The University of Georgia

Center for Agribusiness and Economic Development

College of Agricultural and Environmental Sciences

Feasibility of a Local Processing Facility in Carroll County, Georgia

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FR 09-??

Feasibility of Locally Processed and Branded Beef Products in Colquitt and Tift Counties, Georgia

Executive Summary

The purpose of this study was to consider the economic feasibility of a multi-species processing facility in Carroll County, Georgia. The proposed facility will allow area producers, producers in Georgia and Alabama, to process their own livestock for sale to consumers, retailers, restaurants and other end users of locally grown produce. One of the goals of the proposed multi-species processing facility is to allow area producers to develop consistent, high quality product to service local and regional markets including, restaurants, food service industries, and retail customers.

Currently, there is an undercapacity in Georgia of USDA inspected meat processing facilities that will work with smaller producers.

This feasibility study examined the costs of constructing and operating a local USDA inspected processing facility that will be open to producers who are interested in processing and marketing their products.

Introduction

The Carroll County contacted the Center for Agribusiness and Economic Development (CAED) at the University of Georgia requesting a study to evaluate the economic feasibility of constructing a multi-species processing facility in Carroll County Georgia. The study investigated the market for locally grown and processed beef, pork, poultry, goat, and sheep meat products.

There is a lack smaller USDA inspected processing facilities across the state. Producers interested in harvesting and processing their beef have to transport the animals to a facility in Tennessee or to a facility in South West Georgia. These options are very time consuming and significantly increase the cost of harvesting and processing products. These facilities do not provide harvest and processing alternatives for poultry and turkeys creating a need for this type of animal processing in the state.

I. Technical Feasibility

Obtaining A License To Operate A Meat Processing Facility And Other Considerations

The most difficult technical aspect of operating a multi-species processing facility is that the current State and Federal regulations do not allow for more than one species to be processed at a time. In order to handle more than one species, they must be separated either in space (completely separate areas of the building), or in time (in the same area, but with a complete cleaning of the line between a change from on species to another). In addition, all raw materials would need separate storage areas prior to processing as would all finished products unless they are completely packaged before being placed into the cooler or freezer. The requirement for separate storage areas for each species could considerable increase the equipment costs, plant size, and operating costs in the form of increased utilities and maintenance costs.

Another issue that arises is that each species and product form (i.e., steaks, ground beef, sausage, etc.) would have to have its own approved Hazard Analysis and Critical Control Point (HACCP) food safety management plan. There is more information on HACCP below, but in a multi-species facility there might have to be upwards of 15 or 20 different HACCP plans which must be managed which could be both expensive and time consuming for an operation with limited staff.

Regardless of the final mix of species and products which may be processed in the facility, the following general information deals with obtaining a license to operate a meat processing facility in the State of Georgia.

Rules of Georgia Department of Agriculture, Chapter 40-10-1, Meat Inspection - Meat Processing

If the proposed operation is to be a traditional meat department within a retail store and the products are sold directly to the consumer in that location, then the following regulations apply:

40-10-1-.04 Exemptions. Amended.

1) Exemptions:

1. The requirements of the Act and the regulations in this chapter for inspection of the preparation of products do not apply to operations of types traditionally and usually conducted at retail stores and restaurants, when conducted at any retail store or restaurant or similar retail-type establishment in Georgia for sale in normal retail quantities or service of such articles to consumers at such establishments.

2. For purposes of subparagraph 1. of this paragraph, operations of types traditionally and usually conducted at retail stores and restaurants are the following:

i) Cutting up, slicing, and trimming carcasses, halves, quarters, or wholesale cuts into retail cuts such as steaks, chops, and roasts, and freezing such cuts;

ii) Grinding and freezing products made from meat;

iii) Curing, cooking, smoking, or other preparations of products, except slaughtering, rendering, or refining or livestock fat or the retort-processing of canned products;

iv) Breaking bulk shipments of products;

v) Wrapping or rewrapping products.

3. Any quantity or product purchased by a consumer from a particular retail supplier shall be deemed to be a normal retail quantity if the quantity so purchased does not in the aggregate exceed one-half carcass. The following amounts of product will be accepted as representing one-half carcass of the species identified:

One-half carcass pounds:

Cattle 300
Calves 37.5
Sheep 27.5
Swine 100
Goats 25

4. A retail store is any place of business where the sales of product are made to consumers only; at least 75 percent, in terms of dollar value, of total sales of product represents sales to house-hold consumers and the total dollar value of sales of product to consumers other than household consumers does not exceed the dollar limitation per calendar year set by the USDA Administrator; only federally or State inspected and passed product is handled or used in the preparation of any product; no sale of product is made in excess of a normal retail quantity as defined in subdivision (1)(d)(3) of this subparagraph; the preparation of products for sale to household consumers is limited to traditional and usual operations as defined in subdivision 1(d)2 of this subparagraph; and the preparation of products for sale to other than household consumers is limited to traditional and usual operations as defined in (i), (ii), (iv), and (v) of subdivision 2 of this subparagraph.

If the proposed operation will be processing non traditional meats, or will be selling to other stores or restaurants, then the facility will have to apply for the applicable license through the Georgia Department of Agriculture (GDA) Meat Inspection Division. There are four basic choices for the type of license the facility can hold:

1. **Custom Feral Swine License** – allows for the receiving and processing of wild hogs for “Home Use Only”.

2. **Custom Licenses** – allow for the slaughter and processing of cattle, sheep, swine, ratites, goats, rabbits, horses, mules, and other "non-traditional" livestock for "Home Use Only".
3. **State Meat Inspection** – allows for the activities in the above options, as well as the processing (under inspection) and sale of meat products within the State of Georgia. Onsite retail sales are allowed.
4. **USDA Inspection** – is basically the same as State Meat Inspection, but allows for the sale of products outside the State of Georgia.

The complete State regulations pertaining to meat processing can be found on the Georgia Department of Agriculture's website at the following address;

http://agr.georgia.gov/00/article/0,2086,38902732_0_41051097,00.html

The GDA regulations state that in order to qualify for a State Meat Inspection License, the applicant must meet the following basic requirements:

1. The facility must be constructed and equipped so that it is readily cleanable as well as rodent and insect free. The reference most often cited as a guideline for the proper meat processing facility design is the USDA Agriculture Handbook 570 entitled *U.S. Inspected Meat and Poultry Packing Plants: A Guide to Construction and Layout.* The publication is no longer available through the Government Printing Office or the USDA website, but a copy is attached for your review and use.

2. You will be required by law to have a written plan on how you are going to clean your facility and maintain it in a sanitary manner. This is called a SSOP (Sanitation Standard Operating Procedure) and training for how to properly write and then follow SSOP's is part of most HACCP training programs (see below).

3. You will be required by law to have a written HACCP (Hazard Analysis and Critical Control Point system) plan that details how the food safety of the products will be managed for each species and product form processed in the facility. A HACCP regulated facility (which all meat plants in Georgia are) must have one person on site during operation that has been certified as having attended an approved HACCP training program and who is responsible for overseeing the daily implementation of the facility's HACCP plan. More information on the general topic of HACCP can be found at the USDA website listed below. Information on various options for obtaining the necessary certified HACCP training can be found at the International HACCP Alliance website, and information on the UGA HACCP training programs and other assistance can be found at the UGA Extension Food Science website.

   USDA HACCP Information
   http://www.fsis.usda.gov/Science/Hazard_Analysis_&_Pathogen_Reduction/index.asp

International HACCP Alliance
http://haccpalliance.org/

UGA Food Science Extension
www.efsonline.uga.edu

4. You will be required to have a sewage certificate from the local governing authority.

5. A potable hot and cold water supply

6. Letters of guarantee from all packaging and ingredient suppliers stating that the materials planned for use have been certified as safe for consumption and are suitable for food applications.

7. Blueprints of the facility. Three sets are requires and must at a minimum include a floor plan, plumbing plan, plot plan, room finish schedule, and door schedule.

The above documents and the application for inspection services can be submitted to the GDA Meat Inspection Services at the following address:

Dr. Rex Holt - Director
19 MLK, Jr. Drive, Room108
Atlanta, GA 30334
Tele: 404-656-3673
Fax: 404-657-1357

Glen Echols
Program Manager & Plant Coordinator
Alison Benefield
Accountant II
Blandon Moseley
Compliance Supervisor & Plant Design Reviewer
Sue Morris
Compliance Secretary & Inspection Coordinator

Food Safety Issues Specific to Ground Beef

Ground beef is one of the more closely monitored production categories that falls under the USDA inspection system. This means that a facility producing ground beef will be closely scrutinized by the inspecting authority and that the various regulations and standards that must be met by the producer are more numerous and more stringent than

other categories of meat processing. Of specific concern is the potential presence of E. coli 0157:H7 in the ground product which is a particularly dangerous human pathogen.

