

Selling Directly to Buyers: How to Price Your Products

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Did you know that farmers who sell unprocessed foods to retail outlets typically receive just 11.6 cents of each dollar the consumer spends on food? The remaining amount is allocated to industry groups such as food processors, packaging and transportation, retail trade, food services, energy, finance and insurance, and legal services (Canning 2011; fig. 1). These industry groups are important participants in the food supply chain that allows individual farmers to efficiently focus their time and resources on production-specific issues such as new technologies, improved yields, pest management, and best management practices.

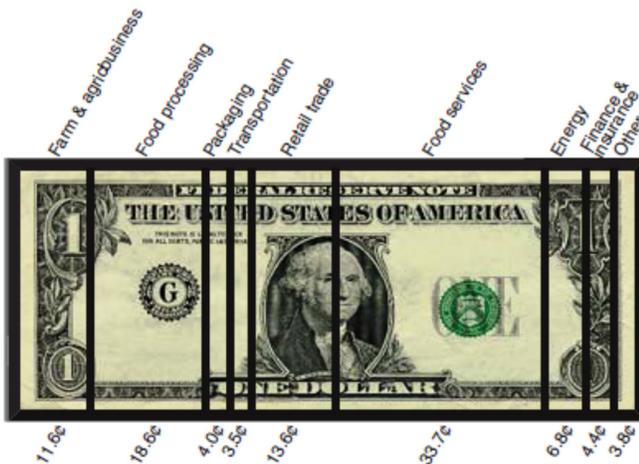
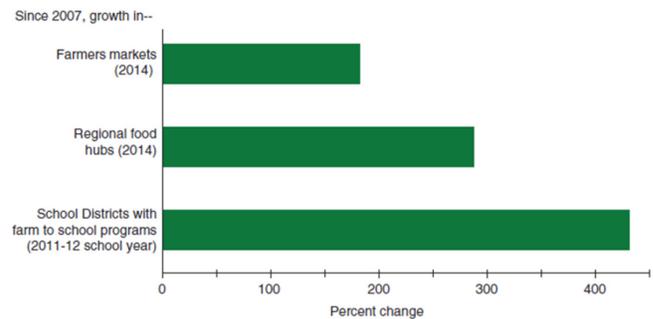


Figure 1. Industry group value-added shares of the food dollar in 2008 (Canning 2011).

Recent trends in the food industry reveal rising consumer interest in purchasing food directly from the farmer (Low et al. 2015; fig. 2).

Currently there are 336 farmers markets listed in Virginia (USDA 2015). A major consideration for farmers interested in selling directly to consumers is deciding how much to charge for their food products.



Sources: USDA, Agricultural Marketing Service, Food Nutrition Service; National Farm to School Network.

Figure 2. Increase in local and regional marketing channels since 2007 (Low et al. 2015).

Economic principles tell us that market demand forces such as consumer tastes and preferences, availability of substitute products, and expectations about future product choices may influence the movement of product prices in the marketplace.

On the supply side, farmers who choose to enter nontraditional market channels must have the ability to provide products that meet these demands and make a profit. Each distribution outlet may require different pricing strategies that require producers to respond with pricing adjustments based on product seasonality or volume. The prices a farmer is offered by wholesalers, grocers, restaurants, or customers at farmers markets may vary widely and are largely dependent on factors such as relationships and perceived value of products sold.

The purpose of this paper is to provide those Virginia farm owners and managers who are interested in selling their food and fiber products directly to retailers, restaurants, and consumers with solid calculations that show how selling a specific product through one of these unique marketing channels will return additional profits to the farm.

Market Diversity

Just as a farmer grows a diversity of crops, offering a range of product prices based on different sales outlets makes sense to achieve profitability. Keep in mind that it is impossible to manage a profitable business if you sell your farm products for less than what it cost you to produce and market them. Wholesale buyers, grocery stores, chefs, and farmers market customers are all making purchases with limited budgets. Customers will try to buy your products for less to stay within their budgets, but as a farm business, long-term success is dependent on your ability to know your price schedules across a range of customers. Once you have spent the time to calculate your prices, you are better prepared to explain how your prices reflect the ability of your product to meet customer needs across a variety of sales channels.

Transparent Pricing

As noted previously, all firms involved in the food supply chain charge a price for the services they provide to move the food from farm to fork. This price reflects the purchase and marketing costs incurred by the firm and their desired profit margin. In general, a wholesale buyer will offer food products to a retail grocer at a price that includes a 30 percent profit margin. In turn, a grocery store manager will offer food products to the public at a retail price that includes the amount paid to the wholesaler, the costs incurred in moving the food to the store, and another 30 percent profit margin.

