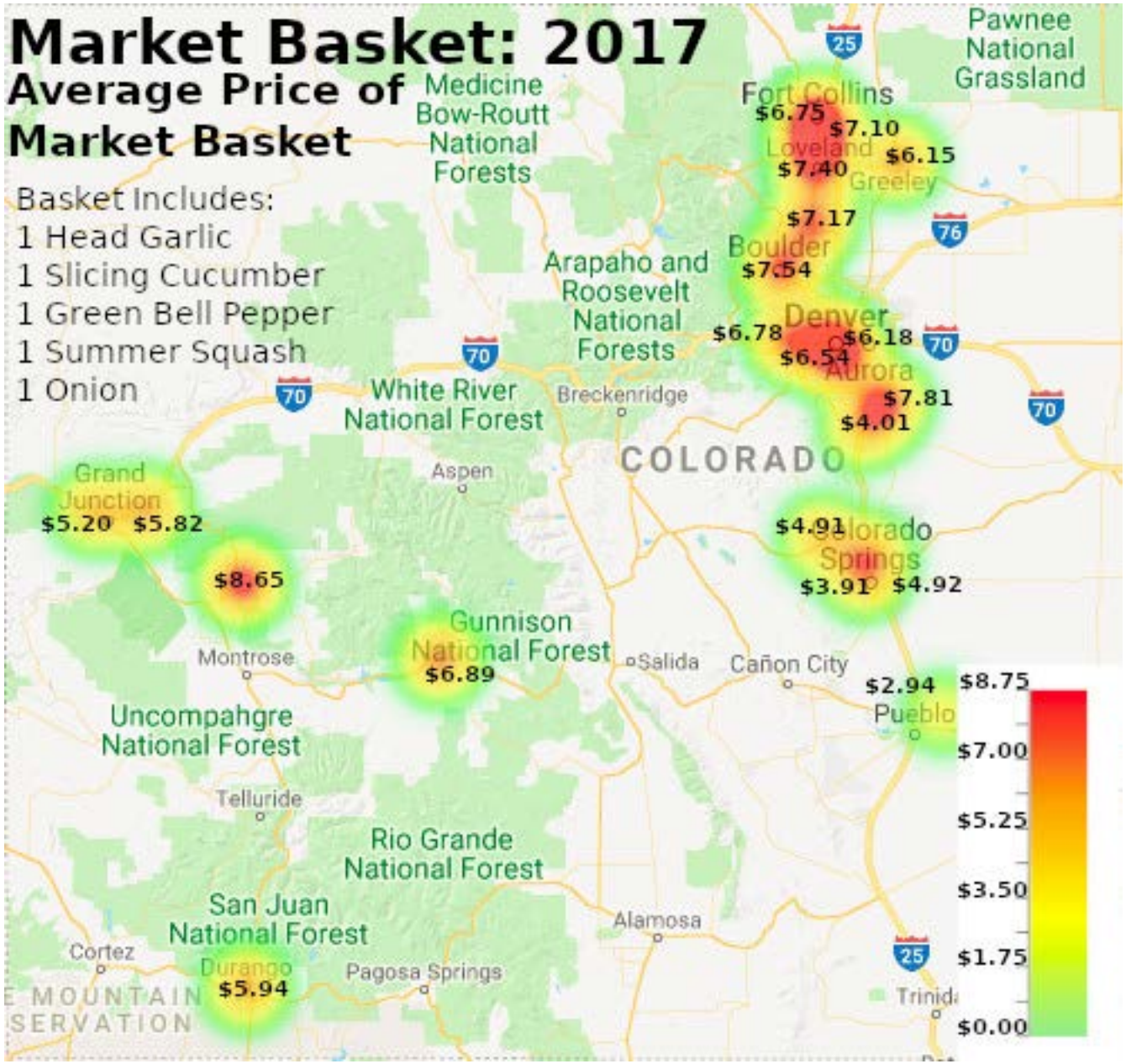


Range: $4.79 - $9.95



Range: $5.25 - $28.21

Producers use different pricing strategies depending on product

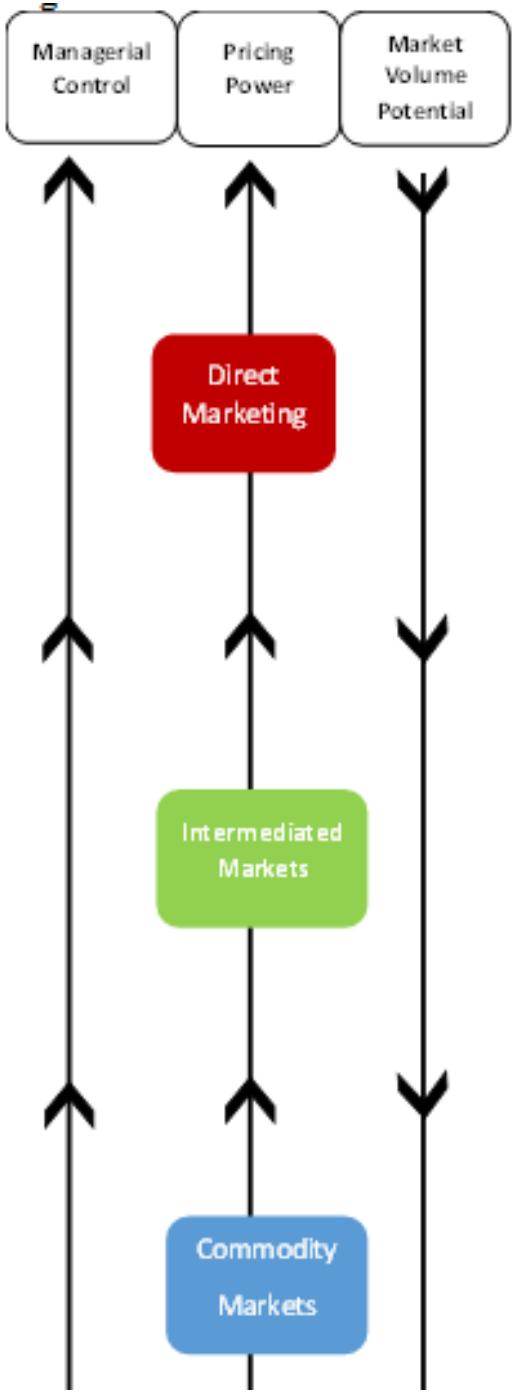


Our composite basket of products ranges from:

- $2.94 in southeastern Colorado, to
- $7.81 in south Denver metro, to
- $8.65 in western Colorado

Key takeaways

- Certifications often command a higher price point, but type is inconsistent
- Place matters (size of market, product diversity)
- Markets may provide buffer from fluctuations in retail prices but,
- Consumer expectations about prices may limit farmers' price adjustment in response to changes in input costs or external factors



There is a likely tradeoff between volume of sales and two key management factors:

1) Managerial control retained by producers

2) Pricing power of producers

Is there an “optimal” place on continuum for an operation?

Mixed Evidence of Farm Performance:
Local food producers grew less between 2007 and 2012, but more likely to have 'survived'

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

2007 sales category	All operations		Beginning farmer in 2007	
	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.

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

2007 sales category	All operations		Beginning farmer in 2007	
	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.

Low et al. 2015

Market Channel Assessments

USDA Federal-State Marketing Improvement Program Grant

- Funders and partner organizations include:

