

**A Case Study Developed  
for the  
Agricultural Innovation  
and Commercialization Center**

# **Indiana Certified Pork**

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This business plan for *Indiana Certified Pork* is one of the significant results of the four prototype projects addressed through the AICC. And as part of the process, each prototype used the newly developed *INVenture* to analyze their business idea. The purpose of developing the business plans is to provide *INVenture* users as well as facilitators with helpful real-life business plan examples to refer to throughout the business planning process.

Because each of the new ventures are actual business situations that are unfolding in real time, some of the business plan examples that we have placed to date into *INVenture* are more fully developed than others. This is a natural consequence of the development of each new venture.

Access to relevant examples should provide support to the users and facilitators as they undertake the business planning process.

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# Executive Summary

Indiana Certified Pork seeks to provide the ultimate consumer satisfaction. Our product provides a culinary experience as well as an opportunity to make this world a better place. Our certified pork chops are produced in an environmentally friendly manner, ensure the humane treatment of our animals and have not been provided any antimicrobials in the feed or otherwise.

Our product targets the concerned, socially conscious, and mainstream consumer. On the basis of preliminary market findings, we find that there is a strong market potential in the U.S. for our certified pork product. Nearly 50 percent of all current consumers of pork would be willing to pay a premium of at least \$5 per pound for the certified pork chop above the regular price of \$3.45. Given that the certification program will cost us about 2.12 to 2.32 dollars per pound, we estimate a long-term market share of about 60 percent of total current consumption. Moreover, our program will increase market access for pork producers, will potentially expand product demand and potentially also increase profitability. We will achieve these long-term goals by establishing alliances and joint ventures with processors and retailers to ensure a stable product flow throughout the supply chain and launch a campaign to raise consumer awareness for our program.

Our certification program is developed by a council consisting either of independent parties or of a board with a broad mix of interest groups. In either case, the certification program will be audited and accredited by the USDA Agricultural Marketing Service's Process Verification Program as well by third party auditors from outside the agricultural sector such as the Humane Farm Animal Care Group. Still, the most important criterion is that our program is creditable from the consumers' viewpoint. Producer compliance must be ensured at all stages of the supply chain, and noncompliant participants will be excluded from this program so as to not lose consumer confidence in the quality of our product and veracity of our marketing claims.

# Long Term Goals

With this venture I would like to accomplish the following goals:

1. Increase market access
2. Expand product demand
3. Increase profitability

# Business Overview

The certified pork product will ultimately be bought by end consumers, however, it is likely that a joint venture with a processor and/or retailer or simply being a dedicated provider of a differentiated product to the process would be the most profitable approach versus launching an independent niche product. Consumers with a strong sense of altruism and desire to contribute to the public good will be drawn to this new product as will consumers who are concerned about food safety issues, antibiotic residues, development of antibiotic resistant bacteria, and animal welfare. Many of these consumers will be of a skeptical nature about the quality of conventional pork products that do not carry any process verified language on their label or in their marketing literature.

My product(s) is a production process certified pork chop that guarantees that farmers and processors follow rigid standards for animal welfare, antibiotic use, and environmental friendliness. The program will be operated under the USDA AMS Process Verified Program (PVP) and audited by the Audit Review and Compliance (ARC) Branch. The standards will be set by parties outside of the pork industry such as the Humane Farm Animal Care animal welfare standards.

Alternatively, a committee consisting of industry representatives, consumer organizations and researchers from land grant universities will set the process standards. McDonald's Corporation and YUM! Brands Incorporated have instituted such councils in which different interest organizations are represented. The third party auditing stage ensures compliance and the product is labeled with USDA's PVP shield. Our product will appeal to customers who appreciate the comfort of knowing that their food was raised in a wholesome and safe manner and that their purchase is not contributing to socially irresponsible behavior.

The product will meet concerns among some consumer segments regarding environmental degradation from animal agriculture, proper usage of antibiotics in food animals and the humane treatment of animals. For these consumers, the certification

program can be viewed as a solution to their concerns.

I will use the following objectives to accomplish my goals:

1. Establish contacts with retailers and packers to ensure a stable product flow from packing to retailing stages
2. Build product awareness among consumers for our products by means of advertising and promotion

Indiana producers have developed a strong human capital investment in pork production and in awareness of their customers. Indiana pork producers tend to be very entrepreneurial and strategic in their decision making processes and face fewer constraints by government in the development of innovative business models versus producers in some other corn belt states. The ability to develop innovative business models as a mechanism to move the certified pork products to the market place and position them for success will like be a key aspect.

