

# MARITIME PORK INDUSTRY RENEWAL

## Phase I - Schematic Planning

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### 1.0 Background

Historically, pork production has been an important sector of the agricultural industry, contributing millions of dollars to provincial economies. The Maritime Pork Industry, small in scale by national standards; generates economic benefit through employment, feed & input sales, and the production of quality hogs and lean pork, sold in both domestic and export markets.

In early 2000, a major Pork Industry decline began to impact the Maritime Provinces, a result of changes at the national level including: rising feed costs, retail sector consolidations, transportation costs, the Canadian dollar, country of origin labelling, Western hog sector expansion, aging processing facilities and the realities of production economics in smaller regions of Canada.

In Nova Scotia, provincial hog production dropped from over 200,000 annual market hogs to approximately 65,000 animals in 2016. In Prince Edward Island the drop over the same period was from 230,000 animals annually to 75,000. The prolonged industry downturn, resulted in a total abandonment of federally inspected pork slaughter facilities and the associated processing infrastructure. This lack of key industry processing and value adding resources is now limiting the opportunity to rebuild industry production levels, develop value added pork products and create export sales for producers in Nova Scotia and Prince Edward Island.

Currently, less than 3% of the total pork consumed in Nova Scotia, is produced in the province. While this situation is a provincial food supply weakness, it also is an opportunity to implement a Pork Industry renewal strategy to displace quantities of imported pork products. This will require a strategy structured around a new unique business model, that can unite regional stakeholders around a new system to produce, process and deliver pork products to a target group of customers. Most pork sold and consumed in Atlantic Canada is processed, not fresh pork. Therefore, value added pork processing needs to be a key component of any regional hog industry renewal strategy.

The successful renewal strategy must also address concerns of all stakeholders: industry, processors, wholesalers, retailers, government, investors and the pork consumer. The old pork industry business model will not take the Maritime Hog Industry successfully and profitably into the future. The market is demanding a new and forward-looking model, organizing the various stakeholders around a common vision and strategy, that is scalable, sustainable, and flexible enough to realign in response to the market changes and challenges of the future as required. This initiative has been undertaken to identify a model that can give both the Nova Scotia and Prince Edward Island Pork Industries a distinct, sustainable and competitive advantage in a competitive global marketplace.



# 2.0 Pork Industry Overview

## World Pork

Pork is the world's most consumed meat product. As incomes rise globally, consumers with plant based protein diets are shifting to include more animal-protein. Pork is an affordable meat that can fit this consumer need well. It is a tasty protein (value) option and it can be efficiently and quickly produced with less energy input and land requirements than is necessary for beef. Japan is the world's largest importer of pork products and China is the largest pork consumer. Anticipation is that these markets for pork will continue to grow; Japan has a limited agriculture production land base, while the Chinese consumer is questioning the confidence and food safety of their own domestic pork production system.

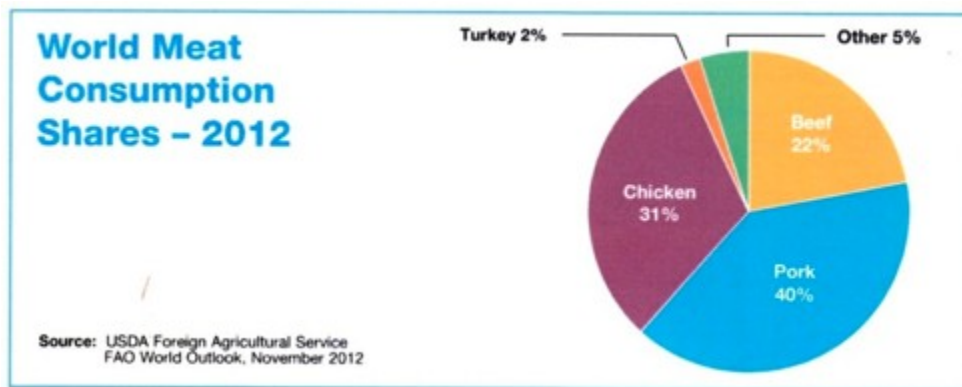


Figure 1 - World Meat Consumption

## The Canadian Pork Industry

The Pork Industry in Canada has annual revenues of more than three billion dollars. The swine sector accounts for 30% of total livestock shipments and 10% of all farm cash receipts. Nationally, a centralized hog production industry benefits from a strong adjacent grain sector supplying quality feed at a reasonable cost. The Central Canada Pork Industry has a competitive production economy of scale and an ability to produce volumes of quality pork products for both domestic and export markets.<sup>1</sup>

The US International Trade Commission 2014 Pork and Swine Industry & Trade Summary, identifies Canada as the world's 5<sup>th</sup> largest swine producer behind China, the EU, the USA, and Brazil. Canada is the largest swine (live animal) exporter, the seventh-largest pork (processed meat) producer and third-largest pork product exporter.

1 <http://www.canadapork.com/en/industry-information/hog-production-in-canada>



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The USA is Canada's largest pork export market followed by Japan, Russia, Korea, China, and Mexico. <sup>2</sup> Pork production in Canada in recent years has evolved to large production units to achieved the economies of scale necessary to supply large markets at a competitive price.

### Hogs Slaughtered in Canada

Hogs are typically produced and slaughtered close to the source of feed. It is more cost effective to ship processed pork products to market than to transport feed to the animals for finishing, or transport live animals' long distances to market.

Ontario, Quebec and Saskatchewan, Manitoba (Central Canada) all have large hog slaughter numbers. These regions are close to local quality feed grain supplies.

ORIGIN OF HOGS SLAUGHTERED IN CANADIAN PACKING PLANTS 2012	
	Hogs
British Columbia - Alberta	2,890,650
Saskatchewan - Manitoba	5,784,752
Ontario	4,430,997
Québec-Atlantic Provinces	8,014,106
<b>Total</b>	<b>21,120,505</b>

(Source: Canadian Food Inspection Agency and Provincial Governments)

Figure 2 - 2012 Canadian Slaughter Hog Numbers

In comparison, during the production peaks of 200,000 hogs per year by Nova Scotia and 230,000 by PEI, when the two province's numbers are combined, it is just 2% percentage of the country's overall hog slaughter total. Historically, the Maritime hog production competitive advantage has not been based on supplying large volume of animals or a low cost of production, rather from supplying local high quality lean animals and pork products.

## The Prince Edward Island Pork Industry

### Pork PEI

Pork PEI is the organization representing pork producers in Prince Edward Island.

The Mission: "The hog producers of Prince Edward Island will provide safe, high quality pork to consumers in a sustainable environment by working together to become a more economically viable industry, while maintaining our social responsibility to our communities, and provide a satisfying lifestyle for ourselves."

During the peak production times of the early 2000's PEI was producing near 230,000 animals per year. In 2016, there were 18 commercial hog producers shipping 50,000 market hogs, 13,000 ISO weans and 12,000 weaners for a total of approximately 75,000 animals.

2 [https://www.usitc.gov/publications/332/pork\\_and\\_swine\\_summary\\_its\\_11.pdf](https://www.usitc.gov/publications/332/pork_and_swine_summary_its_11.pdf)



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Pork PEI estimates in addition, there are between 75-100 backyard producers raising around 1,000 animals per year. There is a good potential for additional hog production in PEI, if feasible market opportunities can be created for producer to invest.

