



## PROFITABLY SELLING FARM PRODUCTS

# Marketing Mix Analysis for Farm Operators

### MARKETING COSTS

While farm operators reap retail prices when selling direct to customers, marketing costs can quickly erode profit margins. As a grower, you should know the costs of all your market channels and then strategically decide which are most advantageous for your farm and business goals.

Regardless of your product—meats, value-added goods, or fruits and vegetables—a marketing mix analysis is a useful tool to help you make sound business decisions. The information below defines marketing costs, explains how to analyze your marketing mix, and outlines decision criteria to optimize your marketing outlets.

### YOUR MARKETING MIX

Many direct farm operators juggle multiple market channels to sell enough product to “make a go” of an enterprise. For example, a produce grower may have a restaurant account, sell at two farmers markets, and manage a Community Supported Agriculture (CSA) subscription service. Altogether, these three market channels are a *marketing mix*.

Managing your marketing channels well and strategically choosing outlets that complement one another will impact not only your success to move product but also your success to *profitably* sell it. Each marketing channel has pros and cons, such as pricing, time commitment, and packaging and quality expectations. You must weigh these considerations before choosing the outlets that best fit your skills, abilities, and business goals.



## MARKETING COSTS DEFINED

As a direct marketer, you control your own supply chain. In doing so, you also incur the costs related to product preparation and distribution. To analyze your return on these marketing costs, you should detail all expenses related to each marketing channel. Although many operators have advertising and promotional costs in mind, marketing costs encompass all monetary expenses related to moving a product from farm to table.

Common marketing cost categories and examples include:

- **Post-harvest handling:** Time spent washing, packing, and organizing product for market.
- **Advertising and promotion:** Time spent creating flyers, brochures, website hosting and development.
- **Travel time:** Time spent transporting product from farm to outlet.
- **Selling or arranging sales:** Time incurred selling product, such as at a farmers market or arranging sales with buyers and dropping off product at stores.
- **Mileage:** Miles to and from an outlet from the farm, which cost \$0.535/mile in 2017.
- **Supplies:** Time spent purchasing bags, cartons, or packaging for outlet.
- **Signage:** Time spent purchasing price cards, labels, or banners.
- **Fees:** Money spent at a farmers market, event, or on membership fees related to your outlet.

## DATA TO CONDUCT YOUR OWN ANALYSIS

To determine last year's performance by market channel, gather all data you have about the previous year's annual marketing costs and revenues.

Begin by collecting records for any cash marketing expenses, such as advertising, post-harvest packaging, supplies, and market fees. These are expenses for which you should have a vendor receipt. Allocate these costs to each of your marketing channels if your records are not specific for each. For example, say you spent \$500 last year on post-harvest packaging, and your receipt shows you paid \$400 for waxed boxes and \$100 for pulp trays. You would then allocate \$400 to your CSA market channel and \$100 to your farmers market channel, since that's how you used the respective packaging.

For non-cash expenses (that often have no receipt or record) like travel time or mileage, you can easily estimate cost based on each delivery or day. For example, if you sell at a farmers market 20 miles away, you would multiply 40 miles (round trip) by \$0.535/mile (2017 federal mileage rate) for each market day and assign your labor inputs a wage rate (e.g., \$15/hour) for the 40 minutes of travel time.

Since the purpose is to identify total costs per outlet, you may need to allocate some costs to each if the costs are spread across all of them. For example, the cost of website development and hosting is a marketing cost for the whole farm and not restricted to one particular marketing channel. In this case, you should allocate the costs proportionately, but this does not need to be complicated. In many cases, simply allocating the cost in proportion to sales by market channel makes sense (e.g., if a farmers market is 50 percent of your sales, half of your website costs

should be allocated to the farmers market). If a whole farm cost closely relates to only one outlet, adjust accordingly.

## MARKETING MIX ANALYSIS

To understand marketing channel profitability and identify relative strengths across channels, you should calculate an apples-to-apples comparison for all sales outlets. This marketing mix analysis shows an overall comparison without including production costs by product or price variations.

