

# *Journal of Cooperatives*

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*Volume 22*

*2009*

*Page 1-21*

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## Determining the Future for Louisiana Sugar Cane Products, Inc.: A Case Study Analyzing Vertical Coordination Options

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## **Determining the Future for Louisiana Sugar Cane Products, Inc.: A Case Study Analyzing Vertical Coordination Options**

*Michael Gunderson, Aaron Johnson, Michael Salassi, Lonnie Champagne, and  
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### **Abstract**

Deciding how to coordinate activities can be a challenge posed in any marketing chain. This case involves an agricultural cooperative that has focused entirely on marketing raw sugar cane for additional refinement. Recent dramatic shifts in the sector have caused the members of the cooperative to consider building a facility that will process the raw sugar cane. In so doing, the cooperative can consider using the spot market, using contracts, vertically coordinating, or vertically integrating. This case study of Louisiana Sugar Cane Products, Inc. is a unique, real-life case that can be widely used in marketing and cooperatives courses.

### **Introduction**

In his office, surrounded by Louisiana State University Tiger paraphernalia, Lonnie Champagne carefully laid out the situation for Mike Daigle, president of the board of directors of Louisiana Sugar Cane Products, Inc. (LSCPI) cooperative. Mike understood that the changing sugar industry would force LSCPI to make some major strategic choices in the near future. As general manager of LSCPI, Lonnie had taken it upon himself to identify the options available to the members that would position the cooperative for long-term success.

Lonnie Champagne has been a part of sugarcane production in Louisiana since he was born, and during his five years as general manager at LSCPI, he has seen tremendous change in the sugar marketing value chain. Producer numbers had remained relatively stable during that time, but the rest of the industry had just completed a phase of tremendous consolidation. According to the United States Department of Agriculture (USDA), the number of companies involved in sugar manufacturing (sugar beet and sugarcane processing and raw sugar refining) was cut nearly in half in the 35-year period from 1967 to 2002 (Haley and Ali).

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The increasing scale efficiencies experienced by grocers drove processors, refiners, and marketers of sugar to increase their scale of operation. As a result,

mills in Louisiana that process raw sugar began to work together to cooperatively market their products by creating LSCPI.

As industry conditions had given rise to LSCPI in 1975, industry conditions now required a strategic choice by LSCPI regarding sugar refining (table 1). To date, the members of the cooperative had only been involved in the processing of sugarcane into raw sugar. With fewer refineries transforming raw sugar into commercially ready product, the members of LSCPI had fewer customers. As a result, their bargaining position had mostly eroded. The board members of LSCPI realized the need to consider several options to deal with the consolidation in the industry. Lonnie and Mike began the process of preparing a presentation that would layout the situation for the members of the board of directors and give them several options.

### **Louisiana Sugar Cane Products, Inc.**

The Louisiana marketing cooperative of LSCPI was founded in 1975 by nine sugar cane mills (Champagne). As of 2007, only seven sugarcane mills remain as members. Three of these mills are cooperatives owned by sugarcane producers, and the other four are privately held mills. These mills use LSCPI exclusively to market their annual supply of 800,000 tons of raw sugar, which accounts for more than 75 percent of the raw sugar marketed in Louisiana. In addition, LSCPI also markets the byproducts of sugarcane processing, specifically molasses. The mills represent more than 700 producers of sugarcane in the Louisiana bayou. The cooperative has five employees including General Manager Lonnie Champagne. The staff handles the marketing of raw sugar and byproducts produced by the member mills.

LSCPI is strictly an agricultural marketing cooperative (Champagne). Its primary mission is to market the raw sugar produced by member mills with the goal of maximizing the returns to its members. The members of LSCPI are the mills, not the sugarcane producers. Unlike most other agricultural commodities, the first processor of sugarcane (the mill) is the seller of the commodity (raw sugar). LSCPI members (the mills) benefit from both the price paid for raw sugar and from the patronage refunds that represent LSCPI's profits distributed to its members in proportion to business volume. Sugarcane producers indirectly benefit from LSCPI's efforts in that the value mills pay producers for sugarcane is based directly on the price of raw sugar received by the mill from LSCPI. In addition, since some of LSCPI's member mills are cooperatives, the farmer owners of those firms benefit from LSCPI patronage payments which are passed through in the form of cash and stock patronage from the cooperative mill.

The seven mills that comprise the membership of LSCPI also make up its board of directors (Champagne). Each mill has one vote on issues brought before the board. Figure 1 indicates the geographical location of the mills. Three of the

mills are farmer-owned cooperatives (represented by circles in figure 1), and the board of directors would likely take a joint venture or major strategic decision to a vote of the membership. Four of the mills are investor-owned corporations (represented by squares in figure 1), and a joint venture or other strategic decision would likely be decided by the board of directors without a stockholder vote.

As a legal entity, LSCPI essentially owns no assets (Champagne). Office space is leased. Raw sugar warehouses are constructed and owned by member mills and leased to LSCPI. All monetary benefits to members are passed down to the mills first and then by the mills to producers as price received for sugar and molasses sales less cooperative marketing expenses. The U.S. sugar market is closely controlled by the USDA to balance supply and demand. As a result, raw sugar market prices have been relatively flat for many years. Typical prices for raw sugar received by LSCPI have been in the 19.5 to 21.5 cent per pound range. Prices received for molasses, however, tend to vary greatly from year to year. Current molasses prices are in the 45 to 50 cent per gallon range.