Farmers selling directly to consumers need to consider their own production expenses and estimate additional expected costs and benefits, including (1) transportation costs, such as delivery vehicle rental or purchase, maintenance and repairs, fuel, and driver insurance; (2) marketing costs, such as promotional material design and delivery to target audiences, sales personnel salaries and expenses, and advertising fees; and (3) the desired gross margins, which are necessary to calculate pricing schedules that accurately reflect farm profitability goals.

Keep Accurate Records

The key to profitable pricing is to keep updated and accurate records. The first step in calculating product prices is to conduct a cost analysis of the product.

A detailed product cost analysis enables you to determine pricing that is acceptable to the consumer while still providing a reasonable profit to you. Records for each crop planted should include costs related to production, harvest, post-harvest, storage, and marketing (table 1). Examples of production and harvest expenses are provided for several of Virginia's crops and livestock by Virginia Cooperative Extension specialists in the form of enterprise budgets (VCE 2014).

Table 1. Items needed to construct accurate product pricing.

Production	Quality, marketable yield, labor
Preharvest	Variety, planting dates, plant spacing, chemical name, application dates, rates used, name of applicator
Postharvest	Harvest and storage costs, transportation
Marketing	Product prices from previous years' sales, packaging, promotion

Determine Costs, Margins, and Profits

To begin constructing your product's price, determine the total cost of producing it. Accurate accounts of total costs allow you to avoid the common mistake of underpricing the product for your selected market channel.

Total costs include total variable costs plus total fixed costs. Variable costs consist of those costs directly related to the production of the product; they vary with the number of units produced. Variable costs directly related to production may also be referred to as "cost of goods sold." Variable costs include items such as seed, fertilizer, direct labor, packaging, utilities, and other costs that vary based on the amount of product grown in any given year or season. Farmers who choose to market food items need to include added variable costs related to processing, packaging, handling, storage, and distribution of the product.

Fixed costs are the costs that must be paid whether

or not a product is grown that year. They include depreciation, insurance, rent, taxes, and interest on investment (see VCE Enterprise Budgets for further explanation of fixed costs; VCE 2014).

Agribusiness managers should carefully consider the desired gross margin for each food product, which is the second key component of the sales price calculation. The gross margin is defined as the percentage of income resulting from sales of a product after paying the cost of goods sold. For this example, a 40 percent gross margin for food pricing was selected. It is important to note that this number may vary widely based on several factors specific to the market outlet, such as seasonality of the product, market location, number of competitors, available substitutes, and consumer demand for the product.

Gross profit informs the producer of the revenue returned to the farm after variable and fixed costs have been paid. Gross profit is calculated by subtracting total expenses from total sales:

$$\text{gross profit} = \text{total sales} - \text{total expenses.}$$

Gross profit should be calculated for each product sold in each type of market channel. For example, greenhouse tomatoes sold to a wholesaler may return a gross profit of \$1.10 per pound to producers, while these same tomatoes sold in a farmers market may return a gross profit of \$2.25 per pound. In this example, the gross profit represents the income from the same product sold in two different market channels, after the payment of the related variable and fixed costs. Note that the gross profit received from tomato sold at a farmers market is calculated after payment of the additional variable costs for production and marketing associated with selling at the farmers market.

Calculate Sales Price

Farmers who decide to sell directly to consumers often ask, “How do I price my product to make sure I’m making a profit?” Of course, this leads to the next question, “Can my product command a price that results in my farm earning a profit?” A commonly used approach to determine a selling price is cost-margin-based pricing (Bruch and Ernst 2011), which provides a method to determine a selling price for the product that is based on the farmer’s individual costs and profit goals.

1. Determine variable costs of production (expenses directly related to the production and/or added marketing costs of the product for any given year or season, noted as cost of goods sold).
2. Determine desired gross margin.
3. Divide variable costs (cost of goods sold) by (100% – gross margin %) to get the minimum price you should accept for your product:

$$\text{Selling price} = \text{COGS}/(100\% - \text{desired gross margin } \%).$$

Example: For a desired gross margin of 40 percent and COGS of \$2.25 per unit, the selling price would be

$$\$2.25/(100\% - 40\%) = \$2.25/60\% = \$2.25/0.60 = \$3.75.$$

In this example, charging a price of \$3.75 per unit means the product will return \$1.50 per unit in revenues to the farm (\$3.75 - \$2.25) before fixed costs are paid.