FIGURE 1: EXAMPLE OF MARKETING MIX ANALYSIS

Items	Farmers market 1	Farmers market 2	Farm Stand	Direct-to-grocery	Direct-to-school
<b>Gross sales</b>	<b>\$2,000</b>	<b>\$3,000</b>	<b>\$1,500</b>	<b>\$800</b>	<b>\$600</b>
# of deliveries/days	(12 days)	(12 days)	(60 days)	(10 deliveries)	(5 deliveries)
Sales per day	\$166/day	\$250/day	\$25/day	\$80/delivery	\$150/delivery
<b>Total annual marketing cost</b>	<b>\$1,056</b>	<b>\$2,124</b>	<b>\$600</b>	<b>\$500</b>	<b>\$250</b>
<i>Post-harvest handling@\$10/hr.</i>	\$40	\$60	\$5	\$10	\$12
<i>Mileage</i>	\$25	\$45	\$0	\$20	\$20
<i>Travel@\$10/hr.</i>	\$15	\$60	\$5	\$20	\$18
<i>Fees</i>	\$8	\$12	\$0	\$0	\$0
<i>Total/day</i>	\$88/day	\$177/day	\$10/day	\$50/delivery	\$50/delivery
Net revenue (Sales - Expenses)	\$944 (\$88/day)	\$876 (\$73/day)	\$900 (\$15/day)	\$300 (\$30/deliv)	\$350 (\$70/deliv)
<b>Gross margin (net revenue/gross sales)</b>	<b>47%</b>	<b>29%</b>	<b>60%</b>	<b>37%</b>	<b>58%</b>

In Figure 1, the gross margin summarizes the overall return on total marketing costs. Outlets with the highest gross margins retain a largest percentage of gross sales. One way to understand gross margin is to imagine the percent of a dollar retained. For example, the farm in Figure 1 keeps 47 cents of every dollar at farmers market 1 and 29 cents at farmers market 2.

Readers should note, however, that a marketing mix analysis does not consider production costs. If your product price is consistent across sales outlets, a marketing mix analysis provides a good comparison. However, if you receive \$2.50 per pound of wholesale meat sales instead of your usual \$5 per pound retail, you essentially have more production costs for each dollar of sale. In turn, the wholesale market channel may be unprofitable, even if a marketing mix analysis shows a positive return.

## EVIDENCE FROM MINNESOTA PRODUCERS

In 2016, University of Minnesota Extension collected detailed marketing costs from 10 commercial vegetable operators. In addition to data collected for creating whole farm balance sheets, income statements, and enterprise analyses for assorted vegetables, Extension also collected costs and sales by market channel.

Most study participants sold produce through an average of three outlets, with CSA and farmers markets comprising 36 percent and 29 percent of total sales, respectively (Figure 2).

A common concern for produce operators is the cost of selling in direct marketing channels. The direct costs of transporting produce and selling at a farmers market or delivering CSA boxes decreases profit margins, even though operators capture retail prices. In contrast, although wholesale market channels offer a lower price, growers may spend less to sell the product.

FIGURE 2: TOTAL SALES OF 2016 STUDY PARTICIPANTS BY MARKET CHANNEL (N=10)