### BACKGROUND – Pork Production Prince Edward Island

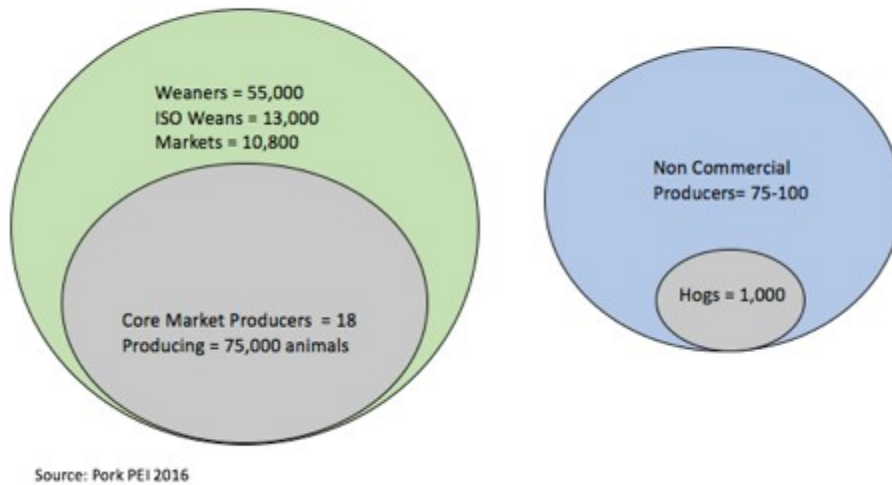


Figure 3- Pork Production in PEI 2016 -Supplied by Pork PEI

### Prince Edward Island Hog Quantities & Flow

The following information was supplied by Pork PEI and is based on the best 2016 information and estimates available at the time of this report. The information was not available by county.

#### BACKGROUND – PORK PRODUCERS PRINCE EDWARD ISLAND

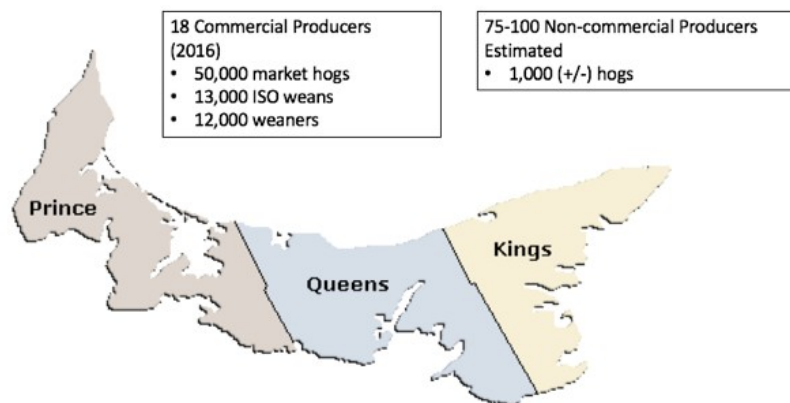


Figure 4 - PEI Hog Quantities, Source: Pork PEI

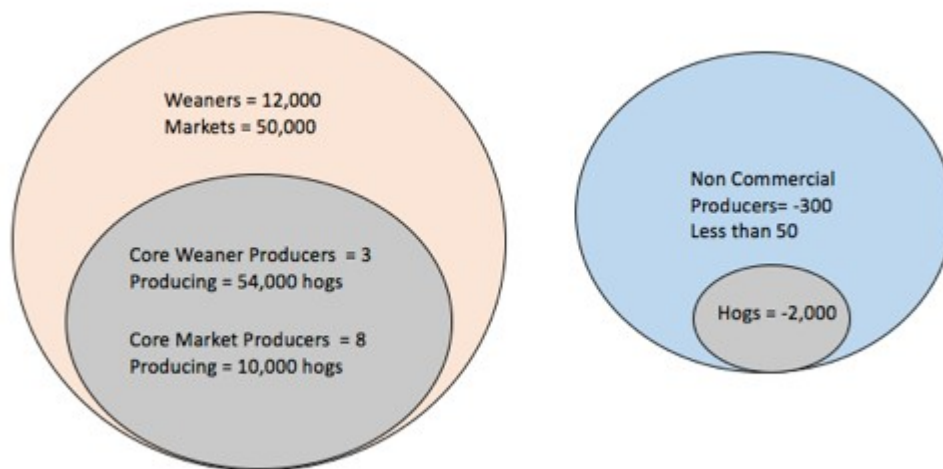


## The Nova Scotia Pork Industry

In little more than a decade, the Nova Scotia pork industry has gone from 80 commercial hog producers, annually producing 200,000 market animals, down to eleven producers in 2016 raising 10,000 market hogs and 55,000 ISO weans.

Pork Nova Scotia estimates that 2,000 hogs are annually produced by 150 non-commercial growers who either self-consume the products or sell products direct from the farm to the end consumer.

### BACKGROUND – Pork Production Nova Scotia



Source: Pork Nova Scotia December 1, 2015

Figure 5- Pork Production in Nova Scotia 2016 -Source: Pork Nova Scotia

Most commercial hogs produced in the Maritimes are shipped to processors in Quebec or Ontario, some are utilized by the local meat trade, and the ISO weans also go to producers in other regions or the USA for finishing. Pork industry growth has been limited due to the lack of a comprehensive value chain strategy, access to federally inspected animal slaughter and processing resources, and modern meat value adding infrastructure. This environment creates pork sector instability and limits new investment into the sector, its growth and pork innovation.

## Pork Nova Scotia

Pork Nova Scotia is the organization that represent the pork industry in Nova Scotia. Its mandate is to create a favorable environment for the production, processing and marketing of pork in a manner that maximizes returns for Nova Scotia producers.

## SWOT Assessment (Strengths, Weaknesses, Opportunities and Threats)

The following SWOT analysis of the Nova Scotia Pork Industry examines the strengths, weaknesses opportunities and threats that will impact an industry renewal strategy. The assessment leads to new strategy development that builds upon the sectors strengths, minimize its' weaknesses, capitalizes on the opportunities and reduces potential threats.

### Strengths:

- Strong commitment from industry for renewal;
- Historical levels of productivity, skills and quality products;
- Industry creates wealth and employment, a fundamental component of rural community development;
- Potential to be a key platform for NS agriculture growth and export;
- Small industry can address unique niche market opportunities others cannot;
- Industry willingness to invest in growth and innovation; and
- Exploring of new more sustainable business and value chain models.

### Weaknesses:

- Producers historically have been dependent upon others to process and market products;
- The pork value chain has been focused on price not customer value;
- Imported feed grain and the associated input costs;
- NS pork products are not well branded or promoted; and
- Consumers view pork as a commodity priced product.

### Opportunities:

- Provincial geographic isolation is ideal for pork bio-security and food safety initiatives;
- Build a renewal strategy around an integrated supply and value chain and unique value added products and services;
- There is a large pork import displacement opportunity in Nova Scotia;
- Resources to create a unique pork industry innovation cluster in Nova Scotia;
- Establish a unique selling proposition with a regional brand & promotional strategy;
- Leverage the export potential associated with the Halifax Seaport;
- Focus on addressing future trends and the needs and wants of the target customer;
- Develop new, modern, efficient, and humane infrastructure and systems;
- Integrate certifications, food safety and humane practices that exceed current standards; and,
- To target the pork needs of the growing ethnic cohorts.





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## Threats:

- Future regulations limiting hog production practices in the province;
- World trade agreements;
- Food safety issue undermining confidence in the industry;
- Achieving the necessary economies of scale to compete with larger commercial pork industries and regions; and,
- Industry stakeholders cannot unite around a common value chain renewal strategy.

