

The World's Largest Open Access Agricultural & Applied Economics Digital Library

# This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<a href="http://ageconsearch.umn.edu">http://ageconsearch.umn.edu</a>
aesearch@umn.edu

Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.

# CASE STUDIES ON LOCAL FOOD SUPPLY CHAINS

# Pilot Case Study: Lake Country Cooperative<sup>1</sup>

Robert P. King and Gigi DiGiacomo<sup>2</sup>

#### Introduction

Lake Country Cooperative (referred to as Lake Country) is a farmer-owned cooperative with approximately 30 members. It is managed by a six member board and three part-time staff (manager, marketing manager, driver) <sup>3</sup> Based in Red Plains, Minnesota, Lake Country has marketed a wide array of sustainably produced products over the past decade. Their web site states that they are:

... committed to creating farms that nourish our families spiritually and economically, sustain the environment, and provide eaters not only with safe wholesome food but with a clear sense of who and where their food came from.

Members produce and process individually but market collectively under a single label. Lake Country sells food and other farm products direct to consumers who place orders via the Lake Country web site and pick them up at drop sites in homes and churches around the Twin Cities metro area. The coop also sells to natural foods cooperatives in the Twin Cities, St. Cloud, Brainerd, and Duluth.

Lake Country's annual sales total approximately \$200,000. Beef products account for a significant portion of sales – an estimated 25 percent in 2008. That year 42 beef were slaughtered and processed for sale by Lake Country. Lake Country beef production standards emphasize grass based feeding regimes and prohibit the use of hormones or sub-therapeutic antibiotics. Limited grain or silage supplementation is allowed. Lake Country does not make a formal grass-fed claim that conforms with the recently developed USDA standard.

This case study is of special interest for several reasons. First, Lake Country has developed a unique direct-to-consumer distribution model that makes effective use of Internet technology for ordering. Second, in contrast to many other online direct marketing businesses, Lake Country markets a wide array of products from different farms under a common label. Third, Lake Country is a cooperative that has operated continuously for more than a decade. Finally, despite continuing efforts, Lake Country has had difficulty selling their products direct to consumers and retailers in the small towns and countryside that surround their Red Plains location.

<sup>&</sup>lt;sup>1</sup> This is a pilot case study conducted in the winter and spring of 2009. Interview questions developed for and research experience gained from this pilot case were used to inform the development of the case studies presented in *Comparing the Structure, Size, and Performance of Local and Mainstream Food Supply Chains*, USDA. Economic Research Service, ERR-99, which is available at <a href="http://www.ers.usda.gov/Publications/ERR99/">http://www.ers.usda.gov/Publications/ERR99/</a>. <sup>2</sup>Robert P. King is a Professor in the Department of Applied Economics, University of Minnesota. Gigi DiGiacomo is a Research Fellow in the Department of Applied Economics, University of Minnesota. Address comments or questions to Robert King at rking@umn.edu.

<sup>&</sup>lt;sup>3</sup> To maintain confidentiality, the names of several business enterprises and individuals who participate in this supply chain have been disguised.

# The Supply Chain

Lake Country's four-segment supply chain begins with the producer (figure 1). All beef sold by Lake Country is produced on member farms. The Lake Country standards specify that animals must be born and raised on the farm or purchased directly from a farmer who adheres to Lake Country production standards. Most of the cattle are either dairy steers or reconditioned dairy cows, however one producer raises beef cattle. A typical dairy steer is 30 months old and weighs 1,100 pounds when it is ready for slaughter.

#### Production

Grass Meadow Farm, a 280 acre, 50 cow grass-based dairy operation near Red Plains, is typical of the farms that supply beef to Lake Country. Owner, Paul Martin, is a founding member of Lake Country and currently serves as Board Chair. He supplied 11 cattle to Lake Country in 2008 and also marketed about 30 cattle at local sale barns and auctions.