USDA United States Department of Agriculture

CDA CO COLORADO Department of Agriculture

Colorado Farmers Market Association connecting farmers and consumers

Colorado Building Farmers

COLORADO FRUIT & VEGETABLE GROWERS ASSOCIATION

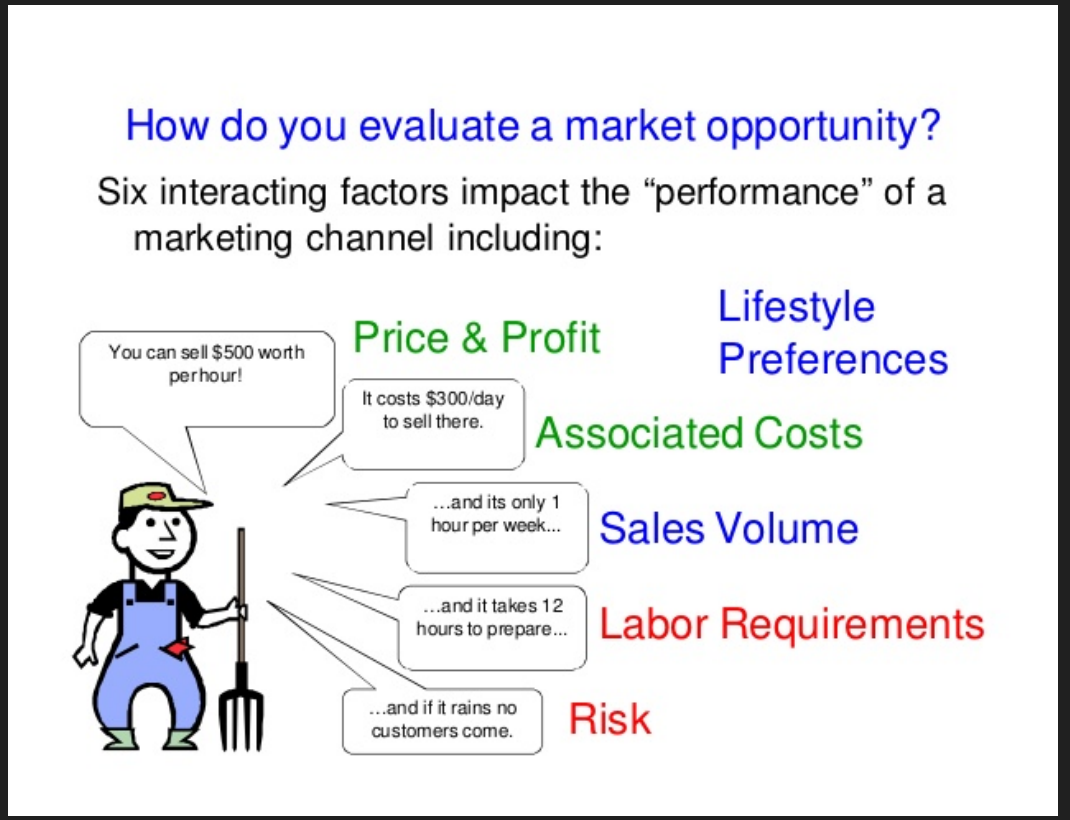
Colorado State University Extension

NORTHERN COLORADO FOOD CLUSTER

Matt LeRoux, Cornell Cooperative Extension of Tompkins County

Market Channel Assessments

USDA Agricultural Marketing Service



Methodology

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- Collect logs of all marketing labor (from harvest to sale) for one typical, peak season week.
- Collect gross sales & mileage for the week.
- Collect ranking on lifestyle & risk.
- Collect weights for each ranked category.

Why labor logs?

- Labor is the largest marketing expense.
- Consistent unit and format.
- Operators tell hired help to complete the forms.
- Each employee filled out their own sheets.

Labor logs

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Anonymous Farm	WORKER NAME:	DATE:

TIME SPENT (to nearest 5 min):		PRODUCT(S):	
ACTIVITY: (Each log sheet should cover one activity at a time)			
◯ **Harvest** e.g., create pick list, organize staff for harvest, harvest	◯ **Process/Pack** e.g., cull, grade, sort, wash, bunch, bag, package	◯ **Travel/Delivery** e.g., load/unload truck, travel to/from market, deliveries	◯ **Sales/Bookkeeping** e.g., bookkeeping, billing, sales calls, sales time, set up/take down
◯ **Other (please describe):**			
PRODUCT DESTINATION: (Check all that apply)			
◯ *Farmers Mkt 1*	◯ *Farmers Mkt 2*	◯ *Distributor*	◯ *Farm Stand*
◯ *Restaurant 1*	◯ *Restaurant 2*	◯ *Farm 2 School*	◯ *Other* _____
NOTES (e.g., case split out -6 cases of cukes harvested, 2 for FM 4 for restaurants, including names of markets):			

Note that we start with HARVEST. Assumption that production labor requirements are not market dependents.

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Methodology

- Use data to rank and compare channels:
  - Profit (gross sales – (labor + mileage cost)
  - Labor hours required
  - Sales volume

- Also use farmer ranking for :
  - Risk perception (financial risk, lost sales, etc…)
  - Lifestyle preference (enjoyment, stress aversion)

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Producer quotes:

- “This report gives me concrete information on the hours I’m spending, and will be really helpful for developing my business plan.”
- “We know restaurants are not a productive avenue for us, and this report accurately reflected this.”
- “It is good to see that benchmark to help us set a goal to be above that 50th percentile.“
- “This report really got me thinking about why I am selling in certain areas.”
- “What I noticed with the farmers’ market is that it takes a lot more out of me. It makes the day after pretty rough. It is tiring, but it is also rewarding.”
- “The information you’ve given me is helpful to try and sort out differently. It gives me an idea of where I can put more effort and tweak things.”
- “It is pretty enlightening and very interesting. It wasn’t what I expected, and we learned something here.”
- “This will help me think of it [the market] differently or better.”
- “The work you’re doing really validates what we are doing as farmers.”

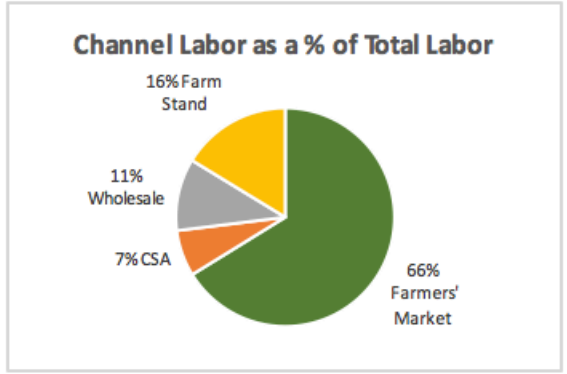
Anonymous Farm MCAT Report

Week interviewed: 8/8-8/14/16

Labor Hours Per Marketing Channel

These charts show how many hours each channel demanded in one "typical peak season" week and what percentage of total labor each channel demanded. Labor here only refers to marketing labor (harvest, wash & pack, travel & delivery, and sales & bookkeeping).

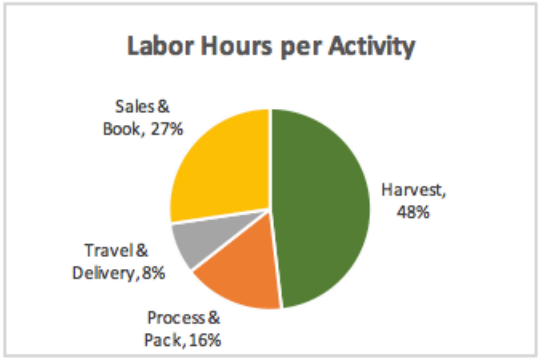
Marketing Channel	Farm Total (Hours)
Farmers' Market	38.75
CSA	4.00
Wholesale	6.25
Farm Stand	9.53
Farm Total	58.53



Labor Hours Per Marketing Activity

Here is a summary of a division of your labor hours across the four activities of marketing. At 48% of all marketing labor, "Harvest" took the most labor.

Marketing Activity (in hours)	Harvest	Process & Pack	Travel & Delivery	Sales & Bookkeeping	Farm Total
Farm Total	28.20	9.50	4.83	16.00	58.53

