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Managing Input Price Volatility at Heritage Family Specialty Foods

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Abstract

This case considers the difficult task of pricing finished products when input prices are uncertain. This study explores the environment of the rapidly growing food service sector and the position of an innovative new company, Heritage Family Specialty Foods. Risk management strategies are discussed in the context of a small firm that must bid on contracts for finished products when input prices are uncertain. Issues associated with contracting, vertical integration, and break-even pricing are also discussed.

Key Words: food manufacture, risk management, teaching case

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Introduction

Daniel Brackeen was contemplating the recent loss of a major customer. His bid on a recent mayonnaise contract was too high and a lower bidding competitor captured the business. Daniel knew that his company, Heritage Family Specialty Foods, produces the highest quality product, but he also knew that he must find a way to offer more competitive bids on salad dressings and salsas. Competition to supply large restaurants, such as Chili's Grill & Bar, with mayonnaise, BBQ sauce, salad dressings, and salsa is fierce and high quality alone does not produce sales. In order to offer competitive bid prices on finished products, Daniel had to find a way to manage the uncertainty of ingredient prices and appropriately set finished product prices. Bids on new mayonnaise, salad dressing, and salsa contracts with a major restaurant chain were due soon. If new contracts are not secured at profitable levels, the future of Heritage Foods looked bleak.

Heritage Background

According to the Economic Research Service (ERS), a division of the United States Department of Agriculture (USDA), the US food processing industry had output that totaled more than \$495 billion and employed 1.7 million people in 2000. Food manufacturing is a relatively mature market with annual growth near just 1%. The world's ten largest food processing firms include firms such as Nestle, Phillip Morris, Unilever, Cong Agra, Cargill, Pepsi, and Coca Cola. Most of these firms produce and process foods under their own brand name or label. The market for custom manufactured foods is much smaller, but is rapidly growing. Custom manufactured foods refer to foods that are produced specifically for a company other than the manufacturer of the product itself. Most custom manufactured food firms compete on a regional basis. Some firms that compete on a national basis include Kraft, Nestle, Cambell's Soup (i.e. Pace), T.J. Marzetti, and Kens.

In the late 1980s and early 1990s Daniel Brackeen became interested in the custom food manufacturing business because he had noted a general absence of quality service in the food service sector. As the former owner and president of Americana Foods (the manufacturer of TCBY yogurt) Daniel had established many personal contacts in the restaurant industry. These individuals also indicated a need for a food processor that could provide niche products, i.e., products to suite a particular clientele's needs. At that time, there were few companies that could deliver custom processed food of appropriate quality. Specifically, no company could provide:

1. quality food service products in specified packing,
2. rapid product analysis,
3. quick bid turnaround and product duplication,
4. expedient research and development and scale up to full production, and

5. the capability to design a product to meet specific handling parameters needed by particular clientele.

As a result in 1991 Daniel purchased and renovated a 36,000 square foot food processing facility in a Dallas suburb and formed Heritage Family Specialty Foods. From the onset, Daniel’s entrepreneurial goal was simple – to be the highest quality specialty food manufacturer in Texas. These ideas took hold, and in a short period Heritage transformed from a fledgling start up company of only 11 employees in 1994 to over 50 employees with \$8 million in sales in 1999. Figure 1 illustrates the rapid sales growth at Heritage since 1995, the first full year of production.

