CASE STUDIES OF VALUE ADDED PORK PRODUCTION & MARKETING

Introduction and Acknowledgments

In 1997, the manual “Front-End Guidance for Value-Added Networks -- Marketing Pork to the Mexican Consumer in the United States” was published by NPPC. Its goal was to introduce the strategic concept of pork producers evolving to create and capture greater value from the end products of pork production. It was developed as an actual market evaluation of pork consumption by Hispanic consumers in the U.S. However, it focused exclusively on the concepts and techniques of market identification and evaluation for value added potential. Missing was an investigation of the execution of value-added production into the identified market.

In an effort to gain insights into execution of a value-added chain to the final consumer, the current case study analysis was undertaken. Case studies of existing firms offer the opportunity to generally describe and analyze the complex managerial and production practices necessary to successfully operate in an expanded market. Five firms were initially identified as case study participants, primarily based on the characteristics of their operations. However, two candidates declined to participate due to disclosure concerns. We gratefully acknowledge the participation and openness of the three participating cases: Goridtos Meats, The Egg & I Pork Farm, and Nahunta Pork Center. Every effort has been made to assure accurate descriptions and evaluations of their operations. Any errors and omissions are the responsibility of the author.

In addition to the case study participants, I would like to thank Jeff Ward of the National Pork Producers for his considerable assistance in managing the project and providing many valuable insights and suggestions. As with the participants, any shortcomings are the sole responsibility of the author.

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Executive Summary

Swine producers have recently expressed increased interest in gaining greater value from hogs raised by investing or aligning further up the market chain. Perceived advantages include increased control over their product, an opportunity to gain direct access to customers, and to capture a greater value of the final price of pork which has increased relative to farm prices. However, few participants in the market chain have a complete understanding of the challenges in controlling a greater part of the market chain. In order to gain insights into the issues faced by direct pork marketing firms, a case study methodology was developed and three direct marketing pork firms were studied. The case studies were conducted in the first half of 1999. Three cases were chosen: Nahunta Pork Center in North Carolina, The Egg & I Pork Farm in Connecticut and Gordito’s Meats in Utah.

Each case study participant had a unique pork production system. However, there are commonalities which arose which provide further guidance for those seeking to develop niche or value added markets.

Production System Flexibility

In the cases of Gordito’s and Nahunta, there was heavy reliance on the ability to adjust production to respond almost immediately to market conditions. Nahunta was able to control supplies through the use of a large holding facility. They further controlled supply for various products by having variable sized pigs available. Gordito’s makes use of a similar situation in that they have a farm through which pigs are held to control slaughter flows. Given their small scale, the utilization of refrigerated trucks provides some flexibility in their cooling and storage capacity at the plant level as well. On the production side, The Egg & I farm had somewhat less flexibility on the production, but was the only operation which froze and vacuum packed all of their product. This was complementary to the mail order and catalog sales focus of the business and allowed for seasonal control of supplies to meet demands.

In Gordito’s case, not only had they developed flexibility, but they illustrate ways to forge fit within related parts of the chain. This is illustrated by their sourcing pigs from much larger commercial operations and utilizing their distribution techniques to service dispersed Hispanic markets. Although this flexibility was clearly a key element of their competitive positioning, the question remains as to whether this is truly a competitive advantage relative to larger commercial slaughter and processing operations.

Marketing Flexibility

Gordito’s and The Egg & I Pork Farm both had multiple consumer outlets for their products. Gordito’s sold to retail stores in several states, as well as to at least three different ethnic populations (Hispanic, Vietnamese, Pacific Islander). Each market had nuances which allowed them to utilize different types of hogs (lighter or heavier weights). In addition to these sales, Gordito’s also was marketing direct through retail stores. This allowed improved access to their customers and has allowed them to capture a greater share of the food dollar. They intend to expand their direct marketings as an important way to increase their value. Similarly, The Egg & I Pork Farm markets through its own retail outlet, mail order, catalog orders (Dean & DeLuca), a direct vending bus/deli service as well as area restaurants and grocers. This diversity of customers protects them from being hostage to one or two large accounts and provides broader exposure to customers. With the recent reduction of offerings by Dean and DeLuca, this illustrates the importance of having multiple reliable outlets for product. Only Nahunta has very focused marketings through their own retail outlets.
Customer Service

Ultimately, all three markets were built on radically superior customer service. In the case of Goridto's, they had developed strong relationships with Hispanic retailers partly through direct interaction, but also by assuring them they would no longer be shorted pork products. Nahunta and The Egg & I Pork Farm rely heavily on their owners' personality and personal touch to connect with customers. This is a two way street as they learn more about what their customers want, and the customers feel like they are important to the owners. This may be a significant competitive advantage for small scale regional suppliers who help break the anonymity prevalent in commercial outlets. Clearly there are scale limitations to direct customer service which limits growth as it provides a potential niche.

In addition to customer service, all three continually evaluated and responded to consumer demands. Goridto's provides unsplit and lighter weight hog carcasses to Hispanic markets, which has allowed them to meet preferences as well as differentiate themselves from larger commercial packers. Goridto's is further serving their retail customers by offering vacuum packed primal cut to their customers' specifications. This provides the product desired and results in a cost savings to the retailers. The Egg & I Pork Farm had a great deal of interaction with customers and in addition was actually soliciting cooked pork recipes from customers to provide further custom products. Similarly, they provide custom hams and chops to restaurant customers on demand. While this results in some merchandising difficulties it helps build a loyal and reliable customer base. The close interaction of all associates of Nahunta with the customers and the entire production base naturally results in strong feedback directly from customers to processing. This is evidenced by Nahunta's ability to meet demand at any given time by altering slaughter and processing. This assures that customers will always find a reliable variety of fresh pork products.

Cost Structures

As reported by each of the firms, their costs of slaughter are remarkably consistent. Goridto's reported a slaughter cost of between $20 and $25/head which was similar to Nahunta's figure of a direct cost of approximately $20/head in a similar sized operation. The Egg & I was not yet slaughtering, but the slaughtering operation was being built partially on the premise that the $35/head charged for custom slaughter was likely too high.

Nahunta provides the best illustration of processing and retailing costs although they are likely rough as well. Nahunta attributes about $20/head to processing and cooked products and another $20/head to the retail packaging and cutting portion. Hence, the total per head cost is around $60/head from live to the case.

Clearly, these levels are above the levels reported for commercial slaughter firms (Hayenga). However, each firm compensates for this differential by capturing the retail value of the products rather than just the wholesale level. From the cases, each emphasized the difficulty in competing at a level further removed from the customer, since these markets are typically valued via cost structure, while the consumer market represents costs plus the willingness of consumers to pay for additional value which can be differentiated.
Merchandising and Seasonality

All cases provide illustrations of the classic merchandising and seasonality problems which a value added marketing effort will encounter. There are two overall components to the problem (1) is the broad seasonality of hog production and (2) is the seasonality differences of pork cuts within the total market and the fact that one hog will have a relatively constant proportion of pork cuts.

In Goridto’s case, they experienced seasonality from the traditional Christmas and holiday influences, but also from the seasonal aspect of migrant labor. They had mitigated part of this by having flexible slaughter. Several individuals involved in the plant operations are also used to promote sales of products in an effort to smooth the seasonality of sales. This has the dual aspect of reducing seasonal employment problems and directly mitigating the seasonal sales effects.

The Egg & I Pork Farm managed seasonality by vacuum packing and freezing many of its products. In particular, hams are stored through the fall for winter demand. Creative marketing has also been employed to move seasonal products. In the summer, when ham demand is low, The Egg & I Pork Farm will use fresh hams for pig roasts instead of utilizing the whole hog as is commonly done. This allows for gaining greater value by segmenting the markets for loins and ribs during the summer grilling season.

Nahunta Pork dealt with seasonality by altering the types of cuts offered and by featuring pork items. The method of country curing hams allows them a great deal of flexibility in storing and selling a highly seasonal meat item.

In creating a business plan for developing a value added market, it will be imperative to include seasonal sales attributes. Seasonality will be critical in developing pricing strategies, merchandising strategies, production management (including employment surplus and deficit periods) and certainly in managing working capital and cash flow aspects of the enterprise.

Regulatory Factors

All three cases were consistent in their comments regarding inspection and other regulatory issues. In fact, Jim Dougherty’s decision to build his own slaughtering system was to some extent based on concerns springing from the new HACCP regulations. A particular problem all confronted was in difficulty with inspection due to their size. All faced a rapid turnover of inspectors and this created continuity problems. Inspectors seemed to have a large degree of subjective latitude so that changing inspectors changed the focus of inspection.

None of the three saw HACCP implementation to be a serious problem to their continued success. While it did increase costs through labor utilization for greater reporting and record keeping, it wasn’t a determining factor in the continuance of their operations.

Another consistency across all three was their encouragement to use existing consultants and government resources to manage regulatory issues such as labeling and nutritional testing. Learning the systems and issues likely costs more than hiring this expertise.
**Case Study Summary**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Nahunta</th>
<th>Goridtós</th>
<th>The Egg &amp; I</th>
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<tbody>
<tr>
<td><strong>Seasonality</strong></td>
<td>Price featuring; cutout differences; hog slaughter flow</td>
<td>Plant employees as sales force; on farm holding</td>
<td>Freezing and vacuum pack; ham “roasts”</td>
</tr>
<tr>
<td><strong>Production Flexibility</strong></td>
<td>Large holding pens; real-time retail information;</td>
<td>Hogs sourced from commercial supplier; farm as holding site; multiple outlets</td>
<td>Complete integration allows production to meet demand;</td>
</tr>
<tr>
<td><strong>Market Flexibility</strong></td>
<td>Merchandising only</td>
<td>Multiple ethnic markets; Retail Outlets; Wholesale to Other Retailers</td>
<td>Direct Retail; Mail Order; Catalog Sales; Lunch Bus Sales</td>
</tr>
<tr>
<td><strong>Customer Responsiveness</strong></td>
<td>Strong Customer Relations; Immediate Demand Response; Quality/Freshness Assurance</td>
<td>Providing Lighter Unsplit Carcasses; Responding to Custom Vacuum Packed Demands</td>
<td>Strong Customer Relations; Providing Custom Recipe Fillings; Custom Cuts for Commercial Clients</td>
</tr>
<tr>
<td><strong>Market Niche</strong></td>
<td>Extreme Freshness; Country Cured Hams and Bacon; Variety; Retail Specialization; Customer Service</td>
<td>Ethnic Markets: Hispanic, Pacific Islander, Asian</td>
<td>New England Farmstead; Customer Service; Country Boutique</td>
</tr>
<tr>
<td><strong>Pricing</strong></td>
<td>Competitive w/ Area Markets; $1 sales; Buy One Get One; Discount Frozen</td>
<td>Competitive w/ Area Markets at Retail; $327 Value per Hog</td>
<td>Premium Pricing at Retail; $550 Value Per Hog Necessary</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>$20/head slaughter; $20/head processing; $20/head retail</td>
<td>$20-$25/head slaughter</td>
<td>$35/head custom slaughter; $35/head smoke and cure</td>
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</table>
CASE STUDIES OF VALUE ADDED PORK PRODUCTION & MARKETING

Case Study Methods

According to Yin, case studies are an appropriate research technique when:

- the investigator is interested in how and why type questions.
- the investigation is not being done in a laboratory setting in which the behavior of those being studied can be controlled and manipulated systematically, and
- the focus of the study is on contemporary events.

Clearly, a case study method fit appropriately on all three criteria for investigating how value-added pork firms were managed and operated. Case study methods were also chosen based on the fact that value added firms are highly complex organizations which likely defy easy categorization which might allow hypothesis testing of alternative structures or markets.

Given that the case study method is appropriate, Yin emphasizes that five items be pre-defined before actually engaging in the case studies. These items include:

1. Case Study Questions
2. Propositions
3. Units of analysis
4. Logic linking the data to the propositions
5. Criteria for interpreting findings.

Case Study Questions:

Primary Question: How have pork production firms entered value added markets in pork products and how have they managed to compete in a highly cost competitive industry based on value added products?

1. What is the firm's major market?
2. How does the firm manage the supply channel?
3. How did the value-added firm begin?
4. What have been the firm's competitive strengths?
5. What have been the firm's competitive weaknesses?
6. How have firms created value for producers who supply hogs?

Study Propositions:

1. Firms have identified a specific market niche for their product.
2. Firms have managed to develop a supply management and distribution channel.
3. Firms are able to cost competitively slaughter hogs and process pork products.
4. Firms have successfully managed to merchandise all of the hog carcass.
5. Firms have successfully managed personnel issues.
6. Firms have formed relationships with others in the supply channel (i.e., retailers, distributors, packers).
7. Firms are investing in new product development and research or market assessment.
8. Firms are actively pursuing a policy of consumer responsiveness.
Unit of Analysis:

Pork producers actively engaged in value-added marketing through the final pork market stage.

Development of Theoretical Framework:

1. Will show that firms have identified specific markets (not competing on a commodity basis).
2. Will show that firms have found ways to cost effectively manage the pork supply channel and create value-added markets for pork products.
3. Firms rely on creative business organization and management structures to create relationships in vertically linked channels.

Criteria for selecting case study participants:

1. Candidates must have pork supply from production through or near retail.
2. The multiple cases should have a unique marketing characteristic from the others.
3. If the primary producer is simply aligned with suppliers or purchasers, we would like to have access to those firms as well. If completely “integrated” this won’t be an issue.
4. Each should have been in existence long enough to establish a track record.

Documentation from participating firms:

1. Financial statements for one year or annual report if that is possible.
2. Organizational structures and linkages through channels.
3. Business relationships with others (e.g., contracted, toll pack, integrated, etc.)
4. Identification of complete product line in pork.
5. Sales and Merchandising problems and issues.

The previous items establish the focus of the case study and formalizes in the researcher's mind the particular items which must be addressed by the case study participants in order to achieve the goal of answering the primary case study question. In order to execute the case study, a protocol is devised to provide consistency across case studies, improve communication with case study participants and assure that appropriate and useful information is gathered.

Protocol:

1. Initiate contact with telephone call describing objectives of project and explore willingness to participate.
2. Upon willingness, send packet of case study format. This initiates case study and individuals will be asked to submit available documentation prior to visit.
3. Once documentation is received, schedule site visit to each participant.
4. At site visit interview key personnel, especially marketing and product development personnel. Photograph facilities, product lines, etc.
5. Compile individual case study data and complete writeup
6. Send draft of individual's case studies to each participant for their review and comment.
7. Revise report as necessary, compile reports into comprehensive evaluation case study.
Prior to the site visits and also during the site visits, the following outline was presented to individuals to allow time for collection and preparation of materials and to organize and consider their responses.

Outline Sent to Case Study Participants

The following list of items are a wish list of items we would like to have to understand and describe your firm. Not all firms will have detailed information available or will be willing to share complete information in sensitive areas. That is understandable. The summary list is intended to help you prepare for our site visit as well as to consider in providing appropriate documentation and background information. Any information you can provide prior to our site visit and interview will help speed that process and result in a much better representation of your activities.

I. External Market Environment - Context within which firm operates
   1. Owners' perspective on how this affected their decision.
   2. Secondary data on market structure for region. (Participant's input is not needed)
      a. Swine production, processor capacity, competitors, population centers, population demographics.

II. History and Development of Firm
   1. Time line of operation and growth.
   2. Critical decision points.

III. Organizational Structure of Firm
   1. What are operational linkages? Hog production - Processing - Retail?
   2. Ownership or alliances structure (proprietorship, LLC)? Is this a significant facet of business?
   3. Schematic of operations and production flows.

IV. Production Description
   1. Production protocols (e.g., genetics, nutrition, custom cutting, processing, etc.)
   2. Listing of full product line and characteristics
   3. Business plan if available.
   4. All phases - farm, packer, processor, retailer
   5. Critical linkages or production feedback.

V. Marketing Description
   1. Quantity Sales Volume - hogs, carcasses, retail cuts, etc. - over time
   2. Sales or market outlets - retail, catalog, internet, etc.
   3. Pricing structure - hogs, carcasses, retail
   4. Market Development/Plan - Identification of new customers or products, market penetration or entry strategies, future growth.
   5. Regulatory Issues - Inspection, HACCP, Labeling, Environmental Permitting?
   6. What are core risks (production, marketing, customer?)
7. Is there ongoing customer response or feedback?
8. Advertising and promotion programs?

VI. What have you learned?

1. Describe the key points you think makes your operation successful.
2. Describe the key failures from which you have learned and offer insights on how to avoid similar mistakes.
3. What would you have done differently if you had it to do all over again?

The case studies which follow were conducted strictly following these guidelines.
Goridtós Meats: A Case Study of Marketing Pork to Hispanic Customers in the U.S.

If sales growth is a measure of success, there is no mistaking the success of Goridtós Meats in Ogden, Utah. With the small beginning of marketing seven custom slaughtered pigs in the back of a pick-up in May 1996, they were slaughtering and marketing 700 head per week by December 1, 1998. Taylor (plant manager) succinctly explains how they accomplished it: “It’s all marketing [sales] and attitude. We never produced anything we didn’t already have sold.” Following is a case study description of Goridtós Meats. This case will illustrate how one firm instigated a direct market program and worked within the context of the changing structure of the swine industry to successfully market pork products to an under served and growing Hispanic market in the Southwest.

External Market Environment

No-one would ever mistake Utah for a pork production center. For the period 1978-1993 the breeding herd inventory averaged 5,000 head and the market hog inventory averaged 31,750 head (Figure 1).

![Utah Swine Inventories (USDA, Hogs and Pigs, 1978-98)](image)

In 1994, Circle Four Farms located in Southwest Utah (Milford and Beaver). Circle Four Farms has single handedly accounted for the twelve-fold increase in the breeding herd inventory and ten-fold increase in market hog inventories since that time. On December 1, 1998 Utah reported 60,000 head of breeding stock and 320,000 head of market hogs, ranking them 20th in hog producing state inventories, up from 38th place prior to 1994.
Marketings of swine in Utah have increased similarly. In 1990, Utah marketed 45,000 head. By 1997, Utah's annual hog marketings totaled 301,000 head. Not surprisingly, the region's historically very small marketings have made it difficult for packing plants to survive in the area — 1997's total marketings could not supply IBP's Waterloo, Iowa plant. Trimiller packing (Hyrum, Utah) was the only major packing plant operating in Utah before the 1990's. In 1990 they were purchased by Thorne Apple Valley which subsequently ceased packing operations at the plant even with the entrance of a major new supplier in Circle Four Farms.

It's within this environment that Goridto's Meats began. Similar conditions of declining slaughter capacity and increasing competition from new and larger production entities exists in many states. Goridto's managed to develop a pork marketing niche, partially in spite of and partially in concert with the market environment.

Early Cooperation and Development

The Beginnings of Cooperation

The Utah Pork Producers organization is a small group of individuals as indicated by the overall size of the industry. As a result of their location, they have two critical competitive problems (1) access to pork product supplies (e.g., premix, vaccines, equipment, etc.) and (2) access to packing. In the mid-1980's twelve viable independent producers (four from Cache Valley, four from Utah County and four from other regions of the state) jointly began to purchase premix feeds from Ohio. Their cooperation arose as a matter of necessity. As Haven Hendricks put it "they all realized they needed to cooperate or were going to get out of the business". As of 1998, they still shipped in a semi-load of premix per month from Ohio. Their "cooperation" has always been loosely coordinated, with no formal business agreements to bind them.

Marketing Hogs

As indicated earlier, most hogs in the region of Logan and Salt Lake City, Utah were shipped in the 1980's to Trimiller packing in Hyrum, Utah. The capacity of this plant was approximately 1,500 head per day. In 1990, Thorne Apple Valley purchased the plant and remained in operation for approximately three years. Shortly after Thorne Apple Valley began operations, they had a dispute with the city of Hyrum regarding their allowable discharge from the plant as well as access to a road which led to the plant. These tensions eventually led to the closing of the former Trimiller plant and created a crisis of hog marketings for producers. As with premix purchases, they banded together to solve their problem. First, they began by jointly shipping semi loads of hogs to Farmer John (Clougherty Packing) in Los Angeles. Several also shipped to Independent Meats in Twin Falls, Idaho. As of this report, they still shipped two semi-loads of hogs per week to Independent Meats. They also jointly ship sows to Omaha for slaughter. They ship approximately one semi load of sows (approximately 100 sows) every 4 - 6 weeks. By sharing transportation costs, they can increase the margins on the sows. The method for shipping is simple, sows are marked and weighed by farm before leaving Utah. Each producer is paid by sow when they are sold in Omaha. This way, everyone retains ownership of their own sows and no formal business relationship needs to exist among the producers. Originally, they invested in insurance for the trucking, but found that this would rapidly overcome any additional profits made on joint shipping. Hence, they have agreed to settle any disputes amongst themselves, recognizing the alternative to cooperation is likely failure. There have been disputes when paint marks have worn off pigs so number of head sold is wrong, or when they have been mis-weighed. However, so far the group has managed to overcome these occasional disputes by setting up a fund to compensate for discrepancies.
Twin Falls, Idaho is approximately 220 miles from Salt Lake City and Los Angeles is approximately 690 miles from Salt Lake City. Although pooling pigs for transport in two semi loads per week helped alleviate the per unit costs of transport, it clearly was not overcoming their comparative disadvantage in swine production. Unable to further cut costs, they pursued the idea of obtaining greater value for their hogs which meant finding a way to direct market the hogs or the pork. As with many producer groups the first place they looked were export markets.

Haven spearheaded the effort to market hogs to Mexico. As a growing market both in terms of population and rising income and with reasonable proximity to Utah, it seemed like a natural fit. They originally proceeded by working with a broker with contacts in Mexico to handle the business arrangements. In 1993 they shipped their first two semi loads of hogs to Mexico. Haven relates that the one of the biggest surprises were the transactions barriers — offloading hogs onto Mexican trucks at the boarder and paying various duties for entry and doing business. In the words of Haven, “we paid our tuition in marketing to Mexico”. The deal fell through when the buyers refused payment on some of the hogs for no apparent reason and members of the coop had to return to Mexico to collect their money. In this case they did receive payment, but the prospect of developing markets in Mexico dimmed.

After the Mexican experience, they also made contacts with a broker who was selling to Russia. In this case they arranged to have the hogs toll processed at a U.S. packing plant and sent boxed primal cuts. Upon arrival in Russia the buyers claimed that the product was all bones. Fortunately, the Utah producers had collected payment at the port, so it was the broker who actually incurred the loses.

This was the group’s last foray into export markets, the costs were too high and the barriers to overcome were too great for a small group of producers to manage. At this point the group began to consider markets closer to home. Haven relates the story of “diamonds in the rough.” The story is of a diamond miner who sold his property to search the world for diamonds. After spending all his money traveling and finding no diamonds he returns home to find that the person who purchased his property had found diamonds in his own backyard. With the experiences in the Mexican market, the group began to consider the idea of marketing pork to Mexican-American customers in Salt Lake City.

Marketing Pork To Mexican Consumers in the U.S.

Growth of a Market

In May 1996, the producers marketed their first hogs to Mexican-American consumers. They had seven head custom slaughtered and then delivered them in a pickup truck to the Talamaho grocery store which served primarily Hispanic customers. At this point there were no employees and it was simply an exploratory effort to try to make contacts with grocers. Within only a month, twenty head of hogs were custom slaughtered and delivered to the same grocers. To improve sanitary conditions, Goridto’s invested in an Omni refrigerated box which fit in the back of a pickup to deliver the hogs to the customers. Sales continued to grow through the year and by January 1997, they were custom killing 50 pigs per week and shipping them in an 18 foot refrigerated trailer which they pulled behind a pick-up. To this point there were still no employees, but clearly the market had grown enough to begin to consider major expansion. By June 1, 1997 100 pigs per week were being custom slaughtered and delivered to Mexican-American grocers in Salt Lake City.
Although unrelated with the Utah Pork Producers at the time, two entrepreneurial young men, Taylor and Bo McDonald, were selling beef door-to-door in Salt Lake City. A third, Robert Sterling was selling pork door-to-door to Latino customers in Logan, Utah. As a method of sales this was highly inefficient. However, it served as an excellent opportunity for direct contact with Mexican-American consumers to find out what they were looking for in meat products. In the end, Goridtós Meats would arise as a collaborative effort between these players.

One of the first problems any start-up direct market operation will face is actually tapping into the market. In the current case, Haven relates that they had to find the community leader. It relates specifically to the nature of the Hispanic market. In a previous study (National Pork Producers Council) of Hispanic consumer preferences it was found that the Mexican-American community tends to be very close-knit and that relationship ranks very high in terms of conducting business. In the current case, the introduction to the Mexican-American consumer was through Horacio who operated the Talamaho market in Salt Lake City and began purchasing hogs in May 1996. The Talamaho market is a typical Mexican-American grocery store. It offers a fresh meat case, fresh produce and many food products (peppers, soda, and other dry goods) imported from Mexico. This gives their customers an authentic connection to Mexican products and product lines and serves as their market niche over traditional U.S. supermarkets.

During this time period all hogs were custom slaughtered at two plants, one at Smithfield, Utah and one in Brigham City, Utah. Sales were typically in the range of 20-50 head per week. Hog processing consisted only of evisceration, the carcasses were unsplit and the head was left on. The fee charged for custom slaughter in this manner was $10/head. It typically required 2 to 3 hours to slaughter the hogs so that the total weekly charges were approximately $300-$400. Also at this point, delivery was made only to Horacio's market so that distribution costs were minimal. Horacio delivered carcasses to other markets.

