Corporate Swine: A Global Value Chain Analysis of Pork Production, Processing, and Retailing in Southwestern Ontario

by

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ABSTRACT

CORPORATE SWINE: A GLOBAL VALUE CHAIN ANALYSIS OF PORK PRODUCTION, PROCESSING, AND RETAILING IN SOUTHWESTERN ONTARIO

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University of Guelph, 2016

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This doctoral thesis provides a global value chain analysis of Southwestern Ontario pork production and processing, and broader retailing sectors, to understand the political and economic challenges experienced by hog producers and the wider hog industry. In-depth semi-structured interviews were conducted with 26 hog producers and 18 key industry informants between June and November 2015. A number of explicit and implicit political and economic challenges to production were identified. Explicit themes include a lack of kill or shackle space in Ontario, no control over pricing, and the influence of animal rights groups and their “vegan agenda” to remove all animals from agriculture. Implicit themes include overproduction and export dependence, a contradictory stance on the value of agricultural subsidies versus agricultural safety-nets, and conflict among producers and the tendency to consumer-blame. An argument is further made for how control is exercised throughout the entire value chain, as powerful further processors and retailers dictate production practices based on a meticulously-calculated pricing formulation based on hog leanness that requires producer-adherence. The results outline how political and economic conditions greatly influence hog production in Southwestern Ontario.

Keywords: Global Value Chain Analysis; Political Economy; Swine; Pork Production; Meat Processing, Slaughter; Value-Added; Canadian Food Retailing; Lean Hogs
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LIST OF ABBREVIATIONS

Agreement on Agriculture (AoA)
Agriculture and Agri-Food Canada (AAFC)
Area Regional Control and Elimination (ARC&E)
Artificial insemination (AI)
Bank of Montreal (BMO)
Bovine Spongiform Encephalopathy (BSE)
Buyer-driven commodity chains (BDCCs)
Canadian Food Inspection Agency (CFIA)
Canadian Imperial Bank of Commerce (CIBC)
Canadian Pacific Railway (CPR)
Canadian Pork Council (CPC)
Canada Pork International (CPI)
Canada Quality Assurance (CQA)
Chicago Board of Trade (CBT)
Chicago Mercantile Exchange (CME)
Comprehensive Economic and Trade Agreement (CETA)
Creutzfeldt–Jakob Disease (vCJD)
Cull Breeding Swine Program (CBSP)
Dried Distiller Grains (DDGs)
Electronic sow feeding (ESF) system
European Union (EU)
Farm Products Marketing Act (FPMA)
Financial Consumer Agency of Canada (FCAC)
Foreign direct investment (FDI)
General Agreement on Trades and Tariffs (GATT)
Global Commodity Chain (GCC)
Global Production Network (GPN)
Global Value Chain approach (GVC)
Hazardous Analysis Critical Control Point (HACCP)
Hog Farm Transition Program (HFTP)
International Agency for Research on Cancer (IARC)
Just-in-Time (JIT) Production
National Farm Animal Care Council (NFACC)
North American Free Trade Agreement (NAFTA)
North American Meat Institute (NAMI)
Ontario Agricultural College (OAC)
Ontario Independent Meat Processors (OIMP)
Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA)
Ontario Pork Industry Council’s (OPIC)
Ontario Pork Producers' Marketing Board (OPPMB)
Ontario Swine Health Advisory Board (OSHAB)
Professional Animal Auditor Certification Organization Inc. (PAACO)
Pale, Soft, Exudative (PSE)
People for the Ethical Treatment of Animals (PETA)
Porcine reproductive and respiratory syndrome virus (PRRS)
Porcine epidemic diarrhea virus (PEDv)
Porcine Stress Syndrome (PSS)
Premise identification database (PID)
Producer-driven commodity chains (PDCCs)
Progressive Pork Producers’ Cooperative (PPPC)
Short food supply chains (SFSCs)
Transnational supermarket chains (TSCs)
Trans-Pacific Partnership Agreement (TPP)
Transport Quality Assurance (TQA)
United States Department of Agriculture (USDA)
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1: Introduction

A number of recent Canadian studies have traced the commodity chain of various food products. Barndt’s seminal critical commodity chain analysis digs at the “routes and roots” (Barndt 2002:1) of corporate tomato production and consumption to reveal the complex and impactful journey that affects numerous lives in a variety of places. Similarly, MacLachlan’s (2001) chain analysis of the Canadian beef industry has revealed the structural strength of corporate conglomerates and subsequent restructuring of the packing industry as a result. A number of these studies that trace commodity chains of fresh food, as well as food inputs, note the complex web of actors who shape and augment the paths that consumables take from farm to fork. Interestingly, such paths are often heavily affected and influenced by political and economic conditions. Canada currently lacks a federal food policy. The lack of food policy is further burdened by limitations imposed by international trade policies of which Canada is a part, as well as the disparate composition of the Canadian political body where food could fall into one of 50 federal legislations within 26 different agencies, board or commissions affecting agriculture and food (The Conference Board of Canada 2011). I contend that much of the food available in modern food environments is deeply embedded in politics. Investigation to understand how political and economic policies influence food production is vital to truly understanding and working toward reclaiming our food systems. Therefore, I will map out the structure and economic geography (MacLachlan 2001) of the Ontario pork industry to gain a fuller understanding, or representative window, of the Canadian pork industry more broadly.

Importance to Field of Study:

There is little work that encapsulates the current social and economic state of the Canadian pork industry. From the producers of gestation sows, gilts, and piglets in farrow-to-wean operations, to the processors responsible for packing the tightly-cellophaned packages that line our grocery stores, understanding the current pork environment within Canada is essential. This dissertation aims to fill this surprisingly wide gap in the literature, both from a critical food studies perspective and a critical sociological perspective. The findings of this dissertation are vital to not only contextualizing the size and structure of the dominant Canadian pork commodity chain, but to also further contribute to the literature on this increasingly globalized industry. There is a nutrition transition occurring with the addition of large amounts of meat in the diets of traditionally vegetable-based cultures (Hawkesworth, Dangour, Johnston, Lock, Poole, Rushton, Uauy & Waage 2010; Popkin 2006; 2008). Similarly, the

1 While the phrase Farm to Fork is now commonplace, in light of astounding levels of food waste produced after purchase, it would be better in many places to state Farm to Fridge, but this is a discussion for another time.
rise and consolidation of largely foreign-owned supermarkets (Reardon, Timmer, Barrett & Berdegue 2003), and the increasing production capacity of Asian pork markets, particularly China, will demand further investigation, which this dissertation can inform. While outside the scope of this particular project, it is important to acknowledge the projected breadth and reach that this study will have by using the current state of hog producers in Southwestern Ontario, as a first step to analyzing the pork industry within Canada and beyond. In addition to the information provided by pork producers, and the historical and literature analysis conducted, I also ensured rigour, validity, and consistency of research findings by seeking influential people within the three prominent nodes of the pork industry (production, processing, marketing) for semi-structured, in-depth interviews. Because I seek to understand the structure and economic geography (MacLachlan 2001) of the Ontario pork industry, those in positions of power provided considerable insight into the industry.

I employ a global value chain (GVC) perspective, as one of many forms of commodity chain analyses. A GVC framework specifically pays attention to how value is added within and along the chain, and how the creation of this value is implemented and governed (Gereffi and Lee 2012). A GVC analysis of the dominant Canadian pork industry captures the historical and spatial features of this industry, while revealing the relationships and experience that link this industry together (Gereffi, Korzeniewicz and Korzeniewicz 1994).
A GVC will thus allow for a greater understanding of the pork industry within Canada, by first outlining the political and economic barriers experienced by Southwestern Ontario pig producers. Utilizing a GVC perspective, I investigate three main nodes within the pork commodity chain. These three nodes of analysis are: production/producers, processing/packing, and marketing/retailing. I have provided a representative understanding of what is occurring in the pork industry, a highly productive, profitable, and problematic industry. Wallerstein contextualized the need for mindful research in a changing world. He states,
…the intellectual, the moral, the political tasks. They are different, but they are closely related. None of us can opt out of any of these tasks. If we claim we do, we are merely making a hidden choice. The tasks before us are exceptionally difficult. But they offer us, individually and collectively, the possibility of creation, or at least of continuing the creation of something that might fulfill better our collective possibilities (Wallerstein 2004: 90).

Wallerstein notes the importance of having difficult conversations, and making uncomfortable decisions as individuals. I further extend this idea to include the need for difficult situations and uncomfortable topics in sociological research. Engaging in critical research allows the researcher to question underlying and natural constructs and assumptions that have developed and have been perpetuated in the world. Engaging in critical research allows the researcher to seek a better collective experience by engaging with, and deconstructing, difficult and yet often hidden processes. As researchers, we need to ask why and how things occur and are understood, so that we can think about how change can be implemented. Critical research must seek to unearth the manner in which social systems operate, and be critical of how such embedded processes are manifested upon people.

**Main Research Questions:**

Two main research questions guided this dissertation:

1. *What economic and political challenges are affecting/impacting pork producers in Southwestern Ontario? How are these challenges perceived by producers?*

2. *How are these challenges currently structured, and how have they become implemented over time?*

In conducting this research, I had the following objectives:

**Objective 1:** Drawing on producer interviews, I contextualize the current structure of the Canadian pork industry, including the political and economic challenges faced by pork producers.