## Nova Scotia Hog Quantities & Flow

The following diagrams and information were supplied by Pork Nova Scotia and are based on 2016 information and best estimates. While hog production takes place throughout the province, commercial production is focused primarily in Kings, Hants and Colchester counties.

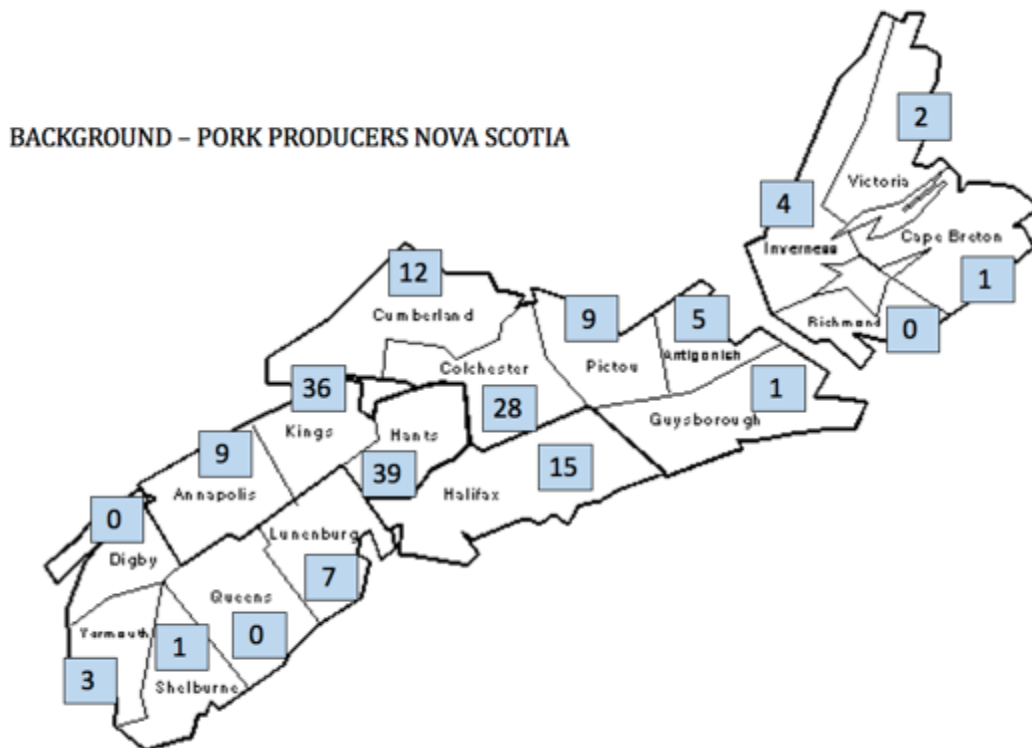


Figure 6- Pork Producer Locations, Nova Scotia – Source: Pork Nova Scotia



# Maritime Pork Industry Renewal: Phase 1

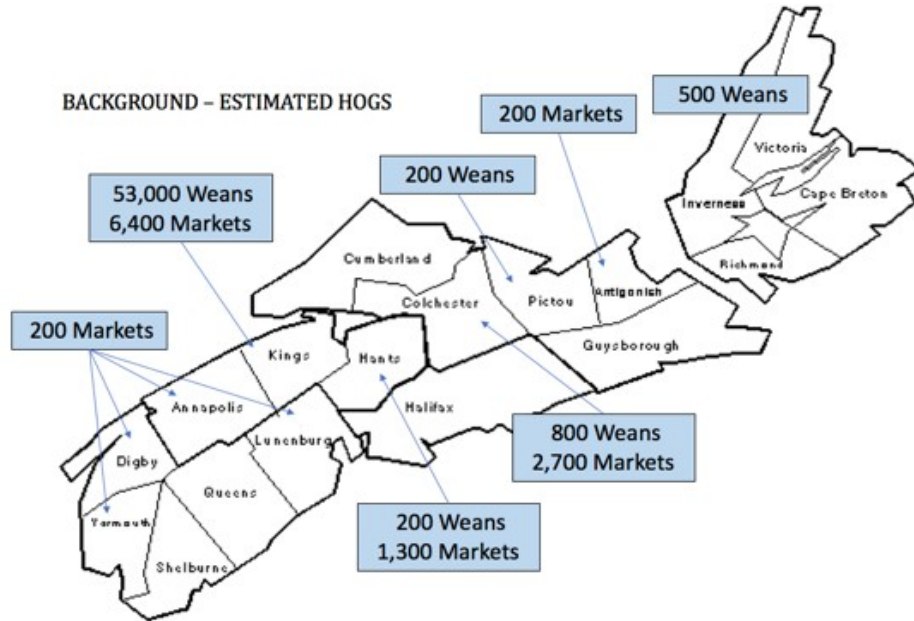


Figure 7- Hog Production Estimates, 2016 – Source: Pork Nova Scotia

### 3.0 Research & Literature Review

Several studies have been undertaken in recent years to explore and assess the regrowth opportunities for the Nova Scotia Pork Industry and the entire Maritime Region.

- (2015) Opportunities to Increase Profitability by Responding to Consumers' Definitions of Value: A Case Study in Fresh Pork, The Value Chain Management Centre, George Morris Centre
- (2014) A Study on the Overall Feasibility of a Federally Inspected Slaughter and Processing Facility in Nova Scotia, St. Mary's University Business Development Centre
- (2013) Brand Strategy, Nova Scotia Pork, Martha Reynolds Marketing
- (2012) Marketing Study, Increasing the Profitability of Nova Scotia Pork Producers, St. Mary's University Business Development Centre

This work included the examination of new market opportunity, the potential to establish a modern federal inspected hog slaughter-processing facility, the re-branding of Nova Scotia pork products and the rebuilding of the pork supply value chain.

The main conclusions drawn from these reports were that industry regrowth will require:

- access to new markets;
- new branding strategies;
- new and innovative value added pork products;
- significant industry supply capacity growth; and,
- better integration of the supply-value chain at all levels.

None of the studies offered definitive strategies or comprehensive models to develop and capitalize upon the findings and recommendations. Assumptions were to some degree based upon historical pork industry thinking, systems and commodity pork production. There was little definition of what a future sustainable, successful pork industry sized for Nova Scotia should look like and how it should differ from the historical commodity pork industry model. The research and literature review shows that the old NS Pork Industry supply-value chain model will not move the industry sustainably, successfully, confidently and profitably into the future.

A new model must be developed to integrated the regions pork supply-value chain, right from the hog to the consumer's plate. The collapse of the Nova Scotia Hog sector left a serious mark on the industry, and painful lessons from competing in a commodity marketplace. In the past pork producers had little control in or of their value chain. Producers were suppliers of raw inputs, that processors then value added, marketed and delivered to the marketplace. This model created mistrust at various levels within the system, negatively influenced the willingness to change, and did not encourage new financial risk, or the introduction of innovation. It also distanced and insulated the producer from the end pork product wants and needs of the consumer.



## Impacting Trends

Rebuilding the Nova Scotia/PEI Pork Industry is a long-term initiative requiring significant industry commitment, energy, investment and for some, a change in mindset. Proper due diligence is also necessary to ensure that new industry regrowth initiatives, commitments and investments will create a sustainable and profitable industry. One where risks have been minimized, and new infrastructures are established based on the future needs of the Pork Industry and not on past practices, or what the industry has been set up to produce.

The following questions are important to any renewal strategy and help explore why this initiative should, or should not go forward.