Martin and other producers call Lake Country when they have animals ready for slaughter. All animals are slaughtered and processed at Country Meats, Inc. (referred to as Country Meats). After notification from the producer, the Lake Country manager calls Country Meats to schedule a slaughter date and informs the producer. The normal wait time is from three to four weeks. The producer is then responsible for delivering animals to Country Meats on that date. Producers normally deliver from one to five cattle. The typical round trip distance for a producer is 60 miles though some travel up to 120 miles.

#### Processing

Country Meats is a USDA inspected custom slaughter and processing facility that is certified organic by the Organic Crop Improvement Association. Located in Prairiestone, Minnesota, Country Meats operated as a butcher shop and creamery between 1940 and 1950. It is owned by Ted and Jolene Johnson – both of whom grew up in the rural county where the facility is located. Country Meats has 11 full time and three part time employees, the majority of whom live either in Prairiestone or nearby and have worked at Country Meats for one year or more. Its annual wage bill is approximately \$200,000. Country Meats slaughters two or three days each week and currently operates at full capacity. Weekly slaughter capacity is 40 hogs and 10 beef or buffalo.

Lake Country beef producers deliver animals to Country Meats the morning of the designated slaughter date. After slaughter, carcasses are split and quartered and then are hung in a cooler for ten days. Meat is then cut according to Lake Country specifications. A typical 1,100 pound steer dresses out to a hot rail weight of approximately 550 pounds and yields approximately 304 pounds of beef products, not including trim, as shown in table 1. All the meat from reconditioned dairy cows is normally processed into ground beef.

The producer retains title to the animal and the meat and is responsible for paying Country Meats for slaughter and processing services - \$25/head for slaughter, \$0.40 to \$0.45/lb. (hot rail weight) for cutting, and \$0.20/lb for grinding. The processing fee for the animal described in table 1 would total \$290.55 (\$25.00 for kill, \$233.75 for processing/cutting, and \$31.80 for grinding). The processing fee for a reconditioned dairy cow that dressed out to a hot rail weight of 550 pounds would be \$319.55 (\$25.00 for kill, \$233.75 for processing/cutting, and \$60.80 for grinding). The Country Meats processing bill – sent directly to the producer – provides detailed feedback to the producer on meat yield (dressing percentage).

Table 1. Beef Product Yield from a 1,100 Pound Steer

Cut	Yield (Pounds)	Lake Country Retail Price	Lake Country Retail
		(\$/lb.)	Value (\$)
Ribeye	22	13.99	307.78
NY Strip	17	14.99	254.83
Tenderloin	10	16.49	164.90
Sirloin	10	8.99	89.90
Stir Fry Meat	86	4.29	368.94
Ground Beef	159	3.85	612.15
Total	304		1798.50

Meat cuts are vacuum packed in clear plastic or packaged in white butcher paper at Country Meats and are labeled with the Lake Country logo. All the meat is flash frozen, and Lake Country is informed that it is ready. The Lake Country driver picks up the meat within a few and transports it back 30 miles in a refrigerated truck to their Red Plains site where it is stored frozen until sold.

#### Marketing and Distribution

The producer continues to hold title to the meat while it is stored at Lake Country. The only exception is trim (meat remaining after primals have been removed from the carcass). All trim is processed into sausage at Country Meats and sold directly to Lake Country. The producer is paid for trim by Lake Country upon submitting the processing receipt. Beef inventories are sold on a FIFO basis (first in-first out). In theory, Lake Country pays the producer as meat is sold. Due to past cash flow difficulties at Lake Country, however, payments are delayed and are currently made about 18 months after the meat is sold. Lake Country retains 30 percent of the sale price to cover its costs. In addition, Lake Country retains an additional five percent of sale proceeds that goes into an allocated equity account for the producer. There are plans to start a revolving equity redemption program that would enable quicker payment to producer members.