**Objective 2:** Drawing on historical context, I provide investigation into the structure of the Canadian meat processing industry through the lens of pork processing, in order to trace the commodity chain of Ontario pigs, post-farm lot, more clearly.

**Objective 3:** By contextualizing interview data from pork producers, I analyze and map the corporate hierarchy of Canadian pork branding and retailing, along with the methods employed by powerful marketing boards and large conglomerate grocery retail stores and their marketing strategies, to understand how pork is marketed to consumers.
Objective 4: Drawing on interview data from key industry informants within the various nodes of the pork commodity chain, I bring further context to the GVC analysis and producer voices by offering a top-down perspective of agricultural policies, and industry-centred initiatives central to the functioning of the overall pork industry.

Chapter Breakdown:

Chapter (2) outlines both the theoretical framework employed in this project, as well as a review of the literature that informs and frames the parameters of this research project. Chapter (3) outlines the analytical framework and methods used for the creation and implementation of this project. Chapter (4) provides a historical and contemporary overview of pork production in Canada, and Ontario more specifically. From here, Chapter (5), sequentially following the commodity chain, provides analysis of the current structure and organization of federally-licensed Ontario processing facilities capable of pig slaughter, with which producers must engage, and how these facilities have evolved over time. Chapter (6) provides analysis of a number of interim processes that are required in the marketing of live hogs. The next stage of the pork commodity chain is outlined in Chapter (7) with an analysis of branding campaigns, of chilled pork and value-added pork products within major, national retailing outlets. This node of the commodity chain is particularly interesting as it most geared towards consumers’ perceived wants than actual needs. Food environments are jointly demanded through the consumer seeking more health-based options in response to ideological notions of choice and healthfulness as a strictly individual problem, as well as that created by powerful players in the food system seeking to improve profit futures. From here, the analysis and discussion of my research findings are presented in Chapter (8). This chapter outlines the structural shifts throughout the hog industry that have resulted in a low-margin, high-volume production of lean hogs to make an argument for how these phenomena have reshaped the entire Canadian hog value chain, and how these changes can be attributed to many of the implicit and explicit challenges experienced by producers. This dissertation concludes in Chapter 9 with discussion on the main contributions of this project to the field of critical sociological inquiry, as well as critical food studies. Here, I also make suggestions for future areas of investigation, which this dissertation can inform as a landmark study in Ontario pork production practices, commodity chain analysis literature, and critical food studies literature.
2. Literature Review

This chapter is intended to establish the framework for the research questions: *What economic and political challenges are affecting/impacting pork producers in Southwestern Ontario? How are these challenges perceived by producers? How have these challenges been structured and implemented over time?*

Within this literature review and theoretical framework the following topics of discussion are presented: This chapter begins with analysis of the global push towards intensified livestock operations (ILOs) and the evolving role of meat in the human diet. From here, attention will be paid to the accelerated growth of confined animal feeding operations (CAFOs) in the US and Canada, with particular attention to the 1995 dissolution of the Crow Rate, and its impact on intensive hog production in Manitoba. Analysis of various food-centred, commodity chain analyses are presented to convey the breadth and applicability of chain-based studies in critical food studies. The final section outlines the major schools of thought within the commodity chain analysis paradigm, each of which outline and map the journey of various networks, organizations, people, knowledge, and capital involved in transforming raw material into commodities (Friedland Barton and Thomas 1981; Barndt 2008; Belasco 2009; Hamilton 2009). Following this, I will further connect the global value chain approach (GVC), which emphasizes the role of value and governance along the various nodes of the commodity chain, to the objectives of this dissertation.

**Livestock Intensification:**

Franklin outlines five key periods in what he terms the “Fordization of livestock production” (1999:130). Sequentially, mechanization, vertical integration, governmental leadership, industrial representation and lobbying, and environmental factors provided ripe structural conditions for the shift towards ILOs (Franklin 1999). Looking specifically at beef in the US, as mixed farming dissipated throughout the 20th century, cattle ranching emerged on unsuitable grasslands (Franklin 1999). The further emergence of railways permitted the shipment of live cattle into city centres for processing (Franklin 1999). The 1870s saw the collapse of traditional cattle ranching as grasslands became overstocked, and by the 1900s, cattle feedlots had emerged as a “solution” (Franklin 1999:134) for both overgrazed lands and Corn Belt (which will be further discussed below) surplus, as cheaply produced corn was being converted in to a more valuable product as beef (Franklin 1999). Similarly, Drabenstott (1998), looking at the changing structure of the US hog industry from the 1980s, notes that “the new pork industry” is defined by three key characteristics which include: a jump in the percentage of growth under
contract, a more concentrated industry overall, and a dramatic shift in the geography of production (1998:80). Drabenstott (1998) continues to state that this new industry is further driven by continuous improvements in genetics and production techniques, and confinement housing that allows for an economy of scale. Stull and Broadway have also noted that meat production has been transformed through “agricultural industrialization” (2004:12). Here, intensification, concentration, and specialization have emerged as major drivers for industrial meat production (Stull & Broadway 2004). *Intensification* refers to the increasing need for producers to purchase and utilize nonfarm inputs such as specialized machinery or improved genetics, to increase production output (Stull & Broadway 2004). When increasingly larger economies of scale are utilized to reap a greater share of the overall outputs of a commodity, *concentration* occurs (Stull & Broadway 2004). Finally, Stull and Broadway (2004) claim that as a result of both intensification and concentration in agriculture, *specialization* occurs. Here, commodities tend to be produced in isolation. A specific example is the decline of mixed farming (multi-crop, multi-species) in favour of mono-cropping or single-species production.

**Role of Meat in the Diet:**

Meat in the human diet has a unique historical basis, which will not be outlined fully here\(^2\), however, early publications on health and nutrition do note the value of meat in the diet. One publication from Canada Packers Limited, entitled *Tasty Meals For Every Day* (1933), targeted at housewives, claims that “…because the protein found in meat, so closely resembles the protein contained in the human body, it is particularly adaptable to human uses” (Canada Packers Limited 1933:4). This emphasis on the *likeness* between animal tissue and human tissue seems obscure in today’s context as consumers are increasingly becoming further distanced, and intentionally so, from the notion that meat must come from a killed animal. Franklin states that pre-agricultural hunter-gatherer societies viewed the human and the animal realms as “indivisible and interactive” (Franklin 1999:146). The consumption of strong bodied animals was thought to literally transfer to the body of the eater (Franklin 1999). Similarly, Ostry (2006), in his book on nutrition policy in Canada until the 1920s states that animal products, particularly cow’s milk, emerged as a substitute for breast milk as increasing awareness of vitamins and trace minerals deemed milk as protective and healthful. Franklin goes on to claim that despite the past intrinsic link to animals, our modern relationship with meat and food animals has “eroded” (1999:146). As consumers become further spatially and mentally distanced from how food is produced, meat in particular becomes “… separable from the animal it comes from” and is relegated to a commoditized “abstraction” (Franklin 1999:146) for consumption.

\(^2\) Rod Preece’s book entitled, *Sins of the flesh: a history of ethical vegetarian thought* (2008), is a rather extensive look at the historical and pre-historical thought surrounding vegetarianism.
Changing Diets:

It has been noted that as individual and nation-wide wealth increases, meat consumption tends to increase (Popkin 2006; 2008). This shift towards an increased consumption of meat and animal-based products like milk and cheese, is one of the main drivers in the *nutrition transition* that is impacting many developing nations that have traditionally followed a dominantly vegetarian diet (Hawkesworth, Dangour, Johnston, Lock, Poole, Rushton, Uauy & Waage 2010; Popkin 2006; 2008). Popkins (2006; 2008) states that with the global rise in meat and animal products, and increasingly convenience foods, obesity and type II diabetes has become endemic to regions rarely experiencing such diseases of affluence. Franklin notes that meat consumption, once seen as a way to tackle malnutrition, is now viewed as an indicator of social progression (1999). Interestingly, while many developing nations, such as China, are increasing meat consumption, there has been decreasing domestic red meat consumption in Canada, Britain, and the US since the 1970s, where emergent research linked increased risk of cardiovascular disease to fattier meats, especially beef (Franklin 1999; MacLachlan 2001; Stull & Broadway 2004).

The Chicken Came First: How Pork Copied Chicken:

There are a number of publications that note the trajectory of the industrial hog industry following the lead of the industrial broiler chicken industry (Drabenstott 1998; Stull & Broadway 2004; Lawrence & Stott 2010). While hogs are not as efficient a protein source as chicken, and neither is as efficient as soybeans, there are a number of striking similarities between the intensification of the poultry industry post-1950, and the intensification of the hog industry during the 1980s in the US (Drabenstott 1998; Grey 2000) and the 1990s in Canada (Qualman 2001). Such similarities between both meat industries include: the increase in animal densities per farm site, specialized housing, and application of animal science to improve genetics and animal efficiency (Drabenstott 1998; Lawrence & Stott 2010; Stull & Broadway 2004).