Question	Result
<i>How does a future pork industry value chain differ from the past models?</i>	<i>It will require full trace-ability from the hog to consumer fork.</i>
<i>How will production/ processing practices need to change?</i>	<i>Consumers want humane animal treatment and assurance (audits); production through slaughter, etc.</i>
<i>What levels of food safety are required?</i>	<i>HACCP is a standard expectation; higher levels of certification are required for export (ISO).</i>
<i>Who is the target customer?</i>	<i>Pork products are not for everyone. Pork products need to address a pressing target customer need.</i>
<i>What pork products will consumers want to buy?</i>	<i>Without a target customer, how does the industry know what to produce? While fresh products are valued by certain consumers, most pork purchased is processed pork products for breakfast and lunch.</i>
<i>Will products be sold domestically or exported?</i>	<i>Federally inspected processing infrastructure determines the market available to the industry.</i>

## Regulation Trends

An example of a growing trend that will affect all animal production industries in the future was illustrated in November 2016 when Massachusetts voters in the USA passed a historic landmark law (Question 3) to protect farm (veal, eggs and pork) animals from intensive confinement. This initiative prohibits commercial farming methods that keep animals severely constrained, including the gestation crating of mother pigs.<sup>3</sup> Going one step further, Massachusetts is barring the import and sale of meat that was produced using the banned methods from outside of the state. The farming industry with less than 2% of the state population was easily out voted on this reform bill. Farms in Massachusetts have until 2022 to comply.

Nine other states are working on implementing similar animal rights legislation. In efforts to get ahead of this trend, America's largest pork producers have agreed to phase out the intensive confinement of livestock. In the last two years, all major grocery and fast food chains in the USA have voluntarily pledged to use only cage-free eggs. The Compass Group and Aramark, two of the largest food service companies in North

<sup>3</sup> [http://www.huffingtonpost.com/entry/massachusetts-animals-question-3\\_us\\_581e4893e4b0e80b02ca7afe](http://www.huffingtonpost.com/entry/massachusetts-animals-question-3_us_581e4893e4b0e80b02ca7afe)



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America announced improvements in animal welfare for broiler chickens in their supply chains. The impact of these decisions is potentially large, as these companies manage dining operations at thousands of hospitals, universities and other large institutions across North America and set the standard for similar service businesses.

These regulations were not government imposed, rather are consumer imposed and illustrate the trends and potential impact on producers. The animal humane movement is trending across the continent and continues to impact farm production practices in all livestock commodities. Historically, it has not been good where industries fought these types of changes, but rather it was more beneficial to be proactive and to get on board the change early, and use it as a competitive and differentiating advantage.

### **Pork Trends: Pork Checkoff Report Magazine Spring 2016**

<http://www.pork.org/checkoff-reports/consumers-put-pork-fork/inspiration-on-a-plate-look-for-these-top-pork-trends-in-2016/>

Changing North American demographics are influencing eating habits and changing the pork industry. This cannot be overlooked as it creates new niche market supply opportunities. These 5 food trends identified by Pork Checkoff Magazine are currently driving new demand for pork products.

- 1) **Carnitas and other Latin Pork Dishes** - with the growing popularity of regional, authentic Mexican cuisine, from food trucks to fine dining, look for more Carnitas on menus.
- 2) **Porchetta** - has been served in sliders or as entrée from food trucks to fine dining for some time, but has room to grow with chain restaurants and retail.
- 3) **Korean BBQ** - Korean BBQ has become a staple of most major US cities, joining the ranks of hibachi grills and sushi bars as a new genre of American fast food.
- 4) **Specialty and Premium Hams** - chefs are turning to cured meats made in house or by domestic, artisan producers. American hams are the New "it" item within charcuterie.
- 5) **High Quality Cooked Loin** - look for pork loins as more than a centre of the plate item and for innovations in flavour profiles with marinade flavour profiles.

## Contracting

There is a trend to forward contracting, or market agreements in the meat industry. In some case producers don't own the animals and are paid a fee to raise them for a processor. Many hog slaughter plants offer supply contracts to producers, which may or may not include a price guarantee.

The benefit of a supply contract for a producer is they obtain the right to supply a certain number of animals at a predetermined specification and time. Processors in this kind of agreement can keep their production lines full and better manage costs. Some contracts contain grade specifications bonuses and discounts relative to the hog price at the time of sale. Packers offering forward pricing contracts guarantee the base hog



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price in advance of delivery. Base prices are adjusted after delivery and slaughter based on industry indexes, or other grading specifications.

### Challenges

An ongoing challenge for any meat processing business is the full utilization of all meat cuts and carcass parts. Slaughtering and processing hogs for hams, pork chops, loins, bacon and ribs does not utilize the entire carcass. A successful hog processing sector needs connections to markets, and innovators to get the most value from the entire pork carcass. In a growing more global and ethnically diverse marketplace opportunities are being identified for better utilization of what westerner societies might consider less desirable pork cuts such as offal, shoulders, organs, etc. To develop these opportunities requires ongoing market intelligence and the creation of partnerships with researchers, food scientists, chefs and innovation centres such as Perennia's BioVenture Centre in Bible Hill to identify and create new value added products. It is possible that entire new businesses can evolve from the better utilization and value adding of pork cuts and carcass components, etc.

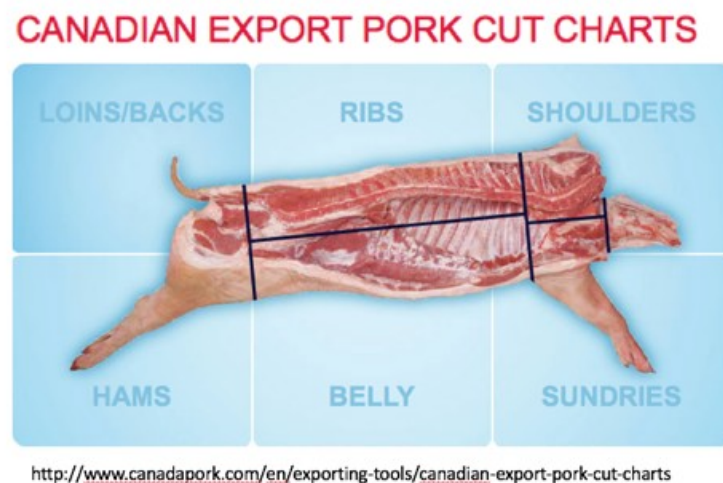


Figure 8- Pork Cuts

### The Hog Cycle

One aspect of swine production that has been studied extensively by agricultural economists is the “hog cycle.” The production of swine goes through cyclical fluctuations of accumulation and liquidation that appear to last in the range of four years. Producers enter the market or increase production in response to improving market conditions. The increased production then leads to lower prices, causing producers to exit the market or reduce production numbers. Based on these facts producers are only able to expand production when prices are high, and are forced to cut production expenditures when prices are low. Thus, there is a quantity cycle, and an opposite price cycle.<sup>4</sup>

4 [https://www.usitc.gov/publications/332/pork\\_and\\_swine\\_summary\\_its\\_11.pdf](https://www.usitc.gov/publications/332/pork_and_swine_summary_its_11.pdf)



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The hog cycle can be lessened through better integration of the value chain, contracting and creating niche market products that are less influenced by commodity pricing.

### Retail Pork

The pork retail price determines the price hog producers will get paid. Most pork products have competitive pricing, which results in pork being a more affordable consumer meat and protein source compared to beef, chicken and salmon.