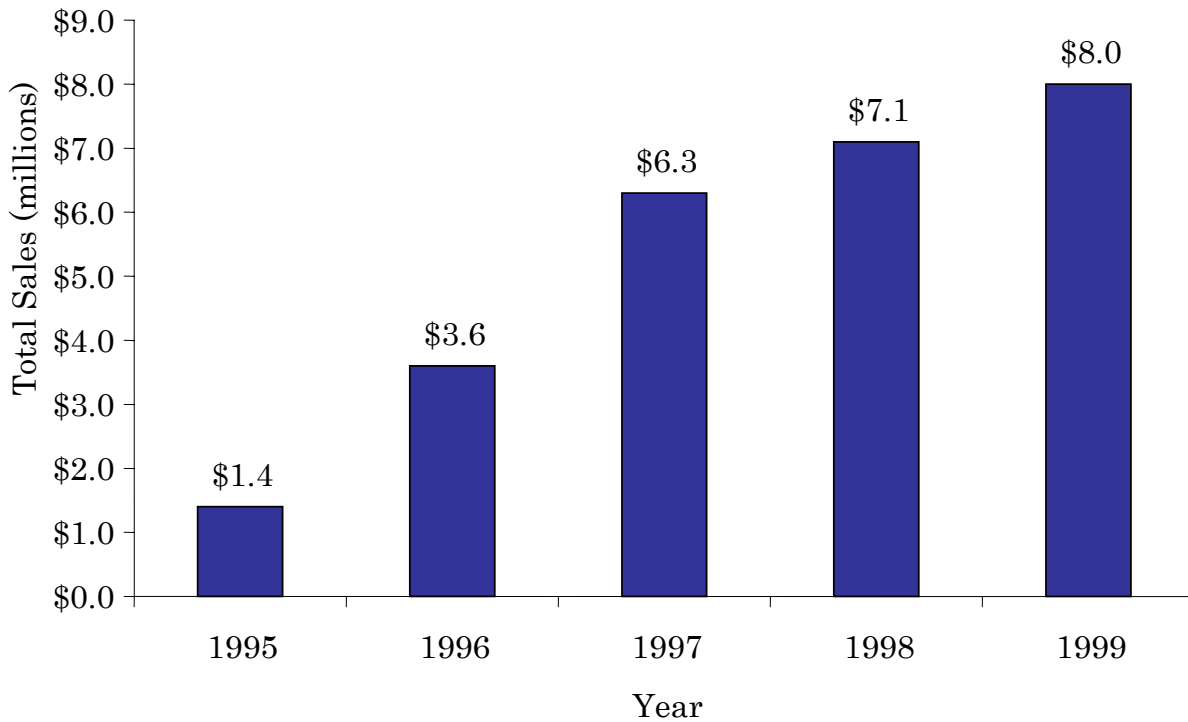


Figure 1: Heritage Family Foods Annual Sales, 1995-1999

Heritage produces a diverse set of products and competes on many levels including wholesale and retail. Relatively speaking, Heritage makes up a very small portion of the national retail markets for salad dressing, salsas, and mayonnaise. They comprise a small to medium share of the national wholesale market (to restaurants or wholesalers) for salad dressings, barbecue sauce, and prepared butters. Lastly, Heritage has a large share of the national wholesale seafood salad market. Figure 2 illustrates Heritage’s position in the value chain.

Firms in the custom food processing industry are very competitive and Heritage is much more diverse than most of its competitors. Although Heritage often has

higher priced goods, they often get business because they have superior service and quality, more production flexibility than competitors (i.e. ability to deliver products in various jar sizes, provide chilled or frozen products, and can produce a wide variety of products), or because retailers and restaurants selling multiple foods wish to deal with only one manufacturer when purchasing several products. Thus, in terms of a highly diversified food processor – Heritage has relatively few competitors. However, on individual items, Heritage may have many competitors. Because Heritage competes on many levels and in many different markets, the number of competitors is difficult to quantify. According to the Texas Department of Health, there are 9,000 food processors in the state of Texas alone.

The flexibility of Heritage’s production facility allows the manufacture of numerous products ranging from salad dressings, mayonnaise, salsa, and seafood salads to fried garlic, ice cream, fruit drinks, and prepared pasta dishes. Food products manufactured at Heritage are found in every major grocery store chain in the United States, numerous restaurants, airports, and even in Las Vegas casinos. A few of the company’s clients include: Brinker International (parent company of the restaurants: Chili's Grill & Bar, Romano's Macaroni Grill, On The Border Mexican Grill & Cantina, Cozymel's Coastal Mexican Grill, Maggiano's Little Italy, Corner Bakery Cafe, EatZi's Market and Bakery, Wildfire, and Big Bowl), Metromedia, Razzo’s, Sam’s Club, Kroger, Randall’s, Tom Thumb, Albertson’s, Bennigan’s, and Winn Dixie.