The management and board of LSCPI had doubts about the efficiency of price discovery at the NYBOT and therefore did not rely on the spot market (Champagne). As a result, much of the raw sugar was recently sold to Imperial Sugar Corporation by contract. According to the Imperial Annual Report, LSCPI has executed a contract to provide 90 percent of Imperial's raw sugar needs until September 30, 2008. As a result of the large consolidation in the industry, Lonnie realized that maintaining the status quo was only viable for a short period of time. Using his knowledge garnered from earning an M.S. in agricultural economics, Lonnie recognized that it might be time for a change in the way the cooperative vertically aligned itself (figure 2) (Peterson, Wysocki, and Harsh).

### *The Decision at Hand*

For LSCPI, the future is becoming increasingly uncertain. Fewer refineries mean fewer bidders for its products. Passage of free trade agreements have the potential of squeezing domestically produced raw sugar out of the refined sugar market. The market concentration has forced LSCPI and its mill members to reconsider their position in the sugar marketing chain. In a situation such as this, one might consider the vertical coordination continuum.

As leaders of a cooperative business, Lonnie and Board President Mike also understand that there are unique issues that they must consider. Lonnie is exploring an opportunity to partner with Cargill and its Sweeteners Division to construct a sugar refinery as one of many options. Partnering with another entity such as Cargill to vertically integrate into raw sugar refining could offer advantages in terms of the value of the final product sold. Refined sugar products could be sold in various regional markets at differentiated prices to maximize returns to the partnership. However, LSCPI would not want to change its

organizational structure. In other words, all benefits received by LSCPI from the potential partnership would have to be passed on to member mills and then down to sugarcane producers as raw sugar price or patronage refunds distributed in proportion to sugar purchases. More intangible benefits of the vertical integration, such as the development of retail brands might be under appreciated by LSCPI members since, in the short run, this strategy would not impact the price received or patronage payments associated with raw sugar and molasses sales. Of importance to LSCPI is that their organizational structure and their relationship with their cooperative and private LSCPI member mills both remain in their current forms.

Lonnie and Mike need to develop a presentation that would describe the options available to the cooperative for vertical coordination and then defend the best option. The objectives of this case study are for students to decide where LSCPI should locate along the vertical coordination continuum and what factors lead the students to believe their choice is the best decision for the cooperative. Students should be sure to list the advantages and drawbacks of each option and defend the option they view as the one most likely to ensure the long-term viability of the cooperative.

### **Sweetener Users and Consumers**

As a nation, Americans consume nearly 10.5 million tons of sugar annually. Much of the sugar is already in products bought for consumption. Products obviously using sugar include candies, confectionaries, cereals, snacks, and jellies. But other products such as soft-drinks, liquor, salsa, dairy products, and pharmaceuticals benefit from the sweetness of sugar. Americans also purchase refined sugars for consumption at home, often for baking or for beverages such as coffee. The price of sugar purchased for home consumption has remained relatively steady in the recent past, despite declines in the price of wholesale refined sugar (figure 3).

Food processors, each with unique needs, have a large demand for sugar (figure 4). For example, United Sugars Corporation offers sugar in 15 different forms including variations of granulation and colors and even a liquid form. Sugar competes primarily with high-fructose corn syrup (HFCS) to sweeten products. Subsidies of corn production have lowered prices for this input, which makes it competitive with sugar as an input. HFCS is often used to sweeten soft-drinks. Also, consumers who are trying to limit their caloric intake might opt for a product sweetened by a low-calorie sweetener such as aspartame or sucralose.

Because consumers have so many options for sweetening foods and beverages, the competitive pressures on all members of the sugar marketing chain is intense. The sugar marketers' job is to price and sell sugar products to food companies such as Hershey, Nestle, Kellogg's, General Mills, and others for use

in prepared, packaged foods. The marketers also sell bags of granulated sugar to retailers such as Wal-Mart, Kroger, Publix, and others. As such, sugar producers and processors must offer a quality product at a competitive price to capture a share of the consumers' food dollars.

### **The Sugar Marketing Chain**

Several steps are involved in producing, processing, and retailing sugar from sugarcane. Five major roles form the value chain. Initially sugarcane producers sell to sugarcane mills that produce raw sugar. These mills, in turn, sell to sugar refineries where the sugar is further processed into its usable form. The refineries offer their product for sale either to food retailers (grocers) or as an input to pre-prepared, packaged foods (such as cake mixes, dry cereals, and other products.). Finally, retail consumers use the product.

#### *Production*

Sugar is produced all over the world. The New York Board of Trade (NYBOT) calls sugar the "Universal Commodity" because it is produced in over 120 countries and is consumed in every country. The United States Department of Agriculture's (USDA) Foreign Agricultural Service estimates marketing year 2007/2008 world production at about 163 million tons of raw sugar (USDA World Agricultural Supply and Demand Estimates). Production exceeds world demand, which was estimated at just over 149 million tons in 2007/08. This excess has resulted in growing world stocks of sugar. The largest international producer of sugar is Brazil, accounting for just over one-fifth of the world's sugar production. The United States ranks fifth as a sugar-producing country (grouping the European Union nations together as one 'country') with just over 4.5 percent of total world sugar production.