- Net farm gate profit to the producer is driven by feed costs.
- The farm to wholesale margin requires a stable flow of hog inputs and consistent markets to supply with finished products.
- The wholesale to retail margin is firmly defended by retailers and based on what the consumer will pay.

In this system, price pressure flows down through the supply chain from the retailers wanting to maintain their margins, processors wanting to maintain margins with the producer at the end getting squeezed on price. The concept of an organized supply value chain is that the value gets shared through the chain.

### Pork Consumers

There are some distinct trends in the marketplace with respect to food choice: consumers want convenience, taste, “natural”, healthful products, especially those that can be prepared at home by those with few cooking skills, at a good “value”. Most pork consumed in the United States and Canada is purchased through retail sales. Analysis of data collected in the Continuing Survey of Food Intakes found that 78 percent of U.S. pork is purchased at retail, 17 percent is purchased at a restaurant, and 5 percent at other locations.<sup>5</sup>

Most pork is consumed as a processed product verses fresh. The largest share of pork consumption is ham, followed by sausages, and then bacon. Processed pork is typically consumed for breakfast and lunch, while fresh pork for dinner/supper.

Not everyone eats pork and those that do have product and cut preferences. The pork market is constantly evolving as are the pork consumer demographics. Aging populations, generational preferences in meat, ethnic group diets, all contribute to a dynamic and changing marketplace. Successful supply/value chains have become closely integrated and better connect the consumer’s wants and needs with what the food producer supplies.

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5 Davis and Lin, Factors Affecting US Pork Consumption 2005



## Maritime Pork Industry Renewal: Phase 1

The George Morris Centre study found that the Atlantic Canadian consumer undervalues pork when compared to beef, chicken, or fish.<sup>6</sup>

They also found that:

- Provenance support for Atlantic Canadian pork is high, but it doesn't seem to be enough to change eating habits.
- The benefit of value adding is that it allows for the setting of product price.
- To deliver value and products that the customer wants to purchase, requires ongoing tracking and sharing of information within the supply chain.
- Innovation is required at every stakeholder level.
- Fresh pork is undervalued in consumer's eyes, viewed as commodity meat, and not for special occasions. (Little upmarket appeal.)
- Not seen as an attractive meat by kids.
- No pork advertising, no brand, no product differentiation.
- Lack of infrastructure & skills to produce value added and high quality meats.
- Consumers are being offered an undervalued pork product. (There is a need to increase the value perception of NS or Atlantic pork.)

Here are some key findings about pork consumers.

(Source: <http://www.porkretail.org/Research/4425/PointofDecisionStudies.aspx>)

- The meat case is a planned weekly consumer shopping destination.
- 83% grocery shop once a week or more.
- 80% of respondents planned on going to the meat case prior to entering the store.
- Many shoppers don't know exactly which cut they will buy until they get to the meat case.
- Shopping lists function more as a guide & tend not to mention specific meat by name or cut.
- More pork buyers (41%) are undecided about which cut they buy until they get to the meat case than are buyers of beef (39%) or chicken (26%).
- Pork is more likely to be an impulse purchase vs. beef or chicken.
- Meat is a high-involvement purchase, consumers re-evaluate the available meat products on every trip; they spend more time on the decision-making process than they do for other food purchases.
- Shoppers spend four minutes at the meat section vs. one minute (norm) for other food products.
- Consumers spend more time at the meat case when buying pork.
- 96% do not seek assistance from store personnel with their meat purchase.
- Rural consumers eat more pork than urban/suburban consumers (Davis and Lin, 2005; Yen et al., 2008).
- In general, men consume 66% more pork than women. Consumption increases among both men and women until they reach the 50s then declines as they age (Plain and Grimes, 2005).

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6 2013 - Rob Clark, Laurie Bonney, Ray Collins, Andrew Feame, Martin Gooch, Abdel Felfel, Bradley McCallum, Benjamin Dent; Opportunities to Increase Profitability by Responding to Consumers' Definitions of Value: A Case Study in Fresh Pork





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- Families with incomes of \$20,000 or less are less likely to select higher quality pork while those with incomes over \$50,000 are more likely to select it than those in other income groups.

A big challenge for the Pork Industry is the consumer's value perception of pork; they typically see it as commodity meat. This creates a market environment, where price becomes the main purchase decision.

Value differentiation and convenience is what positions pork for upmarket consumers, increased sales, margins and profits. Pork competition at a commodity level is fierce and a small industry like Nova Scotia has difficulty competing in commodity without the cropping advantages suppliers in other regions (Ontario, Quebec, Western Canada and the USA) have, which gives them a competitive marketplace advantage.

### Food Safety

Consumers are willing to pay a premium for food risk reduction;

- Trace-ability, tracking of products from origin through processing, is becoming a norm and can be a competitive advantage to meat suppliers.
- Product quality attributes and/or the actual manufacturing process can be verified or certified by a third party.
- These programs are becoming increasingly important as the food industry attempts to reassure consumers about food product safety and to appeal to the social consciousness.

### Organic

According to USDA's Economic Research Service, the increasing sales of organic and natural food products is being driven by a growing health-conscious consumer. Food products offered by natural and organic food supermarkets tends to be less processed and free of preservatives, hormones, antibiotics and artificial ingredients.

Organic pork is raised in a system that promotes biodiversity, low confinement, with minimal use of off-farm inputs and no antibiotics or growth stimulants.



### 4.0 Case Studies

#### Denmark

Denmark is a pork producing and exporting county that hits well above its weight class, and a model that should be examined. Agricultural success in Denmark is the result of focus on areas where the country can have a global competitive advantage. In Denmark, there is land scarcity, farm size restrictions, high land values, strict environmental regulations, EU ag. policies to address, high 2-3X labour costs in processing, and long distances to export markets; yet the industry has become a pork juggernaut. It is the third largest pork exporter to Japan behind the USA and Canada. With a population of only 5.6 million and a land base of only 43,000 square kilometers, about 80% the size of Nova Scotia, Denmark is a pork industry powerhouse. It is a peninsula, with excellent access to sea freight transportation, a high concentration of knowledge institutions and a high level of food related experience and resources.

The Danish pork industry cannot compete by having a low production cost, or against competing large expansive production regions. To overcome these challenges the country took a strong position of agriculture innovation and new product development striving to create clusters of unique innovation connection between industry, universities, institutions and investors to create competitive advantages that no one company could achieve on their own.

There is a proactive approach to quality and food safety verses reaction to legislation. Danish hogs are slaughtered at three-producer owned co-operatives. The vertical supply chain relationships are strong and facilitate the flow of information between breeding, production, slaughter, processing, distribution, and export. The industry takes a proactive approach to product quality and food safety verses waiting for legislation, and is focused on delivering the highest levels of quality assurance possible. Every animal is tagged/tattooed; traceable from the farm to the consumer.

There is a strong focus on value adding and maximizing utilization of all animal components. Since equipment companies are part of the industry innovation cluster they get involved early, creating opportunities for pork technology export. These practices collectively facilitate the industry's ability to capture the customer willingness to pay for Danish Pork attributes. The relationship between producers and processors is further enhanced through the sharing of production and market information and contracts that guarantee and reward, performance and supply. Supply chain relationship stability entices pork producers and processors to risk investment into new production supply chain efficiencies and systems.