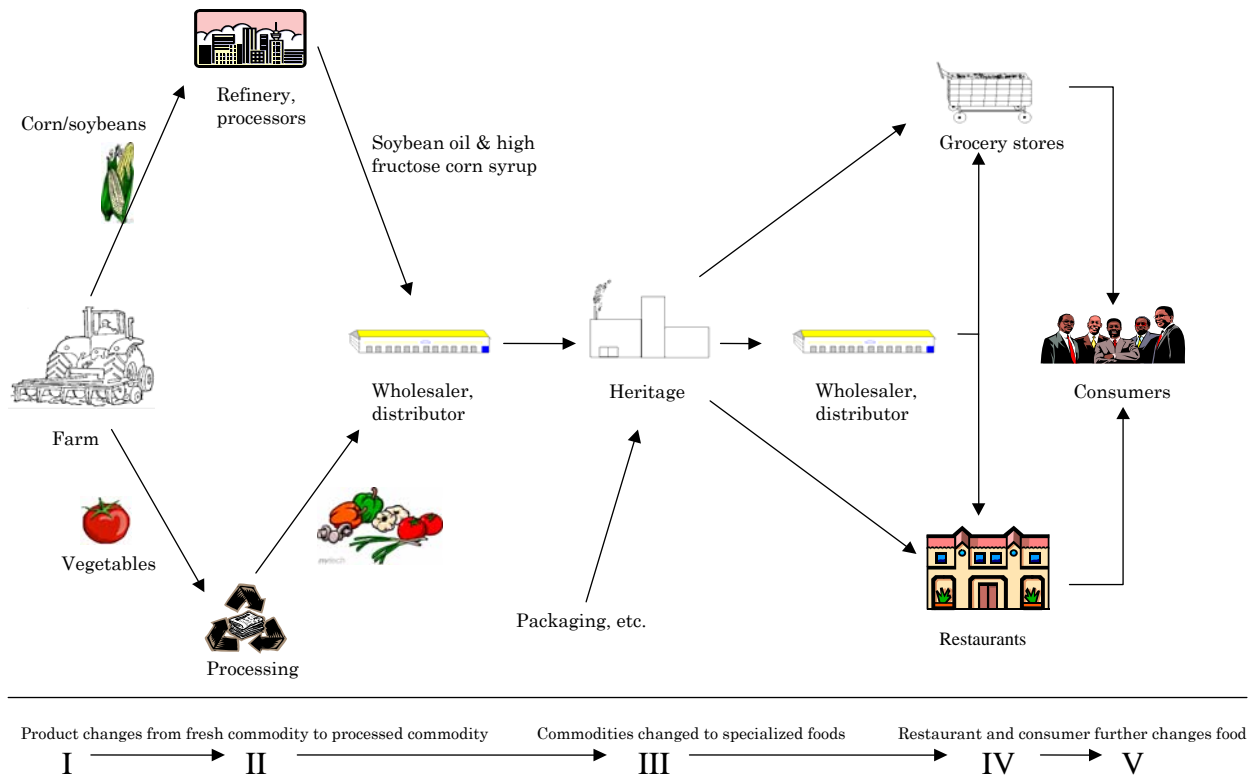


Figure 2: Value Chain

Heritage Goals and Strategies

The Mission of Heritage is to provide the best quality food custom manufactured foods to: 1) enhance brand awareness at a value added price, 2) maintain competitiveness for the customer, 3) maximize benefits to a family of associates, 4) maintain superlative vendor communications and contracting, 5) contract beneficial pricing and volume on raw materials, 6) improve plant productivity and advance with technological change, and 7) deliver reasonable return on corporate assets.

Specific goals and objectives include: 1) to be number one in quality as a specialty food manufacturer in Texas, 2) establish the Heritage brand in food service and retail sectors, 3) build a diverse base of customers in the food service and retail industries, 4) develop a diversity of products that appeals to each market sector, and 5) research and develop products with vendors assistance to improve quality and marketability.

Heritage's overall strategy has been to remain highly flexible and diversified in product lines to reduce risk and increase opportunities. For example, it is important for Heritage to be able to quickly respond to buyers' requests. Often, larger competitors have slower response times when buyers have requests to change products. Heritage also emphasizes a diverse range of quality products instead of focusing solely on costs. Competitors, however, tend to produce only one product (e.g. salsa) at low costs to a wide variety of buyers. In contrast to its competitors, Heritage produces a highly diversified product line. Although Heritage competes heavily with various companies in the salsa and/or salad dressing markets, rarely do they compete with firms in both, allowing Heritage to mitigate risk. For example, a product such as salsa, salad dressing, BBQ sauce, or mayonnaise may begin to suffer in the market place, yet Heritage can shift production and focus to other product areas with more promising prospects.

This diversification strategy has lead Heritage to deal with two distinct clientele groups. One group is comprised of small- to medium-sized firms that sell their branded product through wholesale or retail outlets. Although these firms own their brand, they often do not have the expertise or capacity to manufacture the product itself. It is for this clientele group that Heritage is able to capitalize on their comparative advantage in quality and flexibility. Another clientele group consists of large restaurants or food retail firms. Competition to serve these large restaurants and food retailers can be fierce, but when Heritage is able to successfully win the business of these large firms, the payoff can be substantial.