Lake Country sells direct to consumers and to retail stores and charges the same price to all customers. The bulk of sales occur in the Twin Cities – with approximately half of sales to individual customers and half to retail outlets and restaurants. Lake Country also sells to food cooperatives in St. Cloud, Brainerd, and Duluth. The St. Cloud and Brainerd cooperatives receive twice monthly deliveries from Lake Country. Products delivered to Duluth are distributed through the Twin-Cities-based Coop Partners Warehouse for a fee of \$15/week. This saves both fuel and labor costs for Lake Country.

#### a. Direct-to-Consumer Marketing

Lake Country delivers food to Twin Cities locations on the first four Wednesdays of each month, with a different delivery route for each week. Customers place their orders monthly on the Lake Country web site, selecting a drop site from a list of more than 30 possible sites – including churches, businesses, NGOs, and private homes. Drop site coordinators are volunteers.

Sixteen days before a delivery date, the Lake Country marketing manager sends an email to customers from the drop sites to be served. The email serves as a reminder to place an order and provides

information on any products that are being featured that month. Normally, orders must be placed one week prior to delivery. A \$4.00 delivery charge is added to all orders of less than \$75 of product.

Lake Country staff members and volunteers assemble orders and prepare invoices on the Monday and Tuesday prior to delivery. This is a complex, time-consuming process. Lake Country carries hundreds of food and non-food products. Some, like meat, are frozen. Other products are refrigerated or kept at ambient temperatures. Many products have random weights. Item numbers on invoices include a code that identifies the producer, so preparation of an invoice generates not only a bill for the customer but also the information needed for Lake Country to allocate sales revenues back to producers and for the customer to identify the producer.

Prior to each delivery day, a Lake Country staff member informs drop site coordinators of who will receive an order at their site. Each drop site has a freezer, refrigerator, and an ambient temperature area to place the appropriate orders for customer pick up. Each order is packaged with an invoice in a paper grocery bag labeled with the customer's name. Customers make payments by check, with payments due directly to Lake Country five days after delivery so that no money is handled by drop site coordinators.

#### b. Retail Store Marketing

Retail store customers place their orders during a weekly call from the Lake Country marketing manager. They can receive up to four deliveries each month – i.e., they can always be added to the delivery route. These customers receive an invoice with their delivery and typically pay by check upon delivery. Even when retail stores do not place an order, weekly calls to them are a good source of information for Lake Country about how products are selling. Retail store orders are assembled at the same time as direct-to-consumer orders. There is no difference in packaging or package sizes for retail stores.

Retail stores add a markup to the price of Lake Country product. This means that consumers who purchase Lake Country products from a retail store pay an added cost for the convenience of being able to purchase them at any time and along with the purchase of other products. Based on an interview with Hampden Park Coop (referred to as Hampden Park) – one of Lake Country's retail customers – a 45 percent markup is common. This increases the retail value of the meat yield from a single dairy steer from \$1,798 to \$2,607. Hampden Park re-weighs the Lake Country beef products and generates scanable price labels that are affixed to each item. The Lake Country beef products are displayed at Hampden Park in a freezer case near the refrigerated case where fresh meat products are displayed. Hampden Park does not have a meat handlers' license and so they are only able to sell frozen or case-ready meat products that are packaged before delivery to the store.

# **Supply Chain Performance**

In this section we discuss five critical dimensions of Lake Country supply chain performance: product availability and price, the allocation of revenues and costs across the supply chain, economic impacts on the local economy, social impacts, food safety regulations, and food miles and fuel use.

#### Product Availability and Price

Lake Country meat products are available year-round, though there are occasional stockouts for some popular cuts. In general, direct-to-consumer customers have only one opportunity per month to purchase from Lake Country, and this is a limit on availability and convenience. Lake Country products

are offered in only a few retail stores. Lake Country direct-to-consumer prices for referenced beef products are \$3.85/lb. for frozen ground beef and \$13.99/lb. for frozen boneless ribeye steak.