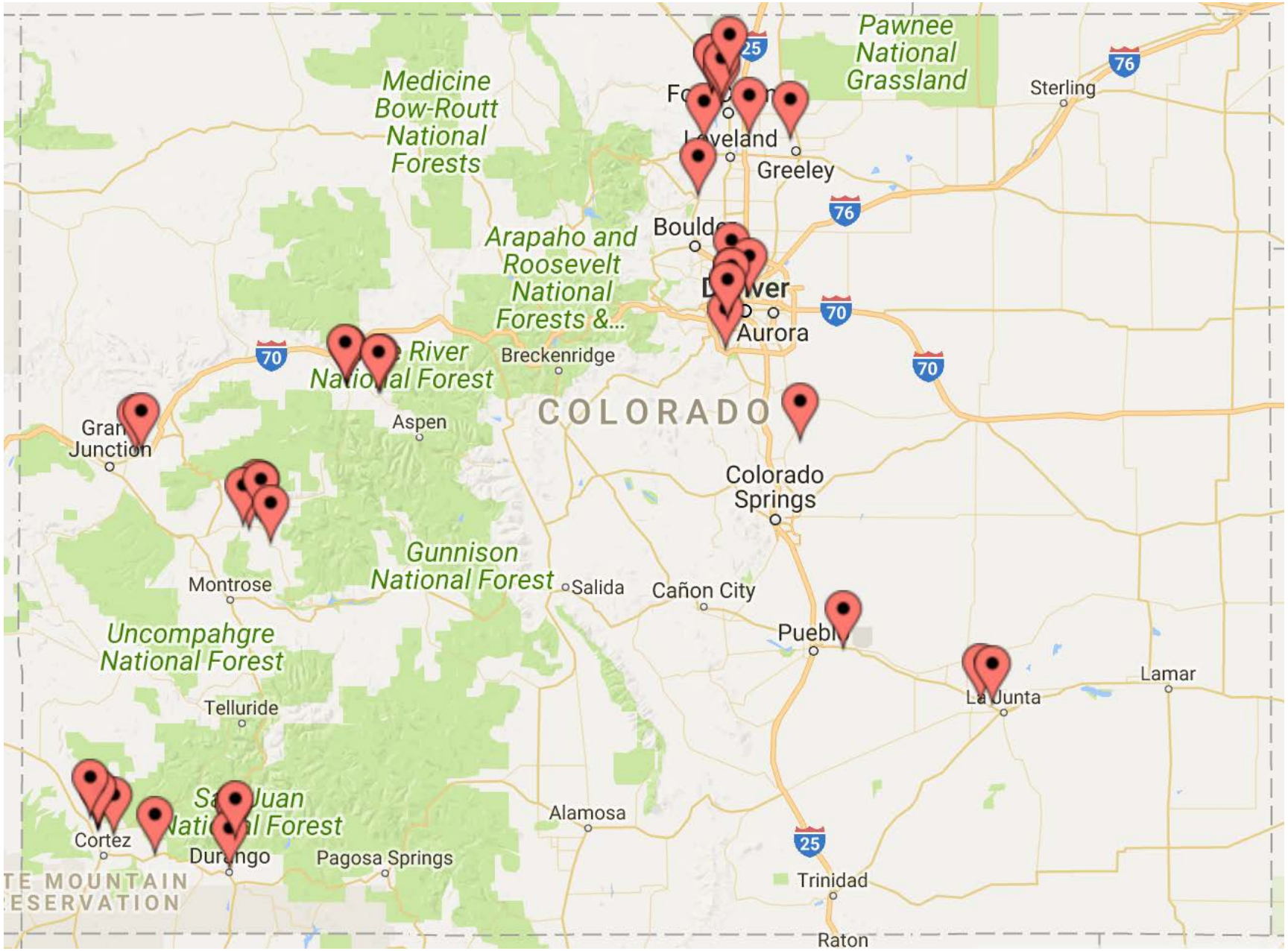


This chart is a quick summary of how much time each person spent on marketing activities. These results could inform how you might reassign some of your farm labor to the people that you know are most efficient at certain activities. The chart also summarizes how many hours are spent on marketing each day of the week.

Included in the report:

- Labor hours required per marketing channel, divided between harvest, processing & pack, travel & delivery, and sales & bookkeeping.
  - Information is also broken down by employee to help farmers better understand labor efficiency and allocation.
- Gross sales per market channel compared to total labor cost.
- Marketing profit per market channel.
- Sales and gross profit per labor hour by channel.
- Preliminary statewide benchmarks
- Final channel rankings integrating the weights discussed above.
- Recommendations to support improved farm profitability, by market channel.

All MCAT Participants



Profit Margin Percentiles, Direct Channels

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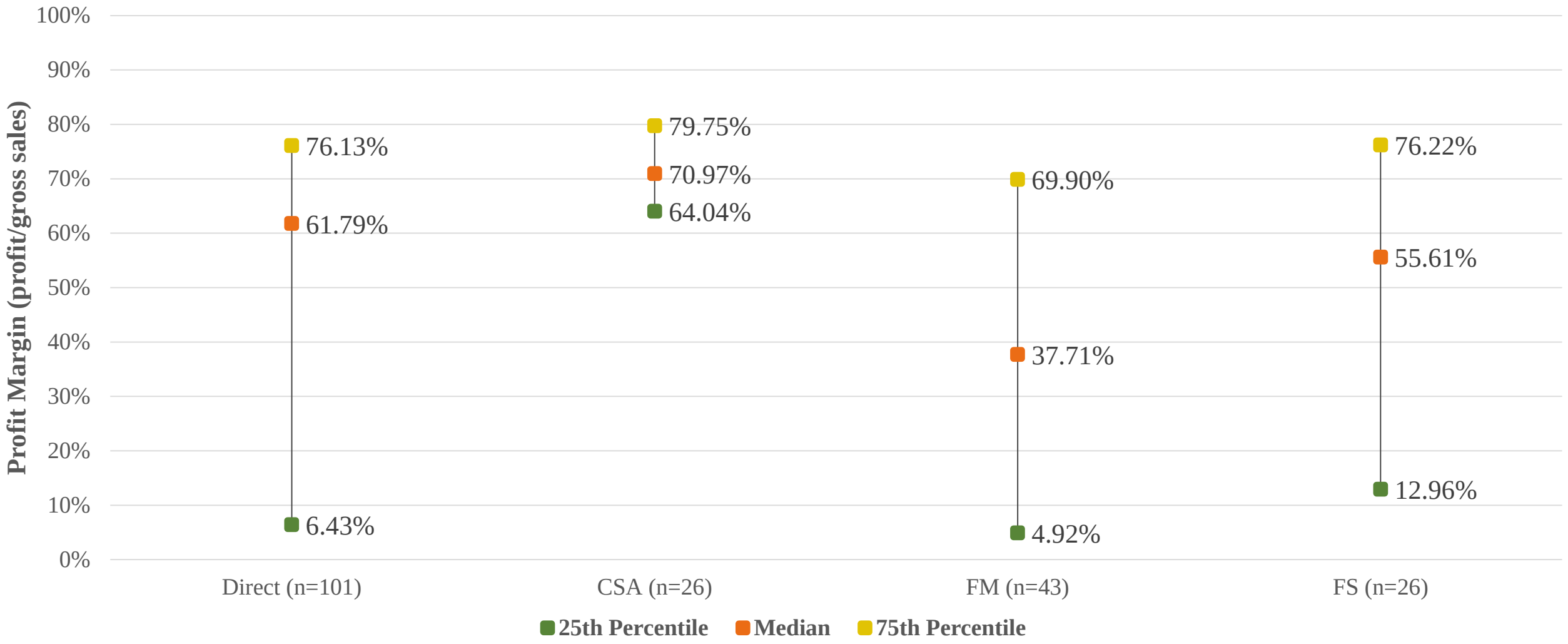

$$\text{Profit Margin} = \frac{\text{Gross sales - Marketing Labor Cost - Travel Costs}}{\text{Gross sales}}$$

Profit Margin Percentiles, Intermediated Channels

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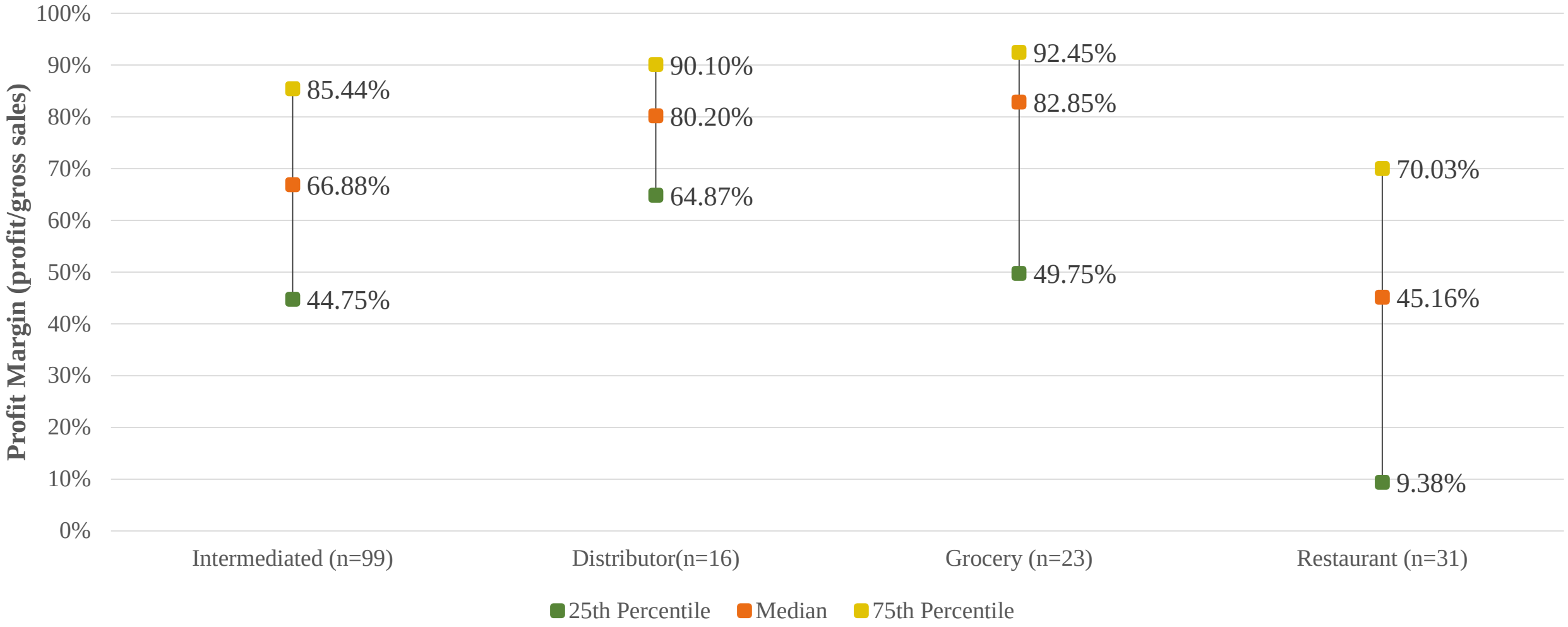

$$\text{Profit Margin} = \frac{\text{Gross sales - Marketing Labor Cost - Travel Costs}}{\text{Gross sales}}$$