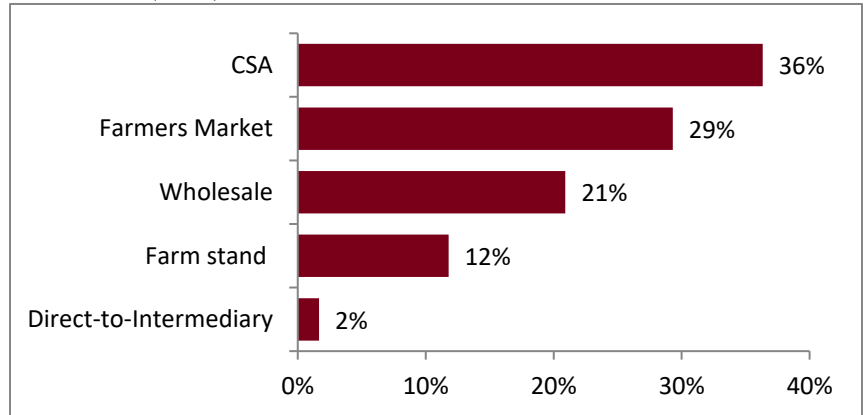
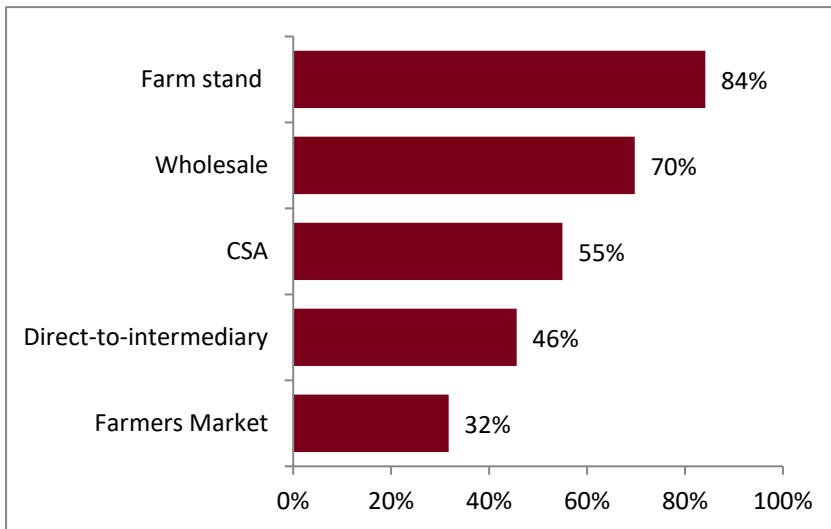


FIGURE 3: GROSS MARGINS BY MARKETING CHANNEL



After considering all direct and labor costs, Extension found wholesale marketing costs were relatively low when compared to direct marketing channels. Operators had the lowest marketing costs per dollar of sales for farm stands, followed by wholesale and CSA (Figures 3 and Table 1). Overall, farmers markets had the lowest return on marketing costs.

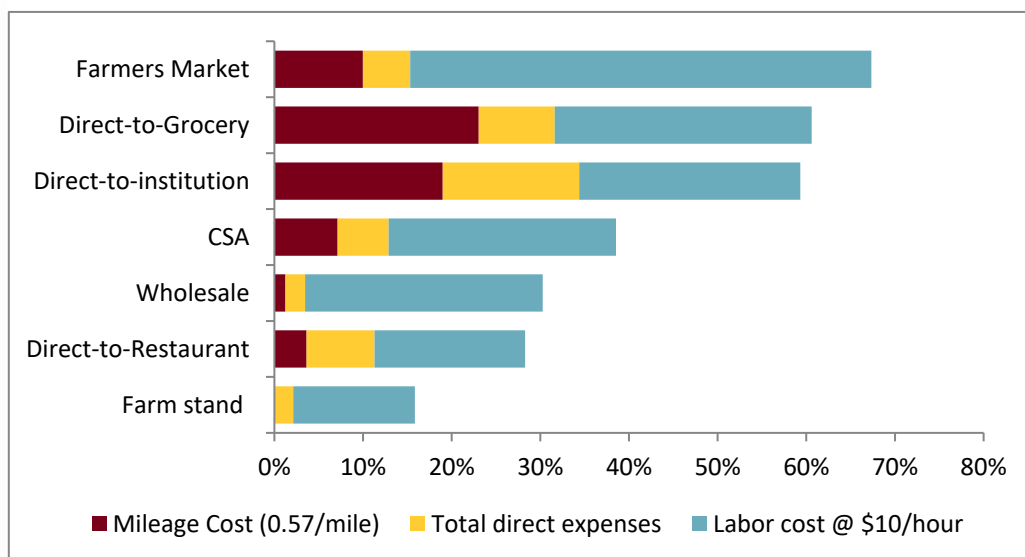
To examine how marketing costs varied across outlet, Extension organized costs by labor, mileage, and direct expenses. Labor included total hours spent selling (such as at a farmers market), preparing product, and transporting produce. The time spent by all farms was valued at \$10 per hour. Mileage cost was calculated as the total miles driven for each outlet times \$0.575 per hour, the 2015 federal mileage rate. Direct expenses included advertising, post-harvest packing materials (e.g., waxed boxes), and a portion of utilities (e.g., phone calls) directly used to sell product through a particular marketing channel.