## Product Offering

In order to maintain market share, this business will need to establish some proprietary production practices or name recognition and consumer loyalty. At present, the proposed production processes are not patentable and so the long term success will hinge on name recognition and loyalty of consumers. This means that a strong marketing plan will be needed and that any trade names and brand names will need legal protection from infringement.

Some competitors in the industry are already producing products of a similar form as the new product being proposed. The technical feasibility is not in question. However, the development and management of the specific production protocols will require exceptional ability. Established environmental standards of state and federal agencies provide an excellent set of standards for environmental certification. This product will be

distinguished in this regard from its conventional counterpart by the fact that compliance with the established environmental standards will be third party certified on an ongoing basis. Typically, government permitting is done at the outset of the project and if there are no complaints then regulators are unlikely to check for compliance with appropriate management practices. Animal well-being guidelines have been developed by a number of agencies including the National Pork Board's Swine Welfare Assurance (SWAP) program, the Food Marketing Institute and National Council of Chain Restaurants' Animal Welfare Assurance (AWAP) program, and the Humane Farm Animal Care (HFAC) Group's Certified Humane Raised and Handled program. We believe that the HFAC program will have greater credence with the skeptical consumer audience that we are trying to reach with this product because of the three it is the only one that is not vulnerable to being considered an "insider" program. That is, both the SWAP and AWAP were developed for and by groups with a vested interest in producing and/or marketing pork and, in the eyes of a skeptical consumer, may have incentives to cut corners on animal welfare to keep their own costs low. On the other hand, HFAC's program is based on standards developed by the Society for Prevention of Cruelty to Animals which is not a producer or marketer advocate in any way.

Furthermore, operations claiming to comply with this program are also audited on a regular basis by HFAC representatives. Antibiotic use standards follow those developed in the MS thesis authored at Purdue University by Roller (2004).

# Industry Profile

## Industry Analysis

Our product will be sold to consumers through retailers. Our business venture is designed as a strategic venture between either retailers and processors or both. The retailing industry is fairly consolidated and this concentration is expected to continue in the foreseeable future. A number of large national retailers compete against other retailers with a relatively strong geographical presence. According to Datamonitor (2004), the combined market share for the five largest firms, i.e. the C5 of all U.S. grocery sales in 1998 was 40 percent. In 1998, the five largest firms were Kroger (10%), Wal-Mart (9%), Albertson's (9%), Safeway (N/A) and Ahold USA (N/A) (Feedstuffs, 1999). Seven years later, the largest five companies still dominates the market. Today, however, the market leader is Wal-Mart, who is now one of the largest companies in the world.

Our product will be competing in the natural foods industry. The natural food segment is somewhat loosely defined because rigorous product standards are forthcoming, so it is difficult to come up with precise market estimates. Most organic produce, however, is labeled under the National Organic Program (NOP). According to the Organic Trade Association (2005), the total retail value for all organic food products was nearly USD 13.6 billion in 2003. Fresh produce captured the largest share of the market value, 42 percent, whereas meat represented 3 percent, or USD 408 million. Organic meat represents 2 percent of the total retail value for all meat products. The overall organic market has experienced a tremendous growth over the past couple of years with annual growth rates of nearly 20 percent. The growth in the organic meat segment has however been even stronger, however. In 2003, the latest year for which data is available, the market grew by nearly 78 percent for fish, poultry and meat. The largest natural foods supermarket chain in North America is Wild Oats Markets. The supermarket operates 100 stores with sales of US\$ 1 billion in 2003 (Datamonitor). The three next-largest national organic retailers are Wild Oats, Henry's Marketplace and

Trader Joe's (Knight-Ridder, 2005). However, there is an increasing trend among conventional retailers to offer natural and/or organic consumer products as well. Therefore, we envision that our product will appeal to both conventional and natural or organic food retailers.

The economy in the U.S. while currently a bit sluggish does not show significant signs of change that would affect pork demand or production. Fuel prices may be a threat that could spill over into the cost of feed, facilities, and labor. With per capita income continuing to rise, demand is expected to at least remain steady.

The most costly input in hog production is the feed. However, pork producers traditionally produce their own feed and have thus created some insulation from the competitive forces of the market. However, the corn market continues to be a good example of a competitive market and feeding livestock still appears to be a good way to add value to corn. Bargaining power of buyers is a potential problem. In 1998, hog farmers in the U.S. came face to face with the reality of a concentrated slaughter sector. In that year, production outpaced the limited capacity to slaughter hogs. The result was the lowest real hog prices in U.S. history and delays reaching into weeks in scheduling slaughter. Farmers suffered huge losses and many were forced to exit the industry or switch to production contract growing. Developing a specialized certified product might offset some of the implicit market power at the farmer-packer interface or if the farmers developed their own processing capacity guarantee market access and ownership retention for further value adding.