On October 7, 2002, FSIS published a notice requiring establishments that had not already reassessed their Hazard Analysis and Critical Control Point (HACCP) plans for raw beef products in light of relevant *E. coli* O157:H7 data to do so to determine whether *E. coli* O157:H7 contamination was reasonably likely to occur in their production process for raw beef products (67 FR 62329). In that notice, FSIS advised that it intended to scrutinize very closely the hazard analyses and HACCP plans of those slaughter or deboning establishments that had conducted a reassessment and decided that an intervention was not necessary. Also in that notice, FSIS stated that establishments receiving product for grinding should address *E. coli* O157:H7. FSIS explained that these establishments could employ validated Critical Control Points (CCPs) in their HACCP plans to address *E. coli* O157:H7, or the establishments could incorporate purchase specifications in their HACCP plans, Sanitation Standard Operating Procedures (Sanitation SOPs), or other prerequisite programs to prevent *E. coli* O157:H7-contaminated product from entering their establishments.

On 3/31/04 the USDA issued Directive 10,010.1 entitled "*Microbiological Testing Program and other Verification Activities for Escherichia coli O157:H7 in Raw Ground Beef Products*" which basically states that the producer should be able to show through microbiological testing that their products are free of E coli 0157:H7, but if they chose not to do so, that they would be subjected to intense product testing by the USDA inspection system. The requirements of this Directive place additional operational and food safety requirements on the producer which will likely result in increased costs for product testing and the need for additional personnel to manage the matching of test results with product batches and to properly manage the inventory system so as to assure that no product that tests positive is released for sale or consumption. The full text of this directive can be found on the USDA website at the following link:

http://www.fsis.usda.gov/OPPDE/rdad/FSISDirectives/10.010.1.pdf

Labeling of Meat Products

The labeling of meat products is regulated by the USDA. The regulations cover standard labeling elements such as name, net weight, list of ingredients, nutrition information, etc, but also outline under what circumstances terms such as "Organic", "Natural", "Free Range", "Grass Fed", and the like are allowed. Information on the current regulations pertaining to such terms can be found at the following websites:

http://www.fsis.usda.gov/Fact_Sheets/Meat_&_Poultry_Labeling_Terms/index.asp
http://www.fsis.usda.gov/Regulations_&_Policies/Claims_Guidance/index.asp

II. **Market Analysis**

The Market

The market for local produced products is growing and expected to grow as consumers become more concerned with their food and look to eat healthier. Current concerns over food safety and quality and public focus on the industrial food chain has enhanced the market for all types of locally grown products. There is a growing demand for source-verified and identity-preserved meat products. Consumer concerns over BSE and the use of certain antibiotics and growth promotants will likely continue.

The target market for products processed in the Carroll County processing facility will be locavores, area restaurants and affluent grocery stores in Georgia and Alabama. According to recent industry research, consumers are looking for alternatives to traditional food production. One result is the increase in demand for locally produced food. The reasoning behind locally grown is that consumers can visit the farm to observe production practices and that locally produced food is fresher than food grown, processed and shipped into the area.

There are currently only a handful of companies supplying locally produced meat products in Georgia due to current processing regulations. One competitor located in Georgia, White Oaks Pastures, is currently selling a ground beef product in the state and has recently expanded its product line beyond ground beef. For example, White Oaks Pastures' ground beef has shown consistent growth in volume at a retail price of $1.00 per pound more than Maverick Ranch brand and about $3.00 per pound more than commodity beef.

Market entry

The Carrollton facility will need to develop a plan for launching their products and introducing them into the marketplace. A key factor is determining the various products pricing points and developing a pricing structure that will allow them to generate the level of revenue needed to be an economically viable business while not pricing their products out of the market. It is important to understand that the facility cannot price their products to compete directly with commodity meat products that are currently on the market.

The facility's marketing strategy will have to focus on a unique or perceived unique product attribute which can be incorporated into a marketing and promotional campaign. One retail market entry strategy is to supply products to retailers on a consignment basis reducing the risk to the retailer in the event the products do not sell.

In addition, incorporating the Georgia Grown label on the product may provide access to retailers across the state as they look to support local producers.

Introducing a product in the market generally takes time as advertising and promotion take time to create the desired effect and may have to be amended according to the results. Getting the message out to consumers as well as businesses may require contacting them several times before they make a purchase.

Product Positioning

The Carrollton processing facility or producers will have to identify a niche market or create some distinguishing characteristics that will allow its product to be differentiated and stand out from the competition. Ground beef is generally seen as a generic, commodity beef product. Therefore, some type of "hook" either a specialty production characteristic or marketing characteristic needs to be identified and used to successfully market the product. For example, humanely grown and locally produced are two examples of production processes that allow the beef to be differentiated in the marketplace. Another may be a catchy name or creating the image of "happy" cows. Dairy cattle are a significant component in the commodity ground beef which retails for around $2.00 per pound. The bottom line, if the producers are not able to identify a means of making its products product somewhat different from competing products, it will be hard to sell the product to consumers, retailers and restaurants. It is important to note that any claim must be substantiated.

Market Analysis[1]

The Carrollton Processing facility is exploring the possibility of marketing its product directly to consumers, retailers and the food service industry. Each of these markets will require its own packaging specifications and have different price points. Selling directly to consumers or directly to restaurants will allow producers to charge a higher price for their products than selling its product to a retail market or accessing the food service market though a distributor where it will be marked up to allow these middlemen to generate revenue. The products will either have to be sold to the retailer for a lower price so after it is marked up at the store, it can still compete with similar products on price or differentiate it's products sufficiently that it will not have to complete on price. The same will be true for the restaurant and direct to consumers market.

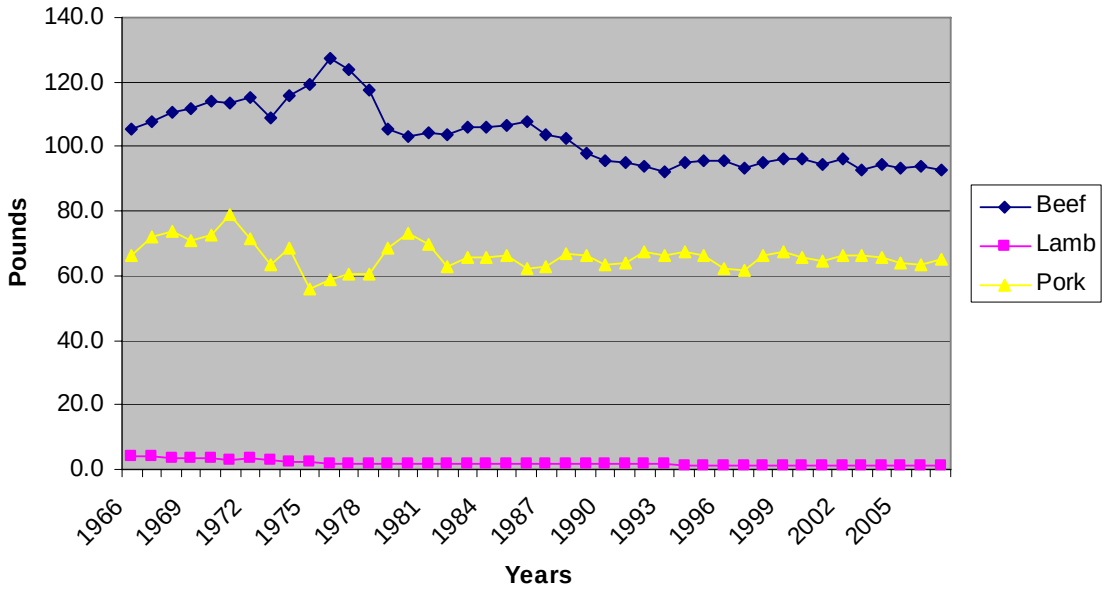
Red Meats

Americans still consume a significant amount of meat annually, Figure 1. However, on a per capita basis, beef consumption has been trending downward over the past 25 years. For example, in 1970, beef per capita consumption of beef totaled 76.6 pounds annually. This has fallen by over 11 pounds per person to an estimated 65.8 pounds in 2006. This decline in beef consumption can be attributed to health concerns and the competition for other meets and meal choices due to advances in transportation, packaging, and processing.