TABLE 1: RETURNS OVER MARKETING COSTS FOR STUDY PARTICIPANTS (N=10)

	CSA	Farmers Market	Farm stand	Wholesale	Direct-to-intermediary
Gross revenue	\$43,408	\$35,013	\$14,088	\$24,979	\$1,992
Total marketing costs	\$19,539	\$23,901	\$2,232	\$7,560	\$1,083
No. of trips or days	90	157	163	80	38
No. of farms	5	8	5	6	3
<b>Marketing cost analysis by outlet per day or trip</b>					
Sales	\$482	\$223	\$86	\$312	\$52
<i>Expenses</i>					
Labor Cost (\$10/hr)	\$123.75	\$115.99	\$11.86	\$83.69	\$12.72
Mileage (\$0.57/mile)	\$65.60	\$24.34	\$-	\$3.90	\$8.96
Direct expenses	\$27.75	\$11.91	\$1.84	\$6.92	\$6.83
Breakeven	\$217.10	\$152.24	\$13.70	\$94.51	\$28.51
<b>Gross margin</b>	55%	32%	84%	70%	46%

Looking at the results of this marketing cost analysis, the labor cost for selling at farmers markets explains its low return, especially since labor costs are the largest component across all channels. The absence of mileage costs associated with self-serve farm stands helps explain how this particular outlet has the highest return on marketing costs. The low mileage associated with wholesale is also notable. In our sample, some foods hubs picked up product on-farm, and this kept marketing costs low. Direct expenses were the smallest component and not significant, with the exception of direct-to-institution sales (Figure 4).

FIGURE 4: MARKETING COSTS COMPONENTS BY MARKETING CHANNEL AND PERCENT OF TOTAL MARKETING COSTS



Extension’s full research report is available at

<https://www.extension.umn.edu/community/research/reports/docs/2017-financial-benchmarks-local-food-operations.pdf>.

## MAKING DECISIONS

After completing a marketing mix analysis, you can wisely decide on a direction to take. To optimize your marketing mix, you should avoid outlets with a low gross margin and focus on those with a high one. Oftentimes, other factors will also come into play that include:

- **Complementary outlets:** Ideally, outlets complement one another. For example, unsold vegetables at a farmers market may be sold at a farm stand you operate every day. These secondary markets help sell product in which you have invested production costs. Also, one market channel can market another. For example, your pork sales at a grocery or restaurant may not be very profitable, but that outlet may provide promotional exposure for your sales of whole and half hogs direct with customers.
- **Future prospects:** You must also judge the future growth of a market channel before removing it from your marketing mix. Its numbers may not look good compared to last year, but if the outlet is relatively new, you may need to invest some time before sales justify marketing costs. This is especially true for a channel that reaches your target market. You may need to give the market time to grow.
- **Lifestyle factors:** Sometime you may retain a market channel simply because you like it or it fits well into your life. A restaurant account in a community where your child attends piano lessons allows you to “double dip” on a trip you are already taking. Also, the quality of the selling experience is important. You may make more sales at a big farmers market down the road or expanding your CSA sales, but you also may simply enjoy the atmosphere of your current farmers market or the company of fellow vendors.

After weighing your return on marketing costs and other factors, you must decide which channels to optimize. At times this is difficult, especially if dropping one means losing customers who know you and love your product. If this is the case, consider creative ways you can still serve your loyal customers while also dropping an unprofitable outlet. In the end, these type of strategic decisions will offer the necessary profitability to continue operating in the future.