#### Banksia Beef/ John Dee, Australia

*(Source: Global Supermarket Magazine Volume 6 No.4 2002)*

[www.johndee.com.au](http://www.johndee.com.au)

Banksia Beef is a successful consumer brand in South East Asia. The Banksia Beef model has helped put both the beef producer and processor in control of their future. The supply chain was formed to deliver



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product quality, customer service and value to all stakeholders by integrating best practices and innovation through the value chain. It is a joint venture partnership between John Dee/Warwick Bacon (processor) and groups of beef producers in New South Wales & Queensland, Australia. Beef producers supply cattle based on market prices set annually and John Dee Brand provides the processing and market support.

The Banksia Beef supply chain was established because producers wanted to:

- Improve returns for their cattle;
- Reduce income fluctuations;
- Take control over their own destiny; and,
- Obtain ongoing market performance feedback on market cattle.

Warwick Bacon recognized the opportunity to develop new markets backed by a guaranteed supply of quality Australian cattle.

### Model Success Factors

The supply chain success factors are:

- 1) Product differentiation that creates customer value - focus is on creating significant product differentiation in the market as fresh, premium yearling beef, that is free range, growth hormone free, halal certified, and food safe.
- 2) Customer benefit - marketed as a tender, lean, healthy, natural product under the Banksia brand and sold as cuts that aligned with Asian style of cooking to assist consumer choice and purchasing.
- 3) Undisputable food safety - the production and marketing chain is HACCP accredited and fully transparent providing market feedback to producers and full HACCP traceability from paddock to shelf.
- 4) Critical mass and year-round consistency of supply – producers commit to delivering decks of cattle (30 head) to agreed specifications at a delivery point in time against a performance bond. Bonds could be forfeited if delivery commitments are not met.
- 5) Delivery assurance - group coordinators help producers finalize delivery timing in accord with a specification grid developed for the product.
- 6) Pricing - delivered prices are set annually reflecting spot market prices.
- 7) Value chain transparency – reduces adversarial relationships between producers & processor.
- 8) Single contact point – chain manager provides communication and builds effective relationships between stakeholder partners ensuring customer responses are relayed through chain.
- 9) Feedback - producers receive direct feedback on each shipment to enable production modifications to enhance performance and yield.
- 10) Financial performance is monitored to ensure sustainable profit from the marketing arrangements.
- 11) Brand building - select producers participate in product launches and POS promotions connecting the farmer, brand and market. Focus on in-store product shelf presentation, monitoring and effective category management to ensure consumer expectations are met. Banksia agents provide ongoing brand customer service.



### Challenges Addressed

The challenges have been to:

- Maintain brand integrity at the store level; and,
- Reinforce brand integrity and consistency with end consumer.

John Dee developed a portion control facility to better manage these challenges.

### Benefits & Outcomes

There have been numerous benefits resulting from the implementation of this business model:

- Processor receives fees for processing and marketing activities;
- Producers benefit as scale of operation increases;
- Processor developed a new market segments complementary to established John Dee brands;
- Future pricing offers stability throughout the chain;
- Producer receives premium cattle prices often more than auction price; and,
- System caters to the customer's needs.

## Belcampo Group Inc., California

(Source: *Modern Farmer Issue 11/ Spring 2016*)

<http://www.belcampo.com/>

Belcampo is a complete meat supply value chain including the farm, a processing plant, butcher shops and restaurants. The concept is based around a unifying commitment to provide customers with delicious, organic & compassionately raised meat the customer can feel good about buying and eating. They utilize an old-fashioned approach, raising meat on Belcampo land, processing in a company facility and cutting meat by hand in own butcher shops, and then cooking it for the customer in Belcampo restaurants. Control of the supply chain allows direct involvement in every aspect from the farm to the consumer's fork. The Farm is in Gazelle, California at the foot of Mount Shasta raising cattle (Angus, Hereford and Wagyu), free range chickens and turkey, and free ranged sheep & goats - (Katahdin, Dorper and Navajo Churro). Hogs are crossed Berkshire, Duroc and Ossabaw, free ranged and supplemented with custom diets of local cereal grains for a true Shasta Valley *terroir*.

### Belcampo Best Practices

1. *Supplying Best Meat* – provide sustainable, quality, good tasting meat, healthy for the customers through best production management practices, control of processing, meat cutting and direct serving to the end customer.
2. *Soil* – recognize that soil sustainability and health is a key resource in the production of meat.
3. *Grazing* – meat flavour is tied directly to what the animals eat, so animal grazing rotation and species diversity is designed to create full circle ecosystems.
4. *Healthy Animals* – good food, water and fresh air produce healthy animals and quality meat.



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5. *Processing* – own 20,000 sq./ft. meat processing facility designed by Temple Grandin for humane handling of animals. Old fashion butchery methods not automation are used and meat is aged for 28 days for full flavour.
6. *Butcher Shop & Restaurant* – butchers and restaurant servers have a strong knowledge of meat and how animals are raised. They share cooking advice & recipes ensuring full customer enjoyment of meat products.

### Model Success Factors

- Complete Control of Supply Chain Farm to Fork.
- Certified by California Certified Organic Farmers (CCOF), Animal Welfare Approved (AWA), and USDA inspected.
- Hire and train butchers in artisanal hand-cutting methods to craft meat cuts for shops and restaurants.
- Full farm to fork traceability through implementation of a strict coding system to track animals from birth to butchery to your plate. Know exactly which animal each cut of meat comes ensuring meat quality, integrity, and safety.

### Benefits & Outcomes

- Building loyal customer base that want to know by who and how meat was produced.
- Customer respond to sustainable production practices and humane handling of animals.
- Supply of meat guaranteed with 40-50 animals processed each day.
- The business was started in 2012 projecting annual sales near \$20 Million for 2016.



# Leamington Farms Ltd, Point Leamington, NL

<https://leamingtonfarms.wordpress.com/2011/03/23/hello-world/>

**LEAMINGTON FARMS (1979) LTD.**  
 P.O. Box 9, Point Leamington, Newfoundland  
**☎ 484-3404**


## Adopt A Pig

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ADOPT A YOUNG PIG NOW      GET YOUR FRESH PORK FOR LATER

**Your Commitment:**

You Pay Only  
**\$50.00** Now And  
 Adopt A One Month Old Pig

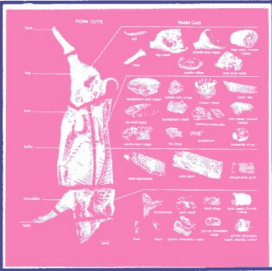


**Our Commitment:**

We Will Raise Pig To Market Size That Will Take Approximately Another Four Months In Government Inspected Buildings While You Pay The Remaining **\$150.00** Then You May Pick Up Pig  
 OR  
 We Will Slaughter Pig And Have It Cut And Packaged At Your Request - **\$10.00** Extra

**You Will Receive Approximately:**

- 72 Pork Chops
- 4 Pork Shoulder Picnic Roasts
- 8 Pork Shoulder Butt Roasts  
OR (16 Pork Shoulder Butt Chops)
- 4 Pork Leg Butt Roasts
- 4 Pork Leg Shank Roasts
- 8 Pork Leg Centre Cut Roasts  
OR (12 Pork Leg Centre Cut Steaks)
- 4 Pks. Pork Hocks
- 4 Pks. Pork Side Ribs
- 16 Pks. Fresh Pork Bacon



**Adopt A Pig Yourself Or Get Together With A Friend**

For Details Call... **484-3404** or **484-3482**

Or Write... **LEAMINGTON FARMS (1979) LTD.**  
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 Point Leamington, NL  
 A0H 1Z0

**Adopt A Pig**

NAME \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 CITY \_\_\_\_\_  
 STATE \_\_\_\_\_  
 ZIP \_\_\_\_\_

**When all the hog producers in Newfoundland went out of business, I was caught wondering what I was going to do."**

Roosevelt Thompson

\$50.00 Adoption Fee To Be Sent With Order  
 For Exact Pick-Up Details Call **484-3404**

MORGAN PRINTING

Roosevelt Thompson established Leamington Farms in 1979 producing pork and poultry for customers in central Newfoundland. Hogs were sent to the government abattoir; the only certified hog slaughter processing facility in the province. In the abattoir closed and there was no-where to have hogs slaughtered, except ship them to Berwick Nova Scotia, an uneconomical option and as a result the industry shutdown.