Lake Country's direct-to-consumer price for frozen ground beef falls between the \$3.59/lb. for conventional ground beef and \$3.99/lb. for natural ground beef observed in Twin Cities metro supermarkets in early June 2009. At that time fresh and frozen grass-fed ground beef sold for \$4.99 and \$3.99/lb., respectively, in a metro natural food cooperative, and Twin Cities farmers' market prices for frozen natural ground beef ranged from \$4.50 to \$4.75/lb. Twin Cities prices for fresh ribeye steaks in early June 2009 ranged from \$7.99/lb for conventional to \$9.99 for natural and \$16.99 for grass-fed. Farmers market prices for frozen ribeye steaks ranged from \$12.65 to \$14.65/lb. for natural beef and were \$16.00/lb for grass-fed beef at that time. In summary, direct-to-consumer prices for these Lake Country products are generally competitive with prices for fresh natural and grass-fed beef and are comparable to or below prices observed in farmers markets for frozen beef products.

# Allocation of Revenues and Costs across the Supply Chain

The allocation of sales revenues is shown in table 2 for the direct-to-consumer and retail store cases. The producer share in both cases is 70 percent, or the direct-to-consumer value less the \$290.55 paid to Country Meats for slaughter and processing fees. Lake Country retains 30 percent of the direct-to-consumer retail value in both cases. While percentage shares for upstream segments of the chain are lower in the retail case, dollar values are identical.

Table 2. Allocation of Revenues f	or Direct-to-C	Consumer and	Retail Store Sales
-----------------------------------	----------------	--------------	--------------------

Supply Chain Participant	Direct-to Consumer		Retail Store	
	Value	Percent	Value	Percent
Lake Country	\$539.55	30.0%	\$539.55	20.7%
Producer	\$968.40	53.8%	\$968.40	37.1%
Country Meats	\$290.55	16.2%	\$290.55	11.1%
Retailer	-	-	\$808.50	31.0%
Total Retail Value	\$1,789.50	100.0%	\$2,607.00	100.0%

#### Economic Impacts

On a live weight basis, the producer's revenue in this example after netting out processing costs is equivalent to approximately \$88 per cwt. This is above the average price of \$80.61 per cwt. received by Minnesota beef finish calf operations for dairy steers in 2008, as reported in the Center for Farm Financial Management's FINBIN Database.<sup>4</sup> Furthermore, Lake Country producers note that grass finished beef typically receive a lower price because they are unlikely to grade prime or choice. A more typical live weight price would be \$70 per cwt. Even if receipt of payment from Lake Country is delayed by two years with cash flows discounted at an 8 percent annual rate, the present value of the revenue from sale through Lake Country is \$75 per cwt. – a \$5 premium over the expected sale barn

<sup>&</sup>lt;sup>4</sup> Center for Farm Financial Management FINBIN website: http://www.finbin.umn.edu.

price. For a steer that weighs 1,100 lbs., this represents an added margin for the producer of \$55. Multiplying this by the 42 animals marketed through Lake Country annually yields added margins for producers of \$2,310.

Lake Country has three part-time employees who handle day-to-day operations such as communicating with members, scheduling meat processing, arranging retail sales, processing customer orders/invoices, packaging orders, managing cash flow, and making deliveries. They work out of a rented site that is just off Main Street in Red Plains. On average, they work approximately 80 hours/week combined. The annual wage bill for Lake Country is approximately \$46,000 (or \$11.00/hour on average). Annual rent is \$9,600. While this site is well suited for Lake Country's needs, it would be difficult to rent to another business. Should Lake Country cease operations, these economic infusions to the local economy totaling \$55,600 annually – as well as the increased margins or producers totaling \$2,310 – would be lost. It is likely that Lake Country could expand sales significantly without a dramatic increase in wage costs or a need for new facilities. With the exception of order preparation, staff activities are relatively insensitive to sales volume.