The current participants in the meat markets are very large companies with huge financial resources and industry connections. This indicates that the competitive environment might be very tough for a start-up firm and might lead to a joint venture activity. There is also the risk of new entry into the certified pork market if it begins to grow. This new entry might come from the existing meat processors or it could come from other producer groups hoping to mimic the Indiana producers' success.

## Competition

Prairie Grove Farms, LLC (a Cargill Meat Solutions partner), Premium Standard Farms, and Niman Ranch are perhaps the most noteworthy competitors in the areas in which we propose to certify pork products. Prairie Grove Farms uses the USDA Agricultural Marketing Service's Process Verification Program (PVP) to help document compliance with a environmental, animal welfare, and antibiotic use standards. They follow the SWAP program for animal welfare and are completely antibiotic free. Premium Standard Farms also uses the USDA PVP program to certify and has an antibiotic free program. Whereas, Prairie Grove Farms partners with Cargill Meat Solutions for processing, Premium Standard Farms is a fully vertically integrated entity.

The competition in the organic or natural foods market is potentially very stiff. A couple of the larger processing companies have already made forays into this market segment. For example, Cargill Meat Solutions operates the Prairie Grove Farms program for animal welfare, antibiotic use and environmental compliance. The program is accredited under the USDA AMS Process Verified Program (PVP). Premium Standard Farms operates two programs under PVP, one that is certified antibiotic free: Premium Standard Farms Antibiotic Free. BC Natural Foods is one of the largest natural meat company in the U.S. and have several subsidiaries and affiliates, such as Coleman Natural Products and Petaluma Poultry. Coleman Natural Pork is not fed or administered antibiotics or growth promoting hormones but appear not to be certified under the PVP program. Moreover, the majority owner of BC Natural Foods is Booth Creek Management, who also owns Swift & Company jointly with Hicks, Muse, Tate & Furst Incorporated. Thus, given the concentrated nature of the pork and live hog processing sectors, there is potential that larger players could exert market power should a smaller entity such as a producer group find some success in the niche marketplace. Alternatively, these companies have better contacts in the retail sector to

help them launch the products. At present, the Prairie Grove Farms products are only available over the internet and BC Natural Food and Premium Standard Farms supplies only a few stores.

Other competition comes in the form of conventional pork as well as both certified and conventional products of other protein products. Poultry and beef are close substitutes and some of the issues may be viewed differently by some consumers. The processing sectors in these industries are even more concentrated than the pork sector and the number of firms that have slaughter and processing capacity in all three main meats (poultry, pork, and beef) is growing. Smithfield Food and Tyson Foods are by far the largest meat processors in the U.S. and they both have significant market shares in all three types of meat. This may give them greater bargaining power with retailers and food service companies because they have the ability to bundle meat products to be a complete meat supplier. This would reduce the transactions costs for the retailer and lead to higher prices for the processor, lower prices for the consumer, and higher profits for the retailer the magnitudes of which would depend on how the costs savings were distributed.

# Market Potential and Competitor Analysis

The customers in my market are from a broad cross-section of society both domestic and foreign. Pork is consumed by the vast majority of U.S. consumers and is a particular favorite of two large and growing ethnic groups: Hispanics and Asians. Primarily, however, the consumers targeted for certified pork consumption are those with higher incomes and a strong sense of social responsibility and/or altruism. Between 1994 and 2004, GDP per capita in the U.S. rose by 24 percent and research has suggested that expenditure elasticities of demand are positive and close to one in value. That means that as income rises we can expect demand for pork to rise.

Trends in my market are toward greater product differentiation. Food markets in general have become mature in recent decades, and in order to successfully compete food retailers and processors have turned to product differentiation and economies of scale. Meat markets are no exception with the increased sales of pre-processed dinners, increases in meals eaten away from home, and a focus on the way in which products are produced. The growth in organic produce consumption and sales is a good indicator of the increased consumer awareness of production processes on the part of consumers. According to the USDA ERS retail sales of organic food increased by 20 percent annually since the 1990's and are available in 73 percent of all conventional grocery stores.