Much like the seemingly accidental start of the industrial hog industry by Wendell Murphy outlined below, intensive poultry was also started by “accident” (Stull & Broadway 2004:38). A woman from Delaware in the Spring of 1923 placed an order with a local chick hatchery for 50 laying chicks, however, the hatchery misread the order and sent Mrs. Steele 500 chicks instead (Stull & Broadway 2004). Deciding to keep the extra chicks and build an additional housing structure, Mrs. Steele raised the bird to eighteen weeks of age and just over two pounds each, and sold the birds as meat for use in a restaurant for 62 cents per pound (Stull & Broadway 2004). Three years later Mrs. Steele and her husband were growing 10,000 chicks per crop (Stull & Broadway 2004). The relatively high price received for the young birds served as incentive for others in rural Delaware, and by the 1930s, more than seven million meat birds were being produced annually (Stull & Broadway 2004). However, as this form of production
increased, the prices received, dropped. In 1934, producers were receiving just 19 cents per pound, a drastic slump from the rate of 62 cents per pound Mrs. Steele received in 1923 (Stull & Broadway 2004). Much like the hog industry that is underscored by price volatility, in order to unpack the Canadian hog industry, attention must first be paid to hog production in the US.

**US Hog Production in The Corn Belt and Beyond:**

The US Corn Belt ranges from Nebraska to Ohio (Stull & Broadway 2004). The aptly named Corn Belt, due to its favorable growing conditions, has become the main area in the US for corn production (Drabenstott 1998). Much like Western Canada’s breadbasket, the Corn Belt through the 1960s once supported an array of hog and mixed farms, able to draw on the plentiful corn supply. However, integrator ownership of hog farms by transnational corporations has seen hog production shift to neighbouring states, such as North Carolina, Utah, and Oklahoma under predominately confined conditions (Drabenstott 1998; Stull & Broadway 2004). In North Carolina in particular, considerable research and resources by the agricultural extension of North Carolina State University has gone towards studying hogs as a replacement for tobacco cropping, since the decline in demand for tobacco has fallen (Stull & Broadway 2004). To again draw a parallel to the intensive poultry industry, the declining tobacco industry in Kentucky gave rise to a boom in poultry production in this state, with reports of a 154-fold increase since the 1990s (Stull & Broadway 2004). Oklahoma has increased its pork production efforts by 900% since 1990 (Drabenstott 1998). Hog production has seen such a boom outside of the Corn Belt because of the lower population densities in these states. Oklahoma supports a much less dense population and vast stretches of land, making animal waste management easier (Drabenstott 1998), as conscientious citizens are increasingly aware of the odor risks from large scale hog barns3 (Constance & Bonanno 1999; Grey 2000; Novek 2003). A much more problematic trend has emerged for North Carolina’s farm placement as confined hog operations in particular, were found to be disproportionately located in non-white, poor communities (Stull & Broadway 2004). The push for cheaper meat does indeed have its costs. Schlosser (2004) further underscores this point stating that the social costs of cheaply produced meat are “much more expensive than we can afford.”

Despite the drastic growth in hog production, the US has experienced a rapid decline in the number of actual hog farms. It is estimated that in the 1970s, there were close to 900,000 hog farms across the continental US; this number has dropped to just 139,000 farms in 1990 (Drabenstott 1998). North Carolina’s accelerated push towards industrialized hog production set the standard for the CAFO

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3 Grey (2000) provides a wonderful overview of the relative success of the Iowa-based Fresh Air Pork Circle Cooperative, who seek to protest both vertical integration by large hog corporations and the odorous after effects of large scale confined hog rearing.
hog production seen in Canada (Boyens 2001). Much like the decline in US hog farms, nationally, Canada is also experiencing a mass exodus of hog farms. Between 1921 and 2011, the number of farms containing at least some hogs plummeted from 452,935 to 7,371 (Novek 2003; Brisson 2014). This decline in the number of farms is further compounded by an aging farmer population as more than half of all farms nationwide are operated by someone 55 years of age or older (Beaulieu 2014).

**William Shay and Wendell Murphy: Hogs’ Humble Beginnings:**

Interestingly, while CAFOs continue to dominate the method in which meat is produced, the tremendous uptake of contract-based production within confined barns is largely the result of accidental circumstance. While hogs have been noted to have a notable place in Southern US homesteads since the 1700s, governmental emphasis on commoditized hog production began in the early twentieth century (Thompson 2000). In 1914, under the leadership of William W. Shay, the Smith-Lever Act of 1914 saw the development of an agricultural hog division in North Carolina (Thompson 2000). The Act emphasized the need for strong breeding stock as the basis for the most profitable animals (Thompson 2000). Similarly, Shay had noted the inefficient methods of traditional hog production which included the gleaning of peanut and soybean fields (Thompson 2000). The Shay Method of production was encouraged, and included the following suggestions to hog farmers: proper housing and sanitation was needed to produce healthful animals, the number of sows owned needed to reflect the amount of corn available, breeding times needed to be adjusted to reflect market trends, to control the hogs’ diet to 80% corn, and to maintain this system regardless of corn and market fluctuations (Thompson 2000).

This new wave of large scale, industrialized hog barns in the US has also been found to operate at a much lower cost than smaller operations, with estimates claiming that large, high-tech sites have up to a 40% cost advantage above even those smaller sites adopting new technology (Drabenstott 1998). Such intensive sites rely on sophisticated, species-specific equipment, and as such are able to operate and manage more animals with less labour (Stull & Broadway 2004). While mega barns claim that their massive operations provide a reliable localized market for grains (Qualman 2001), this ignores the fact that profit, rather than local economic development, is driving IFOs (Franklin 1999). While hog production growth in North Carolina improved, consistent growth was not realized until the 1960s as dramatic research and development took place at the agricultural extension of North Carolina State University (Thompson 2000). Growth leapt again in the 1980s with the further commercialization of this industry which included encouragement by hog researchers to house pigs within large indoor facilities instead of on pasture, as was traditionally done (Thompson 2000). However, the industry was irrevocably changed due to the work of Wendell Murphy. A part-time hog farmer, Murphy, who purchased his own feed mill in the late 1960s, was forced to suspend hog production in 1969 as a hog cholera outbreak
emerged (Thompson 2000; Boyens 2001). Unable to restart hog production following the cholera-induced cull and quarantine at his own site, Murphy sought neighbouring farms to contract for the growth of animals that he would maintain ownership (Thompson 2000). Outside farms provided both barns and labour, and Murphy’s contracts saw him retain ownership of the hogs. In 1969, Murphy paid one dollar per head to his now contracted farmers (Thompson 2000). Murphy Family Farms Inc. is now the largest pig producer in the US (Thompson 2000). Contracting over 500 farmers from North Carolina, Iowa, Oklahoma, Missouri, Illinois and Kansas, Murphy Family Farms has had a deep impact on the structure of the modern hog industry (Smithfield Foods 2013). Murphy Family Farms was purchased by Smithfield Foods in 2000, however, the revamped Murphy-Brown LLC now serves to provide Smithfield with weaners for growth into finisher hogs (Miller 2006; Smithfield Foods 2013). Wendell Murphy has also gone on to develop Murphy Family Ventures, which provides veterinary consultancy services for hog production systems (Miller 2006). Murphy Family Ventures alone currently employs 800 people, indicative of the massive, long term impacts that developed from humble and seemingly accidental beginnings (Miller 2006).

Smithfield Foods remains the largest US pork provider. In 2002, it was estimated that Smithfield Foods owned an estimated herd of 700,000 sows (Stull & Broadway 2004). However, following an early 2000s buyout of rival pork firm Carroll Foods, Smithfield Foods’ added an additional 350,000 sows to their ownership (Grey 2000). While this dissertation draws on some material from the Manitoba, Quebec, and US hog industries to bring clarity to the Ontario case, mention must be made of China, as this developing nation is emerging as the largest producer and consumer of pork in the world (Schneider & Sharma 2014).

Pork Production in China:

Despite the growing prevalence of pork in the Chinese diet, what is most intriguing here is the Chinese firm Shuanghui International Holding’s purchase of Smithfield Foods in 2013 (Schneider & Sharma 2014). Shuanghui International Holding, currently being rebranded as WH Group Limited, will join the ranks of truly industrial, globalized meat companies like Brazil’s JBS, and the US’s Tyson Foods (Schneider & Sharma 2014). While pork consumption increases, China’s shift to emulate US methods of intensive hog production is deeply problematic as it serves to take place at an even greater scale (Schneider & Sharma 2014). Similar to the North American cases, intensive hog production in China has largely resulted from the decoupling of mixed farming methods, and the increasing availability of open market feed grain into the 1980s (Schneider & Sharma 2014).