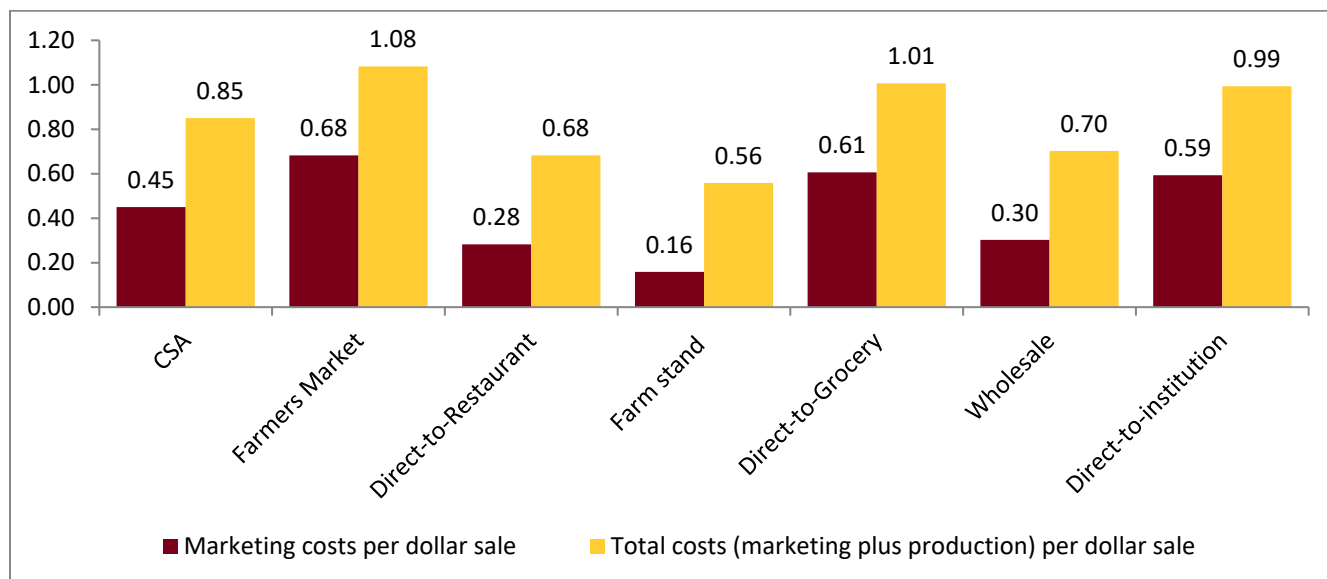
## PRICING AND MARKETING COSTS

Due to variables in marketing costs across channels, a producer can vary his or her price and still remain profitable. For example, since the marketing costs are significantly lower in the wholesale market channel than at a farmers market, a grower can receive a lower price and maintain the same profit.

Assuming a constant cost of production for every dollar of sale, when adding together both production and marketing costs by market channel, total costs for wholesale are 38 percent lower than for a farmers market. Considering that, on average, a farmers market does not cover all marketing and production costs, Extension’s research indicates a producer could price wholesale at 20 to 25 percent less than a farmers market and still experience a premium on marketing costs (Figure 5).



FIGURE 5: MARKETING COSTS PER DOLLAR OF SALE BY MARKET CHANNEL



## CONCLUSIONS

Research findings from University of Minnesota Extension indicate the marketing costs incurred by commercial farms are important for conducting a marketing mix analysis. Careful examination of your marketing costs and revenues by market channel will provide you with the information needed to make wise decisions about how to profitably sell your products.

## ADDITIONAL RESOURCES

Chase, C. (2010). Evaluating Marketing Outlets using Whole-Farm Records. Retrieved from <https://www.extension.iastate.edu/agdm/wholefarm/html/c5-32.html>

Chase, C. (2008). Comparison of Transaction Costs by Market Channel (fillable Excel file). Retrieved from <https://www.extension.iastate.edu/agdm/wholefarm/xls/c1-55marketcomparison.xls>

Jablonski, B., Sullivan, M., Thilmany, D., Naasz, E., Christensen, J., & Hirakata, K. (2017). Market Channel Assessment Benchmarks (Colorado). Retrieved from <http://foodsystems.colostate.edu/research/market-channel-assessments/state-benchmarks/>

## QUESTIONS OR COMMENTS?

Please contact Ryan Pesch, Extension Educator, at [pesch@umn.edu](mailto:pesch@umn.edu).