In January 1997, Taylor McDonald joined the marketing side of the operation. As orders increased, it was necessary to begin to deliver to additional markets. Taylor brought two critical components to the operation 1) sales and marketing skills and 2) he spoke Spanish. This allowed Goridtós's to branch out from relying on Horacio as a market contact to conducting these activities themselves. Additional markets included Compos, LaTienda and Torascos, all in the Salt Lake City area. In addition, they began selling to LaRanchera which operated in Provo, Utah. This store was owned and operated by Bo McDonald, Taylor's brother. As contacts within the Hispanic community grew, additional sales opportunities arose during this time in Los Angeles. As Haven relates it, instead of knocking on doors, calls were starting to come in for orders. They had clearly found a niche.

The Hispanic Customer

What was the niche that Goridtós had tapped into? An overview of the Hispanic pork market can be found in the National Pork Producers Council study coauthored by Buhr and DiPietre. In addition, Exhibit A in this study provides a documentation of a subset of the results of cutting trials on hogs which were done by Mexican-American meat cutters. The illustration presented in this case study was done by Cruz Gonzalez, a meat-cutter in Bo McDonald's LaRanchera grocery store. This trial utilizes the whole carcass. These trials were conducted with two goals in mind 1) to illustrate the different cutting styles and uses for pork products and 2) to better document yield and price values in this growing market. Two other photographic illustrations of Hispanic style pork cuts are included in a companion piece, but are not included here to focus more precisely on the case of Goridtós meats. In addition, a video is available which documents the actual cutting procedures and further illustrates pork cut differences.
One immediate key differentiation is the preference for the unsplit carcass. The vast majority of the wholesale pork trade in the US is on a boxed level of primals. In this analysis, we found that the spine bone is an important cut for making stews (pazole) as shown in the illustration the spine bone is cross-sectioned. This cut is completely unavailable once the carcass is split as in most U.S. packing plants. As we were visiting several stores serving Mexican-American customers in Los Angeles, we actually found a meat-cutter who was attempting to replicate the look of the spine cut by taking the shank from the ham/pork leg and cross-sectioning that to replicate the spine cut. The purpose was twofold: (1) to provide a cut which in appearance was preferred by his customers, and (2) it provided a value added method of marketing the ham shank. Secondly, there is some preference for leaving the skin on the carcass. This occurs for two reasons: (1) some cuts are simply left with the skin on and (2) when the meat-cutters hand skin the carcass a small amount of meat is left on the skin, this increases the value of the chicherones (fried pig skin). For example, chicherones with absolutely no meat often retailed for around $0.99-1.99/lb., while chicherones with some meat trim left on sold for $4.99/lb. Today’s automated skin pulling devices leave no meat trim on the skin as most of the skins go to leather and upholstery products rather than into the food chain. Presentation of the entire carcass with the skin on rather than having to purchase the separate skin allowed the Mexican-American meat cutters to create value for their customers. Hog heads are also very popular during tamale season which extends through November and December. Many of the primal cuts are presented in a similar fashion as “American cuts” although cut differently, often very thin, as illustrated. Other butchers who cut from boxed sub-primals were able to closely replicate the retail cuts from the hog carcass. An additional benefit to Goridtós of marketing the whole carcass was they avoided the need to merchandise the components of the carcass. This was especially critical during the start-up phase when they had relatively few market contacts. Goridtós has also confronted the “boxed convenience” versus whole carcass preference trade-off as have others serving the Hispanic market and have begun offering “Hispanic style” vacuum packed primals. As they have grown in customer base, they have been able to better merchandise across a growing cross-section of customers.
The following table illustrates the expected retail value of a pork carcass merchandised through an existing Hispanic store. The prices were obtained from LaRanchera Supermarket in Logan, Utah on January 28, 1999. The yields and weights were taken from the pork cutting trials. This represents a point in time estimate and should be interpreted as a case observation. Interestingly, the calculated value comes within approximately $14.62 of the USDA based value for the same time period. The value of $326.96 is also conservative. First, notice that in the category of skin, cooked skins (w/ lean trim on) will retail for $4.99 per pound. However, the shrink value from cooking was unknown, therefore, the value was conservatively estimated by using the fresh price of $0.99/lb. If shrink is minimal, this value could increase dramatically. Similarly, one of the more popular cuts recently has been smoked pork chops which are the highest value item. The cutting trials did not provide smoked cut yields, but clearly value could be added by offering smoked pork chops. Also not included is the fact that many grocery stores offer Carniceras (deli's) featuring carnitas, tacos and other pork items for consumption on premises or for take-out. In the case of LaRanchera, a significant portion of sales comes through the Carnicerias and is an important component of creating value from the pork products sold. Finally, pork is also used extensively in chorizo (sausages) which also creates value at the store level. Goridtós attempted to offer a chorizo product, but it failed. As we interviewed meat managers in Hispanic stores, we found that the reason was likely that chorizo is highly variable and each store uses different recipes to attract customers. There is very little “case ready” chorizo in any of the markets observed. Considering all these factors, the value of the hog calculated is likely conservative as it represents only fresh pork cuts, with none of the processed value added. The further processed and pre-prepared nature of some of the products has also provided incentives for Goridtós to have direct tie-ins to retail as will be discussed later. The point of this portion of the case exhibition is critical: there are competitors in any market, and the value received (pricing) is not likely to differ dramatically. The additional value is created by capturing a greater share of the final product market and also by capturing customers. Goridtós had found market access, the problem is could they serve it in a cost effective way which improved profits?
<table>
<thead>
<tr>
<th>Item</th>
<th>English</th>
<th>Price $/lb.</th>
<th>Quantity</th>
<th>Est.Value Retail Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bistek de Cerdo</td>
<td>Pork Steak</td>
<td>$2.89</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Bistek de Puerco</td>
<td>Pork Steak Shoulder</td>
<td>$1.99</td>
<td>11.1</td>
<td>$20.98</td>
</tr>
<tr>
<td>Costillas de Puerco</td>
<td>Pork Ribs</td>
<td>$1.89</td>
<td>3.6</td>
<td>$6.80</td>
</tr>
<tr>
<td>Espinazo</td>
<td>Spine</td>
<td>$1.19</td>
<td>16.1</td>
<td>$19.16</td>
</tr>
<tr>
<td>Chuleta de Puerco</td>
<td>Pork Chop</td>
<td>$2.29</td>
<td>19.2</td>
<td>$43.97</td>
</tr>
<tr>
<td>Chamorro</td>
<td>Ham Hock</td>
<td>$1.29</td>
<td>3.3</td>
<td>$4.26</td>
</tr>
<tr>
<td>Pierna Chuezo</td>
<td>Bone-in Ham</td>
<td>$1.89</td>
<td>18.4</td>
<td>$34.77</td>
</tr>
<tr>
<td>Espinazo o Hueso</td>
<td>Ham bones</td>
<td>$0.99</td>
<td>2.4</td>
<td>$2.38</td>
</tr>
<tr>
<td>Lomo Cerdo</td>
<td>Boneless Loin</td>
<td>$2.29</td>
<td>10.9</td>
<td>$24.96</td>
</tr>
<tr>
<td>Filete</td>
<td>Tenderloin</td>
<td>$2.99</td>
<td>1.4</td>
<td>$4.19</td>
</tr>
<tr>
<td>Piernas sin Hueso</td>
<td>Boneless Ham</td>
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<td>15.9</td>
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<tr>
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<tr>
<td>Patas de Puerco</td>
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<tr>
<td>Smoked Pork Loin</td>
<td></td>
<td>$3.59</td>
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<tr>
<td>Manitas de certo en Vinegre</td>
<td>Pork skin in Vinegar</td>
<td>$2.99</td>
<td>7.3</td>
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<td>Trozos de Puerco</td>
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<tr>
<td>Cobeza</td>
<td>Head</td>
<td>$8/head</td>
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<td>$8</td>
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<tr>
<td>Cuero</td>
<td>Skin</td>
<td>$0.99 fresh,</td>
<td>26</td>
<td>$25.74</td>
</tr>
<tr>
<td>Chicherone</td>
<td></td>
<td>$4.99 cooked</td>
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<td></td>
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</table>

**Totals**

<table>
<thead>
<tr>
<th></th>
<th>184 lb</th>
<th>$326.96/hd</th>
</tr>
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</table>

USDA average retail pork price during the same period was $2.38/lb. USDA assumes a carcass to retail conversion of 0.78. Therefore, the total retail value of a 184 lb. carcass on average would have been 184*.78*2.38 = $341.58/head for a difference of $14.62.

**Purchasing a Packing Plant**

As of June 1997 hogs were being slaughtered at two plants on a custom basis and approximately 100 head per week were being slaughtered. This was the capacity of the custom slaughter plants. Related to the capacity constraints, were scheduling difficulties. If other orders came into the plants the hogs were subject to waiting. This created a serious problem when they were dealing with retail customers — Goridto’s was faced with shorting their customers’ orders if the pigs were not slaughtered. Given their customers’ previous experiences in being shorted products by other larger operations, this was unacceptable. Goridto’s had not set out to buy a packing plant and then develop or hope the market for their product developed. They began small and when the plant became their constraint to growing sales and serving their customers, they made the investment decision — customer demand drove their production decision.
The packing plant purchased is located in Ogden, Utah. The slaughter capacity is approximately 800 head per week. The plant had been in operation for several years but at the time of purchase had been closed for approximately two years. Attached is a floor-plan of the plant. The original purchase price was only $200,000, mainly because the former operator was trying to move out of slaughter and processing and there were few serious offers. In order to reduce costs, much of the plant refurbishment was done by the owners. The repair costs to get the plant operational were only $20,000 of which $12,000 was to replace the refrigeration system for the coolers. They also had to replace much of the equipment (e.g., dehairing and scalding) as the plant formerly specialized in sheep slaughter. Within three months of purchase, the plant was operational although it required recertification for USDA federal inspection. The plant began operation in October 1997. Although direct records were not relied on, Taylor and Haven reported that it cost them $10-12/cwt. ($20-25/head) to slaughter the hogs. The plant requires 8 employees on line, these hourly employees are paid $6 per hour. There are also 3-4 salaried people receiving $400/week. The number of salaried employees will depend on seasonal sales. From a revenue generation perspective, Taylor said that they required approximately $35,000 in gross sales to break-even. The plant was purchased with cash, which certainly improves the financial feasibility of the plant. While Taylor is still involved with sales, he also is serving as the plant manager. Taylor was interviewed regarding plant operations and issues as well as his other perspectives on the enterprise. Regarding sales, Taylor emphasized the point that relationship was a critical factor in retaining and finding new customers. Taylor's previous success in door-to-door sales of pesticide control products provided excellent background for working with their customers as well. Taylor had also literally sold beef door to door to initial Hispanic customers. He relates this as excellent experience for developing an understanding of what the customers wanted and this has fed into their current business. Freshness is a key attribute of Goridto's sales. They have found that their customers often view boxed pork coming from other processors of having spent more time in storage or in transit.

One of the interesting marketing changes which tied to production was a move to lighter weight hogs. There was very little indication early on that their Hispanic customers preferred lighter hogs. However, Goridto found that hogs with lighter carcasses had a higher yield when cooked as carnitas. Pork shoulders or butts are often used in Carnicerías for carnitas. Heavier carcasses/cuts would yield only 50% on a cooked weight basis, while the lighter carcasses would yield 56%. While commercial boxed pork typically is from heavier carcasses, Goridto supplies the lighter weight carcasses which now are preferred by their retail customers. There also is a color preference - carnitas from heavier hogs are too dark and carnitas from much lighter hogs are too light. Most live hogs will be slaughtered in the liveweight range of 180-220 pounds. These quality traits help determine their production practices of which more will be presented later.

The plant has experienced seasonal product flows. At start up, 90 - 120 hogs were processed in the plant per week. Due to high demand by Christmas of 1997, they were already slaughtering 260 head per week. However, after Christmas, they cut back to 200 head per week until March when they again achieved 260 head per week sales. The decline after New Year was due to seasonal decline when many seasonal laborers return to Mexico for 30 to 60 days at the start of the year. The growth by March was due to the beginning of what Haven refers to as the “eating season”. By Christmas of 1998, they were slaughtering nearly 750 head per week, both on increased seasonal demand as well as on an increased customer base. However, after the start of the year, sales again declined to about 500 head per week. This is a similar seasonal pattern to that experienced in other pork markets. The primary difficulties this imposed on the plant were labor and product flow management. In addition, they built stocks slightly as sales declined after the first of the year. They expected to be up to 7-800 head per week again by March. To meet the December demand, they begin ramping up
in November. Taylor related that shorting their customers on orders during this important sales season was not an option as it would create a breach in their relationships they had worked hard to develop.

When asked about the core factors contributing to the success of the plant, Taylor ranked them from highest to lowest importance as:

(1) Sales - All sales are confirmed before the pigs are slaughtered. With freshness as one key marketing point, this is critical.

(2) Delivery on Sales - Many of their customers complain of being shorted on orders by the larger processors. This is related to their overall sales volume and order size. As a result Goridtos' customers are very sensitive to this issue. If Goridto's shorts an order, they expect they will not have the customer again.

(3) Collections - Taylor indicated that their customers are highly reliable on accounts receivable. However, if they allow collections to occur over 14 days, they accrue very large outstanding credit on the volume. It is critical from a cash flow perspective not to let this get out of hand.

(4) Plant, production and processing management - Once operating, plant operations are an ongoing concern. This is a small share of the risk of the operation, as it simply requires getting the job done.

Goridto's is now moving towards selling vacuum packaged primals rather than selling whole carcasses. As of January 1999, they were selling approximately 50 percent of their product as vacuum packed and 50 percent as whole carcasses. This seems to run against the earlier notion that whole carcasses were necessary. However, the primals are still cut to the same styles as Hispanic meat-cutters would do in store, so they are still meeting preferences. It concedes to the economics of in store fabrication of whole carcasses and merchandising problems. The cost of hiring meat-cutters to fabricate the whole carcass in store is greater than it costs for Goridto's to do the next step in processes (i.e., break and package the primals). Just as boxed cuts have replaced carcasses in the mainstream market channel, it better responds to the needs and economics of the grocery customers. At the same time, this places the merchandising burden more directly on Goridtos and at the time we visited they were beginning to stockpile shoulders and skins. Goridtos compensates somewhat by being able ship 20% greater quantity by shipping on an in the box basis. This point best illustrates the trade-offs which can be incorporated to take advantage of serving preferences on an economically viable basis. As always, Goridto's is attempting to provide what their customers demand.

Bo McDonald manages the two LaRanchera stores affiliated directly with Goridtos (one in Logan and one in Provo). This is a key component of their overall marketing strategy. First, it allows them to continue to have direct interaction with their customers which they then can use to develop or test new markets. They are investigating the addition of other stores as the retail interface returns the highest profits and they also gain direct access to the final consumer and are better able to provide and develop products suiting their customers' needs. They did not provide direct sales and cost estimates of the retail operation. However, they did provide the estimates from the feasibility plan for a new proposed store which was based on figures from the existing stores. Gross meat sales are expected to be generate approximately $300-400,000 annually. The proposed store is 1,000 square feet, only slightly smaller than the existing Provo store. They further project that they will require about 6,650 regular customers to make their sales projections above and sell approximately 1,000 pounds of pork and 1,000 pounds of beef per week. Employment requirements are also low, requiring owner/manager input plus 3 others. As a bottom line figure, they have developed a projection of net profit on sales to be 32 percent. The very low cost structure is part of the overall benefit of this particular chain. Many Hispanic customers prefer to shop neighborhood markets in contrast to the
typical supermarkets. The two LaRanchera stores are only 1,500 and 2,500 square feet respectively. Bo indicated that sales are actually greater with the 1,500 square foot store in Provo than in the 2,500 square foot store in Logan.

Distribution

Distribution represents another key part of their competitive positioning. All distribution is done in house. In 1997, retail contacts in Los Angeles were growing. This new market base certainly expanded their market to include the largest concentration of Hispanic population in the U.S. but also stretched their distribution capabilities. As of January 1999, they owned one semi tractor truck which switched between three refrigerated trailers. One trailer is kept on the premises of Goridtos. This trailer is used for storage and shipping so it has the added benefit of adding to their plant cooler capacity which is the primary constraint in total processing capacity. One trailer is on the road delivering to both Las Vegas and Los Angeles and one trailer is left in Los Angeles. These are used primarily for long hauls, while they have two 40 foot refrigerated straight trucks for delivering short orders to their local Utah markets. In Los Angeles, a small van truck is used to offload pork and ship directly to their customers or customers may pick up product themselves at the trailer. To improve their cost effectiveness of trucking, they back-haul produce and other grocery items from California to Utah. The products are also typically geared to Hispanic markets and are supplied to LaRanchera and other Hispanic markets in the Salt Lake City area. At some point, Goridtos recognizes that the distribution costs are likely to constrain their growth. Targeting small neighborhood markets stretches their supply system. This is, however, one of their small scale competitive advantages too. Larger companies will operate through warehouses or distribution centers and are unlikely to compete head-to-head for these smaller and geographically dispersed markets.

Production System

So far, each phase of the operation has been examined independently. However, it is clearly the integration of these systems which ultimately has contributed to the success of the operations. When the decision to purchase the plant was made, all the pork producers (except Haven) stepped aside. They still network to purchase premix, but are not directly involved in the plant operations. With 700 hogs slaughtered per week, Goridtos faced the problem of hog procurement and sourcing. Further, because most of the product would be sold fresh they could not pay premium prices for hogs. The solution to their problem came from large scale swine production. As with many large all-in-all-out production units, Circle Four Farms often have lighter weight or runouts on their grow finish pigs. These do not meet the specifications for the highly uniform typical market for hogs. Goridtos began purchasing these light weight hogs from Circle Four Farms to supply their plant. Rather than being driven out by a large scale company, Goridtos once again capitalized on market change to forge fit with the changing nature of the industry. This synergy has resulted in value creation for both Circle Four Farms and for Goridtos.
The following diagram shows the complete production flow linkages of the Goridtós pork chain as it currently exists. Pigs are procured as light weights from Circle Four Farms and a Colorado farm on a semi-load basis. They ship one to four semi-loads (200 to 350 hogs per load) from Circle Four per week. Haven reported that they do experience a relatively high death loss prior to reaching the plant partially due to handling and shipping stresses. The plant does not have enough capacity to process a full semi-load each day, so to better manage pig flow into the plant, the hogs are taken directly to a farm in Brigham City where the pigs are fed and held until ready for slaughter.

Goridtós has also had to maintain interstate health protocols on pigs shipped from Colorado. Pigs which are in good health will be sold to customers in California and other pigs are used for slaughter at Goridtós. This reliance on run-out hogs has resulted in a higher level of carcass condemnation by plant inspectors. In many cases they receive pigs in the stage between weaning and entering the grow-finish phase of the large herds. In order to capitalize on marketing those that would be high-cost slow growers or might not survive to finished weights, Goridtós has also developed roaster pig markets. The Tongan Pacific Islander market is prevalent in Salt Lake City because of the influx due to immigration. In the spring of the year in particular, they often have large parties where they pit roast roaster pigs. Goridtós supplies these markets as well as several Vietnamese and Chinese markets in Los Angeles. These roaster pigs are priced at $1.00 to $1.10 per pound. Finally, the linkage to only three pig supply sources also significantly reduces the procurement costs and handling which would be necessary if sourcing pigs from several different operations.
Pricing

Consistent with the earlier price information, Goridtós generally pays market price for all hogs based on weight and quality. Earlier in the report, retail prices were reported from one of the LaRanchera stores. The wholesale prices for product are based directly from other meat wholesalers in the region. Goridtós has recognized that it will not be possible to price products higher than their competitors, even if they build strong market relationships. They attempt to compete on cost and view their relationship, service and product offerings simply as providing access to the market for sales. However, Taylor emphasizes they do not base their prices on their cost structure --they must be competitive, but it will be based on market demand.

Challenges, Opportunities and Strategies

With an understanding of the operations and systems of Goridtós, it’s worthwhile to consider where they see their future and the challenges they have faced. A major part of the interview process was to learn from their experiences. Haven attributes some of the success of the strategy to the fact that they are doing what other players can’t or won’t do. Thus, they’re not competing head to head with the larger commercial pork chain. He also points out that to a large extent everything they have done has been a solution to someone else’s problem — not their own problems. Hispanic markets in Utah were demanding whole carcasses and had trouble sourcing them. Circle Four farms was trying to add value to its run-outs from all-in-all-out production systems and Goridtós provided a market. Taylor and Haven both emphasize this need to understand and deliver to the customer. In this regard their direct involvement in two retail stores allows them to interact continuously with customers, giving them access to new ideas for forming the next products or solutions for their customers.

One of their greatest challenges has been inspection and other regulations. Given the nature of the Goridtós system, they are highly susceptible to strict inspection requirements since some of their pigs do have physical abnormalities. Both Taylor and Haven commented that the subjectivity of the inspection system leaves them exposed to variable evaluation. Part of this comes from the fact that they are a small plant and they often get a revolving door of inspectors, each with slightly different perspectives on inspection points. Product loss can vary dramatically depending on inspection and has affected their ability to control product supplies. As HACCP rules phase in they estimate that it will require one more full time person to manage the record keeping and reporting of the new system.

Haven also comments on the role of farmer owners in a pork processing system. A producer himself, Haven suggests producers were hard to work with because they would like premiums for their pigs. It wasn’t enough that a nearby market outlet was found at competitive prices, they wanted to see an increase in prices received. Haven’s understanding has grown to include a broader understanding of value-added — increasing quantities and assuring markets can be as important as increasing prices in a competitive, mature market. This also relates to the importance of producers commitments to a project. Haven emphasizes the amount of hard work it took to develop and grow this market. As soon as other opportunities arose, many people took that road rather than looking at the bigger picture of long term viability.
Other, more narrowly defined concepts follow. These are taken directly from interviews of Taylor and Haven:

(1) All agreements should be written and understood before entering into any joint venture of a packing plant.
(2) Management responsibilities must be clearly designated and followed. Otherwise, in a group setting too few do the work of too many.
(3) The packing plant should be the last thing built. Find and develop your market and hire someone else to do the processing to start with. If your market is viable, you’ll eventually reach the point as they did where you grow into a plant.
(4) Expansion into stores was absolutely critical. It allowed them direct access to their customers and also allowed Goridtos to capture the greatest share of the market value through Carnicerias, direct sales and other value added sales.
(5) Putting Carnicerias in the stores was also a great success. It draws in customers and improves product flow during the week when workers come in on break to buy lunch. Most purchases prior to this were made on weekend sales.
(6) Haven emphasizes the old meat saying “sell it or smell it”. That is why they have always sold the product before it is slaughtered. If sales are slow, Taylor will himself go out and make sales. Other people such as their truck-drivers are also part of their sales strategy. The holding farm also helps with this strategy by allowing them a place to “store pigs”.
(7) There is a need to have plant dedicated management. It is the concept of creating and maintaining profit centers.
(8) Taylor comments that attitude is everything. You must have the attitude that you will succeed. He views himself as fortunate not having any preconceived notions about the meat business. It has allowed him to creatively think about solutions to problems. “The solution to every problem is sales!”
(9) Having the right people is critical. Both Taylor and Haven attribute much of their success to people such as Carlos who manages their Los Angeles sales. They also operate on commission structure for sales and anyone can make sales.

Future Plans

Where does Goridtos see their future? Consistent with history, they are looking at their customer base to expand first. They are considering entering other regional Hispanic markets. They are considering franchising LaRanchera or similar stores, so that they have direct outlets and can better capture the final customers value. In addition, they are working on several processed product development ideas all geared toward the Hispanic market. They were unwilling to disclose these products for obvious reasons. The goal is to identify the sales first before investing in a second plant.

Summary

Goridtos ultimately offers a case of capturing opportunities. Two key points are critical: (1) within a rapidly changing swine industry, they have found a place to compete and remain viable (2) they carefully incorporate their customers’ preferences and needs in creating and maintaining their niche in the marketplace, even more importantly, customer demand drove their investment at every stage.
As with many producers, they faced the problem of declining market access, and the introduction of a large production competitor into their market with the entrance of Circle Four Farms. This limited their access to traditional markets as these could now be supplied with a single source of uniform hogs. The most remarkable response was to forge their fit in the industry by capitalizing on one of the core problems of an all-in-all-out production system — what to do with hogs which don’t fit the marketing system. This allows Goridtos to have a low cost and relatively consistent supply of hogs. Further, it reduces their procurement costs as the lot sizes delivered are large.

The demand pull aspect of the operation is critical. Rather than attempting to develop new products or compete in the commodity pork market with other producers, they identified an existing market and sought ways to fill it. Key characteristics of the market included a large population with specific expectations about how pork cuts were presented and by nature a market of small neighborhood markets. This effectively took Goridtos out of the pathways of the commercial pork channels. Food chains such as IBP to Fleming Foods to Walmart supercenters do not fit well with 1,500 - 2,000 square foot style supermarkets. As Goridtos learned what their customers wanted, they identified ways to serve them better, providing vacuum packed primals when necessary, but still cut to the specifications as Hispanic meat-cutters would do in their own stores. Again, they found the tradeoff between customer preferences and service and costs of product supply. Most critically, the demand for product eventually drove their decision to invest in a meat packing plant. As Haven said “toll packing first was the smartest thing they did”, it reduced their risk exposure as they were learning their market.

Exhibits

A. Whole Carcass Cutout illustration
B. Packing plant layout.
The shoulder is removed by following the natural seam between the breast plate and blade bone (scapula). Cut at the natural seam with a sharp knife while pulling the fore-shank away from the body of the carcass. The shoulder number 1 will include the blade bone (scapula), armbone (humerus), and fore-shank (radius and ulna) and the associated muscles.

- Major muscles will include: infraspinatus, supraspinatus, serratus ventralis, subscapularis, Biceps brachii, Triceps brachii long head and lateral head. A portion of the deep pectoral muscle may remain on the Shoulder Number 1.
The blade bone (scapula) and arm bone (humerus) are removed by separating the overlying flesh of the Shoulder Number 1. The amount of lean left on the Bones is left to the option of the processor depending on demand and market.