Pork per capita consumption has remained fairly stable over the 1981 years at over 60 pounds per person. Pork consumption rose in the early 1970 and then fell in the later part of the decade. Pork consumption has been fairly stable since the 1980s. Lamb consumption has experienced a long, downward trend since 1966. In 19096, lamb consumption was less than four pounds per capita, this number has fallen to just over three pounds per capita in 2007. The data in figure suggests that beef and pork sales will provide the

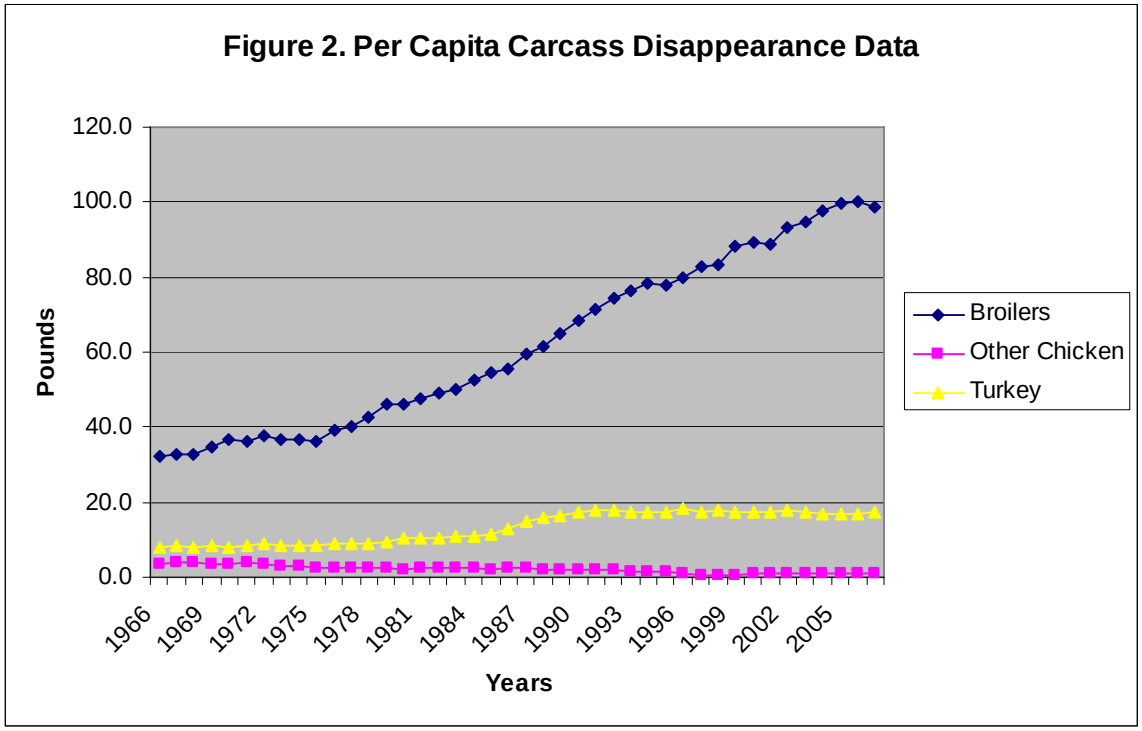
[1]Factors Affecting U.S. Beef Consumption, By Christopher G. Davis and Biing-Hwan Lin
Outlook Report No. (LDPM13502) 25 pp, October 2005

Figure 1. Per Capita Carcass Disappearance Data



Poultry/Turkey

Poultry consumption has risen significantly since the late 1960, Figure 2. In 1966, broiler consumption was 32 pounds per capita. This figure has risen to nearly 100 pounds per capita in 2007. Turkey consumption trended upward from the 1960 to the 1990s and has leveled off. In the late 1960, per capita turkey consumption was around 8 pounds, this increased to a high of over 18 pounds per capita consumption in 1996. Since 1996, per capita consumption of turkey has remained fairly stable at approximately 17 pounds per capita.

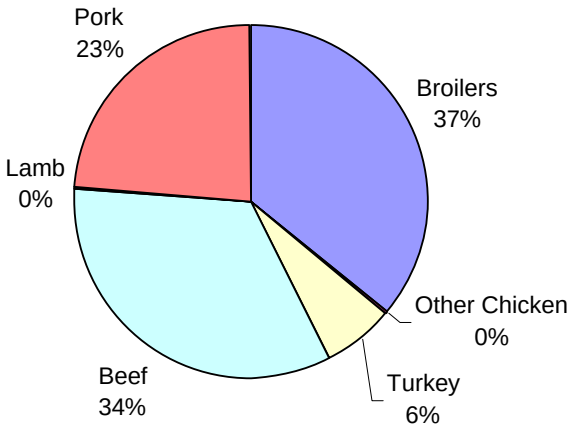


Potential Products

Figure 3 presents a market share of the most popular types of meats consumed in the United States. Broilers account for thirty-seven percent of total meat consumption among the listed products. This is followed by beef, 35% and pork, 23%. The remaining main meat products constitute less than 10% percent of the per capita meat consumption in the U.S.

A national study conducted by the American Meat Institute and Food Marketing Institute showed chicken is the most popular natural and organic meat, purchased by 73.2 percent of shoppers, followed by beef (50.7 percent) and ground meat (31 percent).

Figure 3. Percent of Annual Per Capita Consumption



This figure does not indicate that other than the more traditional sources of protein are not consumed or are not consumed in quantity, the market share in figure 3 provides a perspective on the importance of the various meat products in consumer's diets.

Consumers
For decades the industry has been moving toward growing foods where there is a comparative advantage to grow them and then shipping them to the consumption centers. Technological advancements in processing, cooling preservation and low transportation costs have brought about this transformation. It seems the industry is starting to respond to high fuel costs by moving towards a more localized food production.

There has been increasing discussion recently about the local food movement with new words even being created to describe the phenomenon. The "locavore" is a new word used to describe someone who prefers to eat locally produced food. How increased shipping costs affect the cost of food will be critical to the movement. With low-cost technologies such as high and low tunnels, which are simply plastic covers over the soil, and growing in close proximity to large population centers, small and medium sized farms will offer a solution for those consumers who prefer to eat locally.

Packaging
Given that the target consumer, those that are interested in local foods, reducing food miles, sustainable, organic, and natural and other descriptive most likely will have concerns over packaging. There are a number of environmentally responsible packaging available that will work with packing machinery, virtually indistinguishable from current packing materials but is s environmentally friendly. This is apparent in the trend toward reducing unnecessary packaging and waste. In addition, consumers are looking for simple packaging and labels. This trend means reducing the visual clutter on packaging that creates an obstacle for the time-starved consumer. The trend is toward less cluttered but more compelling graphics and clear copy

Packaging is important as reported by the American Meat Institute and Food Marketing Institute where respondents rated product appearance (4.3) and package size/total package price (3.8) as important, using a six point scale from 1 to 6 where 6 is very important. Therefore creating an eye catching and appealing package is important in attracting potential customers. Packing will include the products label. Creating a label that conveys the image the product wants customers to perceive as well as being attractive can have a significant impact on the success of these meat products.

Retail and Food Service Markets
The producers will focus on delivering products to retailers and food service businesses within a 100-mile radius of the processing facility in Carrollton. This radius provides access to millions of people along with hundreds of restaurants and retail outlets. Given the number of establishments in this market area, distribution will have to rely on the services of professional food brokers or distributors to help market their products as there may be a lack of resources to a field a full-time sales staff. Yet, specialty food manufacturers generally have the desire to expand their businesses beyond the local market. Fortunately, there are a number of marketing channels available for distributing food products locally, regionally, nationally and internationally. It is estimated that up to 80% of retail and 50% of food service products are represented by some type of sales and

marketing agency[1]. Besides having contacts, brokers provide important marketing skills and functions that many specialty food manufacturers do not posses.

Retail

However, to successfully market its products through these retailers, producers will need to produce product that meet consumer's needs. Consumers are demanding easy to prepare convenience foods. People have less time to prepare meals at home and are looking for easy meal alternatives. In addition, family sizes are decreasing so smaller packages are necessary to meet the needs of today's consumers. Locally grown, sustainable consumers tend to be more affluent than the general population and are willing to pay a premium for their beef products. However, the products must impart a premium product to the consumer in addition to convincing these consumers that their product is different and better than the competing commodity beef products.

Restaurants

"The restaurant industry is entering its 17th consecutive year of real sales growth in 2008, and while the overall economy is slowing, the industry will still show respectable growth," said Dawn Sweeney, President and CEO of the Association. "As industry sales continue to increase and its total economic impact exceeds $1.5 trillion, the workforce is also growing. In 2007, we added 400,000 career and employment opportunities, and we expect to add an additional two million in the next decade. With consumers now spending 48 percent of their food budget in restaurants, our industry is a major part of Americans' lifestyle."

There is a negative relationship between fine dining and the state of the economy. Given the economic and financial uncertainty, some people tend to either avoid or reduce the frequency in which they eat at fine dinging restaurants. Even if they decide to eat at a fine dining establishment, folks may be more aware and concerned with the price of the various items on the menu and affect their order.

According to industry research, households earning more that $75,000 dollars per year are significantly more likely than less-affluent households to eat at fine dining restaurants. In fact, these households are three times more likely to patron fine dining restaurants than are households in the lowest income bracket. As a result, fine dining restaurants will feel the effects of the current economic situation as people spend more money on necessities but not to the effect of restaurants attracting less-affluent consumers.