To stay in the hog business Roosevelt needed access to a provincially inspected slaughter facility, and more outlets and customers to take his products. Now, with no fresh pork available in NL Roosevelt saw an opportunity to continue farming and create new opportunity for his children to stay and work in the area.

Roosevelts inspired by his daughter's Cabbage Patch doll started an adopt-a-pig program and created his own hog industry. People paid a \$50 deposit on a young pig, which would then be raised to full size (220 pounds) at Leamington Farms, taking approximately five months. Then the customer pays another \$200 for slaughter and butchering to the customer's specifications. For additional fees, customers can have sausages, breakfast bacon and cured ham. Roosevelt made up flyers and distributed

them to households in the area. The farm wins because it never produces something it can't sell as the product is pre-sold. Also, the \$50 "adoption fee" gives the farm some working capital to cover expenses until the product is available. The customer wins as the pork is local and guaranteed fresh, unlike mainland-produced pork, which is at least six days old before it gets to the supermarket in NL.

## Success Factors

- Developed and implemented creative solutions to seemingly unsolvable problems.
- Used unique strategies to get cash up front.
- Explored new opportunities and made changes to remain competitive.



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- Targeted a market opportunity that others could not and created a niche' market advantage for Leamington Farms.
- Worked to develop strategies to match farm production system with the market opportunity.
- Value adds every hog the farm sells.
- Focus is loyal repeat customers and on getting freshest quality pork and meat products to consumers.

### Best Practices

- Looked for and built on a unique opportunity.
- Wasn't scared to take a risk to stay in farming creating a family business.
- Catered to the customer's needs, "If there is a problem with my products I want to know about it so I can make it right."
- "Things can't be too bad we have expanded every year since 1992."

### Case Study Conclusions

The conclusions drawn from these case studies are that producers who chose to become involved in the entire supply-value chain can create business and price stability, balance production schedules and cash flow, get feedback from end users for product improvement, build product and brand loyalty and grow the meat opportunity larger than would be possible focused on commodity production.

This all builds on the consumer's need to know where their food comes from, creating a connection with the farm, assurance of humane animal treatment and food safety, delivery of quality meat, learning about pork and a better understand of the agriculture practices. As a result, they become loyal customers who want value over price. These models have all very successfully de-commoditized their meat products in the eyes of their target customers and receive a premium value in return.



## 5.0 Traits of a New Pork Value Chain

### Meat Industry Success Traits

The following are some meat industry success traits.

- Take a proactive versus reactive market approach;
- Targets a specific customer or consumer need;
- A strong focus on animal welfare and humane slaughter practices;
- Sustainable environmental practices;
- Fully integrated value chains; farm to consumer plate;
- Brand products, utilize seals of certification;
- Product flexibility allowing for movement with market demand;
- Offer value added products;
- Transparency and traceability throughout the entire chain;
- Exceed customer food safety expectations;
- Offer an exceptional value proposition (tell a story to connect with consumers);
- Utilize contracts to stabilize supply;
- De-commoditized meat in the eyes of the consumer;
- Deliver freshness, flavour and taste experiences;
- Feedback systems that flow animal performance information to producers;
- Open communication at all levels of the value chain; and,
- Take responsibility for the consumer's pull at the retail shelf.

A new pork industry abattoir and processing infrastructure on its own will not change the customer's value perception of pork, overcome past industry challenges, or make the industry successful without a new value chain model that includes these attributes of a successful meat industry.

### Desired Characteristics of a New Value Chain

The following are desirable characteristics that should be included in a new pork value chain:

- Utilization of advanced technology wherever possible;
- Full individual animal traceability (pasture to plate);
- Proactive information supply throughout the chain;
- Co-operative business structures and models;
- Contracts between suppliers and processors to assure supply;
- Quality guarantees and premiums paid e.g.: organic;
- Branded products;
- Investment in the consumer purchase;
- A farmer owned and controlled supply chain;
- Productivity improvement initiatives at all levels;
- Assurances of humane animal practices;
- Raise the consumer value perception of pork;





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- Reduce transaction cost in chain;
- Food safety guarantees;
- 3<sup>rd</sup> party verification;
- Value add all pork sold;
- Link into pork collaborative innovation (Perennia & Universities);
- Link to culinary worlds;
- Unique NS brand of pork;
- Flavour guarantees;
- De-commoditize pork target markets;
- Set own price;
- Delivery/distribution unique models;
- Health and wellness message (story) social media;
- Infrastructure scaled to support market opportunity;
- Ownership of consumer product pull;
- A pork marketing strategy;
- Understand target customer; and,
- Connection with the customer.

### Creating a Pork Innovation Cluster

The development of new pork slaughter-processing infrastructure could become the core of a pork innovation cluster in the region. Clusters can bring innovation partners into the supply chain environment to help develop new products and opportunity for the future. This could include both traditional and non-traditional pork food products, industrial uses, nutraceutical creation and supporting technology, all could open new markets and create new opportunity.

### Creating Competitive Advantages

The target pork customer influences the slaughter processing facility, size, design and capacity. In a commodity pork market, with no product differentiation price becomes the primary purchase decision factor. Commodity markets are based on low margin products with high sales volume traffic.

Pork producing regions with production competitive advantages such as location, or low cost feed can establish economies of scale that dominate in the general meat marketplace. The alternative to commodity is to stand out, through adding value to create unique competitive advantages others cannot easily duplicate. This could be a brand, product origin (provenance), organic, market support, new delivery channels, logistics, or simple a product's texture, colour, taste characteristics, and shape, etc.

Value adding can create new economies of scale in niche pork markets. A couple of examples of unique pork products are:

- Mangalitsa Pork the Kobe beef of pork
- Prosciutto ham



## 6.0 Pork Supply Value Chain Options

There are numerous pork supply chain options to consider:

1. The traditional produce pork, and ship direct to large processor. Involvement in the value chain ends.
2. Produce hogs, ship to provincial abattoir, get animals back, sell products (fresh/frozen) direct to customers. Limited growth potential.
3. Become part of an integrated value chain with a federal inspected abattoir and packaging processing facility.
4. Become part of an integrated value chain utilizing a federal inspected abattoir and processing facility to creating value added products.
5. Become part of an integrated value chain utilizing a federal inspected abattoir and processing facility to creating value added products and sell products direct to the end consumer. (e.g.: Belcampo)