Sugar can be produced from either sugar beets or sugarcane. Production is spread across the US ([http://www.sugaralliance.org/files/docs/sugar\\_industry\\_map.pdf](http://www.sugaralliance.org/files/docs/sugar_industry_map.pdf)). The sugar and corn sweetener industries combined generate about \$10 billion of direct and indirect economic value in the U.S. (American Sugar Alliance). More than 135,000 jobs rely on the sugar industry in the U.S. Sugar beets account for about 60 percent of the U.S. annual production of 8.5 million tons, with sugarcane accounting for the remaining 40 percent. The U.S. also imports about 3.4 million tons of sugar (figure 5), which makes the U.S. the second largest importer of sugar in the world. Domestic production of sugarcane has occurred almost exclusively in Louisiana and Florida with those two states sharing equally about 87 percent of U.S. production (figure 6). The remaining production occurs in Texas and Hawaii.

The producers of sugarcane in Louisiana have fewer alternative cropping opportunities relative to their peers in Florida, Texas, and Hawaii (Champagne).

Each of these three areas has seen sugarcane producers switch to alternative crops that generate greater net returns than sugarcane. For example, sugarcane once was produced in California, but many producers there switched to nut-bearing trees, all but eliminating sugarcane production in the state. Some producers in Florida have switched to strawberries, tomatoes, and other high-value fresh produce crops. Even in Texas, producers have an ability to switch to other commodities for production. However, Louisiana sugarcane producers are limited primarily to the production of sugarcane given the state's climate, soil, and other environmental factors.

Louisiana has more than 700 sugarcane producers who use more than 433,000 acres for production (Champagne). Many of these producers are multi-generation producers and have accumulated experience and expertise as a result. More than 90 percent of the land in production is farmed by share cropping. These producers currently produce about 12 million tons of sugarcane to be processed by mills that are primarily located in Louisiana. This processing yields about 1.26 million tons of raw sugar. Production is highly mechanized, and as a result, costs tend to be fixed (land and machinery) rather than variable (labor and fuel). The crop is a perennial crop with suitable sugarcane yields for three years per planting.

#### *Sugarcane Mills*

A sugarcane mill is the first step in processing the sugarcane. Initially sugarcane is passed through heavy rollers to extract the juice (Baucum, Rice, and Schueneman). The mill adds hot water to the cane and repeats the rolling process a few times. Following that, lime is added to the juice to ensure the raw sugar remains in the form of sucrose rather than other non-crystallizing forms of sugar. Finally, the water is evaporated from the juice, leaving only raw sugar crystals. Each one hundred pounds of raw sugar produced from sugarcane also produces three gallons of molasses as a byproduct. Although a fair amount of water is used in the process, water is actually a byproduct of crushing the cane because it is nearly 50 percent water. Therefore, water is not a constraint for sugarcane mills.

Louisiana has eight sugarcane mills; Florida has five mills. Of the sugarcane mills operating in Louisiana, seven of them are members of LSCPI. Sugarcane mills operate only for a brief window of time near autumn harvest. Because sugarcane contains large amounts of water, importing sugarcane to be processed during other parts of the year is cost prohibitive. This segment of the industry is also capital intensive, and fixed costs represent a substantial portion of total costs. Thus, economies of scale in sugarcane mills are an important determinant to their profitability.

The sugar mills produce two commercially desirable products. Molasses, usually considered a byproduct of the milling process, is typically used in animal

feeds. Raw sugar, on the other hand, is coarse and filled with impurities, which requires it to be further refined before being used. Once the mill has processed the cane into raw sugar, the product is sold to sugar refineries.

### *Sugar Refineries*

The sugar refinery transforms raw sugar into the product that is sold to end consumers or used as an ingredient in processed foods, baked goods, and beverages. The refineries can offer different forms and levels of sugar quality depending on the purchaser's intended use. Refineries offer several levels of coarseness of granulated sugar and also offer brown, powdered, and liquid sugar. Each offering is best suited for a particular use.

Raw sugar is purchased primarily by sugar refiners. The U.S. has very few buyers of raw sugar (figure 7). Not more than a decade ago, Tate & Lyle PLC (previously operating in the U.S. as A.E. Staley) was a dominant force in the sugar refining business. Owning more than one-third of the sugar refining capacity in the U.S., they controlled a significant portion of the market. In 2001, Tate & Lyle sold its North American sugar operations, which included the Domino brand, for \$180 million. An investment group led by Alfonso and J. Pepe Fanjul, who controlled Flo-Sun and Florida Crystals, purchased a controlling interest of 61 percent in Domino, and the Sugar Cane Growers Cooperative of Florida purchased the remaining 39 percent (The New York Times Company).

In Louisiana only two sugar refineries are in operation (represented by pentagons on figure 1). One is the refinery owned by Domino Sugar in Chalmett. Imperial Sugar owns the other refinery in Gramercy, which has a refining capacity of about 800,000 tons of sugar per year. Domino Sugar and Imperial Sugar represent two of the largest consumer sugar brands in the country and have significant bargaining power in the sugar marketing chain. Recently, US Sugar Corporation built a new 600,000 ton per year refinery in Florida. The total costs of building this modern refinery exceeded \$100 million.

### *Sugar Marketers*

The sugar marketers, who often also market other types of sweeteners, are an important link between producers and consumers. According to its own website, United Sugars Corporation is the largest marketer of industrial and consumer sugar in the U.S. They supply more than five billion pounds of refined sugar per year, accounting for more than 30 percent of domestic demand. The firm markets to both food manufacturers and retailers. The firm strives to meet 'preferred supplier' status with retailers and offers both private-label and branded sugar products. A partnership with U.S. Sugar Corporation guarantees supplies of cane sugar for United Sugars.