As the world’s second largest grower of soybeans, China’s next phase of hog intensification arose
from its negotiation under WTO protocols during the 1990s as China became the world’s largest importer of soybeans (Schneider 2011; Schneider & Sharma 2014; Sharma 2014). The now plentiful supply of soybeans, a critical component of hog rations, allowed for production far beyond what would be possible if reliant on local soy stores (Schneider & Sharma 2014; Sharma 2014). The final period of China’s hog intensification emerged in 2006. Following an outbreak of porcine respiratory and reproductive syndrome (PRRS), blue ear pig disease, and soaring pork prices, there was a call for increased food safety practices at the production level (Schneider & Sharma 2014). Alongside the popular notion for China’s growing middle class to eat meat in protest against previous meat scarcity, leading to an increased demand, industrialized confined farming is seen as modern, developed, and thus as safer than more traditional methods used in the past (Schneider & Sharma 2014). The rapid adoption of CAFOs in China, despite increasing concern for animal ethics, human health, and environmental issues, is problematic. Having provided some context for the acceleration of CAFO-style hog production abroad, attention must be paid to the development of the hog industry in Canada, beginning with an investigation into Manitoba.

Manitoba’s CAFO Hog Production:

The federal government’s decision to eliminate the Crow’s Nest Pass Agreement and Rate in 1995 has been widely reported as the major first step towards industrial hog production in Manitoba (Drabenstott 1998; Boyens 2001; Ramsay & Everitt 2001; Qualman 2001; MacLachlan 2001; Stull & Broadway 2004; Broadway 2006). The Crow Rate was established in 1897 by the federal government to essentially subsidize the transport of Prairie-grown grain to ports for further export (Broadway 2006). The Crow Rate was established in 1897 by the federal government to essentially subsidize the transport of Prairie-grown grain to ports for further export (Broadway 2006). The Crow Rate, in the form of Western Grain Transportation Act (WGTA), was extinguished in 1995 following Canada’s accession to North American Free Trade Agreement (NAFTA) in 1994 and the Uruguay Round Agreement on Agriculture (AoA) in 1995 (Broadway 2006), and amidst US political pressure for subsidy removal in favour of neoliberal policy interests (Qualman 2001). Seeing opportunity to both directly compete with the US for export market share, and mimic their vertically integrated growth methods, Manitoba’s past agricultural minister, Harry Enns, sought to mold Manitoba into the hog

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4 Schneider and Sharma (2014) claim that a single pound of pork requires 2180 litres of water to be produced. The hog industry’s thirstiness is further compounded by the alarming rate of raw sewage these animals create. Stull and Broadway (2004) state that an average hog creates 5,270 gallons of liquid manure, and 1.5 tonnes of solid manure per year. Grey (2000) equates this amount of sewage to be 2.5 times more urine and manure than the average human produces per year. This is staggering considering the truly vast size of operations around the world.

5 MacLachlan (2001) provides an excellent historical analysis of the actual and proposed aims of the Crow Rate on Prairie cattle production, please see pages 52-87 in particular.
capital of Canada further solidifying the province’s uptake of hog production post-1995 (Boyens 2001).

Since the Crow Rate’s dissolution in 1995, grain farmers have become directly responsible for the full cost of transporting their grain, alongside a two-fold increase in freight rates (Broadway 2006). With a surplus of local feed grain facing prohibitively expensive shipping costs, a drastic shift toward hog production in the Prairies took place. Producers were encouraged to convert their now depressed grain into an input for hog production (Novek 2003). However, when the Manitoba hog industry was still in its infancy, hog producers accused packing houses of price collusion (Perkin 1951; Broadway 2006). The Royal Commission on Price Spreads (1935) discovered that Canada Packers and Swift Canadian controlled 85% of all meat output which created a highly asymmetrical power dynamic between producers and their packers (Perkin 1951; Broadway 2006). This disparate relationship was remedied with the establishment of provincially-legislated marketing boards nearly 30 years later (Broadway 2006). Each province became the sole seller of its hogs, and thus negotiated directly with packers on behalf of producers. While both Manitoba (in 1965), and Ontario (in 1946) established provincial marketing boards to engage in single-desk selling, Quebec failed to establish its own marketing board (Broadway 2006). Quebec’s hog industry continued to grow beneath a vertically-integrated system, often contracted by feed mill operators to grow hogs that Quebecois farmers never took ownership of (Broadway 2006). In Quebec into the 1970s, the failure to establish a hog marketing board, and the eastern transfer of Prairie grown grain under the 1941 Feed Assistance Program, permitted Quebec to operate within lower production costs relative to the remainder of Canada (Broadway 2006).

Despite the benefits to producers, the Manitoba hog marketing board was disbanded as of 1996 (Broadway 2006), and 2000 saw the removal of Ontario’s single-desk hog market (Ontario Pork 2014a). Qualman (2001) claims that single-desk hog selling remains an essential *solution* to packer-led price fixing, the lack of price transparency, as well as lack of access to packers. A lack of access to packing space is problematic and serves to particularly disadvantage independent hog farmers. When hog production is vertically integrated and packers own their own hogs, they are able to draw from their own herds or “captive supply” (Qualman 2001:26), essentially squeezing out producers seeking processing space for their animals. Especially in Ontario, the lack of access to processing space remains a key issue for independent producers as will be analysed in this dissertation.

The current structure of the Canadian hog industry more broadly, and the Ontario industry more specifically, is surrounded by increasing number of ILOs under corporate control (Novek 2003). Corporate control of an entire food production system is particularly problematic as it is tied to the economic system. Because the economy is seen to operate outside of individual will, the *system* becomes reified. Here, the economic system is treated as if it were a concrete, physical entity, impervious to
change, rather than as an abstract concept.

Wood (2000) notes that a defining feature of capitalism is the need for infinite accumulation. Capitalism must always be engaged in a process of endless accumulation; it cannot remain stationary (Wood 2000). This is particularly interesting with respect to food. Wood notes that food production is tied to the land on which it is grown. Land quality varies from location to location; therefore, the land, and the historical cultivation of land specifically for profit or “agricultural improvement” (Wood 2000:33), led to new conceptions of land use including regulation, enclosure and new conceptions of property. The tied-ness to land is interesting in relation to pork production as a large part of production, particularly in large-scale industrial farming operations, takes place completely within the confines of a building. Another area within the political economy of agriculture literature notes the gap between production time and turnover time as problematic in capitalist agricultural production, as the longer the production time needed to make a product marketable, and thus saleable, the longer the time required to realize value (Mann & Dickinson 1978:468). This is the case for agricultural commodities with long growing times such as wheat (Friedmann 1978a). Therefore, there is an increase in profit when turnover time is short, and value is quickly realized (Mann and Dickinson 1978:468). Pigs are prolific breeders, reach sexual maturity quickly, and are able to birth litters of eight to twelve piglets. This being said, a single sow can produce upwards of 30 piglets per year (in comparison to beef or dairy cattle which birth one, or occasionally two calves, following a gestation period of about 9 months) (MacLachlan 2001; Essig 2015). This high reproductive ability paired with pigs’ high feed conversion rates resulting in slaughter market weights in less than six months provides a short turnover time for value to be realized.

Mann and Dickinson’s (1978) piece is of particular interest here as their analysis also points to areas of agriculture from which capital shies away, such as where there is long turnover time and the inconvenience of highly perishable items. Agriculture produces living and thus perishable items; perishable items quickly lose their value and exchange value (Mann & Dickinson 1978), and are therefore high risk for capitalist. However, while advancements such as hardier plant varieties and animal breeds and refrigeration have been developed to address and combat perishability, this is not where capitalism within agriculture has flourished. Rather, food processing, value-added commodities, and widespread distribution have provided a pocket of protection for capital in a realm of production that is largely high risk, place-specific and, as Wood (2000) argues, short-lived. Marx’s analysis of manufacture and the division of labour, outlines the improvement of labour by splitting up work stations into simplified and specialized tasks (1887:333), resulting in an extensive division of labour. This shift is also occurring in food production. This discussion can be tied back to aims of this dissertation more specifically due to the

6 There is increasing genetic advancements allowing for upward of 24 live piglets to be birthed per sow, per litter.
evolving marketability of the Canadian pork industry. Pork in particular has become a central ingredient to endless items that are value-added. With over 70% of all heavily processed meats in Canada, such as cold cuts, wiener, and sausages, containing pork (Agriculture and Agri-Food Canada 2014), the pork industry has indeed flourished, though producers are not the ones reaping the economic benefits, but rather large processors, as this thesis will flesh out. Stull and Broadway (2004) further claim that the most recent stage of agricultural revolution is food manufacturing, where the notion of adding value to both meat products and profits neglects to benefits actual producers.

However, the scale of production is not all that has changed in the hog value chain. Processors, or packinghouses have also changed substantially. Packinghouses in the past offered labourers competitive wages in exchange for their skilled work (Thompson 1983). Today, line labour is some of the most dangerous work available (Thompson 1983; Genoways 2015). While this dissertation does not explore the numerous labour issues surrounding meat packing work, as a number of recent publications have reported the dire workplace conditions of meat processing plants,7 brief mention will be paid here. In particular, there has been a shift from meat packing work as a highly-skilled, well-paid position, to one now preformed monotonously by migrant labourers for near slave wages under dangerous conditions.