Demand for my product is based on changes in consumer preferences for more processed controlled products. We conducted a survey of 10,000 randomly chosen households with a response rate of 11 percent. Analysis of the responses (Nilsson, Lusk, and Foster, 2005) suggests that there are three classes of pork chop consumers in the U.S. One class of consumer is not willing to pay a premium for certified pork, another is willing to pay in excess of \$10 per pound premium for certified pork chops, and the third class is willing to pay approximately \$5.14 per pound premium above the base price of \$3.50 per pound. A randomly chosen consumer has a 41, 16, and 43 percent probability of belonging to each class respectively. Taking into account this information and other

statistics from the survey results it can be concluded that the long run market share for the certified pork chops is approximately 60 percent of the total pork market when the relative prices for the products reflect the relative marginal costs of producing the certified variety versus the conventional.

Another analysis (Nilsson, 2005) of the certified marketplace used information from the survey as well as certification cost estimates from Roller (2004) to analyze the fate of a certified pork chop introduction in the current pork industry. Those results suggest a growth potential of 269.5 to 276.5 thousand tons in the certified market starting from a base of 5 percent market share and depending on whether the industry is perfectly competitive or characterized by a four firm oligopoly of multi-product firms. Multi-product firms in this case are those that process both conventional and certified pork.

# Marketing Plan

## Product Pricing

Because there is considerable heterogeneity in consumer valuation for certification, not all consumers would prefer the certified product. Therefore, certified demand becomes a function of both the conventional and certified product prices. Figure I displays the predicted demand for each segment of consumers and total demand. The horizontal axis indicates the percentage of all consumers that would switch from the conventional to the certified product for a given price premium. The vertical axis indicates the percentage price premium over the conventional product, which ranges from zero to 400 percent. Four demand curves are displayed in the figure. Class 1 is the demand curve for the socially conscious group, which represented about 16 percent of the respondents (in parenthesis). Class 2 is the demand curve for the price-fixated segment, representing 41 percent. Class 3 is the demand for the mainstream group, 43 percent. Finally, the “All” curve is the combined total demand.

Figure I. Predicted market shares for certified pork chop.

As expected, the consumers in the second class, the price-fixated opt for the conventional product if the price premium is slightly above 50 percent. However, while as the mainstream group is also price sensitive they are willing to pay a relatively high premium before opting for the conventional product. The socially conscious on the other hand has a relatively inelastic demand. The “All” demand curve has therefore two rather steep segments for price premiums above 200 percent and between 50 and 100 percent. In these intervals, the total demand is relatively elastic, i.e. small changes in the price premium causes relatively large changes in quantity demanded. The first interval represents the scenario in which price-fixated group opts for the conventional product. The second interval is where the mainstream group is relatively price sensitive. However, the demand is relatively less elastic for premiums between 100 and 200 percent. When the products are sold at equal prices, i.e. there is no price premium associated with the

certification program, nearly all consumers switch to the certified product.

It is unlikely, however that the certification program is costless. Using data from a study by Roller (2004) we can infer the increase in marginal cost from certification. It is surmised that the programs would affect both the packer and the retailer. The costs consist of program fees as well as compensations for increased production costs and shelf space on behalf of the processor. The retailer costs consist of creating additional shelf space for the product and provide a consistent product labeling, in addition to any program fees.

Moreover, not all the cuts can be certified because many products contain mixed ingredients and cannot be kept separate from the conventional pork products in the processing stages, e.g. sausage and ham. Foster extended Roller's study and calculated the cost of the program by assuming that only fresh cut pork can be labeled at the retailing stages. Approximately twenty-five percent of the animal retail weight bares the certification costs. Foster estimated that the increase in marginal cost at the retail stages were 212 to 232 cents per pound. The price premiums associated with Roller and Foster's estimated cost increase is about 50 percent. As seen in Figure I, this would translate into an approximate market share of 60 percent.

However, these estimates do not reflect increased cost associated with live animal production. Besides program fees, the programs may increase cost of production for the pork producer as well. There may be an initial decline in productivity because the pork producer must keep batches separately if there are both conventional and certified live animals in the facility. The programs may also affect productivity negatively because of stricter regulations related to housing requirements, manure disposal and feed purchase.

# Operation and Management Plan

The farm level production will require swine facilities that are multi-site in nature and take advantage of early weaning, segregation, and all-in all-out production techniques to reduce disease pressures on the animals. To accommodate the Certified Humane Raised and Handled certification program these production facilities will need to be different than conventional facilities. Specifically, sow housing will need to be drastically different and allow a greater degree of freedom for the gestating and lactating sows.

Processing facilities will need to have the ability to segregate certified product from conventional and scale of farm production will need to be sufficiently large to accomplish processing of the certified product without substantial additional cost for switching between product types.