Cargill is another marketer of sweeteners through its CargillFoods division. This division has aimed to be a “food solutions partner,” and strives to provide a variety of inputs with the prepared food companies. Cargill is the world’s largest privately-held corporation with more than \$50 billion in revenues according to Family Business Magazine’s ranking of largest family businesses. Cargill employs more than 95,000 individuals to buy and sell grain, poultry, beef, steel, seeds, salt, and other commodities on six continents. According to the company’s website, the Cargill Sweeteners business unit has sales of \$2.0 billion, including corn sweeteners, sugar, feed, corn oil, ethanol, industrial starch, and fermentation feedstock product lines. Employing more than 2,000 individuals, the division works with food processors to provide a variety of options for sweetening beverages, snacks, and packaged foods. To improve marketing efficiency, food processors often rely on Cargill to be the sole supplier of inputs such as sugar. As a result, Cargill is seeking to build partnerships to help ensure a consistent supply of their own sugar. Cargill Sweeteners has already shown a willingness to partner with cooperatives in the past. They have marketing alliances with the Southern Minnesota Beet Sugar Cooperative and Wyoming Sugar Company, LLC. By partnering with someone in Louisiana or Florida, Cargill would have an opportunity to have a more consistent supply of cane sugar rather than just beet sugar.

Some companies, such as Imperial Sugar, are vertically integrated in that they refine and market their own sugar. According to the firm’s annual report, products from its Gramercy refinery are marketed using the brands Imperial, Holly, and Dixie Crystals. It has private-label brands, however, that account for the bulk of its sales (71 percent) to retail customers. Imperial also offers refined sugar to food processors in a fashion similar to United Sugars and Cargill.

### *Sugar Prices*

The NYBOT used to have two pits that traded sugar contracts. A contract is for 112,000 lbs. of cane sugar, and futures are traded for the months of January, March, May, July, September, and November. Prices are quoted in dollars per pound and have a minimum price movement of 1/100 cent/lb. This price is equivalent to \$11.20 per contract.

There are two types of contracts: Sugar No. 14 is a contract for domestic sugar and Sugar No. 11 is a contract for international sugar. Sugar No. 14 Futures are calls for delivery of raw cane sugar in bulk with CIF (cost, insurance, and freight) duty paid at ports in New York, NY; Baltimore, MD; Galveston, TX; New Orleans, LA; and Savannah, GA. Sugar No. 11 Futures are contract calls for delivery of cane sugar, stowed in bulk, FOB (free on board) from any of twenty-eight foreign countries of origin and the United States.

The market for sugar futures is thin with very few contracts traded per session. Recently, the open-outcry system in trading pits has been abandoned for an electronic system because so few traders exist in the market, and the volume of trades is so low. Currently, information about the bids (prices and number of contracts buyers are willing to pay), asks (prices and number of contracts suppliers are willing to accept), and trades are maintained on the Intercontinental Exchange, an electronic trading platform. Historical data from 1985 to 2006 shows the average trading volume for Sugar No. 14 at just under 500 contracts per day, with a median value of 365 contracts per day. Other agricultural commodities are traded with much greater volume on the NYBOT including Sugar No. 11 Futures that are related to international sugar deliveries. In fact, the No. 11 Futures are the most heavily traded agricultural commodity on the NYBOT, averaging more than 44,000 contracts per day in January 2007. Cocoa, cotton, and coffee averaged between 8,000 to 12,000 contracts traded per day in January 2007.

#### *U.S. Government Policies Related to Sugar*

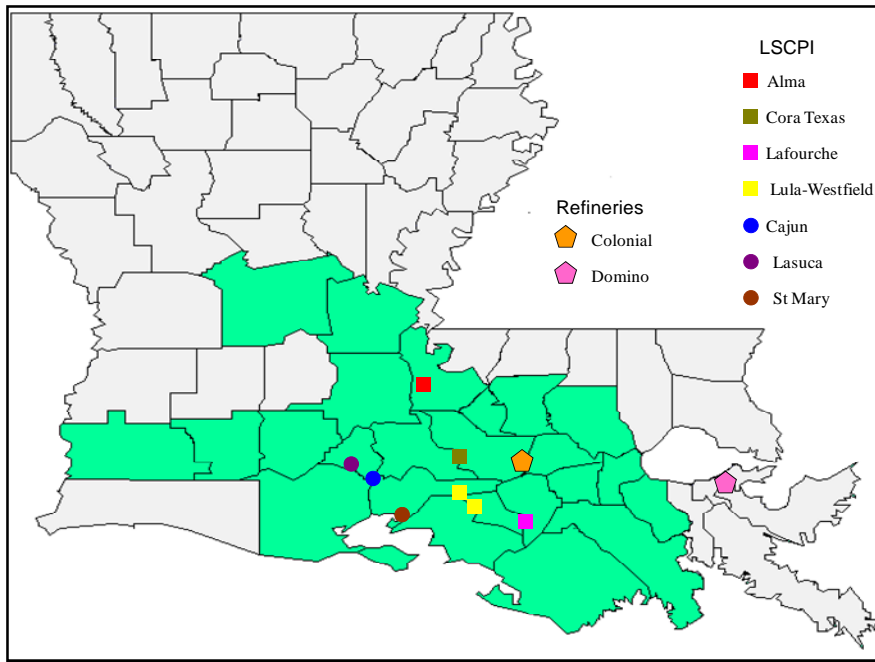
The sugar industry has benefitted recently from some protectionist measures to reduce price volatility in the U.S. The key instrument used to limit sugar importation is a tariff-rate quota (TRQ). Under the TRQ, some sugar is allowed to be imported at a lower, preferential tariff rate equal to 0.625 cents per pound (Haley and Ali). After the quota is filled, the tariff rate increases dramatically. This higher rate makes it economically infeasible to continue selling sugar to the United States. With the World Trade Organization (WTO) agreements, specifically the Uruguay Round Agreement on Agriculture, the U.S. committed to providing minimum access for 1.256 million tons of raw sugar. The Secretary of Agriculture assesses the market situation annually and then determines the amount of sugar allowed to be imported under the TRQ. The U.S. Trade Representative has the authority to allocate the TRQ to specific countries, but currently allocates shares based on the historic shares during the 1975-1981 period.