Given that 2009 will bring some economic challenges, consumers remain hungry for the variety, convenience and social interaction that restaurants provide.

Operational Trends

Sales at full-service restaurants are projected to increase over 4% in 2008 to an estimated $187.4 billion. The growth is attributed to new and expanded menus and restaurants tapping into the off-premise food consumption growth. Restaurants are expanding their menus to address consumer demand for new, sophisticated and vale-added products

creating new opportunities for local growers. The growth in off-premise consumption of food, or meals ready to eat provide new market opportunities for restaurants who are meeting consumers needs for convenience foods.

Full-service restaurant operators will continue to integrate more technology solutions both in dining rooms and kitchens, and increase their focus on environmentally-friendly operations like the growing trend in purchasing locally grown food. The growth in the locally grown market will provide producers of quality products new opportunities.

Quick service restaurant sales are anticipated to grow similarly in 2008. The quick service market growth will be propelled by consumers continued demand for convenience food products. To address the trend of eating healthier, quick service operators will focus on expanding and revamping their menus to include a wider variety of nutritious options. Like their full-service counterparts, quick service operators will also ramp up their environmental efforts.

The eating-and-drinking place segments expected to post the largest sales gains in 2008 are snack-and-nonalcoholic beverage bars at 6.8 percent ($20.9 billion in sales), and social caterers at 6.6 percent ($6.4 billion in sales). This growth is largely driven by consumer demand for convenience, eating on the go or elsewhere off-premise, and the trend toward changing meal-occasions and types.

Market Area
The facility has tremendous potential in a fairly close market area, since the facility is located within 100 of Atlanta and Birmingham to the West and East and Chattanooga and Macon to the North and South, figure 4. There is a tremendous population base within 100 miles of Carrollton as evidenced by these for population centers. In addition, Columbus, Georgia is also within the 100 mile radius.

There are approximately 3.4 million people within 50 miles of Carrollton. This number increases to 6.2 million people at 75 miles and to 8.2 million people at 100 miles. These numbers are based on Census Bureau Estimates for 2008.

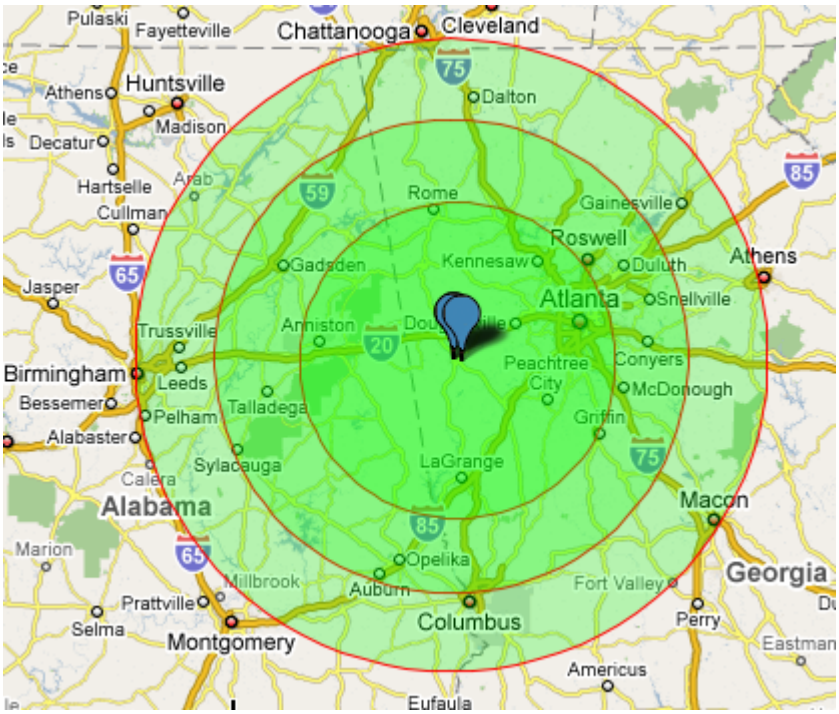


Figure. 14 Market Area – 50, 75, 100 mile Radius around Carrollton, Georgia

Grocery Stores and Ethnic Retailers
There are 999 grocery stores and supermarkets within 50 miles of Carrollton, Georgia. This number increases significantly to 2,660 when the market area is expanded to 100 miles, table 1. These businesses were identified by their SIC code for grocery stores and may include smaller non-traditional retailers.

There are a number of ethnic retailers in the market area as well.

Table 1. Grocery Stores and Ethnic Retail Outlets in the Market Area		
Retail Outlet	**50 Miles**	**100 Miles**
Grocery Stores and Supermarkets	999	2,663
Ethnic Grocers	82	213
Farmers Markets	81	153
Cooperative Grocers	1	3
Mexican Foods	27	64
Oriental Foods	11	37
Chinese Foods	12	43
Italian Foods	4	10
Kosher Foods	3	6
Japanese Foods	2	4
Greek Foods	1	1
Health Food Stores	6	15
Source: Superpages.com		

Restaurant Potential in Market Area

There are over 4,800 restaurants within 50 miles of Carrollton, Georgia and the number increases to over 12,675 when the area is expanded to 100 miles. The following outlines the most likely purchasers of products and excludes fast food restaurants and others that are not likely fits like waffle and pancake establishments.

Table 1. Select Restaurants in the Market Area		
Retail Outlet	**50 Miles**	**100 Miles**
American Restaurants	386	1,054
Family Restaurants	361	1,006
Steak Restaurants	255	838
Chicken Restaurants	239	621
Chinese Restaurants	228	695
Bar & Grill Restaurants	209	664
Japanese	61	235
Southern Style Restaurants	48	102
Thai Restaurants	30	112
Oriental Restaurants	25	65
Fine Dining Restaurants	16	54
Asian Restaurants	15	43
Total	1,873	5,489
Source: Superpages.com		

Estimated Sales

Restaurant Sales

A number of mom and pop restaurants were contacted and asked about purchasing sustainable/organic/natural protein products. The results indicate that these restaurants are willing to purchase these protein products but in smaller quantities. As a result, it will be important to work with a number of restaurants to generate significant sales volume.

Table 2. Weekly Restaurant Beef Product Sales in Pounds

Restaurant 1.	Form	Quantity	Price per pound
Beef	whole	1 per month Quartered. boxed	$5.00 - $6.00
Chicken	whole	75-80 birds, frozen boxed/month	$3.50
Turkey	whole	Not sure	
Goat	whole	quartered/ boxed 1 per month	
Rabbit	whole	would purchase if available	
Lamb	whole	Quartered-boxed 1 per month	$7.00
Pork	whole	quartered/boxed plus organs, feet, tail, tongue – 1 per month	
Quail	whole	Needs reliable supply	
Duck	whole	Needs reliable supply	
Guinea Hen	whole	Need reliable supply	
Restaurant 2	Form	Quantity	Price per pound
Beef			
Tenderloin		14 pounds/week	$6.90-$8.20
Sirloin		3 pounds/week	$1.70 - $2.89
Hanging Diaphragm		50 pounds/week	$2.41 - $4.00
Pork			
Tenderloin		4 pounds/week	$2.45 - $3.25
Butt		2 pounds/week	$1.81- $2.35
Center Cut		12-20 pounds/week	$6.00
Chicken	Boneless-Skinless	50-100 breasts/week	$3.41
Turkey	Breasts	4 breasts/week	$3.54
Goat			
Lamb			
Loin		15 pounds/month	$7.00 - $10.00
Leg		15 pounds/month	$7.00 - $10.00
Chop		15 pounds/month	$7.00 - $10.00
Rabbit	Whole	12 per year	
Venison	Denver Leg	160 lbs per year	$9.95
Duck			
Mullard		50 pounds/week	$5.00 - $8.00
Margreet		70 pounds/week	$5.00 - $8.00
Squab			
Quail			
Pheasant		20 pounds/year	$7.00

Table 2. Weekly Restaurant Beef Product Sales in Pounds - Continued			
Restaurant 3.	Form	Quantity	Price per pound
Beef	Ground	55 pounds per month	$1.79
Bison	Ground	45 pounds per month	$4.50
Pork			
Center Cut		15 pounds month	$6.00
Ground	Ground	20 pounds month	$1,80
Chicken			
Breast		160 pounds per month	$2.19
Wings		320 pounds per month	$1.69
Tenders		320 pounds per month	$2.60
Turkey			
Breast	smoked	10 pounds per month	$3.20
Restaurant 4,5	Form	Quantity	Price per pound
Chicken	Frozen Whole Bird	24 per week	$2.00
Duck	Whole Bird	24 per week	$4.00
Lamb	Boneless Whole Leg	12 per week	$4.00
Pork	Boston Butt	160 pounds per week	$3.00
Beef			
Veal	Bone	100 pounds per week	$1.95
Ribeye	Bone free	100 pounds per week	$9.00
Restaurant 6	Form	Quantity	Price per pound
Chicken	Boneless Breast	300-400 pounds per week	$2.50
Beef			
Tenderloin		120-150 pounds per week	$6.50 - $8.00
Hanger Steak		50-60 pounds per week	$5.00 - $6.50
Ground		40-50 pounds per week	$2.50
Pork			
Chops		40-50 pounds per week	$5.00 - $6.50
Loin		40-50 pounds per week	$2.50
Restaurant 7 ,8			
Chicken	Boneless Breast	80 pounds per week	$3.75
Beef			
Tenderloin		80 pounds per week	$6.50 - $8.00
Flank Steak		40 pounds per week	$4.50
Ground		50 pounds per week	$2.00
Veal	Eye of round	15 pounds per week	$8.00