This item shall be prepared from any portion of the shoulder that is removed during final trimming. The Stew Cubes shall be free of bone and cartilage.
### SHOULDER 2, 11.9 lbs

<table>
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<th>Portion Cut Identifier</th>
<th>Portion Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
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<tbody>
<tr>
<td>Cut 2</td>
<td>3.1</td>
<td>Stew Cubes/ Lean</td>
<td>Trozos de puerco</td>
<td>2.49</td>
<td>Year round</td>
<td></td>
<td>Stew, Fried, Meatballs</td>
</tr>
</tbody>
</table>

This item shall be prepared from any portion of the shoulder that is removed during final trimming. The Stew Cubes shall be free of bone and cartilage.

The Fore-shank shall be removed from Shoulder Number 1 at the knee separating the arm bone (humerus) from the shank (radius and ulna). Shank cross cuts are prepared by cutting perpendicular to the length of the shank at a cut thickness designated by the processor.
This item can be processed from either of two large muscles (Triceps brachii and/or Infraspinatus) removed from Shoulder Number 1. These muscles are located on either side of the blade bone (Scapula). Upon removal from the bone, the processor will lay the muscle on the table fat side up and slice at an angle approximately 45° to the tabletop (to provide greater surface area of the portion cut from this relatively thin muscle). The processor will not completely cut through the muscle on the initial cut. The second cut will "shave" adjacent the initial cut and completely cut through to the table. The slices will be made approximately 1/8 inch thick and laid open in a "butterfly" fashion.
Ham A is processed from the intact carcass using the TableTop method of processing. The intact carcass is positioned on the table loin side down. Both hams are removed from the carcass by a straight cut perpendicular to the backbone. An initial knife cut is made at the base of the ham at a point perpendicular to the last lumbar vertebra. The initial knife cut will cut through the lean tissue to the backbone and a cleaver (or machete) can be used to cut through the backbone and remove the hams connected at the tailbones (caudal vertebra). The hams are then separated by a bandsaw or hand saw by splitting the tail bones (caudal vertebra). The hind foot is removed at a point below the hock by a saw or knife separation. At this point the ham can be skinned or left intact. Ham A will include all caudal vertebra (tailbones), pelvic bone, leg bone (femur), and hind shank (tibia and fibula) and associated muscles.

- Major muscles include:
  Semimembranosus, Semitendinosus, Gracilis, Adductor, Biceps femoris, and Quadriceps femoris.

Ham B is processed from the intact carcass using the Hanging Carcass method of processing. After the hanging carcass is skinned, Ham B is removed by following the natural seam between the flank and the ham knuckle (Quadriceps femoris) to a point where the ball of the leg bone (femur) is attached to the pelvic bone. Remove the ham by separating the femur from the pelvic bone by following the natural curve of the pelvic bone (ileum) separating the pelvic bone from the inside ham (Semimembranosus) muscle at the joint. At this point, the ham is removed from the intact carcass by cutting through the sirloin (Gluteus medius and Biceps femoris) muscle leaving the hipbone and tailbones (caudal vertebra) attached to the carcass. Ham B will be removed including the leg bone (femur) and hind shank/hock (tibia and fibula) and associated muscles.

- Major muscles will include:
  Semimembranosus, Semitendinosus, Gracilis, Adductor, Biceps femoris, and Quadriceps femoris and a portion of the (Gluteus medius and Biceps femoris).
Ham B may be sold as a whole bone-in ham portion cut. Refer to Ham B for cutting procedure.

<table>
<thead>
<tr>
<th>Portion Cut Identifier</th>
<th>Retail Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut 1</td>
<td>19.2</td>
<td>Whole Ham</td>
<td>Piema entera</td>
<td>1.49</td>
<td>Fall, Christmas</td>
<td>Freshness, Color, Bone-in</td>
<td>Baked, Stuffed (nuts, carrots, olives, etc.)</td>
</tr>
</tbody>
</table>

The tail may be removed from the ham and sold separately.
Portion Cut    Portion Cut        Classification            Spanish                       Price           Seasonal        Quality             Preparation
Identifier       Weight (lbs)

Cut 1             15.9               Christmas Ham       Piema de puerco              2.49           Christmas       Freshness, Bone-out  Stuffed and baked (nuts, hot pepper, almonds)

Ham C (Christmas Ham) shall be processed from either Ham A or Ham B by removing all bones. The Ham Hock is removed from the leg bone (femur) at the joint by a knife cut at the joint of the leg bone (femur) and hock (tibia and fibula). All associated muscle will be removed with the Ham Hock according to cutting specification for Ham Hock. After removal of the pelvic bone (Ham A), the leg bone (femur) is removed by following the natural seam of the inside ham (semimembranosus) muscle to the leg bone. This item shall be completely free of all bones and cartilage and include the muscles mentioned in Ham A and B.

The Ham Hock is removed from the leg bone (femur) at the joint by a knife cut at the joint of the leg bone (femur) and hock (tibia and fibula). All associated muscle will be removed with the Ham Hock.
The Ham Hock is removed from the leg bone (femur) at the joint by a knife cut at the joint of the leg bone (femur) and hock (tibia and fibula). All associated muscle will be removed with the Ham Hock.

<table>
<thead>
<tr>
<th>Portion Cut Identifier</th>
<th>Portion Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut 1</td>
<td>1.9</td>
<td>Ham Hock</td>
<td>Chamorro de puerco</td>
<td>1.29</td>
<td>Year round</td>
<td>Freshness</td>
<td>Pozole, Stew, Carnitas</td>
</tr>
</tbody>
</table>

**HAM 1, 23.1**
### HAM 2, 23.5 lbs

<table>
<thead>
<tr>
<th>Portion Cut Identifier</th>
<th>Portion Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut 3</td>
<td>1.4</td>
<td>Ham Bones</td>
<td>Espinazo o hueso</td>
<td>0.99</td>
<td>Year round</td>
<td>Pozole or flavor beans</td>
<td></td>
</tr>
</tbody>
</table>

The Ham Bones are removed from the ham according to Ham C. The leg bone (femur) and pelvic bone will be practically free of lean tissue at the discretion of the processor.

### HAM 2, 23.5 lbs

<table>
<thead>
<tr>
<th>Portion Cut Identifier</th>
<th>Portion Cut Weight (lbs)</th>
<th>Classification</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut 4</td>
<td>4</td>
<td>Skin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The skin shall be removed from Ham A or Ham B by a knife cut following closely to the outer skin surface of the ham. The skin shall remain intact and include external (subcutaneous) fat and lean tissue at the discretion of the processor depending on market.
Loin 1 can be fabricated from the carcass by either the Table Top or Hanging Carcass style of processing. Loin 1 is removed by a knife cut parallel to the loin (Longissimus dorsi), cutting on either side of the full length of the backbone (spinal process) from a point at the base of the neck bone (cervical vertebra) to the tail bones (caudal vertebra). The first several ribs (approximately 1-3 ribs) are removed from the spine by a meat cleaver. The ribs are then spread exposing the chest (thoracic) cavity. A knife cut breaks the membrane at the point of attachment of the ribs and backbone. After this membrane is broken, the rib cage can be further spread, partially separating the ribs from the backbone. The ribs, loin muscle, and belly are then removed from the backbone by a meat cleaver from the base of the neck to the pelvis. The pelvis, backbone, neck, and head will remain intact after Loin 1 is removed from either side.

### WHOLE CARCASS, 187 lbs

<table>
<thead>
<tr>
<th>Primal Cut Identifier</th>
<th>Primal Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rib 1</td>
<td>13.8</td>
<td>Ribs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rib 2</td>
<td>14.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ribs 1 are processed from Loin 1 (not shown) after removal of Boneless Loin, the blade section, and belly. The blade section of Loin 1 is removed at the first rib. The belly and associated ribs are removed by saw parallel to the backbone. The Ribs 1 will be closely trimmed of lean and include a portion of the ribs and pelvis.

Spare Rib Cross Cuts re fabricated from Ribs 1 by cutting perpendicular to length of the rib bones using a band saw.
The tenderloin (Psoas major and minor) is removed from Rib 1 by following the natural seam between the ribs and the tenderloin muscle. The Tenderloin will be completely removed of external fat and associated lymph nodes.

The Boneless Loin is removed from Rib 1 by following the natural seam of the loin (Longissimus dorsi) muscle. The loin (Longissimus dorsi) muscle shall remain intact and be trimmed of all external fat and extraneous muscle tissue.
The Lomo Relleno is processed from Boneless Loin by a thin slice beginning from the external silver skin, rolling the loin along a knife cut parallel to the outer surface of the loin muscle. The resulting product will increase the surface area of the loin by generating a large "sheet" of meat, that can be rolled back up including various stuffings left to the discretion of the processor and market demand.
**Portion Cut** | **Portion Cut** | **Classification** | **Spanish** | **Price** | **Seasonal** | **Quality** | **Preparation**  
--- | --- | --- | --- | --- | --- | --- | ---
Cut 1 | 11.8 | Spare Rib Cross Cuts | Costilla de puerco | 1.84 | Year round | Freshness, Thickness, Bone-in | Fried, Stew, Grilled, Carnitas

Spare Rib Cross Cuts are fabricated from Ribs 1 by cutting perpendicular to length of the rib bones using a band saw.

**Portion Cut** | **Portion Cut** | **Classification** | **Spanish** | **Price** | **Seasonal** | **Quality** | **Preparation**  
--- | --- | --- | --- | --- | --- | --- | ---
Cut 2 | 2.5 | Stew Meat |  |  |  |  |  

This item shall be prepared from any portion of the Rib 2 that is removed during trimming. The Stew Meat shall be free of bone and cartilage and vary in size and consistency at the discretion of the processor and market demand.
Flank 1 is removed from the ham (posterior) end of Loin 1. A knife cut beginning at the ham end following the base of the loin (Longissimus dorsi) muscle to point adjacent the last rib removes Flank 1. Flank 1 will be completely free of bones and cartilage. The amount and content of Flank 1 will be to the discretion of the processor and market demand.

- The Flank 2 can be further processed into strips cut approximately 1 inch wide, parallel to the length of the Flank 2.

<table>
<thead>
<tr>
<th>Sub Primal Cut Identifier</th>
<th>Sub Primal Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flank 1</td>
<td>5.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Portion Cut Identifier</th>
<th>Portion Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flank 2</td>
<td>6.3</td>
<td>Flank Strip</td>
<td>FALDA (to fry)</td>
<td>1.89</td>
<td>Year Round</td>
<td>Freshness Bone-out</td>
<td></td>
</tr>
</tbody>
</table>
The Backbone (dorsal process and vertebra) is removed from the head at the atlas joint by making a straight cut perpendicular to the spine just below the base of the ears. Once the atlas joint is located, the Backbone and what remains of the pelvis can be "twisted" and separated from the head or a meat cleaver can be used. The Backbone will include a portion of the pelvis, tail bones (caudal vertebra), spine (lumbar and thoracic vertebra), and neckbones (cervical vertebra) as well as associated lean tissue.

The Backbone can be further processed into portion cuts or Backbone Cross Cuts. Backbone Cross Cuts are processed by cutting perpendicular to the length of the Backbone using a bandsaw set to a width of approximately 1 inch.

- Pozole, carnitas, with nopales, w/ hot pepper

### Whole Carcass Cutout Illustration

**WHOLE CARCASS, 187 lbs**

<table>
<thead>
<tr>
<th>Primal Cut Identifier</th>
<th>Primal Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backbone</td>
<td>16.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Spinal Bone, 16.3 lbs

<table>
<thead>
<tr>
<th>Portion Cut Identifier</th>
<th>Portion Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut 1</td>
<td>16.1</td>
<td>Backbone Cross</td>
<td>Espinoza</td>
<td>1.99</td>
<td>Year Round</td>
<td></td>
<td>Pozole, carnitas, with nopales, w/ hot pepper</td>
</tr>
</tbody>
</table>
### Portion Cut Information

<table>
<thead>
<tr>
<th>Portion Cut Identifier</th>
<th>Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fore feet</td>
<td>1.3</td>
<td></td>
<td>Pata de puerco</td>
<td>0.69</td>
<td>December</td>
<td>Freshness, Bone-in, Color</td>
<td>In vinegar, pozole battered/fried</td>
</tr>
<tr>
<td>Hind Feet</td>
<td>1.9</td>
<td>Fore Feet</td>
<td>Pata de puerco</td>
<td>0.69</td>
<td>December</td>
<td>Freshness, Bone-in, Color</td>
<td>In vinegar, pozole battered/fried</td>
</tr>
</tbody>
</table>

The Fore Foot is removed from the intact carcass at a point below the knee at the “flat joint”. A knife cut is made through the skin and the outer membrane while downward pressure is applied. The joint will open due to the downward pressure and the foot can be removed at the flat joint with a knife.

The Hind Foot is removed from the intact carcass at a point below the hock. A knife cut is made through the skin and the outer membrane while downward pressure is applied. The joint will open due to the downward pressure and the foot can be removed at the joint with a knife. The Hind Foot can remain intact or split the length of the Hind Foot between the digits.
The Skin can be fabricated from the carcass by either the TableTop or Hanging Carcass style of processing. Begin skinning by opening the skin from the knee to the breast bone. Begin skinning from inside the front legs removing the skin to the base of the head (just below the ears). Care can be taken to keep the skin intact (minimizing holes) or the processor may puncture the skin in an effort to obtain a more secure handhold during removal. The amount and content of fat and lean remaining on the skin will be left to the discretion of the processor and according to market demand.

Leaf Lard is processed by heating (or "rendering") of the abdominal leaf (intraperitonal) fat.
Exhibit A - Whole Carcass Cutout Illustration - 19 of 19

### WHOLE CARCASS, 187 lbs

<table>
<thead>
<tr>
<th>Primal Cut Identifier</th>
<th>Primal Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head</td>
<td>16.2</td>
<td></td>
<td>Cobeza</td>
<td>8</td>
<td>Year round, Christmas</td>
<td>Freshness, Bone-in, Color</td>
<td>Pozole</td>
</tr>
</tbody>
</table>

The Head is removed from the Backbone (dorsal process and vertebra) at the atlas joint by making a straight cut perpendicular to the spine just below the base of the ears. Once the atlas joint is located, the Backbone and what remains of the pelvis can be "twisted" and separated from the head or a meat cleaver can be used. The Head will remain intact.

### WHOLE CARCASS, 187 lbs

<table>
<thead>
<tr>
<th>Primal Cut Identifier</th>
<th>Primal Cut Weight (lbs)</th>
<th>Classification</th>
<th>Spanish</th>
<th>Price</th>
<th>Seasonal</th>
<th>Quality</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidneys</td>
<td>0.7</td>
<td></td>
<td>Kidneys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The kidneys are removed from the abdominal cavity and separated from the leaf (intraperitoneal) fat. The outer membrane of the kidney shall be removed and the kidneys left intact or sliced at the discretion of the processor or according to market demand.
A Dream Come True: The Case of Egg & I Pork Farm

Growing up in New York City, Jim (Doc) Dougherty yearned to live on a farm and raise livestock. “I never thought it could happen though” he recalls, so pragmatism led him into the construction business. When that trade suffered from a downturn, he took a risk in 1977 and bought a run-down five-acre dairy farm in New Milford, CT, 80 miles from Manhattan. As with most direct marketing stories, the farm began small, beginning with two feeder pigs purchased in 1978. He then added 500 laying hens, and named it The Egg & I after the 1950's best selling book and movie. Today the farm includes a retail butcher shop called the ButchersChop, a pork processing and slaughter facility and a hog finishing barn. “This whole thing is the answer to a boyhood dream,” Dougherty said of his operation. “Now the darn thing is a full-fledged business.” This case study will examine the operations of a privately owned, but fully integrated pork production system. The marketing and production protocols will be particularly emphasized.

Market Environment

Connecticut had 1,100 hogs in the breeding herd and only 3,900 market hogs on farms on December 1, 1998 (USDA, Hogs and Pigs, December 1998). Only Alaska, New Hampshire and Vermont have fewer hogs. Commercial hog slaughter for all of New England totaled only 26,400 in 1998 (New England includes Connecticut, Maine, Massachusetts, Vermont, and Rhode Island). According to the 1997 Agricultural Census, there were 210 hog farms in 1997 of which 179 had less than 25 pigs on site. Connecticut acreage in corn production is reported by 1997 Census of Agriculture to be 5,460 acres and total bushels harvested were around 605,666 bushels. However, Connecticut rates fourth in household median income ($43,535 compared to U.S. median income of $36,656) and is within 1 hour of New York City. In addition to the large population base of New York, Connecticut itself holds a population of 3.4 million people. The region where the Egg & I Pork Farm is located has a significant commuter population. Like Jim Dougherty they have sought the romance and beauty of living in the Connecticut countryside away from the big city.

Within this context, the Egg & I Pork Farm finds itself in an ideal market environment - relatively few local competitors and a large and wealthy population at its doorstep. However, there are real growth constraints and if the operation were to expand it would require spreading out operations either through contracts or franchises. More acute than in other regions, the densely populated East Coast has strict restrictions on agricultural zoning and permitting.

History of The Egg & I Pork Farm

The property on which The Egg & I farm now stands was purchased by James (Doc) Dougherty and his wife Nancy in late 1977. The farm consisted of a rundown dairy operation and five acres of crop land. The farm had been abandoned for ten years other than that the buildings were used to raise replacement heifers for a neighboring dairy farm. Jim’s original plan was to live in the country and operate a hobby farm selling vegetables and eggs to pay the expenses of raising pork and beef for home consumption. In 1978, two feeder steers and two feeder pigs were purchased. In the spring of 1979, two acres of land were cleared for vegetables and a small laying flock was started. By 1980, the operations had grown to 500 laying hens and three acres of vegetables were being grown and sold directly from the farm. A barn renovation had also been completed so he began operating a Spring feeder pig operation with pigs sold as custom pork in the Fall.
In 1981, Jim attended an artificial insemination seminar at International Boar Semen (IBS) in Eldora, Iowa. Over the next five years he concentrated on building a production herd, using semen from IBS. After touring many larger hog operations in their area and using the facility manuals of Iowa State University and Penn State University, Jim settled on a pre-fab building (100’ x 40’) for raising hogs. The building included a 40’x14’x6’ USDA, SCS designed, manure storage facility. The manure storage facility is outside the pig area, but is covered by a three sided roof. This helps keep down odor which is necessary due to the population density. The building had the capacity to farrow, nurse, grow and finish approximately 300-500 pigs per year. By 1987 The Egg & I was operating with 50 sows and gilts producing a large, lean market hog with excellent pig per sow per year numbers. As the operation had grown, Jim had to make a decision of whether to continue growth (which was limited by location and resources), begin to add value to the final product to justify the small farm size, or simply stop the operation. The decision was to focus attention on three categories (1) swine housing and production, (2) marketing and (3) further processing pork products.

To evaluate further processing, Jim contracted a meat specialist to act as a consultant. The market strategy was to sell freezer orders. At this point they had built a good customer base and assumed this would be the direction to go. However, in order to better determine the quality of the pork, the meat scientist suggested they do a cutting trial to determine the quality of the hogs. Two market hogs were slaughtered and they spent a full day breaking down and evaluating the cuts. They then broke out everything and priced it at both wholesale and retail cut levels. Every possible scenario for merchandising Egg & I Pork was investigated and discussed. The cutout trials also provided Jim’s education in fabricating hog carcasses. “We videotaped the original cutting trials,” relates Jim, “then I watched the video as I fabricated my first hog.” “It took three days to break down the two halves as I had to keep running back and forth to the house where the video recorder was to watch the next step and then go back to make the cuts.” With the processing divided into three parts: slaughter, fabrication and smoking, it was soon evident that in addition to raising their own hogs they would have to perform at least one of these functions themselves. The Egg & I opted for fabrication since a facility of this type would allow the opportunity to retail right off the farm. Funding was arranged and within 18 months a new finishing barn, a U.S.D.A. inspected processing plant and a small retail store were constructed on the farm. Thirty-five hogs were processed in September of 1989, and by November 1989 they were completely sold out. No more hogs would be available until January of 1990. While the farrow-to-finish production facilities enabled the production of about 5 hogs per week it became clear that they needed 7 hogs per week just to break-even.

In order to expand production, Jim reached an agreement with an experienced Duroc breeder and feeder pig producer who helped Jim get started in 1978 to supply feeder pigs. The breeding/farrowing/nursery operation was relocated to this satellite farm and The Egg & I Farm became a grower/finish operation. This allowed an increase in finishing numbers to 500 hogs by 1992. The pigs under contract are purchased for $50/head. The contract price is completely unrelated to market prices, but is a negotiated price that both the feeder pig supplier and Jim agreed they could live with. However, this was still not enough production to keep up with the demand, so each month The Egg & I Farm receives 80 clean, healthy and large feeders from another regional producer. The Egg & I Farm forecast for 1999 is to produce and process 20 hogs/week for a total 960 per year. Expectations currently are that these numbers will not be sufficient to maintain supply to their customers.

At the beginning of on farm processing operations in 1989, products were sold by word of mouth to local customers. For several years after that, the Egg & I used a newsletter format to market all products. This has grown to include marketing to wholesalers (regional grocery stores), direct sales from the newly constructed ButchersChop on the farm and through the mail order catalog of Dean & DeLuca.
Production Operations

Hog Production

Although the Egg & I Farm began as a farrow to finish operation, it is currently operating as strictly a finishing operation taking the feeder pigs from 60 pounds to 275 - 300 pounds. Feeder pigs are contracted from two area producers who do the farrowing and breeding. A premixed 16% corn/soy ration balanced with a vitamin and mineral supplement is purchased from Cargill and all feed is delivered on a weekly basis. No claims are made regarding production protocols of the product. Subtherapeutic antibiotics and other growth enhancers are not used, but the hogs are treated with appropriate health products when necessary. A closed herd is maintained between the farms which improves health, and with low regional hog populations, there is only a small likelihood that pathogens would be introduced into the herd. The pigs are also bedded with sawdust. Hogs are finished to heavy weights of 290-300 pounds if they maintain lean growth. The heavier weights are preferred because of the $35/head fixed charge for slaughter (average cost per pound goes down as heavier hogs are slaughtered) and also because he needs a large ham to market through the Dean & DeLuca catalog. With a 300 pound live-weight it is assured that the carcass will yield two 9-11 lb. hams for sale with each full ham produced.

The building itself is 40' x 96' including a 14'x40' x 6' Soil Conservation Service designed manure storage pit. The pit is closed to 3 sides and is agitated and emptied every two to three months. The manure is applied to a neighboring dairy farmer's hay and corn fields. The production practices tie in with the on farm retailing. Jim invites visitors (and customers) to go in and see the pigs and is very willing to provide educational information to interested customers. “It’s a way to educate the customer on production practices, and show them how well the pigs are treated.”

Slaughter and Processing

When the site visit to the Egg & I Farm was conducted, the on farm slaughtering facilities were not yet operational. To this point, slaughtering has been done on a custom basis. As indicated earlier, the charge is $35 per hog. Hogs are taken to the custom plant and slaughtered on Monday. On Tuesday, Jim picks up the pigs himself in a refrigerated truck and brings them to the processing facility at the Egg & I Farm. By nine o’clock Tuesday morning, all carcasses are broken into primals. The balance of Tuesday is spent making bacon and ham, skinning and trimming shoulders and packaging feet. In order to merchandise the hog completely, Jim wholesales the neckbones to ethnic markets in Hartford, CT. Currently, the smoking is also done on a custom basis with a USDA inspected smokehouse approximately 45 minutes from the farm. Jim delivers the fresh product (bellies and hams) and retrieves the finished pork product. The process now results in only 10 percent shrink on hams which Jim considers to be quite good.

Jim is taking on the slaughter operations for three primary reasons: (1) the implementation of HACCP (2) the current slaughter plant can only process 15 head per week and only on Mondays and (3) he believes he can slaughter pigs himself for less than the $35/head currently charged. In addition, it will greatly reduce the handling and shipping of taking pigs to market and then bringing them back to the on farm processing. The new slaughter plant has the capacity to slaughter 20-30 head per day. However, initially it will be intended to slaughter only one day per week as is currently done on a custom basis. The decision for single day slaughter is partially an attempt to maintain the current labor situation and simply to cross-train workers.
The plant is separated from the pigs only by a small walk-way, so the pigs will literally be walked to slaughter from the modified open front production facility. The following diagram illustrates the slaughter facility and the finishing facility.

Jim expects to allow pigs to enter the walkway in the week prior to slaughter to minimize the handling stress when they are actually slaughtered. The goal is to also make improvements in pork quality through reduced handling. Although it is not included in the schematic, there are plans to include a lab where organs such as heart valves can be processed and shipped for medical research and use. The original cost for the construction of the slaughter facility was estimated at $100,000. However, as of February 1999, costs had risen to approximately $150,000. The plant will be operated by 3 people and because of the limited slaughter time, employees will be rotated through various workstations to minimize labor costs. Plans are to maintain a completely closed herd and slaughter facility although sows will be utilized from the contract feeder pig producer.
Although the on farm plant was not operational during our site visit, the current processing area was operational as was the retail outlet. The current processing and retail is laid out as follows.

Currently, the fresh pork carcasses are brought into the carcass cooler area, where they remain until they are cut to retail portions. The processing room includes a band saw and sausage grinder for preparing sausage products. Cooking is also done on site. No smoking is currently done on site, but smoked product is brought into the processing area for further cutting or is vacuum packed for sale. All products are placed in vacuum packaging material, not cellophane trays. This enhances shelf-life and presentation, but also is a necessity for the mail order shipping portion of the business. Much of the product is also sold frozen, although none of the products are more than one week old. Once the new slaughter and processing facility is completed, this will free up the further processing area for expanded smoking, cooking and packaging products. In addition another walk-in retail counter will be included where the office now is. The packing and shipping area supports the mail and catalog delivery portion of the business and mostly consists of styrofoam cooler packs and weighing meters.