The allocations used to include Mexico, but the Mexican share is now determined by the North American Free Trade Agreement (NAFTA). An important note is that the agreements in NAFTA regarding sweeteners were under dispute by both countries as a result of a side-letter agreement. Although the dispute has played out over the entire life of NAFTA, in a letter to the WTO dated July 2006, the countries agreed to eliminate duties and quantitative restraints on Mexican sugar shipments to the United States effective January 1, 2008. Mexico reciprocated by eliminating trade barriers related to U.S. HFCS shipments to Mexico.

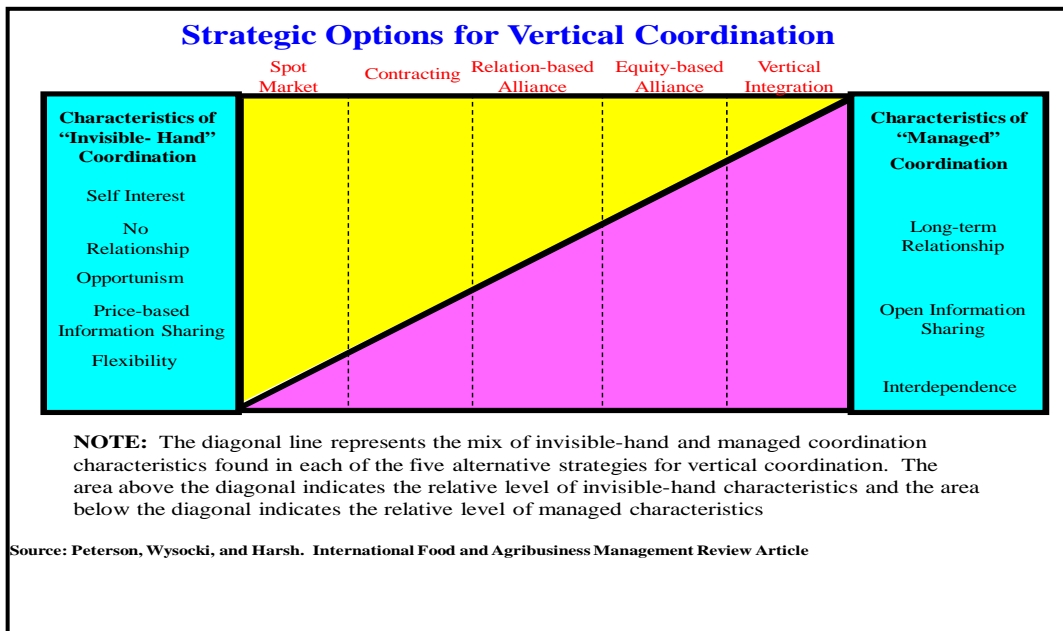
Domestically, the U.S. government has also played a role in sugar production by virtue of the Farm Security and Rural Investment Act of 2002, commonly referred to as the 2002 Farm Bill. This piece of legislation used nonrecourse loans to sugar processors to ensure that domestic prices are higher than world prices. Because the loans are nonrecourse loans, the USDA must accept the sugar used for collateral as payment in lieu of cash at the discretion of the processor. So if market prices are too low to cover the loan, then the government essentially buys and stores the raw sugar as part of the authority of the Commodity Credit Corporation (CCC). This effectively removes sugar from the market, which helps to reduce excess supply. The government gives loans to processors rather than producers (the case in most other agricultural commodities) because the cane must be processed into raw sugar before it can be effectively stored. The processors must promise to pass along these price benefits to producers to qualify for the program, and controls are in place for the government to ensure that this happens.

The Farm Bill also requires the USDA to operate the program as much as possible at no cost to the federal government. As a result, large incentives exist for the USDA to ensure that the price is high enough to cover the loan, interest, and other costs so that sugar is not forfeited to the CCC. The USDA also has the authority to establish flexible marketing allotments to help control the amount of sugar produced. Cane sugar receives 45.65 percent of the overall allotment quantity (OAQ). The OAQ is established based on the level of consumption, imports, and historic production. Contingencies are available during the year for reallocation, but no provision is in place for the cane allotment to be reassigned to beet sugar. The U.S. government is due to write a new Farm Bill in 2008 that may change some of the provisions related to sugar. The likelihood is that alternative income support measures might be considered as options in the 2008 Farm Bill (Haley and Ali). Those drafting the Bill will surely be sensitive to the change in imports due to the elimination of tariffs on sugar from Mexico as a result of NAFTA. However, the decisions LSCPI General Manager Lonnie Champagne has to make would be finalized before a completed 2008 Farm Bill could be enacted.