Finally, although Lake Country is a valued customer for Country Meats, Country Meats would probably continue to operate at or near capacity if Lake Country were to cease operations. Therefore, economic impacts from processing activities induced by Lake Country operations are minimal. If Lake Country were to significantly increase production and sales of meat products, however, it would be a challenge for Country Meats to continue serving its other customers and still supply all necessary processing services for Lake Country. This could induce added economic impacts, especially if there were other plants in the area not operating at capacity.

#### Social Impacts

Lake Country has created a strong community among its producer members. They all convene for the cooperative's annual meeting, and most members also belong to one or more of Lake Country's three product committees. Lake Country also strives to create a link between producers and consumers through an annual autumn open house in Red Plains and through recipe exchanges on the Lake Country web site.

#### Food Safety

Food safety and retail trade regulations are often cited as a barrier to the development of local food markets. When asked whether these regulations had a significant, negative impact on their businesses, however, all the Lake Country supply chain participants replied that they had not had an adverse effect. A typical response was that these regulations were simply "a necessary cost of doing business."

Lake Country's Red Plains facility is inspected at least twice yearly. Lake Country has never had a food safety incident for a beef product. The inclusion of a farmer ID in the product code for items on each invoice allows for some track-back capability. However, there is no farmer ID or lot number on beef product packages, so trace-back would be difficult once items are commingled in a home freezer or retail store.

Country Meats also has a solid food safety record. USDA assigns one inspector to the Country Meats plant to conduct HAACP testing and to review food safety compliance. Country Meats products have never tested positive for e-coli or salmonella during the past 18 years. There was one positive test for environmental lysteria over the same period. Johnson attributes the low bacteria levels to the fact that

most animals processed at Country Meats are pasture-raised; while animals finished in feed lots come in contact with fecal matter more easily.

#### Food Miles and Transportation Fuel Use

The Lake Country supply chain involves transportation from farm to processor, from processor to the Lake Country facility in Red Plains, and from the Lake Country facility to a drop site or retail outlet in the Twin Cities. On average, a producer travels 60 miles round-trip in a diesel truck with a pull-behind trailer to deliver animals for processing. Assuming fuel efficiency of 12 mpg, this trip requires 5.0 gallons of diesel fuel. With three animals delivered in a typical load and an associated meat yield of 912 lbs., fuel use is 0.548 gallons per 100 pounds of meat. Meat is hauled from the Country Meats plant to the Lake Country facility in Lake Country's refrigerated diesel truck, which has a fuel efficiency of 13.6 mpg. The 50 mile round-trip uses 3.68 gallons of fuel. Assuming that a typical load for this trip is 1,500 pounds of meat products, fuel use is 0.245 gallons per 100 pounds of meat. Finally, the roundtrip from the Lake Country facility to the Twin Cities, including the delivery route, is 340 miles in the Lake Country refrigerated truck. Once again assuming fuel efficiency of 13.6 mpg, this trip requires 25 gallons of diesel fuel. If 2,000 pounds of food are carried on a typical trip, fuel use for this segment of the supply chain is 1.250 gallons per 100 pounds of meat. Adding fuel use across the three segments of the supply chain, total transportation fuel use is 2.043 gallons per 100 pounds of meat. When diesel fuel costs \$2.30 per gallon, the transportation cost is \$4.70 per 100 pounds of meat, with 73.2 percent of this cost borne by Lake Country. Total "food miles" for Lake Country beef (from farm to consumer) would be 225 miles, half of the total vehicle travel distance of 450 miles.

#### Linkages to the Broader Food System

Lake Country has benefitted from and contributed to a strong local foods movement in Minnesota. A partnership with the Minnesota Food Association in distributing food to low income consumers through a publicly funded Minnesota Grown Coupon Program was instrumental in the early growth of Lake Country. Subsequently, Lake Country members and staff have shared their experiences with other groups in the region exploring possibilities for developing local food distribution networks. Lake Country currently uses distribution services provided through Co-op Partners Warehouse, a certified organic distributor of food products to retail cooperatives, natural foods grocery stores, and restaurants in the Upper Midwest.