	<b>Options</b>	<b>Pro</b>	<b>Cons</b>
1.	Produce pork and ship direct to processor (e.g.: Quebec)	<ul style="list-style-type: none"> <li>• Receive fair market price, contract supply agreements where possible.</li> <li>• Paid on ability to meet product specifications and delivery timelines.</li> </ul>	<ul style="list-style-type: none"> <li>• Subject to market price fluctuations and the up/down of Hog Cycle.</li> <li>• Require volume sales to be profitable.</li> <li>• Hogs are a commodity, minimal feedback on animal performance at retail.</li> <li>• Cost of shipping to market.</li> </ul>
2.	Produce hogs, ship to provincial abattoir, get animals back, sell product direct to customers.	<ul style="list-style-type: none"> <li>• Cut out middleman.</li> <li>• Higher returns.</li> </ul>	<ul style="list-style-type: none"> <li>• Need investment into retail infrastructure.</li> <li>• Finance the product inventory through to consumer.</li> <li>• Increased food safety requirements.</li> <li>• Lose control of product going to abattoir.</li> <li>• Can only sell products within province.</li> <li>• Requires marketing investment.</li> <li>• Limited by distance to and capacity of abattoir.</li> <li>• Limitations to fresh meat.</li> </ul>
3	Become part of an integrated value chain utilizing a federal inspected abattoir and	<ul style="list-style-type: none"> <li>• Can chose which parts of the value chain to be involved in.</li> <li>• Supply contracts.</li> </ul>	<ul style="list-style-type: none"> <li>• Commitment to supply contracts.</li> <li>• Still subject to market pricing.</li> <li>• Marketing and the sale of</li> </ul>



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	processing facility.	<ul style="list-style-type: none"> <li>• Bonuses and premiums for delivery of quality products.</li> <li>• Feedback from marketplace so can adjust production practices.</li> <li>•</li> </ul>	products may still be in the hands of others.
4.	Become part of an integrated value chain utilizing a federal inspected abattoir and processing facility to creating value added products.	<ul style="list-style-type: none"> <li>• Can chose which parts of the value chain to be involved in.</li> <li>• Supply contracts.</li> <li>• Bonuses and premiums for delivery of quality products.</li> <li>• Feedback from marketplace so can adjust production practices.</li> <li>• Niche market opportunity increases market stability</li> <li>• Set price not commodity price</li> </ul>	<ul style="list-style-type: none"> <li>• Commitment to supply contracts.</li> <li>• Still subject to market pricing.</li> <li>• Marketing and the sale of products may still be in the hands of others.</li> <li>• Value added products are expensive to develop and many fail.</li> </ul>
5.	Become part of an integrated value chain utilizing a federal inspected abattoir and processing facility to creating value added products selling products direct to the end consumer (e.g.: Belacampo)	<ul style="list-style-type: none"> <li>• Can chose which parts of the value chain to be involved in.</li> <li>• Supply contracts.</li> <li>• Bonuses and premiums for delivery of quality products.</li> <li>• Feedback from marketplace so can adjust production practices.</li> <li>• Niche market opportunity increases market stability</li> <li>• Set price not commodity price</li> <li>• Close consumer connection</li> </ul>	<ul style="list-style-type: none"> <li>• Commitment to supply contracts.</li> <li>• Still subject to market pricing.</li> <li>• Marketing and the sale of products may still be in the hands of others.</li> <li>• Value added products are expensive to develop and many fail.</li> <li>• Direct contact with customer.</li> </ul>



# 7.0 Conclusion & Recommendations

There are a variety of options possible to rebuild the Nova Scotia and Prince Edward Island Pork Industry. Without slaughter and processing infrastructure the industry cannot grow, export fresh or value added pork products or have control of the future. The Pork Industry in the Maritimes is small and will always have challenges competing in the larger commodity marketplace against regions with greater advantages.

The goal therefore should be to compete in areas where Nova Scotia pork can have a competitive advantage with unique opportunities. This will likely be in niche markets that larger producers and processors have either overlooked or are too large to bother with. Companies such as Belacampo and Field Gate Organics have created unique value chains where producers have gained control of the product from the farm to the consumer and in the process created significant business operations and systems to get meat products delivered to the consumer, offering assurances, food safety and high quality, high value products at a premium price.

The following are recommendations based on this project's research and assessment of the opportunity:

**Recommendation#1:** Decide if the industry wants to deliver to a commodity market, to the end consumer, or somewhere in between.

**Recommendation #2:** Focus on a production system and value chain where the industry can have a significant competitive advantage for a period of time.

**Recommendation #3:** Utilize existing business models to facilitate successful development.

**Recommendation #4:** Define a target customer (don't try to be everything to everyone) and focus on the pork product needs of that niche customer.

**Recommendation #5:** Develop an industry controlled abattoir for the humane slaughter of animals.

**Recommendation #6:** Create infrastructure to value add products for price stability and to create options when changes occur in the industry.

**Recommendation #7:** Build partnerships that can help move forward faster than could on own.

**Recommendation#8:** Brand the product uniquely and promote the products.



# Appendix

## Studies

(2013) - Rob Clark, Laurie Bonney, Ray Collins, Andrew Feame, Martin Gooch, Abdel Felfel, Bradley McCallum, Benjamin Dent; Opportunities to Increase Profitability by Responding to Consumers' Definitions of Value: *A Case Study in Fresh Pork*

(2015) Opportunities to Increase Profitability by Responding to Consumers' Definitions of Value: A Case Study in Fresh Pork, The Value Chain Management Centre, George Morris Centre

(2014) A Study on the Overall Feasibility of a Federally Inspected Slaughter and Processing Facility in Nova Scotia, St. Mary's University Business Development Centre

(2013) Brand Strategy, Nova Scotia Pork, Martha Reynolds Marketing

(2012) Marketing Study, Increasing the Profitability of Nova Scotia Pork Producers, St. Mary's University Business Development Centre

## Project Related Websites

Pork PEI

<http://peipork.com>



Pork Nova Scotia

<http://porknovascotia.ca>



## Maritime Pork Industry Renewal: Phase 1

V&G Meats, Ontario - <http://vgmeats.ca>

Prosciutto - <http://parmacrown.com/what-is-prosciutto/>

Mangalitsa Pork - <http://modernfarmer.com/2014/03/meet-mangalitsa-hairy-pig-thats-kobe-beef-pork/>

Belcampo - <http://www.belcampo.com>

John Dee, Australia - <http://www.johndee.com.au/responsibility.php>

Lamb Direct Website - <http://www.lambdirect.com.au>

Field Gate Organics, Ontario (Own Abattoir) - <http://fieldgateorganics.com>

Canada Pork International - <http://www.canadapork.com/en/industry-information/hog-production-in-canada>

One Earth Farms - <http://oneearthfarms.com/branded-products/index.html>

Australia's Largest Pork Producer - <http://www.sunporkfreshfoods.com.au/pork-exports>

Russian Pork Hub to China - <http://www.globalmeatnews.com/Livestock/Russia-creates-pork-hub-to-target-China>

China-Pork Imports - <http://www.globalmeatnews.com/Livestock/China-s-pork-imports-booming>

The Danish organic pork chain - [http://curis.ku.dk/ws/files/103805141/FOI\\_Report\\_192.pdf](http://curis.ku.dk/ws/files/103805141/FOI_Report_192.pdf)

The Danish way to more safe meat -

[http://danishfarmconcept.com/uf/100000\\_109999/109191/ad2d2f8e2a2ddb1f2b26382e93e79a84.pdf](http://danishfarmconcept.com/uf/100000_109999/109191/ad2d2f8e2a2ddb1f2b26382e93e79a84.pdf)

Germany Pork Powerhouse - <http://www.globalmeatnews.com/Analysis/Germany-a-powerhouse-on-pig-production>

Australian Air Pork - <http://www.wilfridwong.com/2007/05/16/battle-of-australias-airpork-and-the-local-supply/>

Checklist of Value-Added Opportunities for Pork Products -

<http://www.thepigsite.com/articles/3394/checklist-of-valueadded-opportunities-for-pork-products/>