Although the current system relies on custom killing and smoking of products, by summer, Jim expects to be a fully closed operation. This will allow him to expand product lines, reduce the handling currently involved in shipping hogs and pork products from other slaughter plants and processing facilities and will allow him to use more products as he develops more recipes. Finally, when asked why he was entering further processing, Jim’s response was, “three words: HACCP, HACCP, HACCP. This allows me to control the entire production process and not be concerned if other parts of the chain are compliant.”

Marketing Operations

“If I could just get rid of the shoulder, everything else would be fine” was the first thing Jim said when asked to comment about marketing. “Marketing the entire pig, including the
squeal, is the goal for The Egg & I Farm.” Following is a description of the broad based marketing approach the Egg & I has taken to merchandise pork products.

As indicated earlier Egg & I’s original pork sales were through custom processing. However, when that became inadequate, they turned to a newsletter format to market pork (samples are included as exhibits). Current marketing efforts include three different market formats: 1) wholesale sales of product to local small and medium sized retail operations (one store carries the full Egg & I product line), 2) restaurant sales through area restaurants, 3) retail direct sales to customers. Retail direct sales include their new retail store on site, mail order through their newsletter (also now available via the internet), the Dean & DeLuca catalog, and the operation of a bus they use to supply breakfast and lunch at area flea markets. Jim estimates that 40 percent of his customers are from New Milford, 40 percent are from New York, and the remaining 20 percent are from the tri-state area.

**Wholesale Marketing**

The wholesale marketing component consists of sales to area grocery stores. This would include 8 to 10 loins/week, case ready smoked and fresh items, and whole smoked hams for the deli department. Following is their product line and price list for the wholesale market as of January 1998. Only one store carries their complete line of products, however, six stores do carry some of The Egg & I Pork Farm product line. As part of the marketing, Jim provides the labels and a case display which clearly identifies the pork is from The Egg & I Farm. This co-labeling is important for building customer base and brand identification. Another important wholesale market for the shoulders are pizza restaurants. One pizza restaurant in New Milford purchases 75 to 100 pounds of bulk sausage per week at $2/lb. Two other pizza restaurants will take an additional 50 - 150 pounds per week. The sausage is all shoulder meat, so it represents an important way to create value from the shoulder.

**Table 1. Wholesale Price List, The Egg & I Pork Farm, January 1998**

<table>
<thead>
<tr>
<th>Item</th>
<th>Price/lb.</th>
<th>Item</th>
<th>Price/lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Pork</td>
<td></td>
<td>Smoked Pork</td>
<td></td>
</tr>
<tr>
<td>Bone-In Ham</td>
<td>$2.49</td>
<td>Bone-In Ham</td>
<td>$3.49</td>
</tr>
<tr>
<td>Boneless Ham</td>
<td>$3.59</td>
<td>Boneless Ham</td>
<td>$4.09</td>
</tr>
<tr>
<td>Season Shoulder Roast</td>
<td>$3.29</td>
<td>Pre-Sliced Ham</td>
<td>$3.69</td>
</tr>
<tr>
<td>Spare Ribs</td>
<td>$2.59</td>
<td>Ham Steaks</td>
<td>$3.69</td>
</tr>
<tr>
<td>Pork Loin</td>
<td>$2.99</td>
<td>Bacon Sliced</td>
<td>$3.09</td>
</tr>
<tr>
<td>Sausage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breakfast (links, bulk,</td>
<td>$2.39</td>
<td>Daisy Ham</td>
<td>$3.59</td>
</tr>
<tr>
<td>chubbs, tube, patties)</td>
<td></td>
<td>Country Roast</td>
<td>$3.79</td>
</tr>
<tr>
<td>Italian Sweet (links,</td>
<td>$2.39</td>
<td>Hocks</td>
<td>$2.59</td>
</tr>
<tr>
<td>bulk, tube, patties)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italian Hot (links,</td>
<td>$2.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bulk, tube, patties)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bratwurst (links,</td>
<td>$2.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>singles, 5 lb. link bulk)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Deli Items &amp; Specialties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kielbasa Rings</td>
<td>$2.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kielbasa Dogs - 1 lb.</td>
<td>$3.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Franks - 1 lb.</td>
<td>$3.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Franks - 5 lb.</td>
<td>$2.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liverwurst Fresh</td>
<td>$3.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liverwurst Smoked</td>
<td>$3.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bologna, Beerwurst,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Krakow, Ham Salad</td>
<td>$3.29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Restaurant Marketing

As with grocery stores, Jim provides several area restaurants with pork products. As part of the promotion, he asks that they also identify The Egg & I Pork Farm on the menu. Jim is somewhat concerned that if product is short for the restaurant, they will source their pork from somewhere else, but still leave The Egg & I Pork Farm identifier on the menu. If the substitute pork product is not up to standards, it may provide negative advertising for The Egg & I Pork Farm. Therefore, he carefully controls who uses the brand and they must agree to feature only Egg & I products. This cross tie-in helps to assure markets and maintain quality. The restaurants carrying the products tend to be high end restaurants, pricing the meals with pork at $19 to $24.

<table>
<thead>
<tr>
<th>Item</th>
<th>Price/lb.</th>
<th>Item</th>
<th>Price/lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Pork</td>
<td></td>
<td>Smoked Pork</td>
<td></td>
</tr>
<tr>
<td>Bone-In Ham</td>
<td>$2.49</td>
<td>Bone-In Ham</td>
<td>$3.79</td>
</tr>
<tr>
<td>Boneless Ham</td>
<td>$3.49</td>
<td>Boneless Ham</td>
<td>$4.09</td>
</tr>
<tr>
<td>Season Shoulder Roast</td>
<td>$3.49</td>
<td>Hocks</td>
<td>$2.49</td>
</tr>
<tr>
<td>Spare Ribs</td>
<td>$2.89</td>
<td>Loin Chops</td>
<td>$4.79</td>
</tr>
<tr>
<td>Pork Chops 1 1/4&quot;</td>
<td>$3.25</td>
<td>Deli Items &amp; Specialties</td>
<td></td>
</tr>
<tr>
<td>Pork Chops 1 1/2&quot;</td>
<td>$3.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pork Loin</td>
<td>$3.79</td>
<td>Kielbasa Rings</td>
<td>$2.89</td>
</tr>
<tr>
<td>Sausage</td>
<td></td>
<td>Kielbasa Dogs - 1 lb.</td>
<td>$3.09</td>
</tr>
<tr>
<td>Breakfast Links</td>
<td>$2.59</td>
<td>Franks - 1 lb.</td>
<td>$3.09</td>
</tr>
<tr>
<td>Bulk, Chubs</td>
<td>$2.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tubes, Patties</td>
<td>$2.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italian Sweet Links</td>
<td>$2.59</td>
<td>Franks - 5 lb.</td>
<td>$2.99</td>
</tr>
<tr>
<td>Bulk, Tube, Patties</td>
<td>$2.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italian Hot Links</td>
<td>$2.59</td>
<td>Knockwurst Butcherburgers</td>
<td>$2.89</td>
</tr>
<tr>
<td>Bulk, Tube, Patties</td>
<td>$2.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bratwurst Links, Singles</td>
<td>$2.59</td>
<td>Liverwurst Fresh</td>
<td>$3.39</td>
</tr>
<tr>
<td>5 lb. link bulk</td>
<td>$2.39</td>
<td>Liverwurst Smoked</td>
<td>$3.19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bologna, Beerwurst,</td>
<td>$3.29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Krakow, Ham Salad</td>
<td></td>
</tr>
</tbody>
</table>

Retail Direct Sales

As indicated earlier, retail direct sales include several subsets: sales from the Egg & I Pork Farm retail counter, mail-order or catalog sales, sales through Dean & DeLuca and their bus sales. Following is the retail price list. These prices do not apply to the Dean & DeLuca items which are provided as an exhibit.

The ButchersChop
The ButchersChop is the on-farm retail center. It's layout is shown in the previous diagram. This will be the focal point of the farm. The kitchen area has been included to not only allow preparation of samples, but will also be used to conduct cooking seminars. Area speakers will be invited to hold cooking exhibits. Jim himself has been a featured speaker at area seminar sessions. In the fall, there will be craft workshops held in the customer service area. One idea is to have basket making workshops, with the baskets to include Egg & I pork products for the Holidays. Seminars will also be presented on vegetable growing and preparation as well as pork production. Customers may sign a guest book which serves as a mailing list. A recipe box is for people to leave or pick up recipes for pork products. These will be compiled into...
cookbooks which will then be offered for sale. In addition, people are invited to bring in old family sausage or other recipes which Jim will then custom process. This not only provides a service for customers, but is intended to serve as a product development tool. The ButchersChop is crafted of pine and oak and is made to replicate a New England Style Barn. It is also decorated with historical photos and other antiques from the region. Jim also plans to include an old fashioned knife sharpening business on a custom basis. This ties into the marketing strategy of making people feel like they are visiting a traditional meat market. A critical aspect of the ButchersChop is also direct interaction with customers. Customers will be made to feel as though they are the center of the business. The goal is to pull sales that are currently wholesale to local grocers into the store. “One store in New Milford purchases about $1,200 worth of product per week and then retails it at a 20-30 percent mark-up” Jim said. “Pulling those sales directly into the Egg & I would obviously improve the profitability, the only drawback is the convenience offered by a full service grocer so that the wholesale market will still be important for sales.”

<table>
<thead>
<tr>
<th>Item</th>
<th>Price/lb.</th>
<th>Item</th>
<th>Price/lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Pork</td>
<td></td>
<td>Smoked Pork</td>
<td></td>
</tr>
<tr>
<td>Bone-In Ham</td>
<td>$2.89</td>
<td>Bone-In Ham</td>
<td>$3.79</td>
</tr>
<tr>
<td>Boneless Ham</td>
<td>$3.99</td>
<td>Boneless Ham</td>
<td>$4.79</td>
</tr>
<tr>
<td>Season Shoulder Roast</td>
<td>$4.09</td>
<td>Pre-Sliced Ham</td>
<td>$5.09</td>
</tr>
<tr>
<td>Pork Steaks</td>
<td>$3.89</td>
<td>Ham Steaks</td>
<td>$4.59</td>
</tr>
<tr>
<td>Spare Ribs</td>
<td>$3.19</td>
<td>Bacon Sliced (1 or 5 lb.)</td>
<td>$4.19</td>
</tr>
<tr>
<td>Country Ribs</td>
<td>$3.89</td>
<td>Slab Bacon</td>
<td>$3.89</td>
</tr>
<tr>
<td>Loin Roast</td>
<td>$4.29</td>
<td>Daisy Ham</td>
<td>$4.29</td>
</tr>
<tr>
<td>Pork Chops 1 1/4&quot;</td>
<td>$4.49</td>
<td>Country Roast</td>
<td>$4.59</td>
</tr>
<tr>
<td>Pork Loin</td>
<td>$3.79</td>
<td>Hocks</td>
<td>$2.89</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loin Chops</td>
<td>$5.29</td>
</tr>
<tr>
<td>Sausage</td>
<td></td>
<td>Deli Items &amp; Specialties</td>
<td></td>
</tr>
<tr>
<td>Breakfast (Links, Bulk, Chubs)</td>
<td>$3.19</td>
<td>Kielbasa Rings</td>
<td>$3.89</td>
</tr>
<tr>
<td>Breakfast (Patties)</td>
<td>$3.29</td>
<td>Kielbasa Dogs - 1 lb.</td>
<td>$3.99</td>
</tr>
<tr>
<td>Italian Sweet (Links, Bulk, Tube)</td>
<td>$3.19</td>
<td>Franks - 1 lb.</td>
<td>$3.99</td>
</tr>
<tr>
<td>Italian Sweet (Patties)</td>
<td>$3.29</td>
<td>Franks - 5 lb.</td>
<td>$2.89</td>
</tr>
<tr>
<td>Italian Hot (Links, Bulk, Tubes)</td>
<td>$3.19</td>
<td>Knockwurst</td>
<td>$4.09</td>
</tr>
<tr>
<td>Italian Hot (Patties)</td>
<td>$3.29</td>
<td>Liverwurst Fresh</td>
<td>$3.99</td>
</tr>
<tr>
<td>Bratwurst (Links, Singles, 5 lb. Link Bulk)</td>
<td>$3.19</td>
<td>Liverwurst Smoked</td>
<td>$3.79</td>
</tr>
<tr>
<td>Butcherburgers</td>
<td>$3.89</td>
<td>Ham Salad</td>
<td>$4.29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Head Cheese</td>
<td>$4.19</td>
</tr>
<tr>
<td>Critter Treats</td>
<td></td>
<td>Bologna</td>
<td>$3.99</td>
</tr>
<tr>
<td>Smoked Ears</td>
<td>$0.79 ea.</td>
<td>Beerwurst, Krakow</td>
<td>$4.09</td>
</tr>
<tr>
<td>Seeded Suet Balls</td>
<td>$1.25 ea.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

One of the key problems faced by any retail outlet will be product merchandising. In order to increase utilization of the carcass, there are multiple uses for each cut. For example, there is a charge for bone disposal (rendering), so they are roasted and then turned into demi-glaze bricks. These can then be used as gravy and stock for roasts. Rinds are taken off bacon and rolled up to make chew toys which are merchandised for $0.79 each. There is approximately $12 in value for each hog simply from the chew toys. Other specialty cuts are also made to help differentiate products and improve sales. Rather than selling whole hogs for hog roasts, fresh hams are held back and used instead. During the summer, sales of hams are slower and
more value is created by using them for roasts, but keeping the higher valued cuts such as loins and ribs for summer grilling. The use of fresh hams also reduces the costs of curing and smoking during slow selling summer periods.

Mail Order Sales

Mail order sales continue to be a method of retailing. Orders are shipped overnight using Federal Express. The pricing structure is the same as for retail cuts, but customers are charged an additional shipping fee. A sample newsletter with the mail-order is included as an exhibit.

Bus Sales

From May through September, Jim also operates The Egg & I Lunch Bus at local flea markets. The bus is outfitted with a small kitchenette and coffee pots. The only items on the menu are bacon and egg or ham and egg sandwiches. They are quite large and the bacon and ham used are trimmings which result from the custom cutting done for the main retail sales. This offers great customer exposure and also helps to merchandise what otherwise might be pure shrinkage. Approximately 450 to 500 sandwiches will be sold each weekend during the summer. They have also always had a small catering operation and they will be increasing this along with barbecues and probably hog roasts.

Dean & DeLuca

Dean & DeLuca is a gourmet food catalog (www.dean-deluca.com). The Egg & I Farm began featuring pork in May 1998. Four items are featured from The Egg & I Farm. First is a smoked country bacon. A shipment of 4 one pound packages retails for $28. The second item is a smoked ham with apple wood flavor. Averaging 9-11 pounds and sold bone-in, this retails for $70. For this size category from Jim’s large hogs (280-300 lbs.) he can cut each ham in half so four hams are available from each hog (total retail value of $280 per hog). The third item is double cut smoked pork chops. Four, 1 lb. chops cut 1 1/4 inch thick retail for $42. The final item is a pork tenderloin. A two pack of 1/4 pounds each retails for $25 while the four pack of 1/4 pounds each retails for $45 per pound. The orders are faxed directly to The Egg & I Farm and then are shipped next day via UPS. The Egg & I does not receive the retail price but rather a negotiated wholesale price.
During the summer of 1999, Dean & DeLuca only featured the Egg & I smoked bacon. This was partly due to the seasonality of sales related to pork products. Jim points this out as a pitfall of managing your own marketing. Customers will change their mind on what they want supplied and it is important not to place all your emphasis in one area.

**Summary of Sales Outlets**

Jim provided sales by source for The Egg & I Pork Farm for 1998. The largest sales category was wholesale product (the grocery stores, not including Dean & DeLuca) which totaled $102,649 in 1998. The second largest category were pork sales to restaurants which totaled $80,434.64 followed by the retail sales (mail order from the Egg & I and the ButchersChop) with a total of $56,732.20. The weekend bus sales contributed $45,599 for sales. Total sales for 1998 were $285,414.84. For October through December, the Dean & DeLuca catalog items generated approximately $7,000 in sales. The goal is to position The Egg & I Pork Farm to have a greater share of sales come from the retail category. From the pricing structure presented in the earlier tables, it is clear that this is where the greatest value can be returned to the farm.

**Marketing Opportunities and Challenges**

The overview of the operations and marketing aspects of The Egg & I Pork Farm provides a context for other broader issues which also are important in the operations of a farm direct merchandising enterprise. The following topics are broad issues Jim discussed or presented as being critical factors to the enterprise.

**Merchandising**

As mentioned previously, one of the greatest challenges is merchandising the whole pig. Following is an illustration of the issues faced in merchandising pork across channels. When Jim sells to restaurants, the product is custom fit to their menus. Most restaurants will want only chops with that perfect, large loin eye. This leaves the front end of the loin from which it is impossible to make center loin chops. To merchandise the rest of the loin, the first three ribs are removed and retailed as country style ribs, pork steaks or a small semi-boneless roast. The tenderloin is also pulled and retailed. The balance of the loin is then made into center cut pork chops prepared to restaurant specifications.

There is some difficulty in pricing and merchandising custom cut products as The Egg & I Farm also does. In particular, if someone wants only a portion of the ham, what can be done with the other parts which may be non-standard? The analogy would be time sharing — the only way it saves you money is if you can find the person to take the other portion of time. An example is when fresh hams are marketed to restaurants or provided for large barbeque events and they want a boneless trimmed ham. The ham is weighed and priced simply as a trimmed bone-in ham. Then the ham is cut to the customers specifications at no additional charge. Jim believes this has gained him the loyalty of customers who feel they are receiving a product they want at a reasonable price and it removes the problem of selling the remainder of the product. However, as pointed out earlier, Jim will freeze the ham and bacon trimmings and sell them through the shuttle bus egg and pork sandwiches. When talking with Jim he refers to this as “...keeping the product out of rendering.” Not only does it cost to dispose of, it represents lost revenue.
“One of my major problems has been the seasonality issue. We feel the decline in all three market areas - retail, wholesale and restaurant. This lull usually lasts until Easter when we sell hams and all traditional pork related items. As warmer weather continues, folks start dining out, start up the barbecue grills and come out of hibernation, so to speak.” The following chart shows the seasonality of sales for The Egg & I Pork Farm. These sales figures exclude the summer sales from the shuttle bus (~$42,000 in 1998) and the sales from Dean & DeLuca. If the bus sales are assumed to be evenly distributed through the months of May - September, each month in the summer adds approximately $8,400 to the gross sales.

Figure 1. Gross Monthly Sales, 1998

Seasonal data by types of product were unavailable. However, as an example, Jim related that seasonal demand for hams at both Christmas and Easter requires that they be held back during February and March and again in November. Jim expects the supply management problem to increase with the entrance into the Dean & DeLuca market where seasonal demand for the ham product will be particularly high. A similar problem exists for ribs. While these sell well for barbecue during the summer, they are difficult to retail from January through March or April. Hence, they are often discounted during this period to move product. In the summer, pork butts will be used for sausage and bratwurst which ties in with grilling season. Even with seasonal sales, Jim will rarely discount products although they may be featured. For example, ribs were sold for $1.89 - $1.99 during January and February with the discount based on how many ribs were sold the previous year. Freezing and vacuum packing products helps them control product flow. In October, rib sales will basically stop, so they will be frozen in 5 pound packages. These will begin to come out of storage in March and April and will be priced at $2.29 during the spring and summer months. In general, pricing starts at the meat end and is then worked backward to determine the total value.
Although seasonal data was unavailable, the issues faced by Jim are consistent with industry level price data. For simplification, Figure 2 shows the seasonal patterns of hams and ribs. The chart does not show prices, but an index of annual price movements which makes the two series comparable. The problem presented not only one of cash flow management where volumes and prices vary through the year, but when dealing with component products derived from a hog, they may run counter seasonally. This is why Jim begins stockpiling hams during the summer and early fall for expected winter sales.

![Pork Rib and Ham Price Seasonality](image)

Figure 2. Pork Rib and Ham Price Seasonality

This also has key implications for the cost structure of the operation. They maintain the same labor force throughout the year. This is done because Jim recognizes employees would not want seasonal employment and also it would be difficult to maintain quality labor on a seasonal basis. Another problem is the management of feed and pigs. Product availability in the spring and summer depends on having pigs on feed during the winter. However, with slow sales, this can result in stockpiling of product as well as cash expenditures during periods where cash inflows are slowest.
Advertising and Promotion

As with the physical marketing programs, advertising and promotion has many different dimensions for The Egg & I Pork Farm. In 1998, they reported $11,740 in advertising costs. However, this did not include much of the advertising which occurs within each marketing outlet such as the newsletter and the Dean & DeLuca features.

One key part of the promotion is the name of the farm itself. The Egg & I Pork Farm was derived from the 1945 book written by Betty McDonald about two city folk who moved to the wilderness and began raising chickens. The farm was a rundown mess and not fit for human habitation. As Jim relates, “our new farm was in similar shape and we decided the name was a natural for us. We are fortunate to have copies of the book, the movie (with Fred McMurry, Claudette Colbert and Ma & Pa Kettle) and an original copy of the sheet music.” These items are prominently displayed in the ButchersChop to provide an image and context for the customers. The crux of the marketing positioning is built on this motif.

The newsletter also presents a form of advertising and promotion as well as explicitly including order forms for sales. In general, the newsletter includes a column written in letter form which discusses recent events at The Egg & I Pork Farm. Another section will often describe special events and cross-listing of other area attractions or businesses. The draw is to have people come to the area for other events, and stop by The Egg & I Pork Farm to visit, see the facilities and the hogs and buy a little pork in the meantime. Features will often also provide educational descriptions of the pork operation itself, often describing how products are made, the care and safety assurance that goes with the products and other facts about pork production. This personal connection gives people confidence in purchasing a wholesome product and supporting a locally owned and operated business. Price and product listings are also included in the newsletter along with an order form and map to the farm. Seasonal price specials and other marketing promotions are also prominent.

An online version of the newsletter is available on the internet at http://www.eggandiporkfarm.com. Photos of the operation are included along with a description of the production protocols and product listings. Recipes are available and on-line ordering is also available. This serves as an additional connection to their customers. The farm management section builds on Jim’s belief that consumers want to know more about the food they eat and that solid education can help promote pork sales.

Point of sale advertising is another promotional tool. As mentioned earlier, restaurants which feature The Egg & I Pork Farm products will include The Egg & I logo on the menu. Similarly, grocery stores and delis will also have point of purchase logos displayed which emphasizes the Egg & I Pork Farm.

Finally, a key form of “free” advertising has come from extensive featuring of The Egg & I Pork Farm in regional magazine stories. As an example, it has been featured in Saveur, a lifestyle magazine format, Connecticut Magazine, and other national magazines such as Bon Apetit and Wine and Food. All totaled, Jim estimates they have been featured in over 100 magazines. He attributes this mostly to the story of The Egg & I Farm which makes it an interesting feature.
piece. However, he doesn’t attribute much of his direct sales to the free exposure, although it was through a magazine feature story that the original contact with Dean & DeLuca was made. This likely would not have happened without the extensive coverage. Hence, the story has created a presence that gets the brand and the farm identification which is crucial to customers.

Regulation, Safety and Inspection

As indicated earlier, food safety and the prospect of HACCP was a key driver in Jim integrating the entire system on the farm. Importantly, this did not stem from a concern or claims regarding extraordinary safety standards per se, but rather that with only one local plant and processor, if either failed to comply with HACCP, The Egg & I Pork Farm would be out of business. It was a matter of controlling its own fate while at the same time allowing more flexibility in marketing as well as product development. Regardless, regulations and inspection are a critical component of a successful meat business. Jim offered insights into all aspects and how it affects current and future operations.

Prior to HACCP, a Standard Sanitation and Operating Procedure (SSOP) was required in order to retail products. Included in the exhibits is the actual procedure on file at The Egg & I Pork Farm. In addition, a separate summary of meat inspection regulations and protocols is included because this will be such an important issue for direct sales. In essence, the attached summary sheet must be filled out. The procedures include breaking down all equipment used in meat handling and reporting of any defects or mechanical problems. The forms must be on file and available to the USDA Food Safety Inspection Service (FSIS) inspector upon request. The SSOP procedure will also be on file at the site and available for inspection. The HACCP protocols will be similar to the SSOP already in place. However, the record keeping will be more extensive. Although the recent renovations and new construction were in response to the coming of HACCP, this will eliminate the need to make additional renovations to comply. Hence, while existing operation may incur significant start-up costs for compliance this was not the case for The Egg & I. Hours of operation are affected by complying with the inspector’s workday. Operation can only occur between 7 a.m. and 3:30 p.m.

Another aspect of regulatory compliance is labeling of meat products. Once established, the additional costs are minimal. However, to aid in properly meeting the conditions for label licensing, a professional broker was used to assure filings and registrations were made. Jim recommends this be done since there would be a significant time investment to learn the process and a mistake could be costly in terms of potential fines. Two key parts of labeling are the ingredients in multi-ingredient products such as sausage and the other key part is the safe handling procedures which must be included. The safe handling procedures are fairly standard, however, there is more latitude and minor points to be observed in the ingredient labels which are obviously dependent on the product.