**Figure 1. Louisiana counties with sugar cane production and locations of LSCPI member mills and other sugar refineries Source: Champagne**



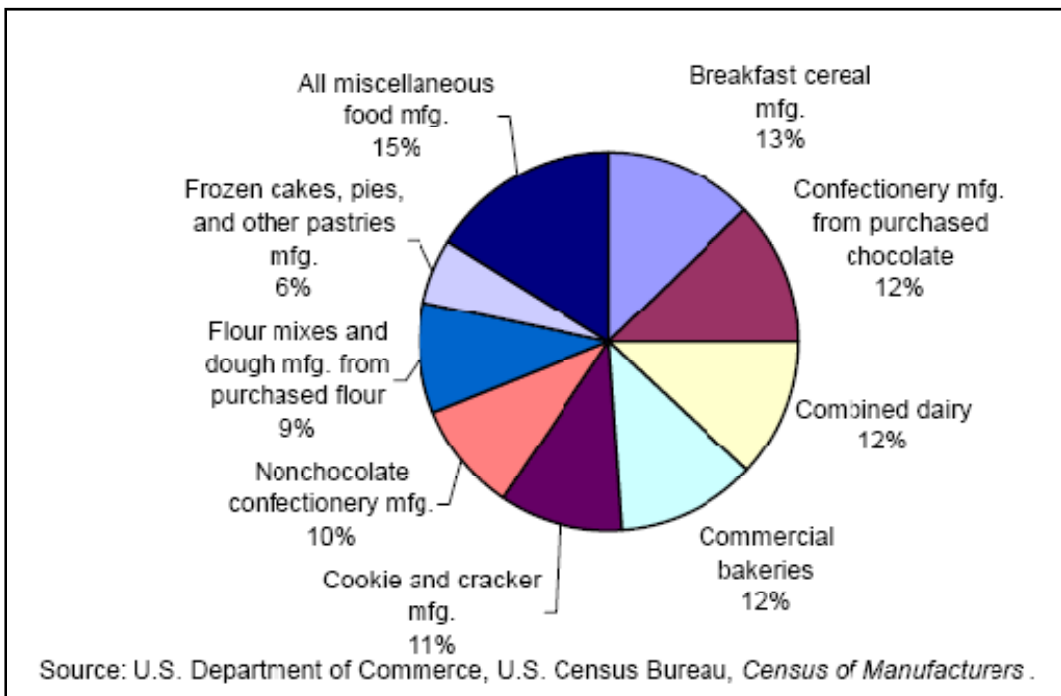
**Figure 2. Vertical Coordination Continuum**



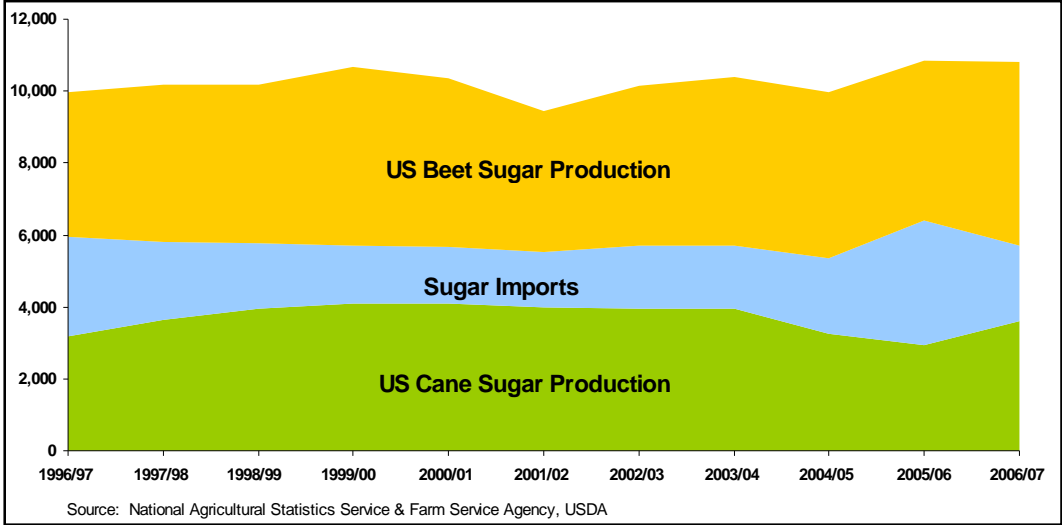
**Figure 3. Consumer and Wholesale Prices of Sugar, 1996-2002**  
**Source: American Sugar Alliance**



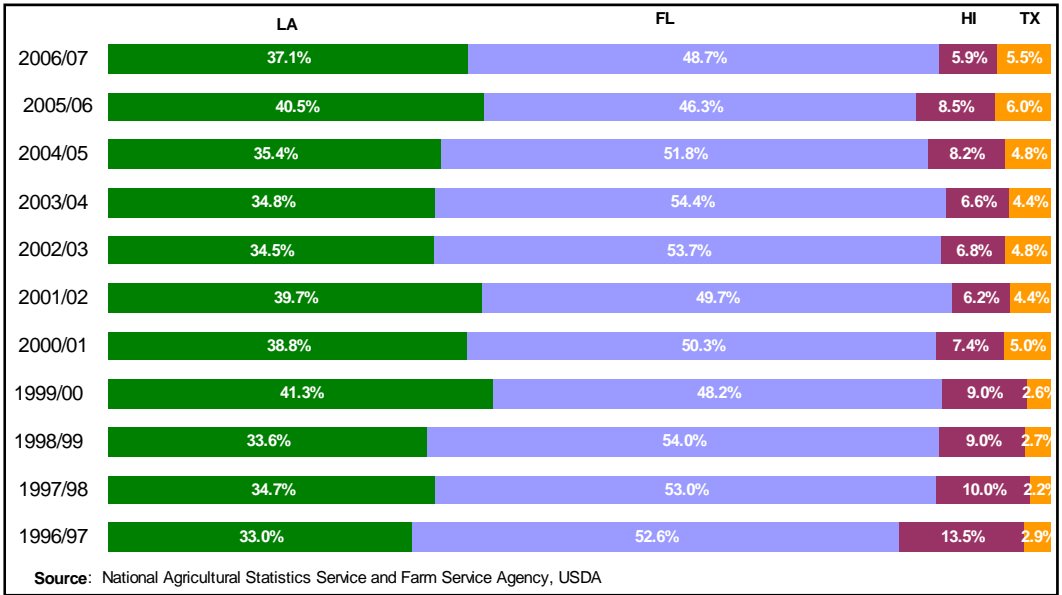
**Figure 4. Sugar usage by U.S. food manufacturers**