Thompson’s (1983) classic symbolic interactionist piece within a Midwestern beef plant discusses the range of methods plant workers would employ to mentally deal with danger on the line, draining, monotonous and de-humanizing work (Thompson 1983). Thompson states, that, ironically, many workers fell into a consumer-spending trap in an effort to combat their low-status jobs (1983). Workers tended to validate their work by purchasing big-ticket items. These purchases then became the topic of discussion on the line. Thompson (1983) states that, this tendency to over-consume served to further solidify workers’ connection to the plant, as their employment was needed to finance the items, removing any chance of workers leaving. Marx can be drawn on here again. Marx (1887) claims that capitalism is only concerned with producing more commodities for a cheaper price and with a given quantity of labour to further accelerate the accumulation of capital (1887). As highly divided forms of labour emerged during the period of manufacture, Marx (1887) contends that there is a need for managerial overseers to supervise and ensure worker efficiency. The implementation of manufacture sought to simplify and improve labour by splitting work stations into simplified and specialized tasks (Marx 1887). Imperative to Marx’s analysis on the development and eventual acceleration of the capitalist mode of production is the dehumanization and subjugation of the labourer. The labourer is employed to create value through

7 Please see Ted Genoways’ The Chain: Farm, Factory, and the Fate of our Food (2015) for a journalistic expose of the precarious work faced within a Hormel hog plant, and the devastating, irrevocable impacts the head line and its creation of aerosolized hog brain matter caused workers. Timothy Pachirat’s Every Twelve Seconds: Industrialized Slaughter and the Politics of Sight (2011) provides a terrific ethnography of the power dynamics between workers and grotesque line speed within a US based cattle slaughterhouse.
embodying himself and his labour into objects of use-value (1887). Marx and Engels state that only by allowing his/her labour to be embedded within objects, and thus creating use-value as proven through exchange, can the labourer reproduce the means of their subsistence (1887). However, the capitalist seeks to exploit labour-power in the goal of gaining never-ending surplus-value.

Another major development in packinghouses occurred in the 1950s, largely changing the nature of packing work. The Can-Pak system, which was developed in the 1950s, was a major development for on-the-rail-dressing, particularly in cattle processing (MacLachlan 2001; Stull & Broadway 2004). This system allowed for animals to be hoisted immediately following stunning, and allowed the carcasses to move through the plant along the rail, which stationary workers then disassembled (MacLachlan 2001). This new system allowed for output to be doubled (MacLachlan 2001). However, the broader implication of the mechanized Can-Pak system was the steady deskilling of labour (Stull & Broadway 2004).

Marx (1887) notes the tragic loss of humanity that emerges from simplifying and making redundant one’s labour while simultaneously feeding the capitalist mode of production when he claims that “what is lost by the detail labourers is concentrated in the capital that employs them” (1887:355). While much more fully developed in Weber’s (1920) work, the period of manufacture that sees the improvement of labour is reflective of an increasing emphasis on efficiency and rationality. Qualman notes that CAFO-style production, led by large corporations, are also advertised as a way to revitalize dwindling rural communities (2001). However, Qualman goes on to state that “transferring hog production from local families to corporations such as Smithfield and Maple Leaf facilitates and accelerates the extraction of wealth and capital. The proposed solution only exacerbates the problem” (2001:37). Boyens (2001) claims that once Maple Leaf Foods’ mega-processing facility was constructed in the late 1990s in rural Brandon, Manitoba, crime rates jumped 14% above previous years. The goal of technological rationality within the modern meat production and processing does comes at a substantial social cost (Stull & Broadway 2004). Similarly, the proposed community benefits of welcoming large corporate enterprise are indeed “illusory” (Boyens 2001:236). Having outlined the beginnings of industrial hog production in both the US and Canada, this chapter will now turn to assess the commodity chain literature, as this is a central component to establishing the GVC framework used in this dissertation.

**Commodity Chain Literature:**

Like many other interdisciplinary theoretical frameworks, the commodity-chain literature is vast in its application, as are the number of commodities that are highlighted by this approach. Just to reiterate a few commodity analyses within critical food studies – tomatoes (Barndt 2008), salt (Kurlansky 2002), sugar (Mintz 1986), Canadian beef (MacLachlan 2001), lettuce (Freidland, Barton and Thomas 1981), strawberries (Guthman 2004), and a number of non-edible commodities such as shipbuilding (Özevern
1994), and labour (Gereffi and Christian 2009) – have drawn on some form of commodity analysis to illustrate both the breadth and impact of global commodity movement. The commodity-chain literature is useful to trace and map the routes that commodities take for our eventual consumption or use. This section of the literature review outlines the history and development of the main schools of thought within the commodity-chain literature. Following this, I will further connect the global value chain approach, which emphasizes the role of value and governance along the various nodes of the commodity chain, to the objectives of this dissertation project. The commodity-chain approach has received its fair share of criticism due to the commodity-specific nature of the analysis, and the geo-socio-politico uniqueness of each particular chain under investigation. However, I believe that it is integral to internalize the scale and scope of the networks, political and economic governance, and transitions that embody much of our current food supply. As our economic transactions and increasingly globalized network of people and things become a central tenet to successful business function, it is imperative to understand how and where value is established along the chain, and who holds the power to augment the way in which the chain operates. Chain valuation and governance are of particular importance to contextualizing the facets of the Canadian pork industry as pork producers experience extreme volatility in both pricing and demand. Here, grain production for hog feed signals the beginning of the chain. From production, analysis will outline processing and then the retailing and marketing of pork products.

**Types of Commodity Chains:**

In its most basic form, a commodity chain refers to the network of processes that result in a complete or finished commodity (Hopkins and Wallerstein 1986). There are numerous manifestations of commodity chains that have emerged and evolved due to disciplinary narrowing and changes with global commodity movements. The role of “historical reconstruction” is particularly emphasized within commodity analysis in order to map disproportionate capital accumulation, which serves to reveal the enduring structure of capitalism (Bair 2009:7). However, a key difference that will be fleshed out below is the increasing role of corporate-level influence within chains, rather than capitalism more broadly (Bair 2009:11). A global commodity chain (GCC) refers to the networks surrounding a commodity that serves to connect the world economy, nation states, and households together (Gereffi, Korzeniewicz and Korzeniewicz 1994). To further tease out the variation of a global commodity chain, a network-centred global commodity chain is set more broadly in its scope, to analyze beyond the confines of the nation-state, and to uncover the influence of extra-national structures (Gereffi, Korzeniewicz and Korzeniewicz 1994). A GCC also seeks to understand competitiveness at different stages or nodes (Gereffi, Korzeniewicz and Korzeniewicz 1994), and is noted to be similar to the value chain approach (Porter 1990). A value chain approach distinguishes and traces the transition between low order and high order
functions, such as cheap human labour and proprietary product differentiation respectively, to unravel the results of competition within an organization’s production of a single commodity (Porter 1990; Bair 2009). Despite the breadth of application of GCCs, they have been critiqued for failing to consider the geographical influence of the chain’s nodes by those employing a global production network (GPN) frame (Bair 2009:4). However, GCC and GPN frameworks, as outlined above, tend not to differ in any methodologically substantive way (Gibbon, Bair and Ponte 2008).

Analysis of these different forms of commodity chains is, however, broadly centred on production, distribution, and consumption (Gereffi, Korzeniewicz and Korzeniewicz 1994). An appealing factor of the commodity-chain analysis perspective is the ability to conceptualize both instances of production and consumption. As noted above, Marx states that one process begets the other, to form a continual circle of production and consumption. Rather than viewing this process as two sides of the same coin, Gereffi, Korzeniewicz, and Korzeniewicz claim that this paradigm allows for the “…detailed disaggregation of stages of production and consumption across national boundaries” (1994:1). There is a need to underscore the centrality of economic action here. Wallerstein’s world-systems analysis is based on economic competition and monopolization, and the manner in which entities (nation-states, corporations, industries, etc.) can establish a competitive advantage (Wallerstein 2009; Gereffi, Korzeniewicz and Korzeniewicz 1994).

Global Value Chains:

Global value chains (GVC) are the “newest variant” (Bair 2009:1) of commodity-chain analyses, which is largely drawn from the global commodity chain perspective (GCC) outlined above. One of my main considerations in choosing to employ a global value chain perspective is the emphasis on governance. It is imperative to contextualize not only how the respective nodes of the chain are produced, but also how the patterns and control of these processes are monitored, sustained, and engrained. The methodological difference between GVCs and GCCs is unclear, but GVCs have emerged from the need for a solidified terminology to “bring some order” (Gereffi, Humphrey and Sturgeon 2006:79) and unify those studying the many manifestations of commodity chains (Bair 2009). The GVC perspective emerged from a workshop with a wide range of participants from economics, sociology, geography, regional planning, political science, and beyond, seeking a pragmatic and “serviceable theory” (Sturgeon 2009:111-112) of governance.
Types of Governance in Global Value Chains:

Governance is a central facet of the GVC approach to highlight, in particular corporate power (Gereffi & Lee 2012). In addition to the types of governance structures found in a GVC, this approach also emphasizes broader linkages along the chain, including trade and regulatory policies (Gereffi 2011). In their influential article that sparked countless conversations on the emergence of global value chains, Gereffi, Humphrey, and Sturgeon (2005) outline five types of governance. Gibbon, Bair, and Pointe state that the governance of GVCs “refers to the content and the management of … decisions across all suppliers and sub-suppliers, the strategies behind the decisions taken and management methods chosen to implement them, and the systems through which their outcomes are monitored and reacted to” (2008:319). Briefly, these five governance types are: 1) market linkages, which refers to governance by price. Transactions are simple, and there is little involvement with buyers, 2) modular governance linkages often occur when suppliers provide products based on customer specifications; 3) relational linkages which emphasize governance based on complex information, mutual trust and social ties; 4) captive linkages that highlight the dependency or captivity of small suppliers on larger buyers; and 5) hierarchical linkages that occur by intra-firm vertical integration, and are governed by managerial control (Gereffi, Humphrey and Sturgeon 2005:82-84 ; Sturgeon 2009:118; Gereffi 2011:41-44; Gereffi and Lee 2012:25). Using these types of governance, this dissertation outlines and discusses how the Ontario pork value chain is reflective of a hierarchical linkage.