Pricing

Although price lists are provided earlier, the general question remains of how are products priced? Trial and error to find out customer demand is one aspect, and then working this back to cover costs is the final step in the process. Jim provided the general rule of thumb that $60 must be generated by each loin, $60 must be generated by each ham, $30 by the belly and $30 for each shoulder. Thus, the total retail target for each hog is in the range of $450-500 per pig. How this value is generated depends on seasonal volumes described earlier and in merchandising cuts. This is a highly subjective problem which is gained more from experience than a formula. However, Jim emphasizes the pricing and merchandising problem is the bottom line difference between success and failure.
Jim provided the profit and loss statement for 1998 on The Egg & I Pork Farm. The financial accounting includes all farm activities as well as living expenses. In many categories such as mortgage payments, transportation, or insurance, it's difficult to assign the costs properly. From the overall profit and loss statement, gross revenues generated were $285,771.65 and total expenses were $313,133.12 for a net ordinary income loss of $27,361.47. However, the primary interest for the purposes of this study is in the operations of the pork side, so only this portion will be included. If expenses only clearly related to the production enterprise are included, the total expenses total $283,715.70 for a net profit of $2,055.95. Including only direct expenses, the income over variable expenses rises to $39,297.98. Profitability for the actual pork operation likely falls within $2,055.95 and $39,297.98, depending on how indirect costs (for example, mortgage, property taxes, interest expenses, etc.) are allocated between pork enterprise and the rest of the farm.

An interesting insight into future prospects is provided by further examining the cost and revenue structure of the operation. Table 4 provides the revenue structure - this was provided earlier in the paper as well.

<table>
<thead>
<tr>
<th>Item</th>
<th>Dollars</th>
<th>Share of Total Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Sales</td>
<td>$40,353.52</td>
<td>14.0%</td>
</tr>
<tr>
<td>Restaurant Sales</td>
<td>$80,434.64</td>
<td>28.0%</td>
</tr>
<tr>
<td>Wholesale Sales</td>
<td>$102,649.00</td>
<td>36.0%</td>
</tr>
<tr>
<td>Retail Sales</td>
<td>$56,732.20</td>
<td>20.0%</td>
</tr>
<tr>
<td>Patronage Dividend</td>
<td>$4,757.92</td>
<td>1.6%</td>
</tr>
<tr>
<td>Reimbursed Expenses</td>
<td>$844.37</td>
<td>0.2%</td>
</tr>
<tr>
<td>Total Revenue</td>
<td>$285,771.65</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The bulk of sales currently falls into the wholesale category. Clearly, with the pricing structure indicated above between wholesale and retail, the value could be enhanced by shifting more sales into the retail category. This is the plan for The Egg & I Farm as the new ButchersChop becomes fully operational this year. Making this shift incurs little additional variable costs since the products are the same in either category. However, this will increase the overhead costs of the retail facility. Jim expects that this move will also further develop brand loyalty with customers which will further solidify his market position. This is an important point for producers moving further up the chain to remember - the primary value resides between the wholesale and retail sector where brand identity and customer preferences are directly confronted. Capturing this value is key to successfully managing such an operation. As Jim said “one of the biggest mistakes was not more aggressively entering retail sales to begin with.”

The cost structure of the firm is illustrated in the following table. Only those costs directly related to the pork enterprise and of major importance are included for brevity and clarity. The most striking result is the large share of costs comprised by the pig production phase of the operation. Feed and breeding fees combined accounted for nearly one-third of the cost of sales. The average share of the cost of hogs is about one-fourth the final sales value calculated as the farm share of the retail dollar. One reason this is likely higher for The Egg & I is the sales are a mixed wholesale and retail price, so the value of the hogs would be a higher weighted average.
<table>
<thead>
<tr>
<th>Item</th>
<th>Dollars</th>
<th>As Share of Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td>$11,470.80</td>
<td>4.1%</td>
</tr>
<tr>
<td>Breeding Fees (Feeder Pigs)</td>
<td>$40,483.00</td>
<td>14.2%</td>
</tr>
<tr>
<td>Labor</td>
<td>$23,647.23</td>
<td>8.3%</td>
</tr>
<tr>
<td>Feed &amp; Grain</td>
<td>$53,505.70</td>
<td>18.7%</td>
</tr>
<tr>
<td>Plant Supplies</td>
<td>$3,188.89</td>
<td>1.1%</td>
</tr>
<tr>
<td>Pork Casings, Pouches, Nets</td>
<td>$2,665.45</td>
<td>0.9%</td>
</tr>
<tr>
<td>Slaughter</td>
<td>$24,378.00</td>
<td>8.5%</td>
</tr>
<tr>
<td>Smokehouse</td>
<td>$34,694.75</td>
<td>12.1%</td>
</tr>
<tr>
<td>Supplies</td>
<td>$22,767.73</td>
<td>8.0%</td>
</tr>
<tr>
<td>Utilities</td>
<td>$10,726.99</td>
<td>3.7%</td>
</tr>
<tr>
<td>Telephone</td>
<td>$6,155.66</td>
<td>2.2%</td>
</tr>
<tr>
<td>Postage and Delivery</td>
<td>$7,141.80</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

The high cost of phone and delivery charges relate to the mail order side of the business operations. However, this avoids the need for other distribution costs and investments. In 1998 both slaughter fees and smokehouse charges were for custom processing. As these are internalized into the operation, Jim expects these costs to decline as a share of the value. In our conversations, he estimated an annual savings of between $15,000 and $20,000. With the market already well established and if these savings are realized, clearly The Egg & I will contribute a much higher return for living expenses.

One cost advantage that The Egg & I likely has over similar operations is on mechanical engineering and repairs. Recall that in his previous incarnation, Jim was a steam fitter. His previous experience working with metal and mechanics has allowed him to do quite a lot of the construction and repairs himself. He also has extensive contacts from the contracting business which assists in acquiring materials. When possible, he has also purchased second hand machines and materials (e.g., saws, the smoker, rails for the cooler) at reasonable prices. In his comments about negotiation, Jim emphasizes the value of "negotiation skills which many producers currently lack."

Another recent addition to the operation team is Beth Arsenault. She has been instrumental in developing the business plan and financial information for the operation expansion. Her experience was from twenty years in the banking industry. Currently, she is the Financial Manager for the farm and oversees day to day financial aspects and long term financial goals. As always, knowledge is a critical component of any successful business enterprise and the combination of Jim's acquired production knowledge and Beth's financial knowledge will be critical to the future success of the operation.

The Market Niche

When I first talked with Jim, I suggested we wanted to conduct a case study on someone selling high-end pork products, he adamantly replied, "these are not high-end or high safety pork products, they are quality products which meet the customers' demands." As usual his feel for the market is unassailable — maintaining the image of "high-end" products would unnecessarily narrow his market base. High quality which matches the price value simply assures customers they're receiving a great value. As Jim said, "Never let your customers feel as though their lucky to have the product, it's you that is lucky to have them."
Regardless of the product quality, the niche clearly ties in with a “day-in-the-New-England Countryside” icon. The workshops, seminars and other special events are intended to create a complete package of information, education and product sales to the customers. As part of the customer service, they will help customers stuff loins if they need it, they will custom cut other products. Special attention is also given to calling each regular customer by name to make them feel important and part of the family.

In Jim’s own words, “throughout the entire time we have been in business it has been paramount to let our customers know the origin of our product. Farm fresh must be upheld (emphasis his) at every turn. Without it we have no niche. It is imperative that we have correct information to give our customers. It only takes a moment to show a customer a beautiful pinkish large loin-chop. We take it up a notch and describe in detail who, how, and what we do to produce it. To fill our niche I feel it is an absolute necessity to spend sufficient time with our customers at all levels.”

Summary

A four word summary would suffice for The Egg & I Pork Farm, James Dougherty is a “man with a mission”. Knowledge, drive for success and vision are all attributes which I observed in Jim Dougherty during the two days I spent at The Egg & I Pork Farm. In the three case studies conducted these same attributes were reflected by the core people. My impression is that before starting any feasibility plan every producer or network must ask the difficult questions of: (1) do we have the knowledge to be successful? (2) do we have the drive to survive short term opportunities which distract us from (3)?, and (3) do we have a long term vision for our marketing plan and production enterprises.

The idea of networking is that each individual need not be able to answer all three questions affirmatively, but that collectively these same three questions can be answered affirmatively. Once done, there are valuable lessons to learn from The Egg & I case study.

First, Jim begins with the customer as the paramount provider of value to The Egg & I as evidenced by the attention given in specializing cuts, and in direct customer interaction. Second, while the farm was largely borne out of a childhood dream, subsequent actions have been driven by market opportunities. Production has chronically lagged behind demand which is a superior position to be in as a perishable product seller. Third, while Jim will disapprove, the Egg & I Farm capitalizes on its regional presence. “Boutique” markets are a natural fit for the New England setting and high income levels in general provides customers with a willingness to pay for that extra mile in pork quality. A similar market in rural Iowa may not do as well. Fourth, having multiple market outlets and multiple product lines allows for management of the classical meat merchandising problem. Finally, on a small scale, state of the art production knowledge and technology is used to control costs and capture the greatest value from product sales.

Exhibits

A. Newsletter samples
B. Sanitary Standard Operating Procedures
Pork Heaven: The Nahunta Pork Center

From Anchorage, Alaska to Dallas, Texas and from the Atlantic to the Pacific Coast, people have come to buy pork from the self proclaimed “Pork King”. With more than 80 different types of retail pork offerings on a given day, it's unlikely the customer will walk away empty handed. On average, it's unlikely they’ll walk away with less than 50 pounds. As a marketing example, one of the few rules broken by the Nahunta Pork Center is “location, location, location”. Located at a country intersection in Pikeville, North Carolina, one wonders how anyone ever finds their way to Nahunta Pork Center, but having sampled the products it's clear what draws them back. Located near the heart of the most rapidly growing and technologically advanced region of swine production in the world, Nahunta Pork Center on the surface reminds one of simpler times, when people frequented neighborhood markets and supported community merchants. On a deeper level, Nahunta represents the future of pork production; a future the one-size-fits-all industrial model will be challenged to emulate -- Nahunta Pork at its root epitomizes two fundamental premises of marketing- uncompromising customer service and production and marketing flexibility.

History

Mack Pierce began raising hogs as breeding stock. In the 1950's, he opened a buying station for Frosty Morn and Swift & Company. However, as Mack said in our interview “I always wanted to get into the slaughter part of the business.” In March 1955 the first hogs were slaughtered. All pork sold was on a custom basis for individuals. In the 1960's, a small enclosure was added onto the slaughter plant and Mack began selling to local grocers on a whole carcass basis. In 1975, the foundation of the current retail center was opened. This was converted from a bulk tobacco barn. During that first week, Pierces' processed three hogs. They were sold out in a matter of hours and Nahunta pork was off and running. As the trend towards boxed products gained speed, the decision was made to expand the retail focus, realizing that most of the grocery service could then be served by the larger processors.

The original display was 12' of meat case operated on a deli style format. However, it soon became clear that this operated too slowly to move product and the format was switched to a standard self serve meat case. The original converted tobacco barn is still a part of the Nahunta Pork Center as it exists today. In 1984, 10,500 hogs were processed, by 1992 this had grown to 23,000 hogs processed and currently they are operating at about 40,000 head per year. To accommodate this growth, the Nahunta Pork Center has been expanded 21 times since 1975.

Production Operations

Currently, Nahunta Pork Center owns no hogs. All hogs are purchased from regional farm suppliers, both large and small producers. Delivery time is scheduled with consideration given to the size of hogs. As will be discussed later, the size aspect is a critical part of the marketing strategy of Nahunta Pork Center. Hogs are simply priced off the Iowa/S. Minnesota quotes for the day, although producers often receive a premium mark-up as well. Mack grades the hogs based primarily on size and any physical problems. The only distinction is that they prefer lighter color hogs because they pick and clean better than either durocs or hamps.

Figures 1-3 illustrate the production schematics of the Nahunta Pork Center. Purchased hogs are brought to a holding facility which is directly connected to the slaughter plant. Hogs will weigh from 80 pound roaster pigs to 400 pound sows. The holding facility is spacious and
Figure 1. General Operations Schematic

Figure 2. Packing Plant Diagram

Figure 3. Process and Retail Area Diagram
extraordinarily clean, with wood shavings for bedding. The hogs are provided full feed and water. There are two key aspects to this seemingly routine set-up. First, the holding period greatly reduces the stress on the pigs. Although no records were provided, Larry and Mack reported very low levels of PSE or even light colored pork products. Secondly, it relates to their marketing strategy. Every animal is slaughtered on demand. If there is a demand for more sausage, sows are selected and slaughtered to meet that demand. If an order for roaster pigs comes in the lightest weight pigs are slaughtered, and market hogs are continuously slaughtered to meet demand for fresh retail pork products. As a quality standard, no pork is sold as fresh product more than 48 hours after slaughter. Therefore, it’s imperative to have stocks of live animals available to adjust to demand rather than stockpiling pork products. As an illustration, the day we first visited was a Thursday. Normally, this was a slower day for sales than the weekend. However, they had sold nearly 4,000 lbs. of sausage that day and were in danger of running shortages for their weekend sales. On Friday morning, a simple phone call from the office to the plant ordered that 12 more sows be first up for slaughter that morning. As the day progressed, it became evident that the Friday sales of sausage had moderated from Thursday’s run so that some of the sows were held off and they resumed slaughtering market weight hogs to meet the fresh product market.

The packing plant is a relatively standard configuration. The current capacity is limited to 150-170 head per day due to cooler capacity limitations. They have completed plant designs for a new 300 head per day plant next to their existing plant. One unique feature is that the plant is fully finished with stainless steel. Mack estimated that at current prices this would add approximately 1.5 million dollars to the cost of a similar sized plant. The stainless steel is easy to clean and contributes to the extraordinarily high quality of the operation. In addition, it has improved food safety inspection compliance and was HACCP compliant (stainless steel is not a part of HACCP per se). The slaughter portion of the operation requires 10 employees. The employee responsibilities are rotated around positions so that it is not too monotonous. They also work on flexible time. They are expected to arrive at 5:00 a.m. and will remain until the necessary hogs are slaughtered. Again, this ties in with the “just-in-time” or as needed production aspect of the operation - demand drives production. Both Mack and Larry did comment that over the past three years, they have noticed a higher turnover rate for employees partly due to increased overall employment in the economy and partly because of the schedule and workers reluctance to meet a flexible schedule. The packing operations only include kill and cut and the whole carcasses are shipped across the road to the processing facility. Detailed costs of operations were not provided. However, Larry said that their direct cost of slaughter was approximately $20/head. This did not include overhead such as insurance, utilities, etc. which are not allocated to stages of the operation. Once slaughtered, the clock begins ticking. As part of their marketing strategy, the maximum time between slaughter and the product is frozen is 48-56 hours. This includes slaughter time and chilling. From the cooler at the plant, no product will be sold as fresh after 36 hours at which time it is placed in the freezer.

The processing/cooking/smoking facility is at the back of the retail store. Chilled carcasses are hauled in a low-boy refrigerated trailer from the plant, across the road, to the dock at the back of the processing facility. Larry commented that they were planning to remodel this area because for inspection purposes, they had to remove all fresh product from the area before they could transport cooked product into the cooler. This often created a production bottleneck. The final cut to the retail product, all packaging and labeling is done at the retail center, behind the display cases, much like a typical grocery meat market.
Not included in the schematic are two ham curing barns located adjacent to the packing and holding pen facilities. These two barns are used for the country cured hams. As with the slaughter stage of the operation, Larry estimated that the direct costs of the processing stage were approximately $20/head given their mix of product and that the cost of retailing (final cuts, wrapping, labeling, etc.) was also approximately $20/head. Therefore, the total cost of product from live hog to retail is approximately $60/head.

**Marketing and Merchandising**

As in other cases, the production is driven by the marketing phase of the operation. While the other case studies focused on multiple market outlets, Nahunta Pork primarily includes its own pork retail operations. There are no sales to grocers and sales to only a few restaurants. However, in addition to the on-site retail outlet, they also sell pork at a farmers market in Raleigh. The day before we arrived to conduct the site visit, the Raleigh Farmers Market burned down, so we were unable to visit that outlet. However, they expected to be operational again by the summer. Given this narrow outlet, the focus of the operation is on marketing and merchandising its products direct to the customer.

**Pricing**

Pricing is critical to any operation. In the broad sense, there are no secrets. Mack and Larry price all products primarily according to retail prices of regional grocery stores such as Food Lion or Win Dixie. In addition, they also formulate prices based on Data Transmission Network (DTN) reports of USDA pork carcass cutout values. This is to ensure they are in line with competing markets. Table 1 provides the complete set of retail prices for February 4, 1999. Looking at the price list provides some perspective of what walking into the Nahunta Pork Center for the first time is like. As shown, there are 85 specific pork items in the meat case. What is even more remarkable is that 63 of the products are either fresh or cured (excludes any cooked or processed). On a volume basis, they estimate their sales at 45 percent fresh, 25 percent sausage, 25 percent country cured products and 5 percent cured products. Much of this is centered around providing variety for customers as well as price merchandising.

Part of the great variety of products extends from the idea of keeping products absolutely uniform in the package. For example, they have end cut pork chops selling for $0.99/lb. and center cut pork chops for $1.59/lb. A typical grocer is not likely to differentiate the cuts and . This creates a lack of uniformity in the customer's eyes and likely results in a discount. It's interesting to note that in fact on the same day, Food Lion in Goldsboro did have a package of mixed chops which was selling for $1.19/lb. Although it was not possible to ascertain the total value the uniformity created, Mack explained that their average price for the two cuts if aggregated by weighting them to the yield from the loin would be approximately $1.29 per pound. Hence, they manage a slightly higher price and create a marketing strategy by providing absolute uniformity in packaging.
Table 1. Product Lines and Pricing, Nahunta Pork Center, February 1999

<table>
<thead>
<tr>
<th>Item</th>
<th>Price ($/lb)</th>
<th>Item</th>
<th>Price ($/lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 lb. BBQ Pork</td>
<td>$2.99</td>
<td>Sliced Country Ham</td>
<td>$6.49</td>
</tr>
<tr>
<td>1 lb. BBQ Pork</td>
<td>$4.99 (1/1)*</td>
<td>Country Cured Sides</td>
<td>$1.19</td>
</tr>
<tr>
<td>Fully Cooked BBQ Ribs</td>
<td>$3.79</td>
<td>Pork Cracklings</td>
<td>$7.99</td>
</tr>
<tr>
<td>Tom Thumb Hot Sausage</td>
<td>$3.79</td>
<td>Bulk Pork Cracklings</td>
<td>$6.99</td>
</tr>
<tr>
<td>Souse Meat</td>
<td>$3.13</td>
<td>Single Slice Country Ham</td>
<td>$3.99</td>
</tr>
<tr>
<td>Liver Pudding</td>
<td>$2.19</td>
<td>Country Ham End Piece</td>
<td>$2.79</td>
</tr>
<tr>
<td>Chitterling Loaf</td>
<td>$3.19</td>
<td>Country Cured Side</td>
<td>$2.79</td>
</tr>
<tr>
<td>Cooked Chitterlings</td>
<td>$3.29</td>
<td>Dry Salt Cured Pork Side</td>
<td>$2.79</td>
</tr>
<tr>
<td>Smoked Boneless Chops</td>
<td>$4.99</td>
<td>Dry Salt Cured Pork Slab</td>
<td>$1.99</td>
</tr>
<tr>
<td>Smoked Loin Roast</td>
<td>$1.19</td>
<td>Lard (8 lbs.)</td>
<td>$5.99</td>
</tr>
<tr>
<td>Smoked Pork Seasoning Bones</td>
<td>$0.59</td>
<td>Cooked Skins (9 oz.)</td>
<td>$1.99</td>
</tr>
<tr>
<td>Smoked Picnics</td>
<td>$0.99</td>
<td>Old Fashion Brown Skins</td>
<td>$1.59</td>
</tr>
<tr>
<td>Ham Hocks</td>
<td>$1.99</td>
<td>Smoked Ears (Dog Treat) 4/package</td>
<td>$1.99</td>
</tr>
<tr>
<td>Smoked Bacon Bits</td>
<td>$2.59</td>
<td>Hearts</td>
<td>$0.99</td>
</tr>
<tr>
<td>Country Style Bacon w/ Rind</td>
<td>$1.99</td>
<td>Tongue</td>
<td>$1.59</td>
</tr>
<tr>
<td>Mack's Smoked Sausage Links (Family Pack)</td>
<td>$1.99</td>
<td>Ears</td>
<td>$1.79</td>
</tr>
<tr>
<td>Mack's Smoked Sausage Links (1.25 lb. Avg.)</td>
<td>$2.59</td>
<td>Fat Back</td>
<td>$1.79</td>
</tr>
<tr>
<td>Smoked Boneless Ham</td>
<td>$1.59</td>
<td>Fresh Sliced Side Meat</td>
<td>$1.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sliced Pork Feet</td>
<td>$0.69</td>
</tr>
<tr>
<td>Smoked Bone-in Chops</td>
<td>$3.99</td>
<td>Whole Pork Feet</td>
<td>$0.69</td>
</tr>
<tr>
<td>Smoked Bone-in Ham</td>
<td>$0.99</td>
<td>Fresh Pork Hocks</td>
<td>$0.99</td>
</tr>
<tr>
<td>Country Cured Hams</td>
<td>$1.79</td>
<td>Pork Neckbone Roast</td>
<td>$1.69</td>
</tr>
<tr>
<td>Pork Pig Tails</td>
<td>$0.99</td>
<td>Pork Side W/ Ribs</td>
<td>$1.19</td>
</tr>
<tr>
<td>Sliced Backbone</td>
<td>$1.59</td>
<td>Pork Shoulder w/Ribs</td>
<td>$0.99</td>
</tr>
<tr>
<td>Whole Backbone</td>
<td>$1.59</td>
<td>Picnic Shoulder</td>
<td>$0.79</td>
</tr>
<tr>
<td>Short Ribs</td>
<td>$0.89</td>
<td>BBQ Style Pork Shoulder</td>
<td>$1.09</td>
</tr>
<tr>
<td>Spare Ribs</td>
<td>$1.99</td>
<td>Fresh Ham</td>
<td>$0.99</td>
</tr>
<tr>
<td>Pork Backbone Roast</td>
<td>$1.59</td>
<td>Cured Country Ham</td>
<td>$2.79</td>
</tr>
<tr>
<td>Pork Country Style Ribs</td>
<td>$1.39</td>
<td>Cured Country Hocks</td>
<td>$2.39</td>
</tr>
<tr>
<td>Pork Boston Butt</td>
<td>$1.49</td>
<td>Ground Pork</td>
<td>$1.77</td>
</tr>
<tr>
<td>Whole Barbeque Pig (40 lbs)</td>
<td>$0.99</td>
<td>Tenderloin</td>
<td>$0.99</td>
</tr>
<tr>
<td>Tendered Pork Steak</td>
<td>$3.49</td>
<td>Small Link Sausage (mild or hot)</td>
<td>$0.69</td>
</tr>
<tr>
<td>End Cut chops Sliced</td>
<td>$0.99</td>
<td>Pattie Sausage</td>
<td>$2.49</td>
</tr>
<tr>
<td>Butterfly Chops (spine in)</td>
<td>$1.29</td>
<td>Salted Pork Fatback Slab</td>
<td>$0.79</td>
</tr>
<tr>
<td>Whole Sliced Loin</td>
<td>$1.59</td>
<td>Salted Pork Fatback Sliced</td>
<td>$0.99</td>
</tr>
<tr>
<td>Center Cut Chops</td>
<td>$2.59</td>
<td>Fresh Pork Seasoning Ribs</td>
<td>$0.19</td>
</tr>
<tr>
<td>Pork Loin Roast, Bone - in</td>
<td>$1.99</td>
<td>Salted Pork Ribs</td>
<td>$0.49</td>
</tr>
<tr>
<td>Boneless Loin Roast</td>
<td>$1.99</td>
<td>Salted Pork Side</td>
<td>$1.99</td>
</tr>
<tr>
<td>Boneless Chops, Thin Cut</td>
<td>$1.99</td>
<td>Salted Pork Sliced Side</td>
<td>$0.19</td>
</tr>
<tr>
<td>Italian Pork Sausage</td>
<td>$2.49</td>
<td>Sliced Country Ham</td>
<td>$0.59</td>
</tr>
<tr>
<td>Pork Sausage (5 lbs.)</td>
<td>$6.99</td>
<td>Loin Cutlets</td>
<td>$3.79</td>
</tr>
<tr>
<td>Front Pork Quarter</td>
<td>$0.99</td>
<td>Fresh Pork Neckbone</td>
<td>$0.99</td>
</tr>
<tr>
<td>Country Ham Value Packs</td>
<td>$3.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
We were unable to obtain seasonal data, however, Larry again provided an excellent illustration. As in most parts of the country, December, January and February are difficult times to sell ribs because of their close association with grilling. Although they offer barbecue ribs in winter, they also fabricate the loin to include the rib bones in a unique cut. They cut the loin into approximately 6 inch roasts with the ribs still attached. Then, rather than cross-cut as would be done for bone in chops, the roast is cut longitudinally across the ribs. This exposes the bright pink meat portion of the loin which has fantastic eye appeal to the customer and leaves the ribs on both sides of the sliced open loin. Hence, the ribs are moved along with the loin and it also provides variety to the standard pork chop. This cut retails for $1.99/lb.

In general, their pricing structure is very stable over time. They generally do not discount or increase prices much based on the price of hogs. However, because of the very low hog prices experienced in the winter of 1998, they had lowered prices about 25 percent overall, primarily through featuring. They also noted that when hog prices move beyond 50 cents a pound, they will need to raise retail prices 40 cents for every 10 cent increase in hog prices. This 4:1 ratio is fairly standard.

The two primary sale features are the buy one get one free and $1 sales. Mack explains that a “$1 sale is better than a $0.99 sale”. “Customers realize that $0.99 is a dollar, there’s something about the nice clean $1 that captures their decision to buy.” These features are run according strictly to sales. Their goal is to keep products out of the freezer at which point their discounted. By carefully watching the case, they are able to on the moment change prices to reflect sales.

Product and Customer Service

In addition to pricing, product and customer service are key management components. Some product descriptions were included earlier as they related to prices, but this section will focus more specifically on product handling and interface with the customer.