**Figure 5. Domestic sugar supply (in thousands of tons)**

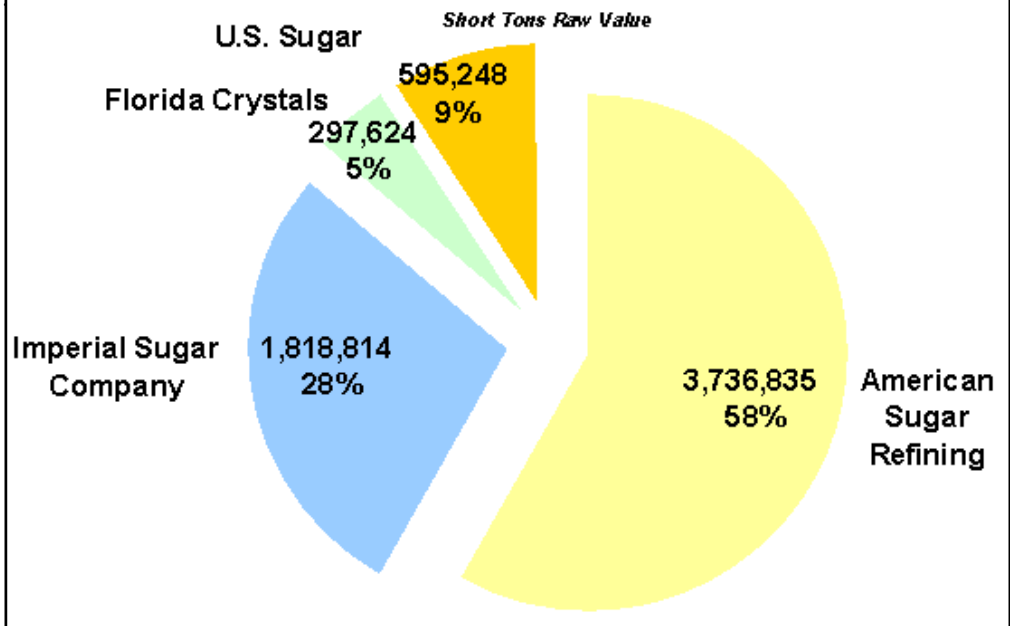


**Figure 6. U.S. sugarcane production by state**



**Figure 7. Sugar refining capacity in the U.S. Source: Champagne**

### Annual U.S. Refining Capacity (300 Days)



**Table 1: Recent mill and refinery closures**

Cane Mill Closures		
Ka'u Agibusiness	Hawaii	1996
Waialua Sugar	Hawaii	1996
McBryde Sugar	Hawaii	1996
Breaux Bridge Sugar	Louisiana	1998
Pioneer Mill Company	Hawaii	1999
Talisman Sugar Company	Florida	1999
Amfac Sugar	Kekaha, Hawaii	2000
Amfac Sugar	Lihue, Hawaii	2000
Hawaii Commercial & Sugar	Paia, Hawaii	2000
Evan Hall Sugar Cooperative	Louisiana	2001
Caldwell Sugar Cooperative	Louisiana	2001
Glenwood Sugar Cooperative	Louisiana	2003
New Iberia Sugar Cooperative	Louisiana	2005
Jeanerette Sugar Company	Louisiana	2005
U.S. Sugar*	Bryant, FL	2005
Cinclare Central Facility*	Louisiana	2005
Atlantic Sugar**	Belle Glade, FL	2005
Sugar Refinery Closures		
C&H	Aiea, Hawaii	1996
Imperial	Everglades, Florida	1999
Imperial	Sugarland, Texas	2003
Domino	Brooklyn, New York	2004
* Phasing out operations 2005-2007		
** Suspended operations for 2005/06		
Note: In 2006, 23 beet factories, 19 raw cane mills, and 8 cane refineries remain in continuous operation, a 39% drop since 1996.		
Source: American Sugar Alliance		



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## **Teaching Note**

### *Introductory Comments and Case Synopsis*

Deciding how best to coordinate activities can be a challenge posed in any marketing chain. Given that some agricultural cooperatives have traditionally focused exclusively on marketing commodities, a decision to link into the chain via processing must be carefully explored before the final result is determined. This case involves an agricultural cooperative that has focused entirely on marketing raw sugar for additional refinement. Recent dramatic shifts in the sector have caused the members of the cooperative to consider entering into a joint venture with an operation that will process the raw sugar cane. In so doing, the cooperative can consider using the spot market, using contracts, vertically coordinating, or vertically integrating. Given the wide options available to them, this situation makes for a particularly unique case study.