Conclusion

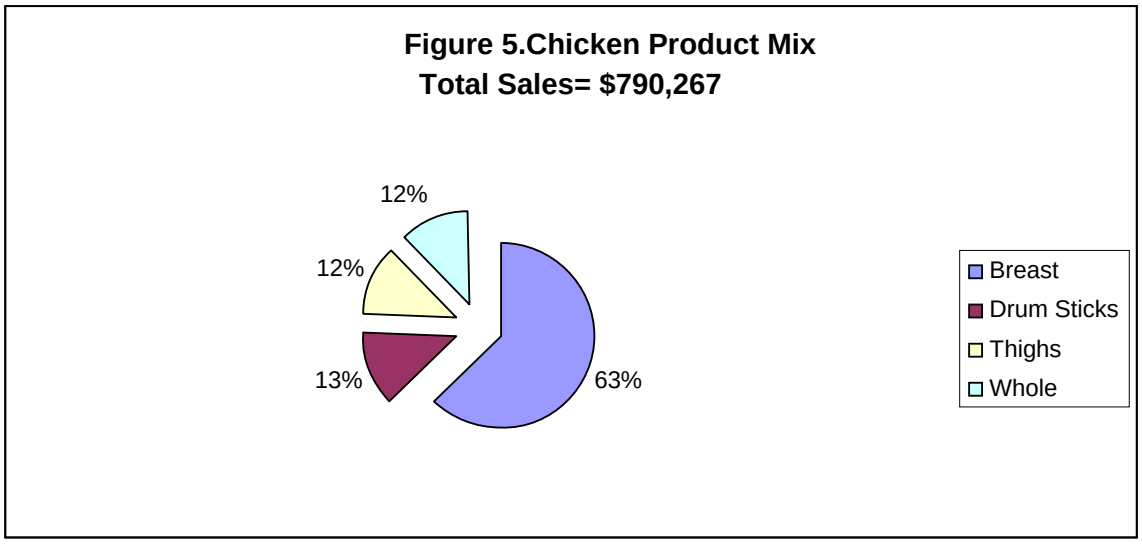
The most popular products are the poultry, beef and pork. There is a limited demand for rabbit, lamb and turkey products. Interestingly, there is a demand for duck meat in two of the restaurants totaling nearly 800 whole ducks per month. The data from surveying these local restaurants that span variety of venues suggest that there is a limited market for products that lie outside the traditional protein animals.

Retail Sales
Nearly 50% of all organic and natural meat products were sold through supermarkets according to a 2007 study conducted by the American Meant Institute and Food Marketing Institute. As a result, the Center for Agribusiness and Economic Development was able to obtain scan data for organic and natural meats. A national retailer operating in Georgia and the southeast provided sales data for a 52 week period. The data indicate that the retailer has increased its sales of natural and organic meat products (beef, pork and poultry) from $165,000 last year to over $1.2 million in the current year. This is an increase of 673%. The market for these products continues to grow as indicated by the above data.

This particular retailer has about a 25% market share of the supermarket business in the state. The above figures are assumed to represent 25% of the states retail sales of these products. Multiplying by a factor of four will provide an approximation of total sales for natural and organic retail sales of the three species under consideration.

The following shows product mix by species and corresponding prices per pound. The prices and product mix are a combination of organic and natural products.

Poultry
Sales of chicken products increased form $89,000 to 793,000 over the past year. Multiplying this figure by four suggests that in 2008, total retail sales of organic and natural chicken in the state totaled $3,174,016. The figure 5 provides a breakout of sales by four product types:

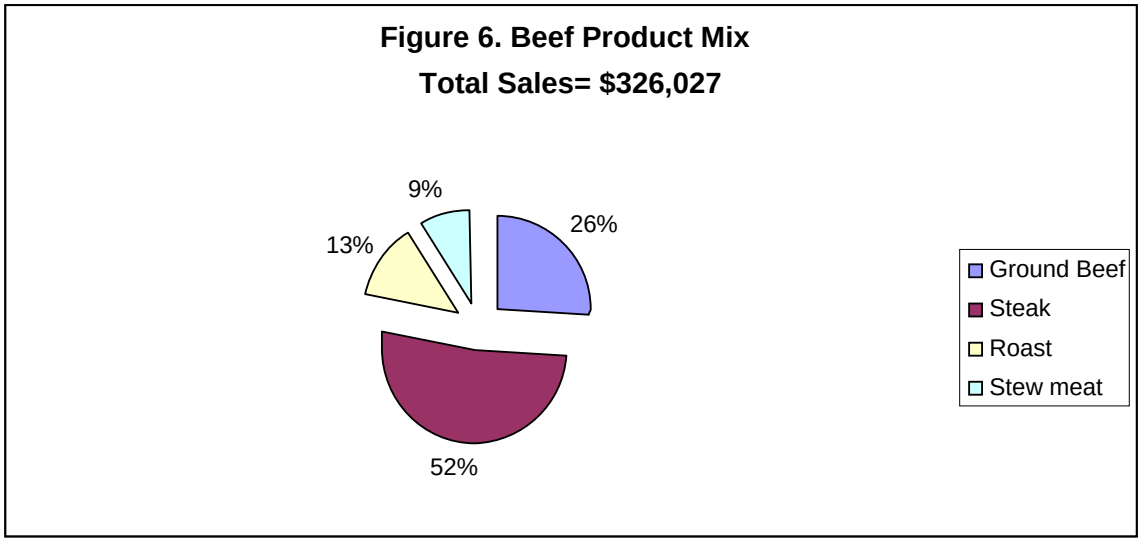


The following shows the average price for four different cuts of organic/natural chicken products in 2008.

Table 3. Average Price for Natural/Organic Chicken Products - 2008	
Product	**Average Price per Pound**
Breast	$5.08
Drum Sticks	$1.98
Thighs	$1.95
Whole	$1.92

Beef

Beef product sales increased from $51,000 in 2007 to $239,000 in 2008. Multiplying this figure by four suggests that in 2008, total retail sales of organic and natural beef in the state totaled $1,304,108.The figure 6 provides a breakout of sales by four product types:

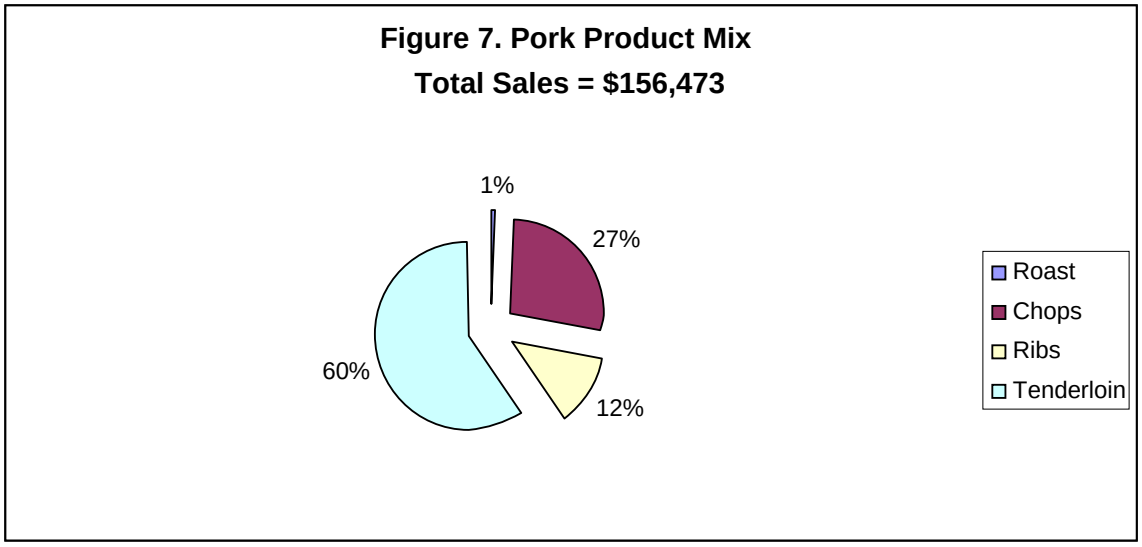


The following shows the average price for four different cuts of organic/natural beef products in 2008.