One word sums up the primary goal of Nahunta: “freshness”. The maximum time any product will be sold as fresh is 48-56 hours. From the time it is removed from the packing plant cooler, the time until it is sold is 36 hours at most. Any product which is not sold is moved to a freezer, discounted an average of 20-50 cents per pound and sold only as frozen. One might think that this results in a large volume of product placed in the freezer given that they sell approximately 75,000 pounds of pork per week (50,000 - 100,000 depending on season). However, on the day we visited, they moved a total of 300 pounds of fresh product into the freezer! This tight product flow is due to (1) pricing to move product through the case (2) the flexibility created by variable slaughter to meet expected daily demand. This is even more remarkable when one considers that another product attribute is that absolutely no empty case space is allowed to show at any time during sales hours. This is done so that customers do not feel like the case has been “picked over” before they came to the store. As a further quality control measure, all frozen product is sold strictly as frozen, it is never reworked into sausage or other cured product. With these strict time constraints, no product in the case will ever show discoloration which also appeals to customers.

Country cured hams are a significant part of the operation, comprising approximately 25 percent of sales (30,000 hams per year). All hams are hand rubbed with salt. Hand rubbing removes the blood and also improves the salt soaking into the ham. The hams will be salted three times before being pulled out of the salting racks and this will require approximately 5 weeks. Hams are then hung in a hot room maintained at 81 degrees Fahrenheit and 50-60% humidity. They may be hung anywhere from 3 weeks to 7 months although most of Nahunta's
hams are hung 5-6 months. They are true country cured hams and are treated with sodium nitrate (to protect against trichinae) so they can be eaten uncooked. Currently, about 75 percent of the ham is sold as sliced product rather than as whole hams. This has changed as lifestyles have changed. Country cured hams are sold whole and unwrapped/unsacked in the retail outlet. This allows customers to see the whole ham. There are between 200 and 300 hams on display at all times. Ham sales are highly seasonal, with the largest sales coming in November and December. Hence, they will begin to stockpile and place hams in the curing barns in February, March and April. Larry also explained that by using fresh hams, hand rubbing and careful handling of the hams, they experience approximately 0.5-1 percent spoilage of the hams during the curing and aging process. During extreme demand periods, they have purchased hams from other suppliers - on these hams they will experience 6-8 percent spoilage during the curing and aging process which has a major impact on their margins. On either ham, the shrink loss will be about 25 percent due to the 3 to 4 month longer aging process. Most commercial curers lose only about 17 percent during the aging process. This is an illustration of how dramatic quality control can affect yields and by extension profitability.

Sausage sales are another critical aspect of the business. They really only sell two types of sausage, Italian and an English style recipe which was from Larry's grandmother. There are also two options; mild or hot. On average, they will sell approximately 10-15,000 pounds of sausage per week. In fact, one retail employee is dedicated to sausage sales. On seasonal demand, they may move as much as 30-40,000 pounds per week. The day we were there (Thursday) they sold 4,000 pounds in one day. This was beyond expectations for the day, and at approximately 3 pm, the sausage maker reported the need for more sows slaughtered. On Friday morning, several more sows were added to the kill schedule (a 400 pound sow will yield approximately 190 pounds of sausage). However, as the day progressed, the sales of sausage moderated and some were held back. Such is the responsiveness of the system to the consumers demand. Larry indicated that slaughter will commonly be adjusted 6-12 times per day to meet product flow and type. Seventy five percent of the sausage sold is semi-dry. They reported a loss of 25 percent shrink over-night, so they are also much better off to sell fresh and not try to store and stockpile sausage if they don’t have to. Again, the slaughter flexibility creates ways to manage the merchandising in the operations.

Advertising and Promotion

Advertising costs will average approximately $125,000 per year. This level of advertising is needed primarily because of the country location. The name Nahunta Pork Center itself was an advertising decision. By naming it Nahunta, it immediately became a place on the map which people could easily cross-reference. All advertising is done in newspapers and on billboards. The billboards serve as both directions to the store and advertisement. As you near Nahunta Pork Center, you will see bright yellow and red signs proclaiming the “Pork King” and mostly painted on the side of old tobacco barns. Larry wryly explains, “There are ordinances which prohibit billboard advertising beyond 500 feet of the business. But the paint on the sides of the tobacco barns occasionally runs together to advertise Nahunta.” Equally as savvy, all ads or store features placed in the newspaper are placed in the classified section. The cost is cheaper, and Nahunta always features the largest ad on a page of typically smaller ads to attract the reader's eye. Also, their ads come out on Monday night rather than Wednesday when other stores place their ads. One advantage of this is that they believe customers are not as likely to directly compare pricing in different days’ papers.

In addition to traditional advertising, they also frequently provide free samples to customers. On weekends, they will provide cooked sausage biscuits, ham or bacon as well. Originally, they went to farm shows and provided concessions and free samples, however, they became so
busy that it distracted from their primary focus which was the retail outlet. At the Raleigh Farmers market, they cook on the grill during their sales times. In addition to the taste sample, the aroma of cooking pork also brings in the customers. Larry attributes a $1,000-1,500 loss in sales when they don’t cook at the farmers’ market. In the Nahunta Pork Center, including sampling increased the sales of those products by as much as 600%. Providing samples will cost them about $600 for Fridays and Saturdays which are the two biggest sales days.

**Employment**

In addition to Larry and Mack, operations of Nahunta require a large labor force. In conjunction with their emphasis on quality, they do in-house training on customer relations and safety for all employees. They are provided a one day orientation and then on-the-job training. Nearly all employees make overtime every week due to the flexible employment schedule which flows with the business. Starting time in the packing and processing side is set, but employees stay until the necessary production level is met. Between full and part-time employees, they will average approximately 70 people on payroll and during seasonal demand periods, they will require as many as 80 people. Larry commented that during the past five years employment has become more of a problem. Availability and quality have both suffered, partly in response to high employment levels in the general economy. Nahunta averages $10/hour for their hourly employees, which places them in the top 5 percent of the pay scale in the county. Overall, Larry estimates that historically labor costs were about 20 percent of sales, but they have risen to comprise approximately 22 percent of sales. As part of their employee programs, they also cross train in other areas of the business. This is done for two reasons (1) it allows them to evaluate which part the employee best adapts to and (2) it provides the employee with a sense of where they fit within the overall operation. Still specialization is required to improve and maintain quality. The general structure of employment is as follows: 10 are employed in slaughter and are rotated between shaving to butcher; 20 are employed in processing and cooking operation and will rotate across activities within processing; the retail operation requires the most labor with 30 people employed between part-time and full-time positions. The retail employees will do everything from cutting to retail, wrapping and labeling to running the check-out line. Three people are involved in the ham house operation and 2 people are involved in the Farmers’ Market Operation. Mack, Larry and their wives (Jean and Rita) and Larry’s son also serve as management as well as labor. In fact, you are very likely to find any one of them actually bagging your order. Their entire payroll is approximately $1.6 million per year which represents the second biggest cost item next to product itself. In addition to their wages, employees are provided with a 401k plan, health insurance, and a disability program.

**Profitability/Costs**

Although much of the previous discussion has been woven around costs and returns, this section focuses exclusively on the profitability. It’s estimated that the current replacement cost of the entire Nahunta Pork Center would be approximately $10-15 million which provides a benchmark for start-up costs of a similar enterprise. This price was also based on their expansion plans for a new slaughter plant. Overall, Larry estimated it required $10,000 in gross sales to breakeven on all costs of providing product for those sales. The profit margin on gross sales was approximately 6 percent. One of the keys to their profitability has been their very low debt structure. Mack and Larry claim to have borrowed less than $100,000 since 1960. As indicated earlier, they estimate approximately an even direct cost split between stages of production, with slaughter costing $20/head, processing costing $20/head and retail costing $20/head for
total direct expense of $60 per head. This did not include overhead costs such as insurance and utilities, nor did it include the cost of the animals. One significant cost many people don’t consider is the packaging cost which can be considerable. For the past 2 years, wrapping material and boxing has increased by 15-20 percent. This is a cost over which they have no control and partly explains why pork prices have not come down to meet the decrease in farm prices. “What most people don’t realize is they’re paying as much for the packaging as the actual food.” exclaims Mack. All phases of the business are managed as profit centers. The processing must pay the slaughter for the product and so-on. This helps maintain accountability throughout the process and they can better evaluate how each segment is performing. When asked about their greatest risk factor, the price of hogs was cited. As with producers, they must manage around the inherent cyclical nature of hog prices. While they were experiencing their greatest profits in years during the period we visited, they had a difficult time when hogs were over $50/cwt. in 1997.

Regulation

One of the key aspects which will drive value added enterprises in the future will be the regulatory structure of meat sales. Larry and Mack were very forthcoming in describing how these affected their operation. In addition, Larry provided a sample of his actual HACCP plan, and nutrition and product labels. Supplementary material on regulatory issues in meat processing are included as exhibits too.

Sanitation regulations and standards are a key part of the enterprise. As a direct illustration, they have a specialty staff simply to clean as an emphasis on safety. The fact that the entire slaughter operation is stainless steel has also helped them comply with HACCP. They have 12 separate plans for operation as HACCP must be implemented by type of process. On the retail side, their display cases are broken down and cleaned every week. Nahunta’s operations were already HACCP compliant, so they found relatively little value in conducting a HACCP evaluation and developing a plan. They estimate it will cost them approximately $25,000 per year to maintain HACCP compliance because they will need to hire one more person to do the record keeping on sanitation. A second costly aspect (relative to larger plants) is that they will need to send samples for off-site lab work which other larger plants can do on-site.

In addition to the HACCP and other sanitary regulations, there are additional costs due to labeling regulations in meat. Nahunta must comply with two labeling standards: (1) nutritional labeling and (2) safe handling labeling. Nutritional labels must be included on all meats for which there are added ingredients. In this case, that includes only their sausage and ham products. However, if less than 1,000 pounds of sausage were made per week, it would not be necessary to nutritionally label those products. They also do not need nutritional labels on the country cured hams which are sold without any packaging. Labeling of products must be approved by USDA and each product will be sampled. Labeling is not a trivial matter as Larry estimates it costs them $0.03-0.04 per pound to compensate for the costs. In addition, any changes in labels must be approved by state and federal agencies and the process can take up to six months. Therefore, with any product development, will have a significant lead time to get any new products labeled.

Safe handling procedures are standardized, but still required to be placed on all products which must be refrigerated or cooked.
Spending a couple days with Larry and Mack Pierce provides ample insight into the nuances of marketing. Collectively, the following comments are the essence of Nahunta Pork Center.

First and foremost, the focus is on quality control and customer service. Part of this was described earlier with their major focus on product freshness. In addition, the case is carefully managed to provide maximum customer appeal. No tray pack items are allowed to have gaps in the wrapper. A purchased item is immediately replaced by a new item so that no empty space exists in the case, otherwise customers will feel the selection has been picked over. All customers are spoken to within 30 seconds of entering the store and many customers are known on a first name basis. In this regard, both Larry and Mack noted that they are limited in growth to the fact that they cannot expand beyond the customer. This emphasis on direct interaction and service requires that they remain a small operation. Both had doubts that you could “hire” this type of detail to customer quality and service.

Their primary customer base is attracted within a radius of approximately 100-150 miles. However, on weekends, 20-30 percent of their business will be from out of state. In a marketing context they view their rural setting as an asset from a couple of vantage points. First, their country cured hams and other country cured products are signature products. The country setting ties in very well with this. Secondly, Mack explains that people who have come this far into the country are set on buying product and they tend to buy in larger quantities to justify the trip. This seems to be borne out in the fact that the average individual purchaser's sale value is $50-$150 per visit and they will average approximately 80 pounds of product per visit. A typical customer will also visit once every two to three weeks. In this regard, they still maintain larger size packages than the trend toward single meal packages in most grocery stores. The average size pork product will be 10 pounds and family packs dominate the display. Family packs are also discounted 30-40 cents per pound which are a good value for the customer. In marketing parlance, Mack would be considered a psychologist - understanding customers every move and nuance. They often honor expired coupons simply to improve customer relations. Mack laughs at one experience when they were offering a buy one get one free promotion and the customer didn't want the second one. Mack immediately offered the free package to another nearby customer at which point the original customer demanded to have the package himself. They have also considered including more items in the retail store, but have stayed with the pork only format. They believe that adding other items would dilute customers expenditures on pork. Finally, there are also distinctive differences in the product movement between the Raleigh Farmers’ Market and the Nahunta Pork Center. During the second pay period pork purchases in Raleigh will be higher because on the first pay period, people are making mortgage payments, car payments, and boat payments. The first pay period is biggest purchase time in Nahunta because customers have welfare or social security checks. These subtleties are critical for managing product flow to meet their customers.

Larry and Mack were also asked about advice they had for swine producers who might be considering a move up the market channel. It's not very encouraging, but adds a dose of realism. Larry recommended that growers start at a farmers’ market rather than devoting any capital to a formal retail outlet. This allows the producer to become acquainted with customers, discover their likes and dislikes, and build a solid base before making any additional capital investments. He points out that Nahunta has been in development for 44 years and it's unrealistic to expect to immediately develop a market of this size. Mack offers more direct advice “I wish all producers would enter value added and build a plant and retail center. That way, I can pick up the discounted equipment when they go out of business.” In his experience, he has opened his doors and ideas to twenty individuals attempting to replicate the Nahunta Pork Center. Today, he says there is one he knows of in existence, but it has been restructured twice.
Summary

Four traits succinctly characterize Nahunta Pork Center operations: (1) specialization, (2) product flow management and responsiveness, (3) product quality, and (4) customer service. In this regard, Nahunta does not have a specific niche market per se. They provide an excellent illustration of managing to compete in the commodity pork market through a blend of product quality and production management. However, they do at least two things that no other pork chain can readily replicate. First, they have virtually instantaneous product order and delivery all the way from hogs to retail as an inherent part of the single site operations. Second, this also allows unparalleled freshness to customers with no product greater than 36 hours away from the packing plant cooler.

It's also interesting to note the size implications of the operation. While they expect to expand to a daily slaughter of 300 hogs in the coming year or two, they both suggested they will experience diseconomies of size if they expand beyond their ability to manage customers. If their costs of production of $20/head slaughter is accurate, it's unlikely they would gain much in cost economies from expansion at any rate. This raises a fundamental question for the swine industry -- is there an inherent trade-off between quality and scale? If there is, there may be a significant niche simply for source verified, high quality control and high customer service products which very large production chains and their focus on throughput and cost efficiency may have difficulty replicating. Still, Nahunta Pork Center maintains competitive pricing structures, recognizing they can have the customers but likely will have a difficult time extracting premiums in what fundamentally is a commodity based industry.

Exhibits

A. Label Samples
B. Sample HACCP Plans
Exhibit A - Label Samples - 1 of 2
Conclusions of Case Studies

Each case study participant had a unique pork production system. However, there are commonalities which arose which provide further guidance for those seeking to develop niche or value added markets.

Production System Flexibility

In the cases of Goridtos and Nahunta, there was heavy reliance on the ability to adjust production to respond almost immediately to market conditions. Nahunta was able to control supplies through the use of a large holding facility. They further controlled supply for various products by having variable sized pigs available. Goridtos makes use of a similar situation in that they have a farm through which pigs are held to control slaughter flows. Given their small scale, the utilization of refrigerated trucks provides some flexibility in their cooling and storage capacity at the plant level as well. On the production side, The Egg & I farm had somewhat less flexibility on the production, but was the only operation which froze and vacuum packed all its product. This was complimentary to the mail order and catalog sales focus of the business and allowed for seasonal control of supplies to meet demands.

In Goridtos case, not only had they developed flexibility, but they illustrate ways to forge fit within related parts of the chain. This is illustrated by their sourcing pigs from much larger commercial operations and utilizing their distribution techniques to service dispersed Hispanic markets.

Although this flexibility was clearly a key element of their competitive positioning, the question remains as to whether this is truly a competitive advantage relative to larger commercial slaughter and processing operations.

Marketing Flexibility

Goridtos and The Egg & I Pork Farm both had multiple consumer outlets for their products. Goridtos sold to retail stores in several states, as well as to at least three different ethnic populations (Hispanic, Vietnamese, Pacific Islander). Each market had nuances which allowed them to utilize different types of hogs (lighter or heavier weights). In addition to these sales, Goridtos also was marketing direct through retail stores. This allowed improved access to their customers and has allowed them to capture a greater share of the food dollar. They intend to expand their direct marketings as an important way to increase their value. Similarly, The Egg & I Pork Farm markets through it’s own retail outlet, mail order, catalog orders (Dean & DeLuca), a direct vending bus/deli service as well as area restaurants and grocers. This diversity of customers protects them from being hostage to one or two large accounts and provides broader exposure to customers. With the recent reduction of offerings by Dean and DeLuca, this illustrates the importance of having multiple reliable outlets for product. Only Nahunta has very focused marketings through their own retail outlets.
Customer Service

Ultimately, all three markets were built on radically superior customer service. In the case of Goridto's, they had developed strong relationships with Hispanic retailers partly through direct interaction, but also by assuring them they would no longer be shorted pork products. Nahunta and The Egg & I Pork Farm rely heavily on their owners' personality and personal touch to connect with customers. This is a two way street as they learn more about what their customers want, and the customers feel like they are important to the owners. This may be a significant competitive advantage for small scale regional suppliers who help break the anonymity prevalent in commercial outlets. Clearly there are scale limitations to direct customer service which limits growth as it provides a potential niche.

In addition to customer service, all three continually evaluated and responded to consumer demands. Goridto's provides an unsplit and lighter weight hog carcasses to Hispanic markets, which has allowed them to meet preferences as well as differentiate themselves from larger commercial packers. Goridto's is further serving their retail customers by offering vacuum packed primal cut to their specifications. This provides the product desired and results in a cost savings to the retailers. The Egg & I Pork Farm had a great deal of interaction with customers and in addition was actually soliciting cooked pork recipes from customers to provide further custom products. Similarily, the provide custom hams and chops to restaurant customers on demand. While this results in some merchandising difficulties it helps build a loyal and reliable customer base. The close interaction of all associates of Nahunta with the customers and the entire production base naturally results in a strong feedback directly from customers to the processing. This is evidenced by Nahuntas ability to meet demand at any given time by altering slaughter and processing. This assures that customers will always find available a reliable variety of fresh pork products.

Cost Structures

As reported by each of the firms, their costs of slaughter are remarkably consistent. Goridto's reported a slaughter cost of between $20 and $25/head which was similar to Nahunta's figure of a direct cost of approximately $20/head in a similar sized operation. The Egg & I was not yet slaughtering, but the slaughtering operation was being built partially on the premise that the $35/head charged for custom slaughter was likely too high.

Nahunta provides the best illustration of processing and retailing costs although they are likely rough as well. Nahunta attributes about $20/head to processing and cooked products and another $20/head to the retail packaging and cutting portion. Hence the total per head cost is around $60/head from live to the case.

Clearly, these levels are above the levels reported for commercial slaughter firms (Hayenga). However, each firm compensates for this differential by capturing the retail value of the products rather than just the wholesale level. From the cases, each emphasized the difficulty in competing at a level further removed from the customer, since these markets are typically valued via cost structure, while the consumer market represents costs plus the willingness of consumers to pay for additional value which can be differentiated.
Merchandising and Seasonality

All cases provide illustrations of the classic merchandising and seasonality problems which a value added marketing effort will encounter. There are two overall components to the problem (1) is the broad seasonality of hog production and (2) is the seasonality differences of pork cuts within the total market and the fact that one hog will have a relatively constant proportion of pork cuts.

In Goridto's case, they experienced seasonality from the traditional Christmas and holiday influences, but also from the seasonal aspect of migrant labor. They had mitigated part of this by having flexible slaughter. Several individuals involved in the plant operations are also used to promote sales of products in an effort to smooth the seasonality of sales. This has the dual aspect of reducing seasonal employment problems and directly mitigating the seasonal sales effects.

The Egg & I Pork Farm managed seasonality by vacuum packing and freezing many of its products. In particular, hams are stored through the fall for winter demand. Creative marketing has also been employed to move seasonal products. In the summer, when ham demand is low, The Egg & I Pork Farm will use fresh hams for pig roasts instead of utilizing the whole hog as is commonly done. This allows for gaining greater value by segmenting the markets for loins and ribs during the summer grilling season.

Nahunta Pork dealt with seasonality by altering the types of cuts offered and by featuring pork items. The method of country curing hams allows them a great deal of flexibility in storing and selling a highly seasonal meat item.

In creating a business plan for developing a value added market, it will be imperative to include seasonal sales attributes. Seasonality will be critical in developing pricing strategies, merchandising strategies, production management (including employment surplus and deficit periods) and certainly in managing working capital and cash flow aspects of the enterprise.

Regulatory Factors

All three cases were consistent in their comments regarding inspection and other regulatory issues. In fact, Jim Dougherty's decision to build his own slaughtering system was to some extent based on concerns springing from the new HACCP regulations. A particular problem all confronted was in difficulty with inspection due to their size. All faced a rapid turnover of inspectors and this created continuity problems. Inspectors seemed to have a large degree of subjective latitude so that changing inspectors changed the focus of inspection.

None of the three saw HACCP implementation to be a serious problem to their continued success. While it did increase costs through labor utilization for greater reporting and record keeping, it wasn't a determining factor in the continuance of their operations.

Another consistency across all three was their encouragement to use existing consultants and government resources to manage regulatory issues such as labeling and nutritional testing. Learning the systems and issues likely costs more than hiring this expertise.
Regulatory Considerations in Value Added Markets

Each of the case study participants indicated that the regulatory aspects of further processing were a key factor in their operations. Following is a summary of regulatory issues in meat processing. The complete regulations are voluminous, but this provides a summary of these regulations and also includes key sources and contacts where appropriate. This should not be taken as a substitute for due diligence in examining these issues on a case specific basis as it will depend on the facility, political and geographic location.

Overview of Government Regulation in Food and Meat Processing

On a national level, five primary government agencies involved in meat processing are the United States Department of Agriculture's Food Safety Inspection Service (USDA, FSIS), the United States Environmental Protection Agency (EPA) The United States Department of Labor's Occupational Safety and Health Administration (OSHA), USDA's Grain Inspection and Packers and Stockyards Administration (GIPSA) and the Food and Drug Administration (FDA).

The Food Safety Inspection Service (FSIS) mission is as follows:

“The Food Safety and Inspection Service (FSIS) is the public health agency in the U.S. Department of Agriculture responsible for ensuring that the nation's commercial supply of meat, poultry, and egg products is safe, wholesome, and correctly labeled and packaged, as required by the Federal Meat Inspection Act, the Poultry Products Inspection Act, and the Egg Products Inspection Act.”

Under the Federal Meat Inspection Act, FSIS inspects all meat sold in interstate and foreign commerce. FSIS inspects at all levels of production: slaughter, processing, handling and packaging. In addition, FSIS sets standards for food ingredients, additives, and compounds used in further processed products. Finally, FSIS also sets labeling standards and approves labels for meat.

The specific federal rules on inspection are contained in the Code of Federal Regulations, Title 9, Volume 2, Chapter III “Food Safety and Inspection Service, Meat and Poultry Inspection, Department of Agriculture.” Parts 301-417. The complete rules may be found on the internet at http://www.access.gpo.gov/nara/cfr/waisidx/9cfrv2.html#301. Following is a listing of the parts and topics of the rules to provide some idea of their scope.

CFR, Title 9, Volume 2, Chapter III, Parts 301 - 417:

- 301 Definitions
- 302 Application of inspection and other requirements
- 303 Exemptions
- 304 Application for inspection; grant or refusal of inspection
- 305 Official numbers; inauguration of inspection; withdrawal of inspection; reports of violation
- 306 Assignment and authorities of program employees
- 307 Facilities for inspection
- 308 Sanitation
- 309 Ante-mortem inspection
- 310 Post-mortem inspection
Establishments are subject to USDA inspection, with the following exceptions:
- slaughtering animals for personal use or custom slaughtering animals for their owners (all such products must be kept separate from inspected products and marked NFS (not for sale).
- processing only parts less than one half of a carcass (100 lb. = 1/2 hog carcass). cutting, grinding, etc. is OK w/out inspection, if it is done with 1/2 carcass or less.

Establishments must contact their regional director for an inspection application. (addresses of field offices are included). If the location or ownership of the establishment changes, a new application must be filed.

Before applying, the applicant needs:
I. Written sanitary standard operating procedures (SOPs)
II. Certification that the establishment will not violate water quality standards outlined in 21(b) Federal Water Pollution Control Act.
III. HACCP plan - 90 days conditional inspection will be granted to validate HACCP.
Site requirements for inspection:

I. For USDA employee - office space with furnishings, light, heat, janitorial services, lockers (locks and keys held by USDA employee), facilities to change clothing (for establishments w/ less than 1/4 time, these facilities may be located adjacent to the site).

II. For ante-mortem inspection - pens and alleys that are paved and well drained, with hose accessible, adequate lighting, and areas to separate suspect and condemned animals.

III. For inspection - racks to retain organs, tables for inspection, water tight metal trucks for holding diseased carcass/parts, areas for condemned products, retention rooms for final inspection of suspect products with USDA locks and keys, lockers for brands, devices and certificates with USDA locks.

IV. All containers for suspect or condemned products must be marked conspicuously with letters at least 2 inches stating “US CONDEMNED” or “US RETAINED”.

V. Lighting - minimum of 50 candle feet, shadow free in inspection areas.

VI. Lavatory with hot and cold running water, soap and clean towels.

Each establishment is assigned an identification number (one and only one) to identify products. This number will be on all stamps, badges and certificates used by USDA. Inspection will be suspended if conditions are unsanitary or inhumane.

USDA employee/Inspector must be given access upon demand to facilities 24 hours per day, seven days per week. Their numbered badge is sufficient identification for access to the facility.