Students are asked to play the role of general manager of the cooperative. Louisiana Sugar Cane Products, Inc. (LSCPI) would like to move from being a supplier of a low-value input (raw sugar) to being more vertically integrated and capture some value-added revenue. Several factors, including a trend of decreased U.S. refining capacity and increased U.S. sugar imports resulting from various trade agreements (NAFTA and DR-CAFTA), no current business ties to a sugar refinery, and a stable, at best, to declining price have raised concerns that LSCPI could potentially be squeezed out of much of its domestic market outlets. In their role, students will evaluate the alternatives available to them and make a decision on how best to coordinate in the marketing chain. Students have enough detailed information in this case to make an informed decision, though no answer is necessarily correct. This fact is reflected in the long and difficult process that it took for LSCPI to make a decision and the lengthy effort in which they have invested to complete a partnership with Cargill.

### *Where and When to Use the Case*

This case study investigates the real-life decision for an agricultural cooperative regarding its choice to vertically coordinate. With options ranging from spot markets to fully vertically integrating, this case study offers many options to illustrate the coordination decision. Given its real-life nature and relevance to production agriculture, it has broad appeal to instructors teaching agricultural marketing. The case would be suitable in an introductory course for discussion, or for an intermediate level course focused on students presenting a detailed analysis. In addition, given that the central firm is a cooperative, this case has appeal to

instructors of courses focusing on the governance and operations of cooperatives.

Enough detail is included in the case so that it can be used as a self-contained lesson for discussion in one class period. The case also provides the opportunity to challenge students to do additional research regarding the options available. The only limitation to this approach is that much of the recent outcomes of the decisions are part of publically available information, and students might assume that the actual decision made is the only correct decision. Undoubtedly students in this situation will discover the efforts made with Cargill. This is simply one of several options the students can consider and if the information is found, they merely have one suggested outcome to consider. They still have other options to consider and evidence to offer for their decisions in the case.

#### *Learning Objectives Supported by the Case*

The case study provides instructors the opportunity to achieve the following objectives:

1. Develop critical thinking skills by challenging students with problems that have no easy or obvious solutions
2. Expose students to strategies and practices of agricultural cooperatives
3. Provide students with the underlying motivation and theory of managing vertical coordination in a value chain

#### *Options Students Might Consider*

Students must understand that LSCPI is in the business of selling raw sugar produced by its owner-members. Production of ethanol, or some other option, is considered to be supplementary to the cooperative's current operations. Options should be considered only if they are economically feasible and would fit into LSCPI's current operations. Production of cellulosic ethanol would probably not be an option due to the current question concerning economic feasibility and also because raw sugar mills would not totally convert from producing raw sugar to producing some other product. Given these facts, students might consider the following options:

1. Do Nothing:  
Continued considerable market price risk and the continual need to increase efficiency to lower costs in the face of relatively stable or declining prices
2. Buy Existing Refinery:

Issues to deal with would be the cost to upgrade refinery equipment and who would market the refined sugar produced.

3. Build Own Refinery:

Issues to deal with would include who would market the refined sugar produced and the risk of the ability to sell raw sugar to its current buyer (refinery) until construction of the new refinery was completed.

4. Joint Venture with Partner:

Seek a joint venture partner who has something to bring to the table, such as refined sugar marketing expertise, existing complementary facilities, and market activities

*Factors Influencing Options Considered*

1. Differing Partner Philosophies:

How to deal with differing partner philosophies on specific issues

For example, LSCPI supports the current sugar farm program to support market prices while Cargill generally supports free trade without program support.

2. SWOT Analysis:

SWOT Analysis (strengths, weaknesses, opportunities, threats) was used by both sides. Both partners continually asked themselves the question "Are we doing the right thing?"

3. Economic Analysis:

Extensive economic analysis of the joint venture was conducted by both sides over an extended time horizon. Eventually, both sides had to agree to use a common economic model to be consistent on assumptions, projected revenues, expenses, and other factors.

4. Partner Education:

Since both partners were bringing something different to the table in this joint venture, there were times when one side had to educate the other side on a specific issue or topic. Examples would include Cargill explaining a refining sugar marketing strategy and LSCPI explaining sugarcane production and processing.

5. Consultants:

Both partners used consultants or experts with specific and various areas of expertise

Some of the consultants were company personnel, and others were hired from outside the company. Areas of expertise

represented include sugarcane production, raw sugar processing engineering, sugar refining engineering, economic, legal, and accounting.

6. Information:

In joint venture negotiations of this magnitude, a critical issue was related to information about the joint venture and what and when certain information was to be made public, given the impact this type of information has on the market and market participants.

7. Financing:

Securing the large amount of financing required by this venture necessitated the evaluation and defense of the risk of the project as well as the probability of economic success.

8. Negotiation:

Finally, the importance of negotiation and the ability and art to negotiate successfully in a venture of this type cannot be overstated. Important aspects of successful business negotiation include having an experienced, knowable lead negotiator, having a negotiation team that includes a diversity of expertise as well as being able to identify points on which a person is willing to agree or concede on and points on which a person is not.

*Follow-up to the Case*

LSCPI has publicly announced a partnership with Cargill (Cargill). Establishing the new refinery in St. John's the Baptist Parish was delayed due to legislative concerns. The partnership was to be funded at least in part by Gulf Opportunity Zone bonds that would have provided tax incentives for the project. Due to concerns raised by Imperial Sugar regarding the sustainability of two sugar refineries in the region, legislators "permanently deferred" action on the project in November of 2007 (Millhollon). In February 2008, the Louisiana State Bond Commission decided to move forward with the bonds (Scott). The composition of the board had changed with the election of a new governor. The new governor, Bobby Jindhal leant his administration's support to the new facility.