Table 4. Average Price for Natural/Organic Beef Products - 2008	
Product	**Average Price per Pound**
Ground Beef	$4.27
Steak	$10.73
Roast	$4.34
Stew meat	$3.85

Pork

Pork product sales increased from $1,385 in 2007 to 156,000 in 2008. Multiplying this figure by four suggests that in 2008, total retail sales of organic and natural beef in the state totaled$625,892. The figure 7 provides a breakout of sales by four product types:



The following shows the average price for four different cuts of organic/natural pork products in 2008.

Table 5. Average Price for Natural/Organic Pork Products - 2008

Product	Average Price per Pound
Roast	$4.03
Chops	$4.32
Ribs	$4.04
Tenderloin	$4.33

Actual Sales Example

Table 5 provides insight into the actual sales of a similar operation in Georgia. These figures provide an idea of what the facility might expect to get for its beef products at various outlets. The data also shows the sales breakdown of beef products by cut which also provides insight into what the facility might encounter. This business is raising a quality, natural product and marketing it as such. Forty-seven percent of sales are via retail and freezer beef with 53% being to restaurants, see table 5. Table 6 provides prices.

Table 5. Sales from a Similar Business in Georgia			
Product	**Retail and freezer Beef**	**Restaurant**	**Total**
Chuck			
Steak			
Roast	120	20	140
Eye Steak		75	75
Ground	60	335	325
Average	**180**	**430**	**510**
Rib			
Steak	30	**110***	
Ribs	62		
Roast			
Average	**92**	**110**	**202**
Short loin			
fillet Mignon	25	20*	
t-bone	35		
porter house			
Average	**60**	**20**	**80**
Sirloin			
Steak	50		
Tip roast	20		
Ground			
Average	**70**		**70**
Round			
Steak			
Rump roast			
bottom roast	60	115	
extra lean ground	100		
cube steak	50		
Average	**210**	**115**	**325**
Flank			
steak	70		
Average	**70**		***70***
Short Plate			
Steak			
Average			
Brisket/Fore Shank			
Roast	70.2		
Average	**70.2**		**70.2**
Beef Patties		**140**	**141**
Total	**752.2**	**815**	**1,567.2**
* only sell for six Months out of the year			

Table 6. Sales from a Similar Business in Georgia			
% of Sales	**70%**	**15%**	**15%**
Product	**Store Prices ($/lb.)**	**Restaurant Prices ($/lb.)**	**Freezer Beef Prices ($/lb.)**
Chuck			
Steak	$2.89		$2.55
Roast	$2.79	$2.69	$2.55
Eye Steak	$3.29		$2.55
Ground	$2.19	$1.59	$2.55
Average	***$2.79***	***$2.14***	***$2.55***
Rib			
Steak	$7.99	$6.99	$2.55
Ribs	$5.29		$2.55
Roast	$7.99		$2.55
Average	***$7.09***	***$6.99***	***$2.55***
Short loin			
fillet mignon	$11.99	$10.99	$2.55
t-bone	$6.49	$5.99	$2.55
porter house	$6.99		$2.55
Average	***$8.49***	***$8.49***	***$2.55***
Sirloin			
Steak	$3.49	$2.99	$2.55
Tip roast	$3.09		$2.55
Ground	$3.59		$2.55
Average	***$3.39***	***$2.99***	***$2.55***
Round			
Steak	$3.49		$2.55
Rump roast	$3.09	$2.79	$2.55
bottom roast	$2.99		$2.55
extra lean ground	$3.59	$1.79	$2.55
cube steak	$3.99	$2.99	$2.55
Average	***$3.43***	***$2.52***	**$2.55**
Flank			
steak	$4.69		$2.55
average	**$4.69**		***$2.55***
Short Plate	**5.50%**		
Steak	$4.99		$2.55
average	***$4.99***		***2.55***
Brisket/Fore Shank			
Roast	$3.59		$2.55
Average	***$3.59***		***$2.55***
Beef Patties		**$1.66**	

Conclusion

Given access to scan data for a large retailer, it appears that there is currently a lack of natural/organic products outside the more traditional poultry, pork and beef protein animals. Not sure if the lack of various protein animals is attributed to lack of demand or lack of supply.

Pricing

According to 2008 research conducted by the American Meat Institute and Food Marketing Institute, consumers ranked price as the most important factor when selecting meat – averaging 4.6 on a scale from 1 to 6. That's a higher ranking than it got in 2006 and 2007. Interestingly, the vast majority of respondents reported that they compare meat prices before making their purchase decision. However, once in the store, more than half of consumers seek the best value among different cuts and types of meat This indicated that these consumers are price sensitive and organic and natural products need to be competitively price or at least provide a value or "perceived" value greater than competing meat products to command a higher price.

The prices received at the various restaurants do not appear to be significantly higher than prices for products purchased via distributors. This suggests that the facility will have to produce a competitively priced product. However, given that the facility will market its own products, it will be able to capture a significantly larger portion of the marketing food dollar leading to increased revenue. The average gross margin for the supermarket chain was estimated to be 28%. Thus, the average retail price for the following products will be adjusted by 28% to reflect the estimated wholesale price per pound.

Revenue Estimates Table 7 presents estimated monthly figures on restaurant sales.

Table 7. Restaurant Sales Of Popular Cuts Average Price And Per Restaurant Quantity					
Chicken	Monthly Quantities	Av. Price	Monthly Quantity per Restaurant	Monthly Per Restaurant Sales	Annual Sales
Whole	124	$ 3.50	24.8	$ 86.80	$1,041.60
Breasts	1800	$ 2.71	360	$ 974.68	$11,696.16
Wings	320	$ 1.69	64	$108.16	$1,297.92
Tenders	320	$ 2.60	64	$166.40	$1,996.80
Beef					
Whole	1	$ 5.50	0.2	$1.10	$13.20
Tenderloin	598	$ 7.15	119.6	$855.14	$10,261.68
Sirloin	12	$ 2.25	2.4	$ 5.40	$ 64.80
Hanging Diaphragm	200	$ 3.03	40	$121.00	$1,452.00
Ground	235	$ 2.33	47	$109.51	$1,314.12
Veal Bone	400	$ 1.95	80	$156.00	$1,872.00
Hanger Steak	220	$ 5.75	44	$253.00	$3,036.00
Ribeye	400	$ 9.00	80	$720.00	$8,640.00
Pork					
Tenderloin	736	$ 1.80	147.2	$ 265.64	$3,187.68
Butt	328	$ 2.98	65.6	$195.31	$2,343.74
Center Cut	48	$ 6.00	9.6	$57.60	$691.20
Ground	20	$ 1.80	4	$ 7.20	$86.40
Chops	720	$ 20.00	144	$103,680	$1,244,160.00
Whole	1		0.2		
Duck	696	$ 5.00	139.2	$696.00	$8,352.00
Pheasant	1.5	$ 7.00	0.3	$2.10	$25.20
Rabbit					

The information in Table 7 suggests that sales to restaurants can generate significant income. However, restaurants purchase only specific products and are willing to pay for them.

The retail prices for the various natural/organic protein products are higher than those not labeled as such. Table 8 presents the average retail and wholesale prices for a number of protein products.

Table 8. Retail and Wholesale Average Prices for Select Meat Cuts

Product	Average Retail Price/Pound*	Average Wholesale Price/Pound
Chicken		
Breast	$5.08	$3.97
Drum sticks	$1.98	$1.55
Thighs	$1.95	$1.52
Whole bird	$1.92	$1.50
Beef		
Ground	$4.27	$3.34
Steak	$10.73	$8.38
Roast	$4.34	$3.39
Stew meat	$3.85	$3.01
Pork		
Roast	$4.03	$3.15
Chops	$4.32	$3.38
Ribs	$4.04	$3.16
Tenderloin	$4.33	$3.38
** Assumes a 28% Gross Margin for Retailer*		

Revenue Estimates

Tables 9 and 10 present sales figures of specific cuts in retail establishments. Chicken is the largest seller or these products followed by beef then pork.

Table 9. Average Price for Natural/Organic Products - 2008

Product	Av. Retail Price/Pound*	Av. Wholesale Price/Pound	Pounds Sold 181 Stores Annually	Sales Revenue
Chicken				
Breast	$5.08	$3.97	98,006	$497,868.21
Drum sticks	$1.98	$1.55	51,886	$102,734.71
Thighs	$1.95	$1.52	48,632	$94,832.04
Whole bird	$1.92	$1.50	49,392	$94,832.04
Beef				
Ground	$4.27	$3.34	39,704	$169,534.04
Steak	$10.73	$8.38	7,900	$84,767.02
Roast	$4.34	$3.39	9,766	$42,383.51
Stew meat	$3.85	$3.01	7,621	$29,342.43
Pork				
Roast	$4.03	$3.15	23,296	$93,883.80
Chops	$4.32	$3.38	9,780	$42,247.71
Ribs	$4.04	$3.16	4,648	$18,776.76
Tenderloin	$4.33	$3.38	361	$1,564.73

Table 10 presents expected sales on a per store basis of select organic and natural meat products. Based on these calculations, each store could potentially generate $6,500 in annual sales.