While linkages to the state-wide local foods movement are well developed, it has been more difficult for Lake Country to establish a strong customer base in the Red Plains area. This may be due to the fact that many people in the community are closely linked with agriculture and are able to produce many of the products Lake Country sells. It may also be due to income levels in the area that are generally lower than those in the Twin Cities metro area, since low income households may have difficulty paying the premium prices Lake Country charges. In the rural county where Lake Country is located, median household income averaged \$39,655 in 2007. By comparison, median household income averaged \$60,943 in Hennepin County – where Lake Country delivers most of its product.<sup>5</sup>

### Prospects for Expansion

Lake Country has long been recognized by its customers as a source of sustainably produced, local food products. It has been innovative in using email and the Internet to establish remarkably strong

<sup>&</sup>lt;sup>5</sup> US Census Bureau, American Factfinder. http://factfinder.census.gov/. Accessed March 2009.

"virtual" ties with its customers in the Twin Cities market. It has a very loyal customer base, as well as volunteer drop site coordinators who promote Lake Country products. Lake Country has also worked hard to establish close partnerships with its processor, Country Meats, and with retail store customers like Hampden Park. Communication within the supply chain is effective and efficient, and Lake Country is the hub for that communication. Finally, within the Lake Country membership, there appears to be a potential for increased product flows. Should there be a rapid upward shift in demand Lake Country is relatively well positioned to respond.

On the other hand, the Lake Country supply chain also has some internal weaknesses and faces some external challenges. Despite successful automation of online customer ordering, Lake Country's business model, which relies on small orders from a large number of customers, is labor intensive and could pose challenges if there were a very significant growth in sales volume. Sales growth could also strain relationships with drop site coordinators. Other internal weaknesses include occasional stockouts and inconsistencies in cut size and tenderness due to differences across producers in breeds and production practices.

One of the most important barriers to expansion for Lake Country is the fact that all its meat is distributed frozen. Given the seasonality of grass-based beef production, plant design-related constraints on processing fresh meat at Country Meats, the configuration of the Lake Country facility in Red Plains, and the delivery model that Lake Country has adopted, frozen product makes sense. However, consumer demand for frozen meat is limited. Most consumers prefer the convenience and taste of fresh meat, and meat retailers find it difficult to display frozen meat products in a way that is as attractive as fresh meat displays. Many supermarkets and natural food cooperatives in the Twin Cities now carry fresh beef products that are labeled "natural" or "grass-fed" and these represent formidable new competition for Lake Country.

When asked about the feasibility of shifting to fresh meat processing, the owner of Country Meats cited limited storage space for refrigerated product and the added complexity of packaging and delivering fresh product to retail customers as major challenges. In fact, the fresh beef that Country Meats sells at its own retail meat counter is boxed beef purchased from a large packing plant in Nebraska. The processes for ordering, receiving, and storing boxed beef are relatively straightforward and simple. Moreover, using boxed beef makes it possible to offer a mix of cuts and processed products that does not necessarily match the cut-out composition from whole animals. Preliminary calculations suggest that the cost of boxed beef delivered to Country Meats's Prairiestone location is actually less than the cost of purchasing a live animal directly from a local producer and processing it at Country Meats.

Finally, farm-to-school and other institutional sales may represent a potential source for Lake Country meat sales growth. Lake Country has been participating in a farm-to-school pilot program with a nearby school district, and there are currently discussions about expanding public sector funding for these programs. Lake Country currently has one significant institutional customer, and it may be possible to identify others, such as nursing homes or hospitals. However, competing with larger broad line food distributors who offer the convenience of year-round product availability, product variety, and competitive pricing continues to be a significant challenge, as it was in the early days of Lake Country.