Another main reason for my usage of GVCs is the literature’s emphasis on value over commodity. As will be outlined below in the section differentiating buyer-driven commodity chains (BDCCs) vs. producer-driven commodity chains (PDCCs), there is a notable shift in the power structure of chain relations. Sturgeon notes that the emphasis on value parallels the notion of value-added within supply chains (2009:117). Value-added focuses on the increased capital returns and post-processing of commodities (Sturgeon 2009).

Buyer-Driven vs. Producer-Driven Commodity Chains:

There is a proposed shift within the agro-food commodity supply chain literature from one that is producer-driven (PDCCs) to one that is buyer-driven (BDCCs). Here, a producer-driven chain is one in which transnational manufacturers are the primary actors within the supply chain, whereas retailers are the primary actors within a buyer-driven chain (Konefal, Mascarenhas & Hatanaka 2005:294). This shift is largely related to the development of a capitalist food economy. Konefal et al. (2005) have noted the shift from producer-driven global commodity chains with transnational manufacturers as the primary actors, to retailers within buyer-driven commodity chains through further consolidation and concentration resulting in global oligopolies (Winson 1993). Baines adds that, in buyer-driven commodity chains,
production capabilities are outsourced to a number of smaller independent suppliers (2013:5). This outsourcing of production is reminiscent of the historical shift from the household unit of production to capitalist agricultural production and the emergence of ‘production contracts’ to mitigate risk and ‘free’ the movement of capital. In this context, the freeing of capital has globalized, as evident by the high amount of foreign direct investment (FDI) from larger chains seeking to expand their retail operations. This is occurring at an accelerated rate in Latin America, Africa and Asia where the growth and consolidation of largely foreign-owned supermarkets has boomed (Reardon, Timmer, Barrett & Berdegué, 2003). This change in the global retail scene is also emblematic of the nutrition-transition, which includes the global degradation of traditional diets alongside the double burden of under and over nourishment (Hawkesworth, Dangour, Johnston, Lock, Poole, Rushton, Uauy & Waage 2010; Popkin 2006; 2008). Gereffi et al. (1994) state that PDCCs are often characterized by centralized governance, and that this type of chain is characterized by high-capital investments that are closely integrated in established markets. Oligopolistic supermarkets and the wildly successful own brands have reconfigured the supply chain as transnational supermarket chains (TSCs) (Konefal et al., 2005) through the multitude of markedly differentiated and innovative products, often produced at a high quality standard (Burch & Lawrence 2007) while reducing transaction costs. The switch from largely producer-driven to buyer-driven chains is an important development to the commodity chain literature. This retailing revolution (McMichael & Friedmann 2007) is indeed occurring, and it has been well explored in the literature (Winson 1993; Konefal et al. 2005; Dixon 2007; Baines 2013). This change will be explored more fully in Chapter 7 on pork retailing.

Short Food Supply Chains (SFSCs):

Watts and colleagues (2005) stress that the most effective alternative food networks (AFNs) are those concerned with the systems through which food passes, rather than focusing on the food itself. Short food supply chains (SFSCs) (Renting, Marsden & Banks 2003) are a component of alternative food networks, and are built upon consumer demand for quality production such as organics, and producers seeking to capture more value in the supply chain by establishing a relationship based on value and meaning (Renting, Marsden & Banks 2003). SFSCs are also premised on bridging producers and consumers by reintroducing consumers to where and how their food is produced.

Other Food Commodity Chain Approaches:

In addition to the major analytical approaches and frameworks within the commodity-chain literature, there are two minor types of commodity analysis that have been specifically used in food commodity analysis. These approaches are: Fine and Leopold’s systems of provision (1993) and the French filière approach. Each will be briefly outlined to conclude and to provide a more definitive breadth
on the commodity chain literature. Systems of provision are noted to be a case-by-case framework that
does not search for similarities to other commodities (Fine and Leopold 1993). Rather, this approach
attempts to capture the unique relationship that exists between a particular commodity’s production and
consumption and to highlight that commodity’s distinctiveness (Bair 2009). A filière approach pre-dates
commodity chain analysis (Bair 2009). The filière approach was developed by French economists in the
1960s (Hawkes & Ruel 2011), and is largely based on quantitative analysis for the purpose of
development (Hattersley 2013). Having provided analysis of the various forms of commodity chains, this
chapter will next outline specific food-based commodity chain methodologies.

**Various Food Commodity Chain Methods/Methodologies:**

The increasing prominence of food-centred research in a number of academic disciplines from
geography and economics through to arts and humanities has resulted in a breadth of studies that trace
food via commodity chains. The following section will outline the methods and methodologies of a
number of food commodity chain analyses, contrasted to the global value chain (GVC) approach that is
employed for this research.

**Comparative analysis of production systems (Friedland, Barton and Thomas 1981):**

In their analysis of the US lettuce industry, Friedland, Barton and Thomas (1981) note that
comparative analysis of one commodity can be both beneficial and problematic to the features of another
type of commodity. Drawing on both the parallels and discrepancies that exist between tomato and lettuce
production and processing, the authors claim that an analytic focus allows for the experience of one case
to draw similarities to another case (Freidland, Barton and Thomas 1981). Friedland et al. (1981) note the
prominent use of comparative analysis within the social sciences; unlike their methodology, I do not seek
to outline a number of comparative methodologies, but rather to explicitly contextualize the production
system of pork within Southwestern Ontario. Friedland et. al.’s work is argued to be a landmark study
within food-based commodity analysis with particular attention to production practices, labour supply,
and the role of agricultural technological advancements, including automation and marketing post farm-

**Just-in-time agro-industrial US broiler chicken filière (Boyd and Watts 1997):**

In the study by Boyd and Watts (1997) on industrial just-in-time (JIT) broiler chicken production,
the boom in poultry production and consumption is explored via filière analysis. The filière perspective
largely stems from the work of French agricultural economists. The social and corporate relations that
comprise this filière are centred on the unique biological and reproductive capabilities of chicken that
permits agro-industrial flexibility and just-in-time production (Boyd and Watts 1997). Providing a
historical overview of the social changes that occurred in the early 1950s, such as the discovery and synthetic development of vitamin D which allowed for animal confinement (Boyd and Watts 1997), the authors trace the subsequent events that created the conditions for monopolized broiler production in the US. In addition to the social changes taking place in post-war agricultural development, the broiler industry, as an industry, emerged from extensive biological research and development, allowing for chick uniformity, higher yielding breast-meat varieties, and production flexibility (Boyd and Watts 1997:207). The scale and speed of chicken processing plants and the often-impoverished labour needed to staff the assembly lines (Genoways 2014; Pachirat 2011; Boyd and Watts 1997) have shaped the entire structure and organization of the broiler filière.

As noted previously, a filière emphasizes mixed-method analysis for the purpose of development (Hattersley 2013). The authors’ usage of a broiler filière here is to reflect and map the historical development of broiler production into its current manifestation under JIT flexible production (Boyd and Watts 1997). While the filière outlines the relationships that exist within the broiler industry, emphasizing the vertical integration of corporate structures in shaping the broiler industry over time, there is no emphasis on governance or how analysis of governance can be applied within filière analysis, as in the GVC approach.

Economic geography of beef production, processing, and consumption (MacLachlan 2001):

MacLachlan (2001), in his analysis of the Canadian beef commodity chain and how this chain has been restructured over time, states that the commodity chain weaves numerous inputs, outputs and, geographies together into a complex, and difficult to follow web of activities. Noting the important role of geography, in particular Canada’s unique and historically-developed agricultural geography, MacLachlan (2001) emphasizes the west-to-east pull that Innis (1956; 1967) and other staples thesis proponents pegged as integral to western agricultural expansion and the concurrent urbanization of eastern Canada (Ontario specifically). Historically, the live transport of pasture-raised beef cattle from Western Canada was into city centres. MacLachlan (2001) notes that this is still the case, but that advancements in refrigeration have seen the shipment of fully dressed or increasingly value-added boxed meats to urban consumers, rather than live animals. He states that the “cattle followed the grass and the grain, and the beef-packing industry simply followed the cattle” (MacLachlan 2001:120). Tracing the agro-industrial beef commodity chain across Canada, MacLachlan (2001) provides a comprehensive look into the state and structure of the beef industry, from production, to processing, through to retailing, while underscoring that this particular chain is a long and value-added one. Value-added here is termed simply as the value of outputs minus inputs (MacLachlan 2001:4). However, MacLachlan (2001) states that added value comes from the spatial connectivity of supply and demand, both globally and locally. For example, changing
consumer demands for beef are translated to producers, who are often hundreds of kilometres away. Yet, cattle production for national and international consumption also has local impacts – from the agricultural landscapes manifested as feedlots, to environmental issues stemming from concentrated cattle manure, and to social issues arising from the massive scale of production (MacLachlan 2001).