Table 10. Wholesale Average Prices and Per Store Sales for Select Meat Cuts

Product	**Average Wholesale Price/Pound**	**Pounds Sold per Store Annually**	**Per Store Annual Sales Estimate**
Chicken			
Breast	$3.97	128.71	$510.98
Drum sticks	$1.55	54.03	$83.75
Thighs	$1.52	25.68	$39.03
Whole bird	$1.50	2.00	$3.00
Beef			
Ground	$3.34	219.36	$732.66
Steak	$8.38	43.65	$365.79
Roast	$3.39	53.95	$182.89
Stew meat	$3.01	42.11	$126.75
Pork			
Roast	$3.15	541.47	$1,705.63
Chops	$3.38	286.66	$968.91
Ribs	$3.16	268.68	$849.03
Tenderloin	$3.38	272.88	$922.33
Total			$6,490.75

FINANCIAL ANALYSIS

General Assumptions

The data for this analysis was based on previous studies conducted by CAED for beef slaughter and processing facilities. Similar studies conducted in North Dakota and Nevada for other species were also considered. This project provides both opportunities and challenges in consideration of multi-species to be slaughtered and processed.

Equipment must be thoroughly cleaned between changes in processing different species or must take place in different parts of the facility. Different species must also be stored separately which results in additional capital cost for storage. It was assumed that the facility would devote 2 days per week for beef processing, 2 days for poultry processing and one day for pork processing 50 weeks per year. Given labor and equipment capacities, it is assumed that 2 beef carcasses can be slaughtered and fabricated per day, or 5 swine carcasses per day, or 480 poultry carcasses.

Conservative turnout assumptions were utilized. Assumptions set forth in this analysis include a 60% yield of beef products from a 1200 pound live animal or 720 lbs of product per carcass. For pork the turnout is assumed to be 70% of a 210 lb live weight animal or 147 lb carcass. For chickens the average live weight utilized was 6 lbs with a 65% turnout, or 3.9 lb carcass. Annual production based on these assumptions is shown in table 11.

Table 11. Annual Capacity for Multi-Species Livestock Slaughter & Fabrication Facility

Capacity:	**Beef**	**Pork**	**Chicken**
# Days/Week	2	1	**2**
# head/Day	2	5	480
Annual Production	200	250	48,000
Live Weight (lbs)	1200	210	6
Turnout	60%	70%	65%
Product lbs/carcass	720	147	3.9
Annual Production	**144,000**	**36,750**	**187,200**

Capital Costs

The capital cost figures include land, building, and all equipment necessary to slaughter and fabricate multiple species. The current estimated total capital cost is expected to be just over $1.25 million for land, building and equipment.

Working capital, the resources used to support a business until it is able to generate resources to support itself, is also included in the table. Working capital varies with production level since it is directly related to variable operating expenses.

For this analysis the required working capital is assumed to be resources sufficient to cover three months of operating expenses. The total capital cost and working capital represent the total estimated capital to be raised through equity and/or debt financing. These costs are summarized in Table 12.

Table 12. Capital Cost Summary

Building	$ 500,000
Kill Floor Equipment	$ 58,932
Processing Room Equipment	$ 83,677
Supplies	$ 26,809
Track & Steel Systems	$ 61,530
Wall Coverings	$ 61,955
Cold Storage Units	$ 150,000
Office Equipment	$ 20,000
Delivery Truck	$ 38,000
Land	$ 250,000
Total Capital Cost	$1,250,903
Working Capital	$ 218,609

Fixed Costs

Fixed costs are expenditures that remain the same regardless of production level. Items categorized as fixed costs include miscellaneous startup fees and licenses, accounting and legal fees, taxes, insurance, interest on intermediate and long-term debt, and depreciation.

The land, equipment and building related to processing (manufacturing) the product may be tax exempt for the first five years of operation if an application is filed with the county tax assessor claiming a manufacturing exemption. However, any real or personal property not directly related to processing, i.e. the retail portion of the facility, will be taxable. An expense of $13,435 is included in the model to cover these taxes. Also included in the analysis is insurance for the facility estimated to be $5,000 per year.

Annualized cost of the internal capital and return on investment is built into the economic analysis. Fixed cost include a return on all capital invested. Interest expense is included at a rate of 8% of the average total investment for a cost of $50,036 for this operation. Return on invested capital can be thought of as the average annual interest payment for a loan capitalized over the anticipated useful life of the facility.

Economic depreciation is used to cover physical deterioration and functional obsolescence of equipment and facility and can be thought of as the annual average principal debt payment occurring if a loan is structured for the entire capital costs for the anticipated useful life of the facility. The annual depreciation is estimated to be $70,660 based on the capital cost estimates and economic life of the capital assets. Table 13 summarizes the fixed costs associated with the retail and processing facility.

Table 13. Fixed Costs

Miscellaneous Startup	$ 5,000
Accounting & Legal Fees	$ 5,000
Property Tax	$ 13,435
Insurance	$ 5,000
Interest Expense (8% Average Total Investment)	$ 50,036
Depreciation	$ 70,660
Total Fixed Cost	$ 149,131

Operating Cost

Operating and fixed costs were estimated for this venture based on prior feasibility studies for similar ventures.

Operating cost are expenditures that vary with the level of production. For this analysis, items include direct animal cost, packaging, shipping, labor and benefits, utilities, repair and maintenance, advertising, inedible pickup, lab sample analysis and shipping, phone, office and operating supplies, uniform service and interest on operating (working) capital.

Labor and benefits and direct animal cost represent the two largest expenditures of total operating cost at 35% and 33% respectively. Line item operating costs are detailed in Table 14.

Total operating costs for the multi-species livestock slaughter and fabrication facility is $891,925.

Table 14. Operating Cost for Multi-Species Livestock Slaughter and Fabrication Facility

Operating Expenses:	**Price/Unit**	**Units**	**Annual**	% of OC	% of TC
Animal Cost					
Beef	$ 1.00	240,000	$ 240,000.00	27%	23%
Pork	$ 0.65	52,500	$ 34,125.00	4%	3%
Poultry	$ 0.07	288,000	$ 20,160.00	2%	2%
Packaging	$ 0.21		$ 77,270	9%	7%
Direct Labor & Benefits			$ 316,159	35%	30%
Repair & Maintenance			$ 20,018	2%	2%
Utilities & Water	$ 3,000.00	12	$ 36,000	4%	3%
Advertising	$ 25,000.00	1	$ 25,000	3%	2%
Auto Expense--Delivery Truck				0%	0%
Fuel	$ 1,000.00	12	$ 12,000	1%	1%
Auto Insurance	$ 100.00	12	$ 1,200	0%	0%
Inedible Pickup	$ 2.50		$ 25,125	3%	2%
Lab Sample Analysis	$ 4.00		$ 40,200	5%	4%
Phone/Long Distance/Internet	$ 300.00	12	$ 3,600	0%	0%
Office Supplies	$ 250.00	12	$ 3,000	0%	0%
Product Liability Insurance	$ 1,000.00	12	$ 12,000	1%	1%
Uniform Service (per e'ee/week)	$ 15.00	11	$ 8,580	1%	1%
Interest on Working Capital (3 months)	$ 218,609	8%	$ 17,489	2%	2%
			$ 891,925	100%	

Direct Animal Cost

Direct animal costs include purchase of the live animals at premium prices given the focus on natural and/or organic products. The average weights were discussed earlier in the general assumptions. The purchase price per pound of live weight is estimated at $1.00/lb live weight for beef, $0.65/lb live weight for pork, and $0.07/lb live weight for chicken.

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Labor

Labor requirements and related cost are detailed in Table F4. A total of 11 employees would be required. It is assumed that the facility will operate an eight hour shift, five days a week, 50 weeks a year. This will require two full-time employees for the kill floor; five full-time butchers; one HACCP trained employee would be required to oversee plant operations; a truck driver for product delivery and a bookkeeper. In addition, one full-time outside sales manger would be hired to increase the market area. Costs associated with benefits and payroll taxes are also detailed in Table 15. Fringe benefits are estimated to be 17.8% of the gross wages.