A full time inspector will work at an establishment 8 hours per day, 5 days per week, paid by USDA. Any overtime or holiday time must be requested, and paid for by the establishment.

HACCP

In 1996, USDA’s FSIS (Food Safety and Inspection Service) mandated the first fundamental change in food safety inspection since 1906. Previously, inspectors had used measures based on organoleptic (relying on the senses) evaluation. Methods based on sight and smell were developed in the early 1900’s when animal disease and unsanitary processing were major food safety issues. However, such threats have subsided, and attention has refocused on the problem of microbial contamination and food borne illness.

The new food safety regulations require that all plants processing animal products for interstate trade adopt a HACCP (Hazard Analysis and Critical Control Point) program. HACCP was developed in the 1960’s by Pillsbury for NASA to ensure the safety of foods on manned space missions. This approach is better suited for preventing microbial contamination than the old method, because it focuses on prevention of safety hazards throughout the processing chain. Referred to as a “farm to fork” policy, HACCP relies on safeguards from the farm all the way to the consumer.

A HACCP plan identifies and controls critical control points in the production process that can affect food safety. A plant must conduct an analysis of the production process to determine where there are risks for hazards and identify critical control points (CCPs). Critical Control Points are points in the process where a control, such as chilling or hygiene, can be applied to prevent any risk to food safety. Critical Control Points are then targeted with appropriate checks and controls. Stringent monitoring procedures and detailed records are vital.

Following is a general overview of the key highlights as well as key sources for learning more about HACCP.
Sanitary Operating Procedures (SOP’s)

Each firm engaged in meat packing and processing must develop, implement, and maintain written standard operating procedures for sanitation (sanitation SOP’s). Sanitation SOP’s must describe all procedures which will be conducted daily, before and during operations, to prevent direct contamination of products. The procedures at a minimum must address the cleaning of food contact surfaces of facilities, equipment and utensils. It must also identify how frequently the procedures will be conducted, and will identify the employees responsible for the implementation and maintenance of the procedures.

The described activities for the sanitation SOP’s are to be implemented as described and also evaluated for effectiveness on an ongoing basis. Sanitation SOP’s will also be revised as necessary to keep them effective with respect to changes in facilities, equipment, utensils, operations, or personnel.

Each establishment must maintain daily records sufficient to document the implementation and monitoring of the Sanitation SOP’s and any corrective actions taken. These records must be maintained for six months and made available to FSIS at the establishment within 48 hours following completion.

FSIS is the agency which verifies the adequacy and effectiveness of the Sanitation SOP’s. FSIS may verify by: reviewing the Sanitation SOP’s, reviewing the daily records documenting the implementation of the Sanitation SOP’s, direct observation of the implementation of the Sanitation SOP’s and corrective actions taken, and direct observation or testing to assess the sanitary conditions of the establishment.

When an unsanitary condition is detected and rectified, the facility will be considered in compliance. Depending on the severity of the incident, inspectors can take action, including tagging the equipment or product, and may recall suspect products if they have been distributed. USDA can temporarily suspend or terminate inspection for "persistent and serious" non compliance.

A sample Sanitation SOP is included in The Egg & I Pork Farm case study.

Hazard Analysis and Critical Control Point (HACCP) Systems

As specified in the Code of Federal Regulations, Title 9, Volume 2, Chapter 3, Part 417, HACCP has seven core components: (1) Conducting a hazard analysis and develop and implement a written HACCP plan covering each product produced by that establishment (2) identification of corrective actions to be followed in response to a deviation from the control limits specified in the plan (3) validation of the adequacy of the plan in controlling safety hazards identified during the hazard analysis (4) effective record keeping systems to document and monitor the HACCP systems (5) methods for FSIS verification of the HACCP plan.

Again, FSIS is responsible for implementing these regulations. FSIS has developed a series of generic plans for HACCP which are available on the internet (www.fsis.usda.gov). In addition, FSIS provides state HACCP contacts who can coordinate resources and activities to support HACCP implementation in small plants. These contacts may be found at http://www.fsis.usda.gov/OA/haccp/stcontacts.htm. Each state also has a HACCP information coordinator, normally with a university Extension Service, who is the contact point for HACCP materials. These information coordinators may be found at http://www.fsis.usda.gov/OA/haccp/stateinfo.htm. Additional publications available have been
cited previously. As an example, a part of the HACCP plan from Nahunta Pork is included with their case study. Nahunta actually has twelve individual HACCP plans; one for each stage of production and each type of further processed or cooked product.

Labeling Issues

The previous summary of standards are necessary for any slaughter, processing or preparation establishment. In the case of developing value-added products, it is likely that there will be specific labeling requirements or ingredients which need to be identified for market differentiation.

Labeling and Marking

Labeling, marking devices, and containers are described under part 317 of Title 9, Chapter III of the Federal Register. Marking is defined as lettering or tags directly affixed onto products (e.g., marks of inspection.). Labels broadly refer to product identification, and includes marking.

The Federal Meat Inspection Act (FMIA) gives FSIS the authority for a label control program. Before a label can be used, it must be approved and must be used under inspection supervision. Regardless of who owns the establishment or where the establishment is located, all establishments under federal and/or state inspection must comply with the same requirements and standards for labels, establishing uniformity through the label control program.

An establishment may submit any label, marking or sketch directly to the Food Labeling Division of (FSIS) in Washington D.C. For each label or sketch submitted, the establishment completes an FSIS Form 7234-1, Application for Approval of Labeling, Marking or Device, in duplicate and attaches the label, marking or sketch to each copy of the form.

The establishment has the responsibility to establish and maintain a record of all labeling that is used for meat and poultry products under their control. Labeling records must be made available to FSIS field personnel and any authorized USDA official upon request.

Required label features include the following:

- **Product Name**: Must have a definition and standard of identity of which the consumer has knowledge
- **Ingredient Statement (if needed)**: If composed of two or more ingredients, must show the common or usual name of each in the descending order by weight at the time of product preparation.
- **Inspection Legend and Establishment Number**
- **Net Weight Statement**
- **Signature line (manufacturer's or distributors name and address)**
- **Handling Statement (if needed)**: Handling statement such as “keep refrigerated”, “keep frozen”, etc. is required on the label of packaged product to indicate that the product must have handling to maintain its wholesome condition.
- **Nutrition Labeling (if needed)**: Required for most further processed products. It is voluntary for raw meat and poultry products but producers are encouraged to supply nutrition labeling. The information includes the serving size, servings per container and the calories, fat, protein, carbohydrate, and sodium per serving.
Safe Handling Instructions (if needed)
Required on all labels for products that are not processed to the point of being “ready to eat”. This includes raw meat and poultry products. Safe Handling Instructions include a graphic display of pictures along with information on keeping foods refrigerated, keeping product contact surfaces clean, cooking thoroughly, and keeping cooked foods hot.

More specific issues are also dealt with under part 317. Examples include: nutrient content claims for “good source”, “high”, and “more”; nutrient content claims for “light” or “lite”; and nutrient content claims for “healthy”.

With the increase in interest in organic products, this is a specific area of concern. USDA's Agricultural Marketing Service (AMS) is responsible for regulations for the use of the term “organic” on the labeling of food products. To date, AMS is planning to reissue a proposed rule that will address issues raised in the December 16, 1997 release of its original proposal for defining organic products. Therefore, it is not possible to label meat products as generically “organic” since no such rule or definition yet applies. However, FSIS will allow the terminology “certified organic by (a certifying entity)” as a factual statement if the certifying agency has (a) standards for what constitutes an agricultural product as “organically” produced and (b) a system for ensuring that products the certifying agency certifies meet those standards. Applications for these labels are to be directed to the Labeling and Additives Policy Division, FSIS, USDA, Room 616C, Cotton Annex, Washington, DC 20250.

In addition to the “certified organic by (a certifying entity)” claims, FSIS permits animal production claims and the term “natural” as long as they are truthful and claims can be supported by documentation (e.g., producer affidavits and raising protocols) to ensure the accuracy of claims. Such claims might include “raised with no artificial growth promotants” or “corn fed”. The term “natural” may be used when products contain no artificial ingredients and are no more than minimally processed. The term natural is applied to many existing “commercial” pork products in markets where there is a perceived value. Hence, the term natural is very unlikely to provide a significant differentiation from existing products.

Irradiation is an additional consideration for labeling now. The Food and Drug Administration is currently considering revisions to its labeling requirements for foods treated with ionizing radiation. Currently, FDA's regulations require that the labeling of retail packages or displays of food treated with ionizing radiation include both the radura logo (the international symbol that indicates radiation treatment) and a disclosure statement (either “treated with radiation” or “treated by irradiation”).

Environmental Regulations

The Environmental Protection Agency is charged with protecting human health and the natural environment. Unlike the FSIS, there are no specific regulations regarding the meat processing industry. However, the Clean Water Act (CWA) 1977 Clean Water Act Amendments to the 1972 Federal Water Pollution Control Act), requires that permits be obtained for wastewater discharges from industrial, commercial, and certain agricultural sources. Operations that discharge directly to surface waters need a National Pollutant Discharge Elimination System (NPDES) permit. The permit identifies and limits the quantity and content of discharge, as well as establishing approved monitoring procedures.
The processor should contact the appropriate state environmental agency to find out about specific permits which may apply. Links to all state agencies can be found at: http://www.smallbiz-enviroweb.org/seasbapweb.asp. This site also provides small business assistance program contacts. A list of ombudsman for state environmental agencies and small business assistance programs may also be found at http://www.epa.gov/ttn/sbap/offices.html.

In general, meat packers and processors will have to follow regulations and standards at the state level rather than the federal level. Federal legislation sets limits which the state has authority to implement in “at least as strong as levels” or at higher levels. The National Food Processors Association (NFPA) offers a publication Sourcebook of State Laws and Regulations for Food Processors which may be purchased at www.nfpa-food.org/pulicat_fr.html.

A processor may also contact the regional EPA office, which has small business and technical assistance programs. A listing of addresses for the ten regional offices is included. The EPA offers grants and awards to small businesses implementing new environmentally sound technologies.

A review of several state publications provides a summary of waste audit information for reducing emissions. Reducing waste can decrease operating disposal and liability costs of operating a plant.

Waste Reduction

Perform a waste audit
1. List wastes the plant generates. (i.e., process wastewater, sludge, waste oils, dirty filters, empty containers)
2. Identify composition and source of waste.
3. Identify options to reduce waste. Priority should be given to the most hazardous materials and to the most easily achievable reductions.
5. After implementation, schedule periodic evaluation of results.

Reduction methods
Operating procedures:
1. Separate waste streams. Do not contaminate reusable or recyclable material.
2. Reduce waste of raw materials – reject damaged goods, monitor use and avoid over stock of perishables.
3. Use drip pans, screens and grease traps to capture solid residue.

Production process:
1. Use mechanical, dry cleanup whenever possible (i.e. sweep floor before hosing). This can reduce BOD5 by 50 percent or more.
2. Install high pressure, low volume water systems with automatic shutoff. Optimize use of equipment to reduce cleaning needs.

Recycle and Reuse
1. Waste can be composted or land-spread.
2. Residues can be sent to renderer, or put into animal feed directly (depending on its nature).
3. Clean shipping materials, paper, etc, can be reused.
4. Recycle lubrication oils.
Occupational Safety and Health Administration

Under the Occupational Health and Safety Act (CFR Title 29, parts 1900-1910), all employers are required to provide a work place ‘free from recognized hazards likely to cause death or serious injury’.

OSHA requirements

All employers must comply with OSHA standards and are subject to inspection. Standards can be purchased hard copy or CD ROM from Superintendent of Documents, Gov't Printing Office, Washington, DC 20402-9352 (phone 202.512.1800)

All employers must inform employees of any chemical hazards faced on the job (chemical manufacturer is responsible for determining these hazards) and train them to take appropriate precautions

All employers must prominently display the OSHA poster ‘Job Safety and Health Protection’, available on-line at www.osha.gov, or from the OSHA publications office, Room N-3101, Frances Perkins Bldg., 200 Constitution Ave NW, Washington, DC 20210.

All employers must report fatalities or incidents requiring the hospitalization of more than 5 employees within 24 hours (1-800-321-OSHA).

Employers with >10 employees\(^5\) must maintain OSHA records. The largest number employed by the entire firm (not just one establishment) during the previous calendar year determines number of employees. Owners & partners are not considered employees.

Record keeping

The employer is responsible for maintaining all records.

- Employers with less than 11 employees may be required to keep records for the Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illness.
- Two forms must be kept by subject firms – OSHA No. 200 & OSHA No. 101. Forms must be obtained from OSHA publications office.
- Form OSHA No. 200 serves two purposes:
  1. a log of the occurrence of occupational illnesses, their extent and outcome
  2. provides a yearly summary of these occurrences.
- Form OSHA No. 101 should contain additional information about cases logged in No. 200
- Records for the past five years must be kept at each establishment.
- Records must be kept for the calendar (not fiscal) year.
- Summaries of OSHA 200 for each year must be posted prominently for employee viewing by February 1 of the following year, and remain posted until at least March 1.
- Incidents must be recorded ASAP and no later than 6 days after occurrence.
- Records must be made available to OSHA inspectors, State reps, employees of the Department of Health and Human Services & Department of Labor.
- Employees or their representatives must be allowed to view and copy OSHA records for the period of their employ.
- Intentionally false statements in logs are punishable by up to $10,000 fines or up to 6 months imprisonment.

\(^5\) exceptions exist, but are not pertinent to our cases

\(-106-\)
What needs to be recorded

- All deaths.
- Non fatal illnesses due to events or exposures on premises or work site.
- Nonfatal injuries that involve loss of consciousness, restriction of work or motion, transfer to a new job, or medical treatment (not including simple first aid).
- Injuries are distinguished from illness- injuries are due to an instantaneous event, whereas longer term exposure, inhalation, repetitive movements, etc are contributing factors to illness.
- Incidents occurring while on the premises for any reason relating to employment are reportable.

OSHA and state plans

Currently, 25 states have OSHA approved plans. These plans are stricter than, or the equivalent of, OSHA regulation. In states with OSHA plans (list attached), the state agency is the primary authority for inspections, etc.

Resources for Compliance

- Small businesses (< 250 employees) are eligible to participate in the free OSHA on site consultation plan. Plans are administered through state agencies. Consultations are separate from inspection visits, and no fines or citations can be issued. A directory of consultation programs is attached.
- Publications such as record keeping guidelines, inspection booklets and other hand books are available from the OSHA publications office
- Training courses are available at the OSHA Training Institute (private sector) 1555 times Drive, Des Plaines, IL 60018. Courses are offered at 8 locations. Call 847.297.4913 for info.

OSHA Standards Relevant to Meat Packing

- Personal protective equipment (PPE) required for employees using particular equip- ment (i.e. safety glasses or mesh metal gloves for meat cutters).
- Machinery must be equipped with guards to stop flying chips, sparks, etc
- Any sprockets, chains, rotating drums, etc, must be enclosed and rendered inoperable if guard is removed.
- Electrical stimulation devices for meat tenderizing must be grounded and the live wires guarded.
- ‘Ergonomic Program Management Guidelines for Meat Packing Plants’ OSHA pub #3123 is available, as are case studies of several plants ergonomic interventions.

Grain Inspection and Packers and Stockyards Agency (GIPSA)

The Regulations and Statements of General Policy, together with the rules of practice governing proceedings under the P&S Act and the organization and functions of the Packers and Stockyards Programs, are contained in the Code of Federal Regulations, Title 9, Chapter II, parts 201-205.

The Packers and Stockyards Act is generally concerned with fair practices in the exchange of livestock. Following are the broad categories of the regulation:
APPLICABILITY OF INDUSTRY RULES
201.4 Bylaws, rules and regulations, and requirements of exchanges, associations, or other organizations; applicability, establishment.

REGISTRATION
201.10 Requirements and procedures.
201.11 Suspended registrants; officers, agents, and employees.

SCHEDULES OF RATES AND CHARGES
201.17 Requirements for filing tariffs.

GENERAL BONDING PROVISIONS
201.27 Underwriter: equivalent in lieu of bonds; standard forms.
201.28 Duplicates of bonds or equivalents to be filed with Regional Supervisors.

MARKET AGENCY, DEALER AND PACKER BONDS
201.29 Market agencies, packers and dealers required to file and maintain bonds.
201.30 Amount of market agency, dealer and packer bonds.
201.31 Conditions in market agency, dealer and packer bonds.
201.32 Trustee in market agency, dealer and packer bonds.
201.33 Persons damaged may maintain suit; filing and notification of claims; time limitations; legal expenses.
201.34 Termination of market agency, dealer and packer bonds.

PROCEEDS OF SALE
201.39 Payment to be made to consignor or shipper by market agencies; exceptions.
201.42 Custodial accounts for trust funds.

ACCOUNTS AND RECORDS
201.43 Payment and accounting for livestock and live poultry.
201.44 Market agencies to render prompt accounting for purchases on order.
201.45 Market agencies to make records available for inspection by owners, consignors and purchasers.
201.49 Requirements regarding scale tickets evidencing weighing of livestock and live poultry.

TRADE PRACTICES
201.53 Persons subject to the Act not to circulate misleading reports about market conditions or prices.
201.55 Purchases and sales to be made on actual weights.
201.56 Market agencies selling on commission; purchases from consignment.
201.61 Market agencies selling or purchasing livestock on commission; relationships with dealers.
201.67 Packers not to own or finance selling agencies.
201.69 Furnishing information to competitor buyers.
201.70 Restriction or limitation of competition between packers and dealers prohibited.

SERVICES
201.71 Scales; accurate weights, repairs, adjustments or replacements after inspection.
201.72 Scales; testing of.
201.73 Scale operators to be qualified.
201.73-1 Instructions for weighing livestock.
201.76 Reweighing.
201.81 Suspended registrants.
201.82 Care and promptness in weighing and handling livestock and live poultry.
INSPECTION OF BRANDS
201.86 Brand inspection: Application for authorization, registration and filing of schedules, reciprocal arrangements, and maintenance of identity of consignments.

GENERAL
201.94 Information as to business; furnishing of by packers, live poultry dealers, stockyard owners, market agencies, and dealers.
201.95 Inspection of business records and facilities.
201.96 Unauthorized disclosure of business information prohibited.
201.97 Annual reports.
201.98 Packers and dealers not to charge, demand, or collect commission, yardage, or other service charges.
201.99 Purchase of livestock by packers on a carcass grade, carcass weight, or carcass grade and weight basis.

9 CFR PART 203 Statements of General Policy Under the Packers and Stockyards Act
203.2 Statement of general policy with respect to the giving by meat packers of meat and other gifts to Government employees.
203.4 Statement with respect to the disposition of records by packers, live poultry dealers, stockyard owners, market agencies and dealers.
203.5 Statement with respect to market agencies paying the expenses of livestock buyers.
203.7 Statement with respect to meat packer sales and purchase contracts.
203.10 Statement with respect to insolvency; definition of current assets and current liabilities.
203.12 Statement with respect to providing services and facilities at stockyards on a reasonable and nondiscriminatory basis.
203.14 Statement with respect to advertising allowances and other merchandising payments and services.
203.15 Trust benefits under sections 206 and 207 of the Act.
203.16 Mailing of checks in payment for livestock purchased for slaughter, for cash and not on credit.
203.17 Statement of general policy with respect to rates and charges at posted stockyards.
203.18 Statement with respect to packers engaging in the business of custom feeding livestock.
203.19 Statement with respect to packers engaging in the business of livestock dealers or buying agencies.
Appendix A

FSIS Field Office Locations and Phone Numbers

As Of August 16, 1998

Technical Service Center
Omaha, NE

Dr. Paul Thompson, Director
106 South 15th Street
Suite 904
Omaha, NE 68102
PHONE: (402) 221-7400
FAX: (402) 221-7438

District Offices

Alameda, CA
District 05
Dr. Murli M. Prasad
620 Central Avenue
Building 2C
Alameda, CA 94501
PHONE: (510) 337-5074
FAX: (510) 337-5081
States: California

Albany, NY
District 65
Mr. George Puchta
230 Washington Avenue
Albany, NY 12203
PHONE: 1-800-772-7033
FAX: (518) 452-3118
States: New Jersey, New York

Atlanta, GA
District 85
Dr. Lewis Burgman
100 Alabama Street, SW
Suite 3R90
Atlanta, GA 30303
PHONE: (404) 562-5900
FAX: (404) 562-5877
States: Florida, Georgia

Beltsville, MD
District 75
Dr. Perfecto Santiago
5601 Sunnyside Avenue
Suite 1-2288 B
Beltsville, MD 20705
PHONE: (301) 504-2136
FAX: (301) 504-2140
States: Delaware, District of Columbia, Maryland, Virginia

Boston, MA
District 70
Mr. Jan R. Behney
411 Waverley Oaks Rd
Bldg. 3, Suite 331
Waltham, MA 02452-8405
PHONE: (781) 398-2290
FAX: (781) 736-1843
States: Connecticut, Maine, Massachusetts, New Hampshire, Puerto Rico, Rhode Island, Vermont, Virgin Islands

Boulder, CO
District 15
Dr. Ronald K. Jones
665 South Broadway
Suite B
Boulder, CO 80303
PHONE: (303) 497-5411
FAX: (303) 497-7306
States: Arizona, Colorado, New Mexico, Nevada, Utah

Chicago, IL
District 50
Mr. David E. Green
1919 South Highland Avenue
Suite 115C
Lombard, IL 60148
PHONE: (630) 620-7474
FAX: (630) 620-7599
States: Illinois, Indiana

Dallas, TX
District 40
Dr. Alan F. Knox, Acting
1100 Commerce Street
Room 5F41
Dallas, TX 75242
PHONE: (214) 767-9116
FAX: (214) 767-8230
States: Texas
Des Moines, IA
District 25
Dr. Jerry J. Booth
11338 Aurora Avenue
Des Moines, IA 50322
PHONE: (515) 727-8960
FAX: (515) 727-8991
States: Iowa, Nebraska

Jackson, MS
District 90
Dr. Mariano-Loret de Mola
715 S. Pear Orchard Road
Suite 101
Ridgeland, MS 39157
PHONE: (601) 965-4312
FAX: (601) 965-4993
States: Alabama, Mississippi, Tennessee

Lawrence, KS
District 30
Dr. William M. Walker
4920 W 15th Street
Lawrence, KS 66049
PHONE: (913) 841-5600
FAX: (913) 841-5623
States: Kansas, Missouri

Madison, WI
District 45
Mr. James W. Blank
Park Bank Plaza Building
2810 Crossroads Dr.
Suite 3500
Madison, WI 53718-7969
PHONE: (608) 240-4080
FAX: (608) 240-4092
States: Michigan, Wisconsin

Minneapolis, MN
District 20
Dr. Nathaniel Clark
Butler Square West, Suite 989-C
100 N. 6th Street
Minneapolis, MN 55403
PHONE: (612) 370-2400
FAX: (612) 370-2411
States: Minnesota, Montana, North Dakota, South Dakota, Wyoming

Philadelphia, PA
District 60
Mr. Joseph Priore
Mellon Independence Center
701 Market Street, 2-B South
Philadelphia, PA 19106
PHONE: 1-800-637-6681
FAX: (215) 597-4217
States: Pennsylvania

Pickerington, OH
District 55
Dr. Ellis L. Jones
155 East Columbus Street
Pickerington, OH 43147
PHONE: (614) 833-1405
FAX: (614) 833-1067
States: Kentucky, Ohio, West Virginia

Raleigh, NC
District 80
Dr. Karen W. Henderson
6020 Six Forks Road
Raleigh, NC 27609
PHONE: (919) 844-8400
FAX: (919) 844-8411
States: North Carolina, South Carolina

Salem, OR
District 10
Dr. Helmut W. Blume
530 Center Street, NE
Room 405
Salem, OR 97301
PHONE: (503) 399-5831
FAX: (503) 399-5636
States: Alaska, American Samoa, Guam, Hawaii, Idaho, Oregon, Washington

Springdale, AR
District 35
Dr. Cordell H. Schilmoeller
216-1/2 East Emma Avenue
2nd Floor
Springdale, AR 72764
PHONE: (501) 751-8412
FAX: (501) 751-9049
States: Arkansas, Louisiana, Oklahoma
Appendix B

EPA Regional Offices

Region 1 - CT, MA, ME, NH, RI, VT
NEEA Team assistance line: 1-800-90NEEAT (1-800-906-3328)
http://www.epa.gov/region01/steward/neeat/index.html

Region 2 - NJ, NY, Puerto Rico & the U.S. Virgin Islands
290 Broadway
New York, NY 10007
212.637.3000
http://www.epa.gov/Region2/

Region 3 - DE, MD, PA, VA, WV, DC
Director -- Richard Segrave-Daly  215-814-5535 or 1 (800) 228-8711.
http://www.epa.gov/region3/sbac/index.htm

Region 4 - AL, FL, GA, KY, MS, NC, SC, TN
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8960
Main Switchboard Number: (404) 562-9900
http://www.epa.gov/Region4

Region 5 - IL, IN, MI, MN, OH, WI
77 West Jackson Blvd
Chicago, IL 60604
312.33.2000 or 800.621.8431
http://www.epa.gov/Region5

Region 6 - AR, LA, NM, OK, TX
Main Office
1445 Ross Avenue
Suite 1200
Dallas, Texas 75202
(214) 665-2200
http://www.epa.gov/Region6

Region 7 - IA, KS, MO, NE
726 Minnesota Ave
Kansas City, MO
800.223.0425
913.551.7003
http://www.epa.gov/Region7

Region 8 - CO, MT, ND, SD, UT, WY
999-18th St., Suite 500 Denver, Colorado 80202-2466 1-800-227-8917 (Region 8 States Only) 1-303-312-6312
http://www.epa.gov/Region8

Region 9 - AZ, CA, HI, NV, Guam & American Samoa
75 Hawthorne Street
San Francisco, CA
(415) 744-1500
http://www.epa.gov/Region9

Region 10 - AK, ID, OR, WA
1200 6th Avenue
Seattle, WA 98101
(206) 553-1200
1-800-424-4EPA
http://www.epa.gov/Region10

-112-
State Marketing Programs

Alabama Department of Agriculture
4121 Carmichael Road
Montgomery, AL 36124-0578
334/240-7100

Contact:
Dr. John C. Gamble
Director, Marketing Division
334/240-7245

Domestic Marketing Program
A key element of the domestic marketing program of the Alabama Department of Agriculture and industries is the "Alabama...Experts in the Field" logo program. Goals of the logo program are to promote Alabama produced or manufactured products in the state and worldwide marketplaces. A "Pick Your Own" is published each ear in the Alabama Farmers' and Consumers Bulletin.