Sales per Labor Hour Percentiles, Direct Channels

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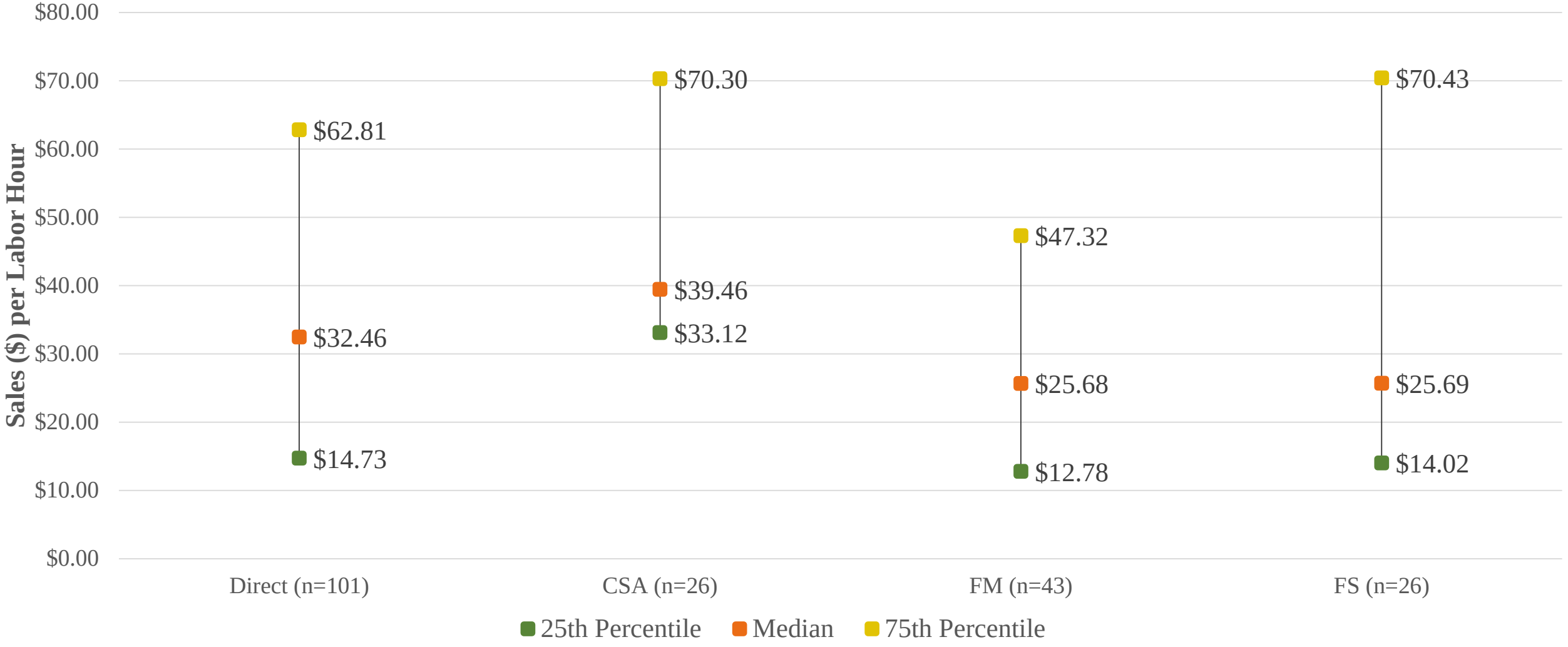

$$\text{Sales/LHr} = \frac{\text{Gross sales}}{\text{Marketing Labor Hours}}$$

Sales per Labor Hour Percentiles, Intermediated Channels

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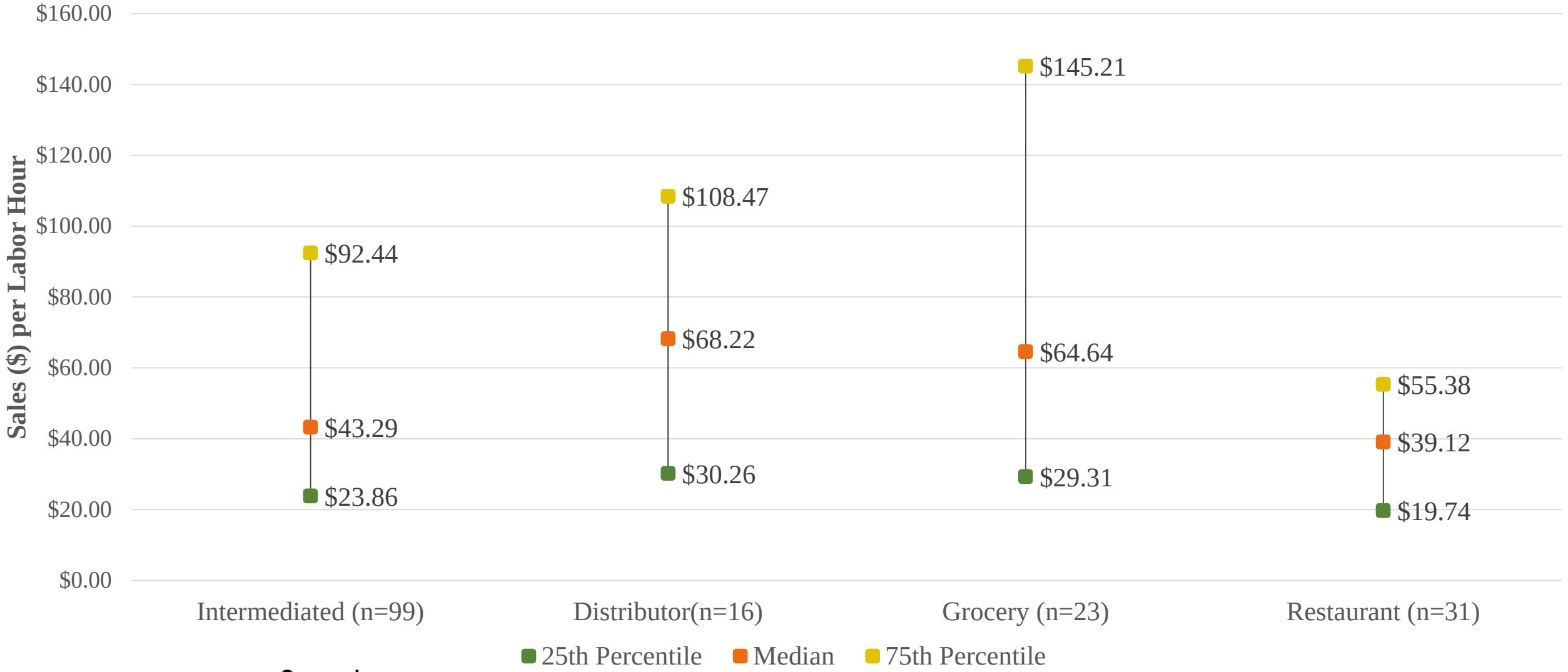
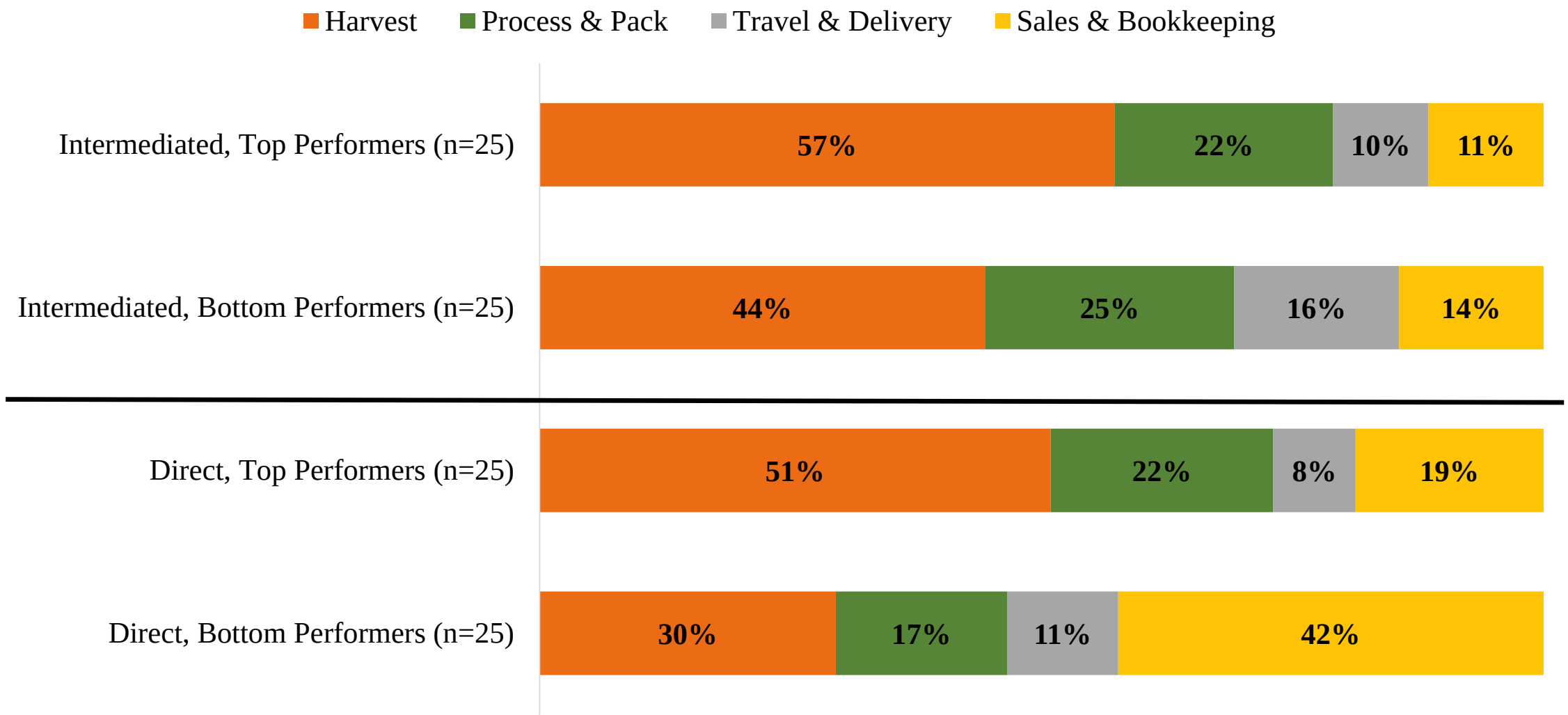