As the only modern study available on the Canadian agro-industrial meat chain, MacLachlan (2001) traces the history of beef-calf production, cattle feeding, and the changing meat processing and retailing sectors. MacLachan (2001) pays particular attention to the changing hands within Canada’s rather concentrated processing/packing industry, and unfolds the mergers, takeovers, and dismantlement of the Big Three: Canada Packers, Burns and Company, and Swift Canadian (MacLachlan 2001:185). MacLachlan emphasizes the need to ask “but what was here before?” (2001:3) in order to understand how economic activity has changed over time. His study relied heavily on semi-structured interviews with producers and processors within the beef commodity chain. In his acknowledgements section, MacLachlan acknowledges 16 beef producers and 29 beef industry key informants, from plant managers to packinghouse workers and union representatives (2001:x) for their time. While MacLachlan (2001) does not explicitly call his study a GVC analysis, his attention to the structural elements of the industry, such as the packinghouses involved in processing beef, is closely aligned to the focus of a GVC.

Feminist “routes and roots” analysis of the industrial tomato trail (Barndt 2002):

Employing a global commodity chain (GCC) approach, Barndt (2002) seeks to trace the trail of the now corporatized, uniform, and tasteless tomato. Beginning her analysis with the domestication of the Mayan tomatl, Barndt provides a historical overview of the key moments that helped shape the fate of the modern day tomato. These moments span from 16th century colonialism to the neoliberal regime of the 21st century (Barndt 2002:34) and are thoroughly unpacked into 21 stages that trace production, transport, trade and distribution, along with commercialization and consumption. Barndt’s analysis uses a critical eco-feminist lens to illustrate the many “routes and roots” (Barndt 2002) of modern tomato production. This includes analyses of the preference for uniform tomato varieties which are picked unripe in order to endure the lengthy trip across the Mexican border, to the commercialization of tomatoes each equipped with a product look-up code sticker (PLC code) in modern grocery stores (Barndt 2002). Barndt states that the modern tomato has, sadly, been degraded into a commodity for commercial gain (Barndt 2002:34). While Barndt’s study has been criticized for its use of plain language and seemingly lack of academic rectitude, it does provide a comprehensive overview of the scattered trail of a no-longer-precious commodity, and of the people involved and impacted, by its production and consumption.
While Barndt’s study states that political economy and commodity chain analysis do inform the axes of her project, cultural studies brings further richness to the meaning of food and eating (2002:60). Barndt (2002) sees this work as emancipatory as her goal is to educate a more general readership and draws on five creative tensions to frame this piece of popular education: personal/socio-political, nature/culture, critical/creative, local/global, reflections/action. The main methodological approaches used here are: qualitative approaches (individual and group interviews), corporate research (library and internet searches particularly on NAFTA, feminists theories, globalization and women’s work), and visual methods (2002). As a photographer, Barndt uses photos to make visible the hidden parts of the tomato trail. Her two main goals in choosing visual methods, while maintaining that “photography is a political act” (2002:74), are to subvert corporate messages/images while developing a social documentary of workers’ lives. To further blend these places and stories, Barndt draws on three case studies to bring each of these nodes to life. The node of technology is underscored in her analysis of Loblaw’s cashiers, and the node of health is outlined by her analysis of Mexican agribusiness centred on production for export. Barndt’s (2002) analysis of McDonald’s food chains weaves a number of critical nodes together. While Barndt’s (2002) text does indeed weave a great number of approaches, stories, and visuals together; there is no explicit analysis on governance within the tomato chain, as is central to GVCs.

Life history approach of UK broiler industry (Jackson, Ward, and Russell 2010):

In their analysis of the UK broiler chicken industry, Jackson, Ward, and Russell (2010) take a life history approach to reveal the distinctive meaning of food. For this study, consumer focus groups, along with interviews with food producers, policy makers and food campaigners, were conducted (Jackson, Ward & Russell 2010). A life history approach, as another qualitative method particularly oriented toward cultural food studies, is utilized to “record and analyze the personal testimony of key players involved at all points along the supply chain” (Jackson, Ward & Russell 2010:164). The authors reject the emphasis on value and profit by other forms of commodity analysis, opting to humanize commodity chains while deeply exploring the subjective “myth and memory” (Jackson, Ward & Russell 2010:164) of personal accounts of the food industry. Furthermore, the life history approach is utilized to analyze chicken as both a commodity and a living thing (Jackson, Ward & Russell 2010). A main area of analysis that is highlighted within the intensive UK broiler industry is the use of distinctive spaces. Here, Jackson, Ward, and Russell (2010) explore commodity spaces (what chicken was perceived to be – a commodity or sentient being), commercial spaces (the distance from nature due to mechanization), and spaces of consumption (how consumers perceive and how food industries shape consumption). What is interesting, here, is the spectrum through which producers and consumers alike viewed commodity spaces. The interview data teased out the idea that the more fully constructed, and thus less processed, the chicken
was (whole bird vs. pre-cooked and mixed into something), the less commoditized, and thus more sentient, the chicken was perceived to be (Jackson, Ward & Russell 2010).

While their analysis provides an intriguing look at the usage and understanding of space, there is no suggestion on how this information can be used to inform policy to develop increased consumer awareness of the industry from which they seem to be so disconnected. Similarly, the life history approach does not hone in on value or governance – two key notions that this dissertation illustrates as central to the modern industrial food supply, and thus central to pork production, processing, and eventual consumption.

Having provided a broader framework of CAFOs and ILOs literature, including the trajectory of the US and Canadian intensive hog industry, the commodity chain literature, and various food-based commodity analyses, this dissertation will now turn to the methods that have been employed in this dissertation to begin analyzing and assessing both value and governance within the Ontario pork value chain.
3. Analytical Framework and Methods

I employ a global value chain (GVC) perspective, as one of many forms of commodity chain analyses. A GVC framework specifically pays attention to how value is added within and along the chain, and how the creation of this value is implemented and governed (Gereffi and Lee 2012). A GVC analysis of the dominant Canadian pork industry will capture the historical and spatial features of this industry, while fleshing out the relationships and experiences that link this industry together (Gereffi, Korzeniewicz & Korzeniewicz 1994). GVCs focus on the forms of regulatory policies involved in structuring the pork chain; the forms of corporate regulatory power that are exercised are a central consideration to this thesis. Because this industry is so embedded in economic and trade policies, it is necessary to investigate how various forms of governance become enmeshed and standardized within this system. Another reason for employing a GVC is the emphasis on value - where value is derived and by whom. Value-added processing is a massive component of the Ontario pork industry. As will be discussed in detail in Chapter 5 on pork processing, there is a strong push for producers to raise lean hogs. Lean hog production results in much less marbled meat than what tends to be desired in table meat (such as a loin or pork chop), and therefore lean hogs serve as a central input for further processed, and more profitable, branded goods such as sausages and patties. A GVC will thus allow for a fuller understanding of the pork industry within Canada more broadly, by first outlining the political and economic barriers experienced by pig producers in Southwestern Ontario. Using a GVC as a framework, I also employ qualitative methodologies within this dissertation. Within the social sciences, particularly sociology, content analysis, and in-depth interviewing stand as prominent qualitative research methodologies (Van den Hoomaard 2015; Hesse-Biber & Nagy 2006; Jackson & Verberg 2007). Similarly, the coding of interview data for manifest/explicit and latent/implicit themes is evidenced within sociological studies (Stull, Maynard-Moody & Mitchell 1988), as social scientists may emphasize participants’ explanations and descriptions when conducting qualitative research (Jackson & Verberg 2007). There are other forms of qualitative methods for data collection such as the focus group, ethnography and participant observation (Van den Hoomaard 2015; Hesse-Biber & Nagy 2006; Jackson & Verberg 2007), however, in-depth interviews followed by transcript content analysis offered the opportunity to yield a rich, qualitative data set for this dissertation, as will be further discussed throughout this chapter.

In particular, I will be investigating the political and economic challenges faced by Bruce, Huron, Middlesex, Perth, Oxford, and Wellington counties’ and Region of Waterloo’s pig producers. Utilizing a GVC perspective and qualitative methodologies such as in-depth interviewing and content analysis, I seek to investigate three main nodes within the pork commodity chain. These three nodes are: production/producers, processing/packing, and marketing/retailing.
For the first node of the chain, production/producers, I interviewed those producers who raise pigs, both on fully integrated operations (farrow-finish) and segmented operations that specialize in different aspects of the pig lifecycle. I uncovered many of the problems that these individuals have faced as pig producers, and how they have coped with changing demands, as it is important to contextualize producer voices within this dissertation.