#### Policy Issues

One important policy issue raised by the Lake Country case, however, relates to the role of public support for purchases of local foods by low income consumers and public institutions. The Minnesota Grown Coupon Program was critical in fostering the early growth of Lake Country, but the termination of that program created a crisis for Lake Country that has taken years to overcome. By all accounts, there was widespread support for this program. The \$1 million in funding for it came from the state budget. After three years funding was not renewed, along with a number of other social service programs, due to a budget shortfall.

The 2008 Farm Bill has several programs and provisions that promote purchases of local food products by low income people, senior citizens, and K-12 students. These will help spur the development of local food systems, but if they may also establish incentives for the creation of business models that will be difficult to sustain if they are discontinued. As these programs are implemented, careful attention should be given to the inclusion of provisions that also foster concurrent growth of business activity that does not rely on subsidies or purchase mandates.

# **Key Lessons**

Several important general insights emerge from this pilot case:

First, this case study clearly illustrates the importance of a close relationship between beef producers and processors. Lake Country, the Lake Country beef producers, and Country Meats form an effective team. They trust each other, communicate effectively, and share information that ultimately improves the product that consumers purchase. Lake Country holds this relationship together – a relationship that benefits both producers and Country Meats.

Second, this case highlights the difficulty of selling local foods in rural areas. Despite continuing efforts to sell more food in the areas around Red Plains, Lake Country still draws most of its sales volume from the Twin Cities area, where there is a much larger base of consumers who value a closer connection with producers. To some extent, this is due to the fact that rural consumers already have opportunities to either produce their own food or buy food from a friend or relative who farms. Nevertheless, it appears that the major growth opportunities for local food sales will be in metropolitan areas.

Third, without a continuing physical presence in metropolitan area markets, such as a stall in a high-traffic farmers market, it is difficult for an organization like Lake Country to reach new customers. The Lake Country model for direct-to-consumer sales works relatively well for repeat customers. Without some prior direct contact with a Lake Country member or with the organization or individual hosting a drop site, however, it can be intimidating for first-time customers to place an order. As food production in urban and peri-urban areas develops, it may be more difficult for supply chains like Lake Country's to compete with producers who can more easily establish direct contacts with new customers.

Fourth, while a business model based on direct sales to many individual consumers captures the spirit of the local foods movement, the expense of retail order assembly is high and can be a barrier to expansion. As noted earlier, Lake Country could, perhaps, double its current sales volume without needing to hire additional staff or move to a new facility. Increases beyond that level would necessitate significant new investments and possibly fundamental changes in business practices. This suggests that, in its current form, the Lake Country model may scale up to meet significant increased

demand through replication by a new organization rather than through internal growth. On the other hand, Lake Country may be able to grow internally without major changes in its business model if it focuses promotion activities on sales to institutions, restaurants, or retail stores.

Finally, this pilot case points to the difficulty local food supply chains have in competing directly with the mainstream food supply chain that focuses on low cost, convenience, and year-round availability of a wide variety of products. In the case of beef, the mainstream supermarket supply chain can deliver a full array of fresh beef products of consistent quality that cost considerably less than those offered by Lake Country. Some consumers are and will continue to be willing to pay a higher price in order to know how and by whom their food was produced, but many consumers simply will not be willing to pay that higher price. This raises the question of whether the dramatic increase in producer and consumer interest in local food will establish only a small but vital niche market or be a force that drives fundamental transformation of the food system.

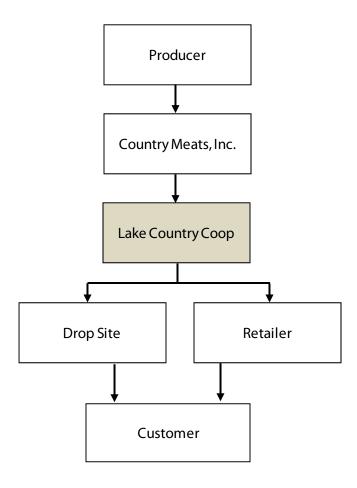


Figure 1. Lake Country Cooperative Supply Chain