Sales/LHr = Gross sales / Marketing Labor Hours

Percentage Distribution of Labor by Marketing Activity, Top (75th Percentile) and Bottom (25th Percentile) Performing Channels, All Channels



Market Channel Assessments

FOR COLORADO SPECIALTY CROP PRODUCERS

Market Channel
Assessment Tool

Previous research indicates that the largest variation in market channel costs are associated with labor and distribution. Accordingly, this study focuses on understanding the relationship between sales and labor utilization by market channel and activity (e.g. harvest, process and pack, travel and delivery, and sales and bookkeeping).

This study used market channel assessments to populate individualized reports to help specialty crop producers analyze financial returns to their individual market outlets and make recommendations to improve market channel selection and performance.

Farm-level market channel data from 2016 and 2017 were then aggregated to develop state-level benchmarks that:

1. Determine predictors of success in marketing through different outlets; and

2. Provide market performance metrics that help guide existing and beginning specialty crop farmers by identifying market channels that maximize farm-level profitability.

What is a Market Channel?

There are two categories of market channels:

1) Direct (e.g. farmers' markets, Community Supported Agriculture (CSA), and farm stands); and

2) Intermediated (e.g. sales to larger buyers such as restaurants, grocery stores, and distributors).

Market Channel Assessments provide customized information to Colorado specialty crop producers about the profitability and efficiency of their market channels.

	Greenmarket	FCE Ag Retail
Category	Mean ($/acre)	Mean ($/acre)
Total sales	15,388	24,326
Variable expenses:		
Hired labor	4,098	6,791
Fertilizer and lime	383	206
Chemicals and pest control	119	259
Fuel	1,025	353
Seeds and plants	1,046	450
Freight and trucking	483	185
Inventory purchased for resale	0	5,954
Total variable expenses	7,154	14,198
Gross margin	8,235	10,128
Fixed expenses:		
Taxes	640	402
Insurance	360	597
Rent and lease	1,170	661
Repairs and maintenance	1,710	790
Utilities	295	350
Interest	57	374
Other	1,154	2,988
Total fixed expenses	5,385	6,163
Total expenses	12,539	20,361
Net margin	2,849	3,965

Farm Sales and Expenses per Acre,

Primary Greenmarket Farms and FCE Ag Retail – Farm Market

USDA NIFA
United States Department of Agriculture
National Institute of Food and Agriculture

Dyson
Cornell
SC Johnson College of Business

FARM CREDIT EAST

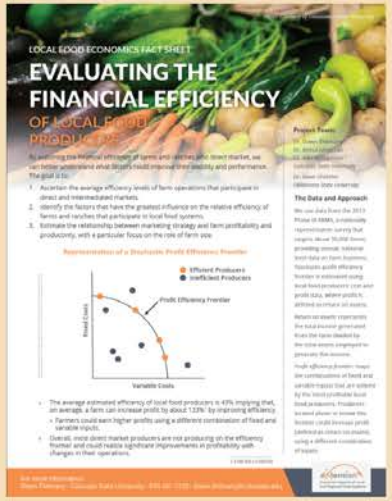
USDA Nationwide Data

Financial Performance Implications of Local Food Enterprises

FACT SHEETS

USDA Agricultural Marketing Service

FINANCIAL PERFORMANCE IMPLICATIONS OF LOCAL FOOD ENTERPRISES



NIFA

LocalFoodEconomics.com

USDA AMS sample of Local Food Producers, Farmers and Ranchers, 2013

- 2013 Phase III ARMS data
- Nationally representative survey that targets about 30,000 farms, providing annual, national-level data on farm business

	No. of observations	Population size
Market Channel		
D2C	664	124,186
Intermediated	136	11,703
D2CIntermediated	213	24,012
Alllocalfood	1,013	159,901
Nonlocalfood	16,416	1,935,568
Local food producers by farm scale (GCFI)		
1kto75k	534	112,563
75kto350k	214	21,104
350to1Million	104	3,922
Million and higher	107	3,607

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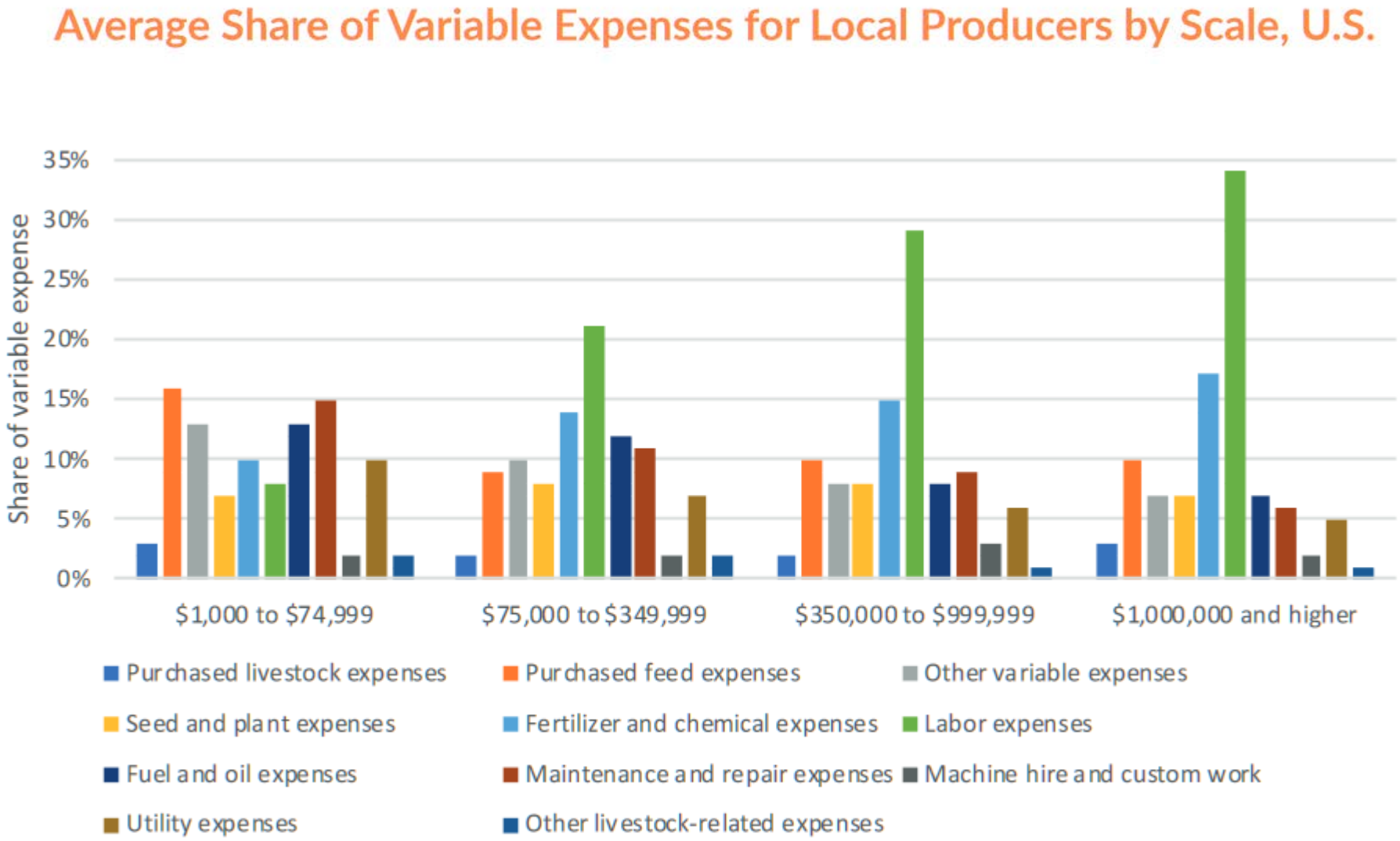
The Role of Labor and Other Variable Expenses