The small Farmers Marketing and Education Association maintains a close working relationship with various Farmers’ Market activities to include Home Agent Demonstrations, Farmers’ Market Day, and special promotions throughout the year.

The marketing and economics division works with the various Alabama agribusiness associations in conducting workshops, tradeshows, and meetings.

Arizona Department of Agriculture
1688 West Adams
Phoenix, AZ
602/542-4373

Contact:
Dr. Ralph Meer
University of Arizona
602/621-9446

Office of Commodity Development and Promotion
• Assist various Arizona agricultural and food processing companies in successfully marketing products locally and abroad.
• Sponsoring and participating in trade shows where Arizona products are showcased.
• Implementing the "Arizona Grown/Buy Local" campaign.

Arizona Grown
Encourages people to consume the daily recommended allowance of fresh fruits and vegetables, preferably those grown in Arizona, and to buy Arizona Grown food products because they are fresher, more flavorful, a good value, and support the Arizona economy.

Program includes activities statewide in the media, retail grocery stores and community setting such as schools. Callers from Arizona can receive a free Arizona Grown/5-a-Day for Better Health Harvest Calendar by calling 1-800-4-Cancer and asking to speak with a cancer information Specialist. The Harvest calendars feature nutrition information on Arizona Grown "in season" fruits and vegetables along with easy-to-fix recipes.

The Arizona Grown Farm to Family Directory
Gives consumers information on where they can buy agricultural products directly from Arizona farmers and ranchers. The Arizona Grown Farm to Family Directory was prepared by the Arizona Department of Agriculture. For more information or to add farms and ranches to the future editions of the directory, call: Arizona Department of Agriculture, Office of Commodity Development and Promotion at 602/542-0978.
Colorado Department of Agriculture
700 Kipling St Suite 4000-
Lakewood, CO 80215
303/239-4100

Contact:
Markets Division
Jim Rubingh, Director
303/239-4114

Farmer/Rancher Programs
Seal of Quality

An inspection and labeling program that differentiates Colorado fresh produce of the highest quality. The program is voluntary, but if producers or packers choose to market products with the Colorado Seal of Quality, they must meet standards established by the industry.

Beginning Farmer Program

The Colorado Agricultural Development Authority provides tax-exempt bonds for low-interest financing of land or equipment purchases. Individuals must qualify as beginning farmers to participate in this program. A beginning farmer is defined as a person who does not own more than 30 percent of the median county farm size.

Foodservice Program
A Match Made in Colorado

This program is a joint marketing program between the Colorado Department of Agriculture and the ACF Culinarians of Colorado. Its purpose is to encourage and promote the use of Colorado food products by the state’s foodservice industry through many different programs including:

- Signature Chef Program

This program carefully matches Colorado commodity organizations and small food companies with “chef mentors.” For a reasonable annual fee, the chef develops signature recipes, represents the group or company at trade events and endorses the participant’s product. Chef mentors volunteer their time for this program and all proceeds are used to fund scholarships and educational programs for individuals pursuing careers in the culinary arts.

- Networking Meetings

The Colorado Department of Agriculture hosts at least one networking meeting for chefs and farmers each year. The purpose of the meeting is to provide an opportunity for chefs and growers to meet face-to-face to establish marketing relationships. The informal format allows time to discuss custom crops and plantings. Delivery arrangements, etc.

Food Processing
Business Development Workshops

The Starting a Food Processing Business workshop is designed specifically to assist start-up food processors in successful development of their business. The Marketing Your Food Product workshop is a one-day program which includes topics such as marketing plans, product introduction, advertising, and promotions. HACCP for Small Food Processors is a food safety conference which provides the small food processor with an understanding of the importance of and the steps in developing an in-house Hazard Analysis and Critical Control Point program.

Agricultural Business Review Program

Provides agricultural producers and processors a business plan review of their proposed project and/or venture. The resulting information is constructive criticism highlighting project strengths and weaknesses prior to start-up or expansion, thereby identifying potential business risks.

Florida Department of Agriculture
The Capitol
Tallahassee, FL 32399-0800
850/488-3022

Contact:
Nelson Pugh, Director
Division of Marketing and Development
850/488-4031

The Division of Marketing and Development is designed to boost the image of Florida Agriculture and increase sales.

Logo Incentive Program

Designed to provide participating agricultural entities with opportunities to offset a portion of their advertising costs while promoting the "Fresh from Florida" message.

Florida Agricultural Promotional Campaign

The promotional campaign enables Florida's agricultural industry to benefit from a multi-tiered advertising campaign coordinated by the Florida department of Agriculture. Members of the campaign are authorized to use the "Fresh from Florida" logo, which will help consumers easily identify Florida-grown and produced agricultural products at retail stores.
Illinois Department of Agriculture
Illinois State Fairgrounds
P.O. Box 19281
Springfield, IL 62794-9281
217/782-2172

Contact:
Floyd K. McKeith-- Improving the quality and consistency of Illinois Pork
University of Illinois at Urbana-Champaign
Animal Sciences

Objectives of value-added programs in Illinois

1. Evaluating the effects of initial meat quality and pump level on the palatability and processing characteristics of fresh enhanced pork.

2. Evaluate the consumer acceptability of fresh enhanced pork.

3. Cooking procedures, degree of doneness, and palatability attributes of enhanced pork.

4. Characterization of the impact of nutritionally modifying the level of intramuscular fat in the muscle. Marbling can be increased in the muscle by feeding Lysine deficient diets.

Research Projects

1. Evaluating the effects of initial meat quality and pump level on the palatability and processing characteristics of fresh enhanced pork.

2. Evaluating the consumer acceptability of fresh enhanced pork.

3. The cooking (cooking procedures and degree of doneness) and palatability attributes of enhanced fresh pork.

4. Characterizing the impact of nutritionally (AA deficient diets) modifying the level of intramuscular fat in the muscle. Marbling can be increased in the muscle by feeding Lysine deficient diets.
Ag Initiative 2000 Goals
1. Iowa will become the world's leading producer of value-added agricultural products. By the year 2000, 90% of Iowa's agriculture will have one level of value-added before leaving the state.
2. Iowa will create more jobs and income opportunity from agricultural production and value-adding processes.
3. Iowa will become the world's leader in linking agricultural producers and workers with value-adding processes.
4. Iowa will become the world's model for integrated agricultural value-adding systems which focus on success through broadly shared access to information, capital, and cooperative action, rather than success through sheer size.

Legislation

House File 322
Expands the Linked Investment Loan programs to include traditional livestock producers and value-added agriculture initiatives. This legislation expands the opportunity for Iowa farmers to receive low-interest loans from the Linked Investment Program. This legislation would increase the cap by $20 million for traditional livestock producers and an additional $20 million for value-added agricultural initiatives.

House File 779
Prohibits "confidentiality provisions" in any production contracts involving Iowa livestock producers. The effect would be to require meatpackers to disclose the prices they pay for animals. Linked investments other than traditional livestock mature in one year and are eligible to be renewed on an annual basis for a total of five years. Currently the program allows nine years of participation. The requirements for the value-added agriculture program is 1) Must be existing or start-up business, 2) may borrow up to $250,000, 3) One year program with five years of renewal.

Programs
Revamp-Rural Economic Value-Added Mentoring Program
1. Assists Iowa Entrepreneurs
2. Help Expand Iowa Agriculture
3. Help build Iowa's economy

VAAPFAP- (Value-Added Agricultural Products and Processes Financial Assistance Program)

Once the business plan is complete the applicant may apply for VAAPFAP. VAAPFAP is administered through the Iowa Department of Economic Development that has funds available to assist innovative new or expanding value-added businesses.

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Kansas Department of Agriculture
901 S Kansas Avenue
Topeka, KS 66612-1280
785/296-3558

Contact:
Agriculture Products Development Division
913/296-3736

Industrial Agriculture Program

The Industrial Agriculture Program provides information, guidance, and funding for a business seeking to commercialize nonfood and nonfeed agricultural products.

Assists emerging and existing Kansas companies in applying for both private and federal funding. Proposals are evaluated on technical merit, management team capacity, business and marketing soundness, expected time frame, potential impact of the project, and the potential for commercial success.

Agricultural Value Added Center

The Agriculture Value Added Center assists agriculture processing businesses by identifying technologies that can be used for expansion and to enhance profitability.

1. To provide technical assistance to existing and potential value-added processing facilities.
2. To develop a network for collecting and distributing information to individuals involved in the value added processing.
3. To provide pilot plant facilities for use as research and development laboratories for existing and potential value added processors.
4. To provide technical assistance to new agriculture value added processing businesses.
The Agricultural Marketing and Promotion Department contain four divisions of value-added development. The four divisions are:

- Dairy
- Horticulture/Aquaculture
- Livestock/Poultry/Forage
- Secondary Wood

These four divisions focus on marketing and adding additional value to Kentucky's agricultural products. Value-added industries process agricultural raw materials in the state, creating more jobs and enhancing the state's overall economy.

Value-Added Grants Program
The Department of Agriculture Value-Added Grants Program is designed to increase marketing opportunities for Kentucky agricultural products. During the first phase of the program 198 grant applications were received and 126 were approved by the Department's Marketing Advisory Board and funded by the Kentucky Department of Agriculture. Many promising and innovative marketing and infrastructure projects are being implemented as a result of this funding. (For information about the programs feel free to contact the Kentucky Department of Agriculture. The second round of funding has high hopes of being as successful as the first round. Grant availability is limited to non-profit organizations acting on behalf of producers.

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Maine Department of Agriculture
28 State House Station
Augusta, ME 04333
617/727-3000

Contact:
Howard Jones, Director
Market and Production Development
207/287-9072

Agricultural Marketing Loan Fund
The Department has a new low interest loan program to assist agricultural business fund capital projects that improve the marketability and quality of products or improve the efficiency of the operation.

By helping eligible businesses to employ new technologies and innovative processes, the Agricultural Marketing Loan Fund may be used for new or existing facilities, improvements to land, buildings, vessels, as well as to purchase or retrofit machinery and equipment that helps to improve the quality and marketability of Maine-made products.

Under the Agricultural Marketing Loan Fund, financing will be made available to eligible borrowers at attractive rates and terms. Financing from the fund may be used for up to 55% of the costs of an eligible project.

Funds from the Agricultural Marketing Loan Fund may only be used for permanent take-out financing after the "construction phase" of the project is completed.

The Agricultural Marketing Loan Fund consists of three programs tailored to achieve specific goals:

The Loan Fund
Any individual or entity engaged in an agricultural, aquaculture, or natural resource-based enterprise in Maine is eligible to apply for financing under the Agricultural Marketing Loan Fund. The proceeds will be used for building or land acquisition and improvements, construction or expansion, and purchase and installation of equipment, docks, wharves, piers, vessels, etc.

Technical Assistance Grant Program
Grants of up to $5,000 for the purpose of a new or innovative technology that is designed to support the manufacturing, marketing, or production of Maine-made products. Applicants are eligible to receive a Technical Assistance Grant upon the demonstration that the project seeking assistance is an agricultural, aquaculture, or natural resource-based enterprise. The Commissioner of the Maine Department of Agriculture may also approve Technical Assistance Grants of up to $5,000 for organizations and associations whose primary purpose is the promotion of Maine-based agricultural, aquaculture, and natural resource-based enterprises.

Research Grant Program
The commissioner of the Maine Department of Agriculture may award Research Grants for the purpose of funding production and market research related to the development of new and innovative technology as well as the establishment of new markets which will benefit agricultural, aquaculture, and natural resource-based businesses in Maine.

Entities that are eligible to receive Research Grants include:
- Technology Transfer and Special Research Projects Program.
- Market Research and Development Program of the Division of Market and Production Development.
The marketing and Agricultural development division develops and implements programs to increase sales of Maryland food and agricultural products in domestic, regional, and international markets. Marketing staff members work closely with farmers, agribusinesses, and commodity organizations to ensure continued profitability of Maryland agriculture.

Some of the current activities include:
- Participation in domestic and international trade shows.
- Conducting trade missions and hosting reverse trade missions.
- Establishing producer-only farmers’ markets.
- Sponsoring retail promotions.

The office conducts research on development of alternative crops and alternative uses of agricultural products. Educational and informational consumer brochures are also published and distributed.

Massachusetts Department of Agriculture
100 Cambridge Street
Boston, MA 02202
617/727-3000
Contact:
Mary J. Jordan, Director
Division of Agricultural Development
617/727-3018 ext.171

Massachusetts Farm Viability program

Farmers and Agricultural business owners who wish to improve the economic productivity and environmental integrity of their operations may apply to participate in the Department of Food and Agriculture’s Farm Viability Enhancement Program. The program is designed to improve the economic bottom line of participating farms and through the development and implementation of farm viability plans developed by teams of agricultural, economic, and environmental consultants.

The team will assess the current farm operation and suggest ways to increase on-farm income through such methods as improved management practices, diversification, direct marketing, value-added initiatives, and agri-tourism.

The Massachusetts Department of Food and Agriculture is seeking farmers who intend to have their land in continued agricultural use and who wish to enhance the economic and environmental viability of their farm.

Any Massachusetts farmer who owns at least five acres of land in agricultural use is eligible to apply; however, the applications will be evaluated based upon the following criteria:
- Number of acres of land to be placed in the program.
- Suitability and productivity of the land for agricultural use based on its soil classification, physical features, and location.
- Degree of threat to the continuation of the agriculture on the land.
- Degree to which the project would accomplish environmental objectives.
- Number of years and type of agricultural experience of the applicant.

Minnesota Department of Agriculture
90 West Plato Boulevard
Saint Paul, MN 55107
651/297-2015
Contact:
Gerald Heil, Director
Ag Marketing and Development
Missouri Department of Agriculture
P.O. Box 630
Jefferson City, MO 65102
573/751-4211

Contact:
S. Wayne Yokely, Director, Market Development
Loyd Wilson, Coordinator, Domestic Marketing

Missouri Value-Added Grant Program
The Missouri Value-Added Grant Program provides grants for projects that boost local economies by adding value to agricultural products. The grants are intended to finance activities prior to starting or expanding a business, such as feasibility studies, prospectus development for cooperatives and business marketing plans. They cannot be used for operational or capital expenditures.
Contact 573/751-2129

Missouri Value-added loan Guarantee Program
The Missouri Value-added loan Guarantee Program provides partial loan guarantees to banks, savings and loans, and Farm Credit system lenders. Lenders can receive a 25 percent first-loss guarantee on loans up to $250,000 that finance projects involved in processing, manufacturing, marketing, exporting or adding value to agricultural products.
Contact 573/751-2129

Domestic Marketing
The Domestic Marketing Program works to market Missouri's agricultural products within the state and across the nation. The program provides marketing opportunities for commodity groups, horticultural and aquaculture products, specialty crops, and the livestock and forage industries. The domestic marketing program disseminates daily and weekly market information and oversees the states' AgriMissouri program. Established in 1985, the AgriMissouri program works to identify and promote products made or processed in Missouri.
Contact: 570/751-4339

AgriMissouri Program
The AgriMissouri program promotes Missouri processed and produced products. The products are identified in stores by the AgriMissouri logo. Processors and producers can feel free to use this logo on any of their promotional materials. The AgriMissouri program publishes a yearly Buyers Guide with producer and processors' names and addresses so consumers can find these Missouri products. Products are also promoted at trade shows around the country.
Contact: 1-888-MO-BRAND

AgriMissouri Matching Fund Program
Producers and processors of a Missouri agricultural product can obtain matching funds on a project to help them market their product. The producer or processor must submit an application outlining their proposed project and include how they are going to display the AgriMissouri logo. Approved applicants receive a year to complete their project.
Contact 1-888-MO-BRAND

Farmers' Market Directory
The Farmers' Market Directory offers a comprehensive listing of farmers' markets in Missouri, including sale dates, hours, locations, contact names and telephone numbers. To receive a free copy of the Farmers' Market Directory call 573/751-3394.
The Make Mine Mississippi program conception in the Spring of 1999 will be for any company that produces, processes, or manufactures Mississippi products. The program builds on the state’s reputation for quality products in an effort to increase sales.

Benefits of Make Mine Mississippi

- Serves as a unified marketing promotion for all Mississippi products.
- Promotes a positive image of the state while building pride in Mississippi and among your employees.
- Sells Mississippi products.
- Helps keep Mississippi dollars in Mississippi.
- Can be utilized for wholesale, retail, and/or consumer marketing.
- Builds product identity, awareness, and producer pride.
- Can be utilized in statewide, regional, national, and international marketing campaigns.
- Ties in with existing marketing efforts of individual products and adds to the over all strength of a company’s promotional strategies.
- Is a cost-effective promotional method of marketing.

The value-added sector is a growing segment of Montana's agriculture industry. A few of the products that are produced through value-added processing include bread and cereal, processed meat and fish, pasta, jams and syrups, and soup mixes.

A growing interest among producers to supply distinctive products to a specific segment of a market is emerging. Organic and gourmet foods are gaining popularity among producers and consumers alike. A commitment to provide high quality specialty products fosters the recognition among consumers that Montana-made products are the best of their kind.

A diverse climate and fertile soil helps Montana farmers and ranchers produce a wide variety of high quality products. While beef and wheat are our two largest commodities, many other products add to the state’s agriculture base.

A variety of promotional and educational literature is published about Montana's agricultural industry including the Montana Agricultural Buyers Directory. The directory is a comprehensive listing of Montana agricultural product suppliers. To get your free copy contact the Marketing office.
The Agricultural Promotion and Development Division of the Nebraska Department of Agriculture works closely with farm and commodity organizations, public and private research institutions, and other state agencies to open new markets and expand existing markets for Nebraska farm commodities and value-added agricultural products. This cooperative effort multiplies the marketing impact for Nebraska by increasing consumer awareness of new food and nonfood uses for Nebraska commodities. This effort takes both a domestic and international focus.

Value-Added Foods and Meats

With an abundance of raw commodities and a growing list of available resources, Nebraska has been identified as a leading producer of high quality food products. The value-added food industry is comprised of nearly 400 food companies offering thousands of name-brand items in grocery stores and the food service industry. Access to information, research, and educational opportunities has enabled these Nebraska companies to implement solid domestic and international marketing plans.

New Jersey Department of Agriculture
John Fitch Plaza
P.O. Box 330
Trenton, NJ 08625-0330
609/292-3976

Contact:
Dr. Vance Young, Director
Division of Markets
609/292-5536

The Jersey Fresh and Promotional Program

The Jersey Fresh Promotional Program will keep millions of consumers aware of the availability of hundreds of farm products. The program includes virtually all products raised on Garden State Farms, including fresh fruits and vegetables, dairy products, fish and seafood, nursery and greenhouse products, and horses.

Matching Grants Program

In 1998, Jersey Fresh matching grants totaling $150,000 were awarded to 68 agricultural organizations which used funds to carve out their own promotional or educational Jersey fresh niche through food and wine festivals, urban farm market promotional events and other efforts. As a result, another $300,000 worth of welcome publicity was generated by and for the Jersey Fresh Program.

Product Promotion Assistance

New Jersey Department of Agriculture helped New Jersey companies obtain more than $500,000 in federal funds for market development activity through the USDA's Market Access Program which helps assist American firms establish new foreign markets or increase their current foreign market share. The Market Access program enables New Jersey companies to receive reimbursement for up to fifty percent of eligible promotional expenditures.

New York Department of Agriculture
1 Winners Circle
Albany, NY 12235
518/474-2121

Contact:
Kim Blot, Director
Ag promotion and Development Services
518/457-7076
Goodness Grows in North Carolina
Virtual Supermarket

This is a new Internet website that will allow you to learn about many of the great food products made in North Carolina. All you do is click on the aisle you want to see, and instantly you will get a listing of the products in that aisle. You can also link to the websites of many North Carolina food companies from the Virtual Supermarket. Address http://www.agr.state.nc.us/markets/domestic/mkdev/virsupmkt/

The Taste of Summer
"Fresh From North Carolina Farms"

The North Carolina Department of Agriculture is working with all grocery chains in North Carolina to promote local produce and help our state's farmers. Local items will be identified by the Goodness Grows in North Carolina logo.

Pride of Dakota

The program was created by the North Dakota Department of Agriculture to develop, improve, and expand domestic and foreign markets for North Dakota Products. Pride of Dakota is funded by state revenues and membership fees. The program began with only 18 original members and twelve years later membership is approaching 300. A few of the ways that Pride of Dakota products gain exposure is through:

- Sharing booth space at trade shows and fairs.
- A listing in the North Dakota Products Guide and brochures.
- Networking with other North Dakota companies.
- Pride of Dakota Day promotions.
- Cooperative advertising and magazine advertisements.

Marketplace of Ideas

Resource Directory of economic development ideas and resources for North Dakotans. The resource directory includes an extensive list of resources that can assist you to start a new business, diversify your operation, organize a cooperative, explore new development opportunities, and revitalize your rural communities. The directory can be found on the website http://www.marketplaceofideas.com.
Ohio Department of Agriculture
8995 East Main Street
Reynoldsburg, Ohio 43068
614/728-6200

Ohio Proud
A marketing program introduced by the Ohio Department of Agriculture to help consumers identify agricultural products that are grown, raised or processed within the state. Companies who market a product that is 50% raised, grown, or processed within the state are eligible to apply for an Ohio Proud license.

Contact: Lori Panda 614/466-8799

Some of the products in Ohio Proud Partners include:
- Breads and Pasta
- Canned and Prepared Foods
- Jams and Jellies
- Salsa
- Sauces
- Syrups and Toppings
- Dairy Products
- Fresh Produce
- Frozen Foods and Frozen Entrees
- Fresh and Processed Meat Products

Oklahoma Department of Agriculture
2800 North Lincoln Blvd
Oklahoma City, OK 73105-4298
800/580-2474

Contact: Dennis Howard
Commissioner of Agriculture

House Bill 2959
A new expanded Oklahoma processing facility may exclude from Oklahoma taxable income 15 percent of the new investment. Swine and poultry producers may use a seven-year depreciation schedule on new investments for Oklahoma tax purposes. Direct investment ventures may receive a tax credit of 30 percent of the amount on the investment.

Oklahoma Agricultural producers may claim an income tax credit for their direct investment in an Oklahoma producer owned agricultural processing entity which is designed to develop and enhance the production, processing, handling, and marketing of Oklahoma agricultural commodities.

The types of entities in which direct investments can be made shall be limited to:
- Oklahoma producer-owned agricultural processing cooperatives.
- Oklahoma producer-owned agricultural processing ventures.
- Oklahoma producer-owned agricultural processing marketing facilities.

Oregon Department of Agriculture
635 Capitol Street N.E.
Salem, OR 97301-2532

Contact:
Agricultural Development & Marketing Division
Oregon Department of Agriculture
503/229-6734

Value-Added Industry Development
A key goal of the Agricultural Development and Marketing Division is to add value to Oregon products. They help existing food processors expand and bring new processing business into the state. The focus is on retention and expansion of existing businesses to Oregon.
The mission of the division of marketing is to be a facilitator, creating marketing and economic development opportunities for Texas Agribusinesses by providing a variety of support services. Goals of the marketing and agribusiness development include:

- Expand profitable domestic and international markets for Texas products.
- Strengthen working relationships with domestic and foreign agribusiness groups.
- Increase value-added processing activities of Texas agriculture.
- Promote the diversity of Texas agriculture and maximize relationships with economic development allies.
Because of the small quantity of pork in Wisconsin the state has few programs related to pork. Some of the value-added projects that are in the works include:

1. New food products
2. Ethanol feasibility study
3. Caviar processing and marketing
4. New soybean oil products
5. Development of new specialty cheeses
6. Farmstead cheese production

Grant Project Summaries

12042-Value-added Lamb Awarded $27,000.00
The goal of this grant is to increase the price lamb producers receive. In order to achieve this goal, lamb producers will conduct a feasibility and product development study to identify possible value-added lamb meat products. After a possible product is identified, the group will create a business plan for the producer-based association.
Contact: John Witherspoon (715) 748-2008

12055-Development of a Value-Added Oil Seed industry for Wisconsin Awarded $20,000.00
The goal of this project is to develop value-added oil seed processing in Wisconsin. The project is a collaborative effort between the Wisconsin Innovation Corporation, UW-Madison Department of Agronomy, UW-Center for Cooperatives, Soy-Co L.L.C. and Cooperative Development Services. Project goals include the creation of new value-added products from oil seed processing plant and creation of an oil seed cooperative. The project will provide a new profitable market for central and northern Wisconsin Farmers.
Contact: Bruce Davis (715) 635-2197

12078-Conducting value-added Product Development Research at River Valley Foods, Inc Awarded $17,550.00
The purpose of this study is to provide producers with a value-added food-processing model. In this study, River Valley Food will document the complete food product development research conducted on several value-added processing foods. Information gained from this study will be published in a guidebook and be made available through the UW-CIAS World Wide Web Page.
Contact: Bill Wenzel (608) 226-0300
References


www.epa.gov - Home Page, United States Environmental Protection Agency

www.osha.gov - Home Page, United States Department of Labor, Occupational Safety and Health Administration.