Profits and Break-Even Analyses

A producer’s decision to market farm products directly to retailers, restaurants, institutions, or consumers should be based on calculations from the farm’s records that show how selling a specific product through a unique marketing channel (restaurant, retailer, farmers market, etc.) will return additional profits to the farm. With accurate cost data and sales prices for your product lines based on each specific sales channel, a break-even analysis can be used to determine the point at which sales (revenues) are exactly equal to costs (expenses).

Conducting a break-even analysis allows you to determine the number of units of a product required to be sold to cover all variable and fixed costs. This makes it possible to determine the sales volume needed to cover total costs, defined as your business break-even point. At the break-even point, zero profit is made and zero losses are incurred. The break-even equation is useful in determining the break-even point for your product based on your selling price, number of units sold, COGS, and fixed costs:

$$\underbrace{\text{price} \times \text{quantity sold}}_{\text{total sales}} = \underbrace{\text{COGS} \times \text{quantity sold} + \text{fixed costs}}_{\text{total expenses.}}$$

As noted, at the break-even point, zero profits are earned and zero losses are incurred by the farm, so total sales must be equal to the total expenses.

Example: Let X represent the number of units that must be sold for the farm to break even on a specific product. From the previous example, the COGS = \$2.25/unit and the sales price = \$3.75. Now, let annual fixed costs equal \$5,000. How many units of the product must be sold to break even?

$$\$3.75 \times \text{quantity sold} = \$2.25 \times \text{quantity sold} + \$5,000;$$

$$\$3.75 \times \text{quantity sold} - \$2.25 \times \text{quantity sold} = \$5,000;$$

$$(\$3.75 - \$2.25) \times \text{quantity sold} = \$5,000;$$

$$\$1.50 \times \text{quantity sold} = \$5,000;$$

$$\text{Quantity sold} = (\$5,000/\$1.50) = 3,333 \text{ units.}$$

In this example, 3,333 units of the product must be sold to cover COGS and fixed costs at the selling price of \$3.75 per unit. To calculate the break-even point for this specific product in a specific market channel at this selling price, multiply the number of units of the product that must be sold to cover total costs by the selling price:

$$3,333 \text{ units at } \$3.75/\text{unit} = \$12,498.75.$$

Therefore the zero profit point for your farm is reached when total revenue equals \$12,498.75, assuming a sales price of \$3.75/unit. Producing an additional unit beyond the break-even quantity of 3,333 units at the selling price of \$3.75 results in profits earned after variable costs are paid (fig. 3). To calculate profits earned for each unit sold beyond 3,333 units, multiply each additional unit sold by the additional profit generated after variable costs are paid:

$$\begin{aligned} \text{additional profit} &= \text{selling price} - \text{variable cost of} \\ &\quad \text{producing one additional unit;} \\ &= 3.75 - \$2.25; \\ &= \$1.50 \text{ profit per each unit produced} \\ &\quad \text{after 3,333rd unit.} \end{aligned}$$

For example, selling a total of 5,000 units at \$3.75 per unit would generate profits of \$2,500.50 for your farm. The first 3,333 units sold will generate revenues to cover all fixed and variable costs, and the additional 1,667 units sold will generate revenues to cover additional variable costs and provide farm profits.

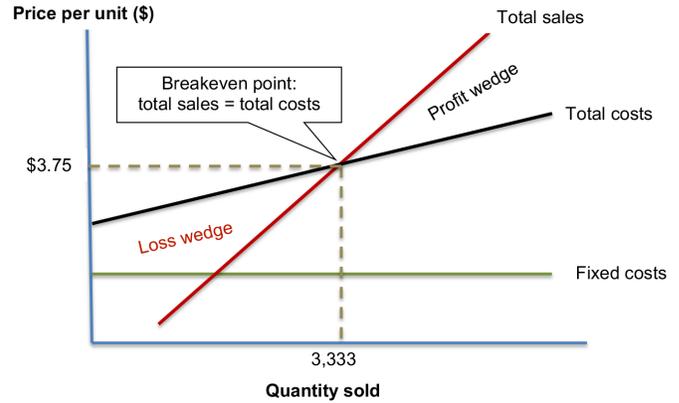


Figure 3. Breakeven quantity sold at selling price of \$3.75/unit example.

Additional Information

For more information about pricing your product for direct sales to consumers in Virginia, please contact Theresa Nartea at tnartea@vsu.edu or 804-524-5491 or Kim Morgan at klmorgan@vt.edu or 540-231-3132.

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