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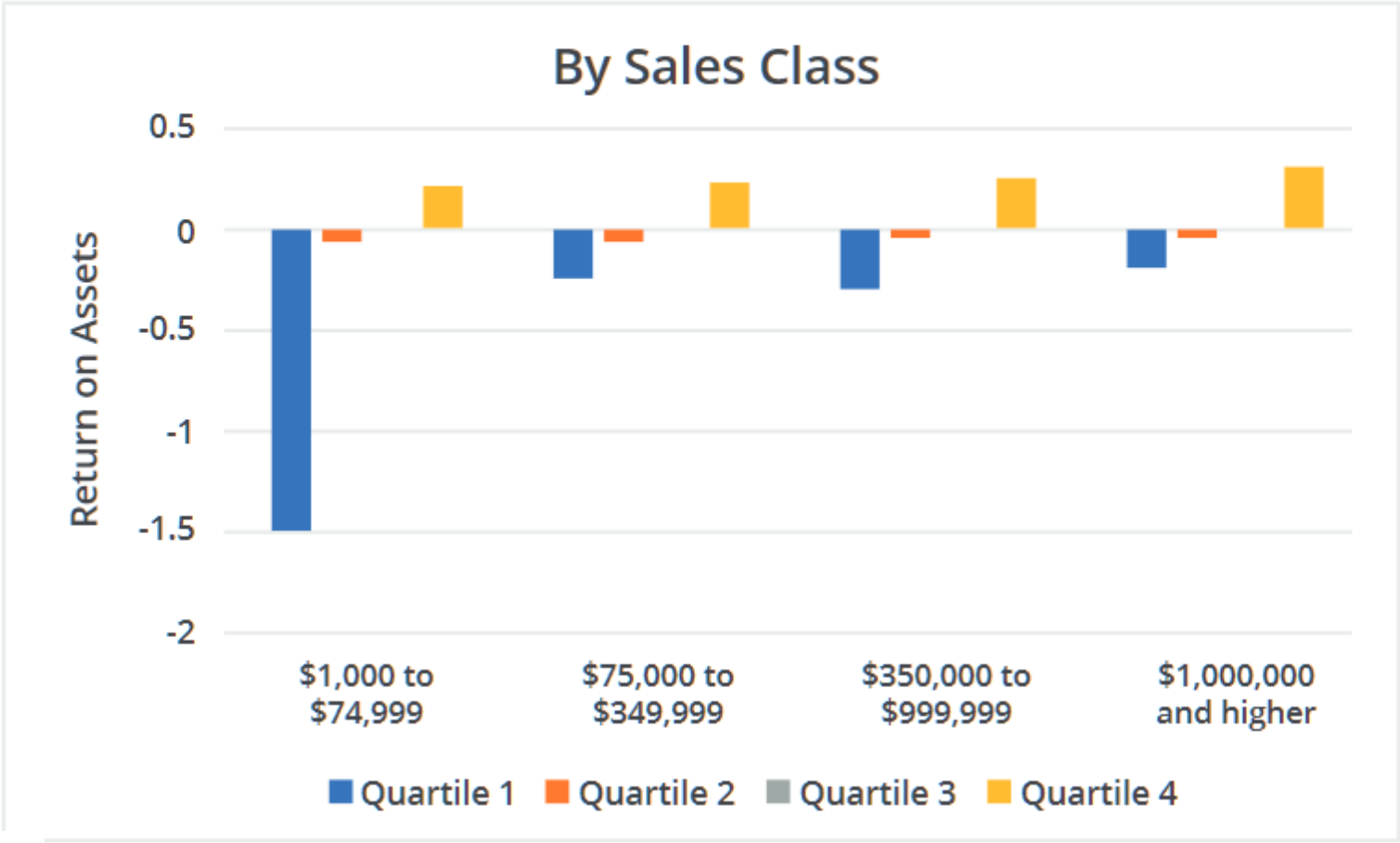
Source: Bauman, Thilmany, Jablonski 2018

Methodology: Profitability implications of local food marketing strategies

- We divide the sample into quartiles, segmented by profitability
  - Profitability is defined as return on assets.
  - A % representing the net income made per dollar of assets invested in a farm, common competitive returns for industry are 10-15%
  - For segments: Quartile 4-best performers, Quartile 1-lowest performers
- Provides benchmark information for comparisons across groups and time (as more years become available)

Profitability by Scale and Channel

Return on Assets by Quartile (Quartile 4 is the most profitable)



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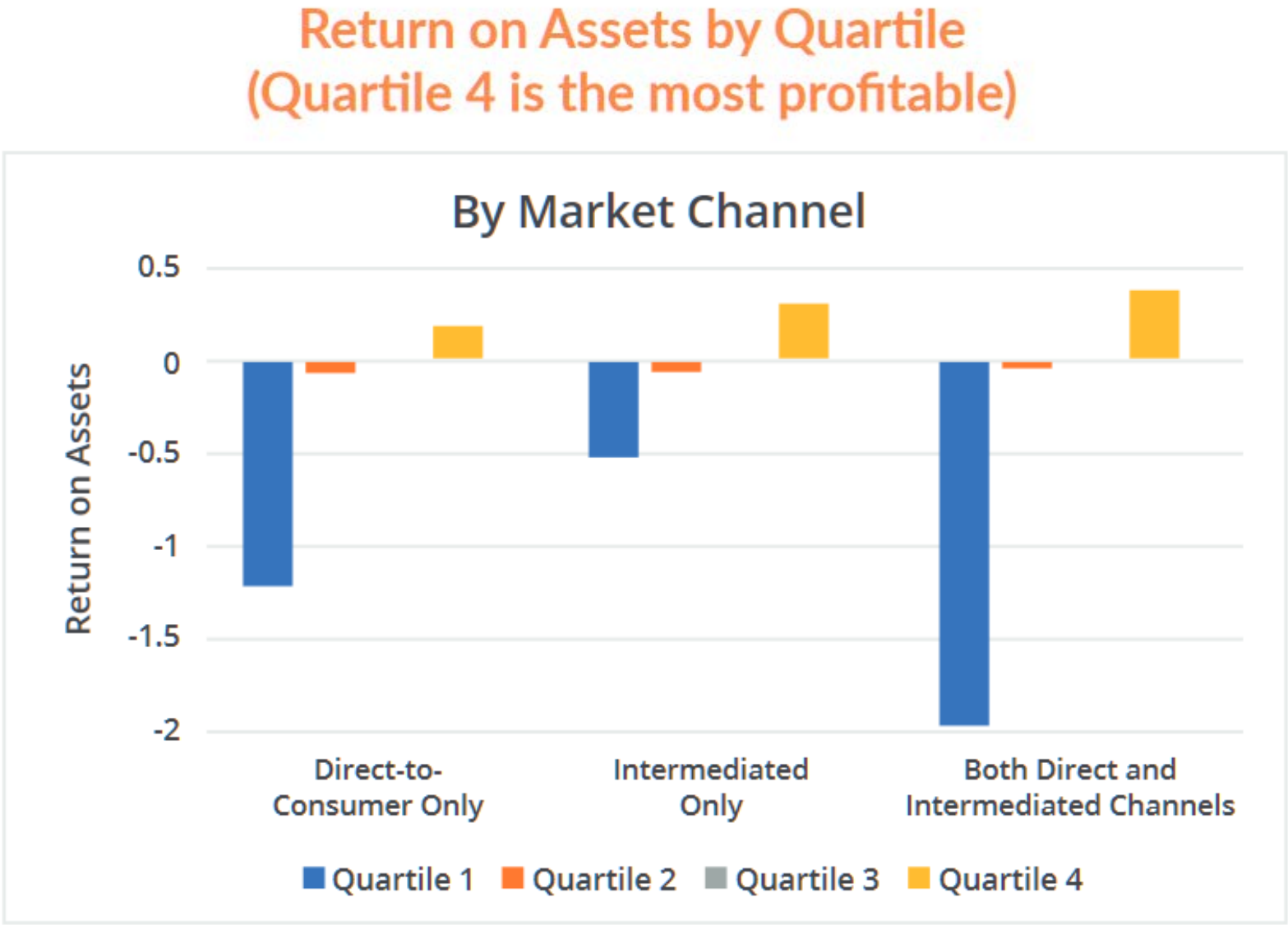
Source: Bauman, Thilmany, Jablonski 2018