The Problem: Managing Input Price Volatility

Daniel sat in his office contemplating his current situation. In order to attract the business of the large restaurant chain, Daniel had to compete against other food

manufactures for bids on mayonnaise, salad dressing, and salsa contracts. The contract was for 500 cases each of mayonnaise, salad dressing, and salsa to be supplied each month. The quality and packaging specifications were pre-established by the restaurant. If the restaurants accepted Daniel's bid, the price of the finished good would be fixed for one year. Thus, Heritage would have to absorb any changes in input costs that might arise over the contract period. High bid prices ran the risk of losing business to competitors, while low bid prices meant that costs of production might not be recovered. Managing input prices was also a part of Heritage's longer-term growth strategy. As Heritage grew and increasingly competed for large restaurant contracts, managing input price variability was increasingly important relative to Heritage's formative years. Because the scale of these bid-based contracts was relatively large, the impact of input price volatility on net profits was potentially substantial in forthcoming years.

As Daniel formulated bid prices on the new mayonnaise, salsa, and salad dressing contracts with a large restaurant, he considered several strategies to manage input price variability in an attempt to accurately set bid prices. Stabilizing or reducing variability in input prices did not necessarily translate into achieving lower input prices. Nevertheless, the advantage of reducing input price variability was that it improved the accuracy of future cost projections. If Daniel could find a way to make input price levels more certain six months to a year in the future, it would result in a more informed bid prices.

However, Daniel realized reducing input price variability was not free. There could be significant costs associated with hedging. All these factors would be considered before a definitive decision was made. Whether input prices for a particular commodity should be stabilized largely depended upon the particular hedging method and on the contribution of particular ingredients to overall product costs. Furthermore, Daniel realized one risk management strategy might not suit every type of input. Daniel began to consider some input price stabilization strategies for each of the products.

From his previous experience at American Foods, Daniel was adept at pricing products such as ice cream and yogurt because fluctuations in the price of the primary ingredient, milk, could be managed by hedging in organized futures markets. In a similar vein, soybeans oil was a primary ingredient in mayonnaise production. Mayonnaise was an important product at Heritage because it was sold as a finished product and also used as an input in the production of salad dressings and seafood salads. Soybean oil is the critical ingredient in mayonnaise (mayonnaise is comprised of over 80% soybean oil).

Figure 3 shows daily Chicago Board of Trade soybean oil futures prices (nearby contract) from 1995 to 1999. Over this time period, oil prices generally declined. On the surface, this appeared to be a positive trend for Heritage. However, figure 3

also shows that the variability in soybean oil prices increased in recent years. Data indicate that price levels fall from the 1995-1997 average of \$0.2484/lb. to a 1998-1999 average of \$0.2146/lb. However, the standard deviation of prices in 1995-1997 was \$0.0161/lb. as compared to the 1998-1999 standard deviation of \$0.0426/lb. Variability in soybean oil prices was over 2.5 times greater in 1998 and 1999 than in previous three-year period.



Figure 3: Chicago Board of Trade Daily Soybean Oil Futures Prices, Nearby Contract, January 1, 1995 to December 30, 1999

Although there were futures markets for inputs such as soybean oil, there were no such markets for other commodities such as tomato products and high fructose corn syrup. Despite this, there are publically traded companies whose primary business revolved around the production of one or more of these products. For example, soybean oil prices are likely to have an impact on the stock price of publicly traded companies that are involved in crushing soybeans to make soybean oil and soybean meal. One such company that is involved in processing soybeans is Archer Daniels Midland (ADM) of Decatur, Illinois (see Table 1 for firm data). Similarly there exist publicly traded companies that are involved in producing some of the other ingredients (tomato products and high fructose corn syrup) used in producing salsa and ranch dressing. Movement in the price of such companies stocks might provide a means of hedging against volatile input prices.