A number of models of ownership are potentially feasible. They are succinctly:

1. Farmer owned cooperative or LLC with joint ownership in production and processing facilities.
2. Farmer owned cooperative or LLC that partners or joint ventures with a processor.
3. Single large scale farmer who partners or joint ventures with a processor.
4. Options 2 and 3 above except that the processing is contracted or paid on a toll basis
5. Options 1 through 4 above except that the farm production is owned by a consortium of investors.

In all cases, shares in the venture should be saleable with first option to existing partners, members, or corporation owners.

# Financial Plan

## Balance Sheet

<b>Assets</b>	Startup	Year1	Year2	Year3	Year4	Year5
Current						
Cash		\$0	\$0	\$0	\$0	\$0
Inventory	\$0	\$0	\$0	\$0	\$0	\$0
Non Current						
Startup Costs	\$0					
Machinery and Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Buildings and Structures	\$0	\$0	\$0	\$0	\$0	\$0
Land	\$0	\$0	\$0	\$0	\$0	\$0
Trucks and Vehicles	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Assets</b>	\$0	\$0	\$0	\$0	\$0	\$0
<b>Liabilities</b>						
Term/Mortgages	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Liabilities</b>	\$0	\$0	\$0	\$0	\$0	\$0
<b>Owner's Equity</b>						
Retained earnings		\$0	\$0	\$0	\$0	\$0
Contributed Cash Capital	\$0					
Contributed in-kind Capital	\$0					
Owner's Equity	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Liabilities + Owner's Equity</b>	\$0	\$0	\$0	\$0	\$0	\$0

**Income Statement**

	Year1	Year2	Year3	Year4	Year5
<b>Income</b>					
Gross sales	\$0	\$0	\$0	\$0	\$0
<b>Expenses</b>					
Materials, Labor, Utilities	\$0	\$0	\$0	\$0	\$0
<b>Total Direct Expenses</b>	\$0	\$0	\$0	\$0	\$0
<b>Gross Profit</b>	\$0	\$0	\$0	\$0	\$0
<b>General and administrative expenses</b>					
Non-production wages	\$0	\$0	\$0	\$0	\$0
Occupancy Costs	\$0	\$0	\$0	\$0	\$0
Taxes and licenses	\$0	\$0	\$0	\$0	\$0
Transportation/shipping	\$0	\$0	\$0	\$0	\$0
Advertising	\$0	\$0	\$0	\$0	\$0
Other Expenses	\$0	\$0	\$0	\$0	\$0
Office Supplies	\$0	\$0	\$0	\$0	\$0
Travel	\$0	\$0	\$0	\$0	\$0
Start-up Costs	\$0				
Depreciation	\$0	\$0	\$0	\$0	\$0
Total G & A Expenses	\$0	\$0	\$0	\$0	\$0
Earnings before interest and taxes	\$0	\$0	\$0	\$0	\$0
Interest Expense	\$0	\$0	\$0	\$0	\$0
Income Taxes	\$0	\$0	\$0	\$0	\$0
<b>Net Profit</b>	\$0	\$0	\$0	\$0	\$0

<b>Statement of Cash Flows</b>	Year1	Year2	Year3	Year4	Year5
Initial Cash	\$0	\$0	\$0	\$0	\$0
Cash From Operations					
Sales Income	\$0	\$0	\$0	\$0	\$0
Cash Expenses	\$0	\$0	\$0	\$0	\$0
Net	\$0	\$0	\$0	\$0	\$0
Cash from Capital					
Purchases/Sales					
Capital Investments	\$0	\$0	\$0	\$0	\$0
Cash from Financing					
New Capital	\$0	\$0	\$0	\$0	\$0
Principle Payments	\$0	\$0	\$0	\$0	\$0
Net	\$0	\$0	\$0	\$0	\$0
Taxes	\$0	\$0	\$0	\$0	\$0
Ending Cash	\$0	\$0	\$0	\$0	\$0

### **Valuation**

Investment Outlay	\$0
Discount Rate	0%
Net Cash Income	
Startup Period (year 1)	\$0
Average yearly cash flow (years 2-5)	\$0
Value of Business	
Minimum (net assets in business at the end of five years)	\$0
Projected	\$0
Internal Rate of Return	

<b>Breakeven Analysis</b>	Year1	Year2	Year3	Year4	Year5
<b>Breakeven Volume (average)</b>	0	0	0	0	0
1. Total Direct Costs	\$0	\$0	\$0	\$0	\$0
2. Per unit revenue (average)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
3. Per unit costs (average)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00