Profitability by Scale and Channel



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Source: Bauman, Thilmany, Jablonski 2018

Profitability by Scale and Channel

Return on assets, by marketing outlets and by gross farm income

Scale	Quartile	Direct-To-Consumer Only Mean	Intermediated Only Mean	Both Direct and Intermediated Mean
$1,000 to $74,000	1	-1.37	-0.80	-2.63
	2	-0.07	-0.07	-0.07
	3	-0.01	-0.01	-0.02
	4	0.20	0.04	0.07
$75,000 to $349,999	1	-0.24	-0.20	-0.33
	2	-0.07	-0.09	-0.07
	3	-0.01	-0.01	-0.01
	4	0.08	0.26	0.39
$350,000 and higher	1	-0.23	-0.31	n/a
	2	-0.06	n/a	-0.06
	3	0.00	-0.02	-0.01
	4	0.19	0.31	0.34

Profitability by Scale and Channel

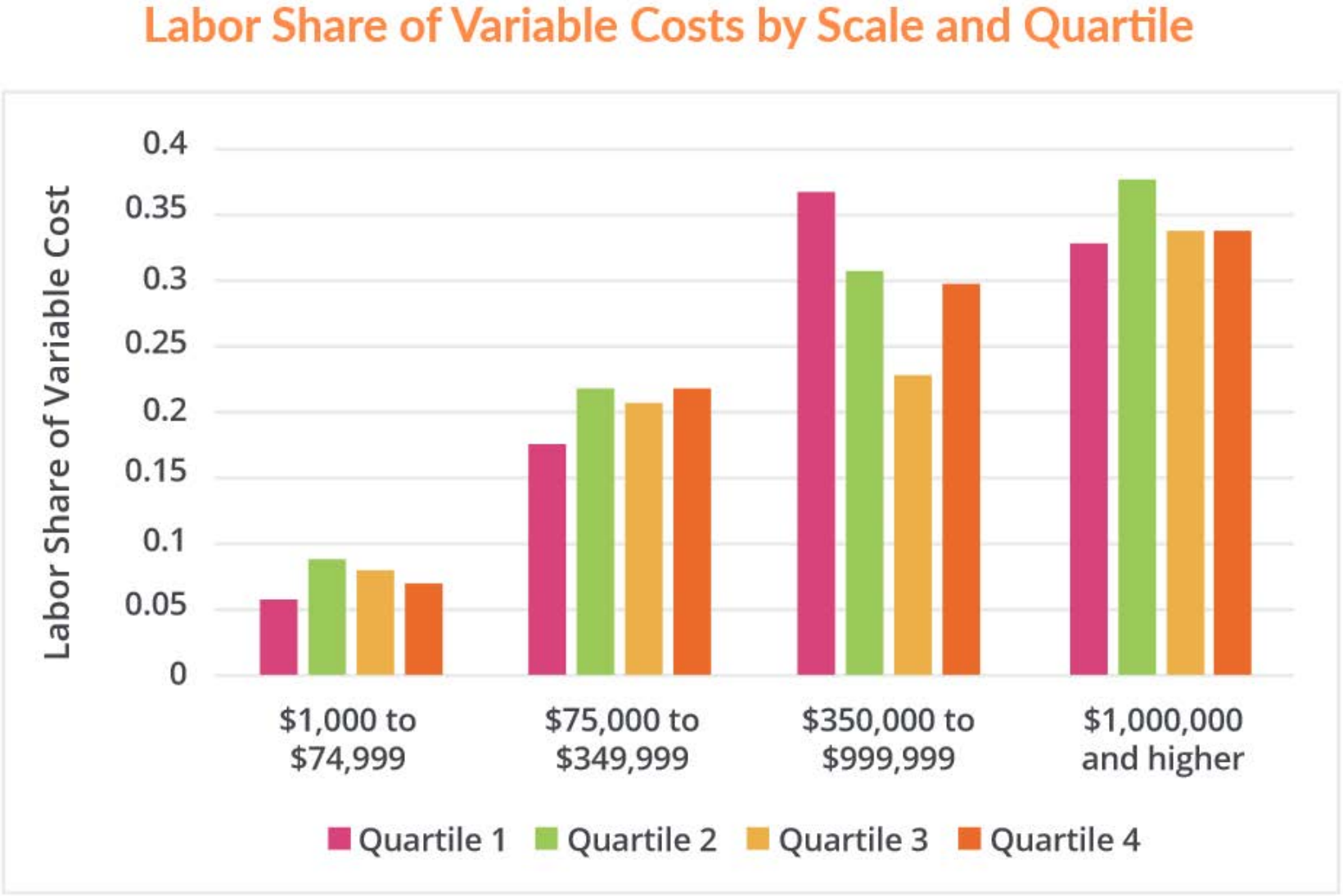
Key takeaways

- Local food system participants can be profitable at any scale (even the smallest producers)
  - But scale does matter in the choice of appropriate marketing strategies and the portfolio of channels.
  - Farms with direct and intermediated sales vary greatly in terms of profitability
- Intermediated sales are correlated with higher profitability at every size class when compared to producers with only direct-to-consumer sales.

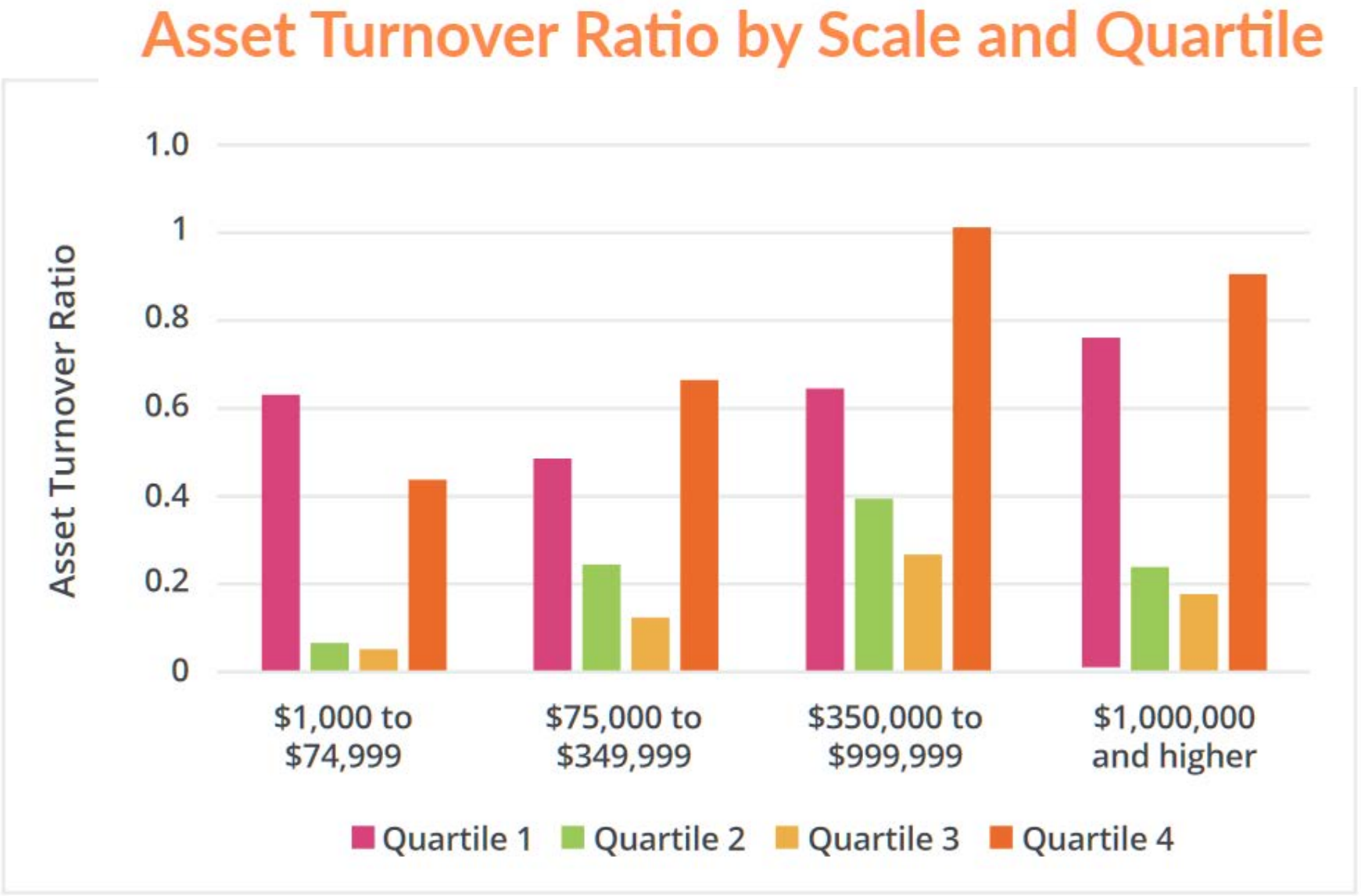
Data Sources:

Bauman, A., D. Thilmany, & B.B.R. Jablonski. 2017. "The financial performance implications of differential marketing strategies: Exploring farms that pursue local markets as a core competitive advantage." Agricultural and Resource Economics Review, forthcoming.