Table 1: Firm Data^a

Input Hedged	Firm	Share Price (\$/share)	Shares Outstanding (millions)	Cost of Goods Sold (millions)
Soybean Oil	ADM ^b	\$14.63	637.41	\$11,657
Tomato Products	Del Monte	\$8.50	52.20	\$921
Tomato Products	Heinz	\$44.69	347.44	\$5,788
High Fructose Corn Syrup	Con Agra	\$24.38	492.21	\$21,205
High Fructose Corn Syrup	Tate & Lyle	\$15.84	456.37	\$5,164

^aFinancial numbers are from annual reports for the fiscal year ending 2000

The first issue at hand was to determine the price to bid for mayonnaise, ranch dressing, and salsa. Table 2 reports recipes for each of the products and associated ingredient prices at the time. These products were manufactured in 500 lbs. batches and were packaged in one-gallon containers (with four one-gallon containers comprising a case). On average, a one-gallon container held about 8 lbs. of mayonnaise, ranch dressing, or salsa. Labor costs were estimated at \$50.00 per batch and other variable costs associated with electricity, packaging, clean up, etc. were about \$50.00 per batch. Lastly, fixed costs, attributable to this enterprise, were \$10,000 per month. The restaurant indicated they would order 500 cases of each product each month over the next year at the contracted price, if accepted. Daniel began running through the numbers to determine feasible pricing of finished precuts at current input price levels.

Although Daniel might be able to calculate break-even prices given today's ingredient prices, he knew input prices would fluctuate throughout the year. As depicted in Table 2, Heritage would use large amounts of soybean oil over the next year if bid prices were accepted. These prices were volatile and difficult to predict. Daniel considered the possibility that the only way to offer competitive bids and ensure profitability was to stabilize input prices over the contract period.

Despite the importance of soybean oil, a number of other ingredients were involved in the production of mayonnaise, salad dressing, and salsa. Egg yolks, crushed tomatoes, buttermilk, vinegar, and sour cream, for example, comprised a large share of production costs. Managing the volatility in these input prices would be more difficult. Although Daniel had experience managing products such as milk that had one major ingredient, he had little experience pricing products made with a wide diversity of ingredients such as salad dressing and mayonnaise. Nevertheless, stabilizing variability in prices of these inputs might also important because due to the fixed nature of the output price in the restaurant contract.

Table 2: Mayonnaise, Salad Dressing, and Salsa Recipes and Ingredient Costs Prices

Ingredient	Price per pound	Percent by Weight	Dollars per batch ^a
<i>Mayonnaise</i>			
soybean oil	\$0.18	83%	\$74.70
egg yolk	\$0.65	7%	\$22.75
vinegar	\$0.45	4%	\$9.00
other ingredients	\$0.40	6%	\$12.00
			\$118.45
<i>Ranch Dressing</i>			
mayonnaise	\$0.24	50%	\$60.00
buttermilk	\$0.28	30%	\$42.00
sour cream	\$0.85	15%	\$63.75
other ingredients	\$0.40	5%	\$10.00
			\$175.75
<i>Salsa</i>			
crushed tomatoes	\$0.27	61%	\$82.35
jalapenos	\$0.90	15%	\$67.50
onions	\$0.15	9%	\$6.75
vinegar	\$0.45	5%	\$11.25
water	\$0.01	3%	\$0.15
garlic	\$0.90	3%	\$13.50
other ingredients	\$0.40	4%	\$8.00
			\$189.50

^aBatch sizes are approximately 500 lbs.

In the production of ranch dressing, sour cream and buttermilk comprised 60% of the ingredient costs. Unlike soybean oil, there were no active futures markets for sour cream or buttermilk in which to hedge. However, the Chicago Mercantile Exchange has a futures market for milk, which is closely related to sour cream and buttermilk. If buttermilk or sour cream prices closely followed milk prices, these products might be cross-hedged in the milk futures market. Table 3 reports monthly data on fluid milk prices and dry buttermilk prices.

Table 3: Fluid Milk and Dry Buttermilk Prices in 1999

Month	Class III Fluid Milk Price (\$/cwt)	Buttermilk Powder Price (\$/cwt)
January	16.27	8.25
February	10.27	7.39
March	11.62	7.12
April	11.81	7.10
May	11.26	7.10
June	11.42	7.11
July	13.59	7.23
August	15.79	7.62
September	16.26	7.97
October	11.49	8.14
November	9.79	8.10
December	9.63	8.10

Source: USDA/AMS—Dairy Market News

Conclusion

As a member of Daniel Brackeen's senior management team, you should consider strategies that could be used to manage input price variability. Some of these strategies might be short-term in nature, while others could be long-term strategies to reduce the price variability. In making your recommendations, be sure to consider the financial feasibility of your options, future growth of Heritage Foods, and the overall mission and goals of Heritage Foods.