Table 15. Labor Requirements

LABOR

Function	#	Rate	Hours/Wk	Weekly Gross Earnings	Annual Gross Earnings
Butcher	5	$ 10.00	40	$ 2,000.00	$ 104,000.00
Truck Driver, Kill Floor	3	$ 7.50	40	$ 900.00	$ 46,800.00
HACCP	1	$ 20.00	40	$ 800.00	$ 41,600.00
Bookeeper	1	$ 7.50	40	$ 300.00	$ 15,600.00
Manager/Outside Sales	1	$ 25.00	40	$ 1,000.00	$ 52,000.00
				$ -	$ -
Total	11	$ 11.36	440	$ 5,000.00	$ 260,000.00

Fringe Benefits Calculations:		
Turnover Rate	**20%**	
FUTA Taxable amount/e'ee	**7000**	
FUTA Rate	**0.80%**	
SUTA Taxable amount/e'ee	**8500**	
SUTA Rate	**2.70%**	
FICA Rate	**7.65%**	
HOURLY& SALARY EMPLOYEES		
Vacation Days	**-**	
Total Vacation		$0
Worker's Compenstation	**$ 12.50**	$32,500
PAYROLL TAXES:		
FUTA		$739
SUTA		$3,029
FICA		$19,890
Total Fringe Benefits All E'ees		**$56,159**
Total Labor Costs		**$316,158.60**
Fringe % of Wages		**17.8%**

Revenue

Income was also determined in the model assuming three products, 1) Beef Sales; 2) pork sales; and 3) chicken sales. Given the broad nature of this study, it is assumed there would be a mix of retail and wholesale customers. The average price per pound for each of these is $3.50, $1.90, and $3.00 respectively. Table 16 shows this summary of income.

Table 16. Summary of Projected Income

Income:	**Price/Unit**	**Units Sold**	**Annual**	% of Total
Beef	$ 3.50	144,000	$ 504,000	44%
Pork	$ 1.90	36,750	$ 69,825	6%
Chicken	$ 3.00	187,200	$ 561,600	49%
			$ -	0%
Total Revenue		367,950	$ 1,135,425	

Given the estimated revenue of $1.135 million and total cost for the facility of $1.041 million, the estimated net income is $94,369. The resulting return on investment is 8%.

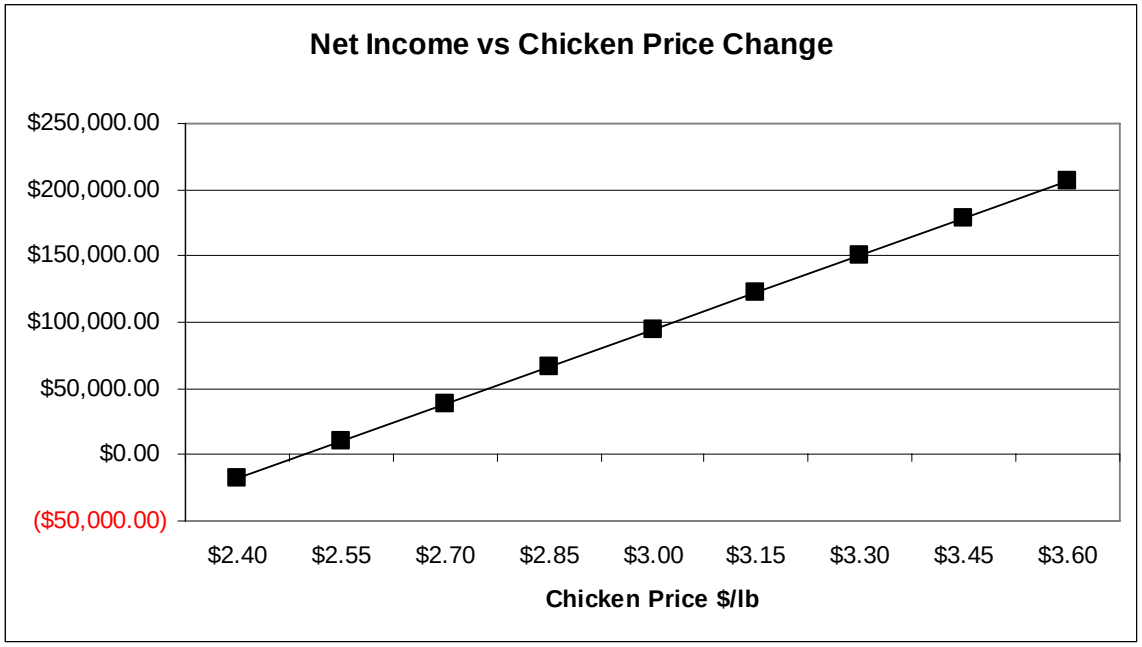
Sensitivity Analysis

The previous sections provided an analysis of the proposed venture in static form and with strict assumptions of unchanged parameters. This section explores the impact upon net income when a single parameter is allowed to vary while all others are held constant.

The most significant factor impacting net income is the price received for chicken. Revenue received from chicken sales represents 49% of the total revenue stream. The business model can withstand some volatility in the market. Returns remain positive until the price is reduced by more than 15%. Figure 8 demonstrates the relationship between net income and chicken price.

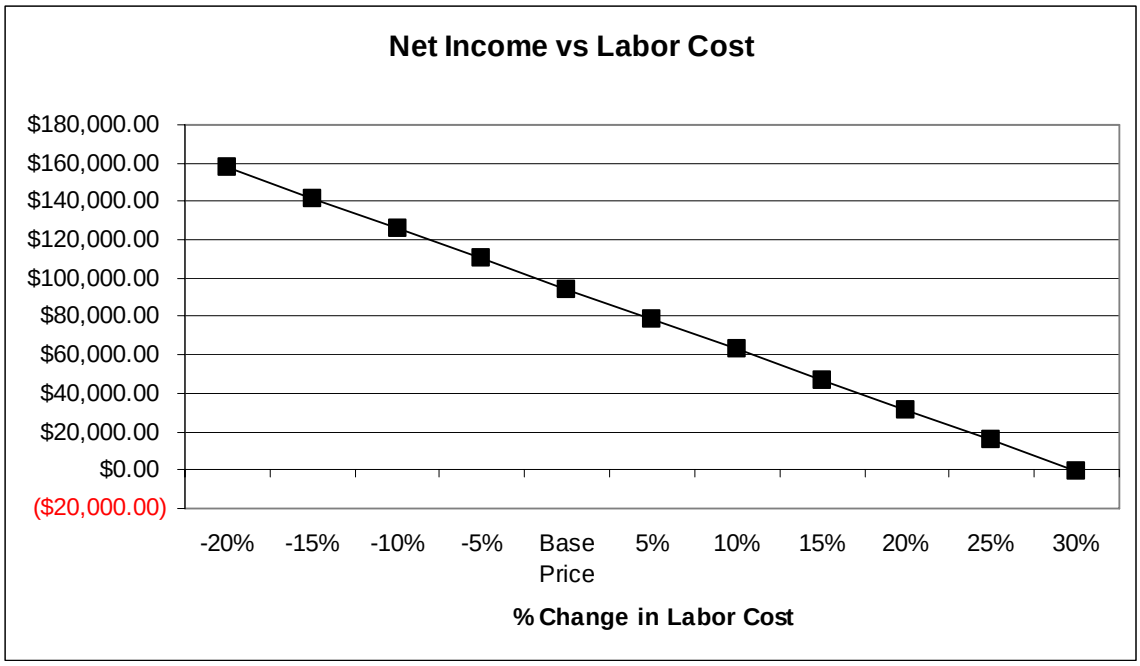
It is important to point out that the sensitivity analysis only considers changes in the revenue generated from the chicken market. The revenue generated from beef and pork sales remains constant.

Figure 8. Comparison of Net Income vs. Chicken Price



The two most significant expenses for this venture are labor and the direct animals purchased. Figure F2 demonstrates how changes in labor cost impact projected net income. Labor costs represent 35% of the total operating cost. Again, the business model shows potential to withstand some fluctuations. The model does not operate at a loss until labor costs increase 30% or more. Figure 9 illustrates net income with a change in labor cost ranging from a 20% decrease up to a 30% increase from the assumed annual expense of $361,159.

Figure 9. Net Income vs. Direct Cow Price ($/head)



When total variable costs are considered, the operation can withstand changes of just over 10% increases before the facility would operate at a loss.

Summary of Economic Feasibility

Based on these results, it appears a multi-species livestock slaughter and fabricating facility in Carroll County, GA could be beneficial to producer, consumers and the local economy in general. This venture appears to be economically feasible based on assumptions set forth. The current estimated volume of natural, organic or locally produced branded meat products demanded is greater than the volume needed to break-even if a large enough distribution area is targeted. Similarly, projected average price are greater than those determined to break even. The estimated annual net income $94,369 or 8% return on total investment. Management will have to be aggressive in capturing new markets for the venture to be a success.

The Center for Agribusiness & Economic Development

The Center for Agribusiness and Economic Development is a unit of the College of Agricultural and Environmental Sciences of the University of Georgia, combining the missions of research and extension. The Center has among its objectives:

> To provide feasibility and other short term studies for current or potential Georgia agribusiness firms and/or emerging food and fiber industries.
>
> To provide agricultural, natural resource, and demographic data for private and public decision makers.

To find out more, visit our Web site at: http://www.caed.uga.edu

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