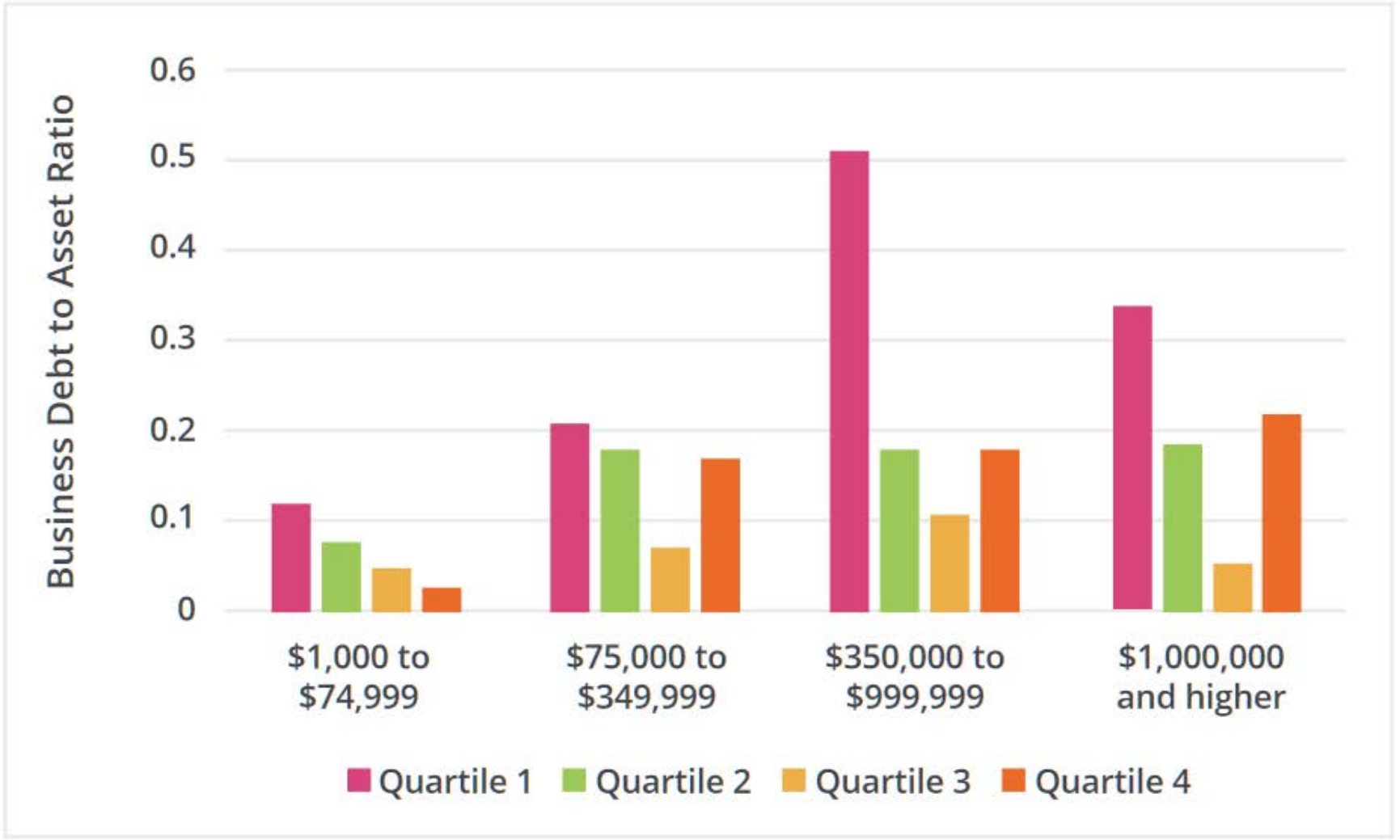
Financial Benchmarks for Local Food Producers



Financial Benchmarks for Local Food Producers



Financial Benchmarks for Local Food Producers



Profitability by Scale and Channel

Key takeaways

- Labor costs are a relatively higher share of total costs as operations grow in scale.
  - As operations grow, the hours, skill and expertise needed to manage responsive supply chains increases.
- The highest performing farms generally have the highest asset turnover ratios.
  - Farms are highly effective in using assets to generate sales.
- Debt usage is bi-modal with the best and worse performing farmers using relatively more debt.

Data Sources:

Bauman, A., D. Thilmany, & B.B.R. Jablonski. 2017. "The financial performance implications of differential marketing strategies: Exploring farms that pursue local markets as a core competitive advantage." Agricultural and Resource Economics Review, forthcoming.

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Efficiency Analysis Approach

- Focused on ROA rather than output based on the nature of the data
  - Challenge given the number of nonpositive profit farms
  - Complements other work focused on quartiles, with this work focused on those performing in top two quartiles
- Focus on costs may be inappropriate in a business model focused on quality differentiation and customer service
  - Allows for interactions among costs
- Allows us to focus on scale, but allow other important factors to be revealed
  - Complements USDA ERS work on implications of scale and structure

Three Specifications of Seminal Model

Gross cash income and marketing channel
Only marketing channel
Only gross cash income

The technical efficiency for an individual producer is defined as the ratio of the observed profit of an individual producer to the maximum observed profit:

$$TE_i = \frac{\pi_i}{exp(f(x_i, \beta) + v_i)} = exp(-u_i)$$

Evaluating the Financial Efficiency of Local Food Producers

Key takeaways

- Many local food producers could increase profitability by improving their efficiency
  - Changing their relative investment in labor, production inputs, and land.
- Not surprisingly, scale has the largest impact on financial efficiency among direct market producers.
- Managing variable and not fixed expenses is the key managerial focus for direct producers to achieve profit efficiency.
  - Land ownership is not a determinant of efficiency.
- The choice of market channel was not shown to have an impact on efficiency.
  - There are many different choices a producer can make in terms of where they choose to sell their product and remain efficient.

Wage rate for local food producers, U.S.

Key takeaways

- Average wages are slightly higher in metro areas ($26 vs. $23 and $21 in metro-adjacent and nonmetro, respectively), there are no significant differences.
- Given the substantial literature that focuses on persistent wage gaps between rural and urban places (e.g., Marré 2017; Young 2013), this finding is unexpected.
- Shows potential for those who see local food systems as one strategy for rural economic development.

NIFA

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Source: Jablonski, Bauman, and Thilmany under review

Local food markets involve strengthening rural-urban linkages

	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.

Highlights and Looking Ahead

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- There is evidence that direct and intermediated markets are one strategy to can even the playing field for smaller producers
- However, scale still improves efficiency and profitability
- There is a large share of farms with very poor performance
  - Typical of business churn?
- We will continue to mark against these benchmarks
  - Across years
  - Across regions/rural vs. urban
  - Across commodities
  - Mix of marketing channels
- Show progress in sector as policy and market dynamics change

Integrating findings into Extension programming

Integrating findings into Extension programming

Farmer Pete, Georgia
Credit: National Farm to School Network

Evaluate if Farm to School programming results in profitability outcomes for farmers and food supply chain businesses.

- National analysis using 2013-2016 USDA ARMS data
  - Focused on financial analysis using return on assets as measure of profitability
  - Includes market channel portfolio, location, and farm to school policy variables
- Approximately 5% of sample does some type of local food markets
  - Observations with missing local foods data points were dropped, but **over 67,000 observations** remain

localfoodeconomics.com

eXtension
Economic Impacts of Local and Regional Food Systems

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The Economics of Local Food:

an Emerging Community of Practice

We are actively growing a new Community of Practice to help you and your community understand the ag and food enterprise viability, market dynamics and other key socio-economics metrics of local and regional food systems.

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