For the second node, there was a need to briefly contextualize some of the pork processing and packing industry within Canada. I outlined the current structure and organization of large processing facilities capable of pig slaughter, with which producers must engage. I fleshed out a fuller understanding of how these structures have evolved historically, and how these facilities have changed over time. While there are smaller abattoirs still in operation in Ontario, despite a steady decrease in number, my focus here is on the largest of the federally-licensed plants. With the closure of Quality Meat Packers in 2014, there are currently only two federally-licensed kill-and-pack plants in Ontario: Conestoga Meat Packers in Breaslaw, and Fearman’s Pork owned by Sofina Foods in Burlington. The lack of shackle/hoof/kill space in Ontario is a central tension for producers and industry key informants alike.

Finally, for the marketing and retailing node, large conglomerate grocery retail stores and their marketing strategies will be investigated to understand how pork is marketed to consumers. The role of marketing boards in establishing prices, and branding campaigns like those mounted by Maple Leaf Foods, Olymel, the Ontario Pork Producers’ Marketing Board (OPPMB or Ontario Pork), and the Canadian Pork Council (CPC) are investigated. Particular attention will also be paid to Loblaw Company Limited, as the largest of three dominant food retailers in Canada. Loblaw’s outlets are particularly interesting, as a number of my producer-respondents made mention of the President’s Choice (PC) “Free From” line of pork products which they felt placed a negative spin on other pork products by insinuating that those other products were not free from hormones. One producer had mentioned that all living things produce hormones, and that claiming that any livestock are free of hormones is simply ridiculous (Pamela).

Research Questions:
The principal research questions that were addressed in this thesis are as follows:

1. What economic and political challenges are affecting/impacting pork producers in Southwestern Ontario? How are these challenges perceived by producers?

2. How are these challenges currently structured, and how have they become implemented over time?
Research Questions
What economic and political challenges are affecting/impacting pork producers in Southwestern Ontario? How are these challenges perceived by producers? How have these challenges been structured and implemented over time?

Literature Review

Question Generation

Industry Information Interview Guide

Producer Interview Guide

Semi-structured, in-depth interviews

Transcription of Interviews

Analysis, Coding, Word Web

Implicit Themes

Explicit Themes

Deliverable
Processors and retailers dictate production practices. Political and economic conditions greatly influence hog production in Southwestern Ontario.

42nd Annual Ontario Pork Congress Trade Show

Attend Professional Animal Auditor Certification Organization course

Figure 2 Methodology Diagram
Sample: Participants and Geographic Areas:

Drawing on the latest agricultural census data (Statistics Canada 2011), Table 1 shows all of the provinces of Canada, and illustrates the total number of animals, the total number of farms reporting pigs, and their respective percentages in Canada. Table 1 illustrates the total number of pigs and number of pig farms reporting on census day (Statistics Canada 2011). Here, Ontario represents the largest number of hog farms reported (Table 1).
Using the same census data, Table 2 illustrates a further breakdown of the different agricultural regions of Ontario, showing that Southern and Western Regions in Ontario respectively report 27% and 51% of the number of farms in Ontario. I sought the Southern and Western Regions of Ontario as a study area as these regions have a greater number of farms reporting pigs. Because of the increasing sensitivity surrounding CAFO-style meat production, and intensive hog farming more specifically, I drew from regions reporting a greater number of farms, to draw on a greater pool of potential interviewees.

Table 3, further breaks down the specific agricultural census division and subdivisions (counties) data for the Southern and Western Regions of Ontario. This table provides the total number of farms reporting and pigs, by county. This information reflected in this table was used to select the counties canvassed in this research, as these counties, again, have the greatest number of farms reporting pigs. Together the chosen counties of Bruce, Middlesex, Oxford, Wellington, Perth, Huron and the Municipality of Waterloo which represent 55.56% of the total number of hog farms in Ontario (Table 3).

Prior to data collection, an application (REBapp) was submitted to the University of Guelph’s Research Ethics Board (REB), outlining the aims and possible discomforts that could be experienced by participants recruited for this study. The REB is in place to ensure that researchers are appropriately collecting data, while respecting the aims, potential conflicts, and areas of contention of human participants involved in research and data collection. Within the REBapp, my interview guides, recruitment materials (outlined below), and recruitment prompts were submitted. My REBapp for this dissertation was reviewed by the University of Guelph’s Research Ethics Board (REB) General Board. Approval to begin data collection was granted on May 21st, 2015, and allotted the following REB number: REB#15AP013. This number is linked exclusively to this dissertation, and was provided to all participants within a Consent to Participate in Research Form (Please see Appendix D), along with the contact information for the University of Guelph’s Research Ethics Board if they sought additional information regarding their rights as a research participant.
### Table 1 Total number of animals, number of farms reporting on census day, 2011, national

<table>
<thead>
<tr>
<th>Provinces</th>
<th>Number of animals</th>
<th>% of Canada Total</th>
<th>Number of farms reporting</th>
<th>% of Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newfoundland and Labrador [PR100000000]</td>
<td>1,144</td>
<td>0.0%</td>
<td>12</td>
<td>0.2%</td>
</tr>
<tr>
<td>Prince Edward Island [PR110000000]</td>
<td>53,649</td>
<td>0.4%</td>
<td>55</td>
<td>0.7%</td>
</tr>
<tr>
<td>New Brunswick [PR130000000]</td>
<td>54,630</td>
<td>0.4%</td>
<td>82</td>
<td>1.1%</td>
</tr>
<tr>
<td>Nova Scotia [PR120000000]</td>
<td>18,645</td>
<td>0.1%</td>
<td>121</td>
<td>1.6%</td>
</tr>
<tr>
<td>Saskatchewan [PR470000000]</td>
<td>1,028,530</td>
<td>8.1%</td>
<td>518</td>
<td>7.0%</td>
</tr>
<tr>
<td>Manitoba [PR460000000]</td>
<td>2,850,581</td>
<td>22.5%</td>
<td>590</td>
<td>8.0%</td>
</tr>
<tr>
<td>British Columbia [PR590000000]</td>
<td>89,067</td>
<td>0.7%</td>
<td>627</td>
<td>8.5%</td>
</tr>
<tr>
<td>Alberta [PR480000000]</td>
<td>1,397,534</td>
<td>11.0%</td>
<td>857</td>
<td>11.6%</td>
</tr>
<tr>
<td>Quebec [PR240000000]</td>
<td>4,096,678</td>
<td>32.3%</td>
<td>1,953</td>
<td>26.5%</td>
</tr>
<tr>
<td>Ontario [PR350000000]</td>
<td>3,088,646</td>
<td>24.4%</td>
<td>2,556</td>
<td>34.7%</td>
</tr>
<tr>
<td>Canada [000000000] (3)</td>
<td>12679104</td>
<td>100%</td>
<td>7371</td>
<td>100%</td>
</tr>
</tbody>
</table>

Derived from Table 004-0223 Census of Agriculture, pigs on census day, every 5 years

### Table 2 Total number of animals, number of farms reporting on census day, 2011, Regions of Ontario

<table>
<thead>
<tr>
<th>Ontario Regions</th>
<th>Number of animals</th>
<th>% of Ontario Total</th>
<th>Number of farms reporting</th>
<th>% of Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Ontario Region, Ontario [CAR350500000]</td>
<td>6,107</td>
<td>0.20%</td>
<td>103</td>
<td>4.03%</td>
</tr>
<tr>
<td>Eastern Ontario Region, Ontario [CAR350400000]</td>
<td>99,859</td>
<td>3.23%</td>
<td>197</td>
<td>7.71%</td>
</tr>
<tr>
<td>Central Ontario Region, Ontario [CAR350300000]</td>
<td>37,700</td>
<td>1.22%</td>
<td>237</td>
<td>9.27%</td>
</tr>
<tr>
<td>Southern Ontario Region, Ontario [CAR350100000]</td>
<td>1,383,068</td>
<td>44.78%</td>
<td>696</td>
<td>27.23%</td>
</tr>
<tr>
<td>Western Ontario Region, Ontario [CAR350200000]</td>
<td>1,561,912</td>
<td>50.57%</td>
<td>1,323</td>
<td>51.76%</td>
</tr>
<tr>
<td>Ontario [PR350000000]</td>
<td>3,088,646</td>
<td>100.00%</td>
<td>2,556</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Derived from Table 004-0223 Census of Agriculture, pigs on census day, every 5 years
Table 3 Total number of animals, number of farms reporting on census day, 2011, agricultural census division and subdivisions, Southern and Western Region, Ontario.

<table>
<thead>
<tr>
<th>Counties in Southwestern Ontario</th>
<th>Number of animals Total</th>
<th>% of Ontario</th>
<th>Number of farms reporting Total</th>
<th>% of Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peel, Ontario [CD3502210000]</td>
<td>-</td>
<td>0.00%</td>
<td>1</td>
<td>0.04%</td>
</tr>
<tr>
<td>Halton, Ontario [CD3502240000]</td>
<td>-</td>
<td>0.00%</td>
<td>5</td>
<td>0.20%</td>
</tr>
<tr>
<td>Essex, Ontario [CD3501370000]</td>
<td>12,984</td>
<td>0.42%</td>
<td>14</td>
<td>0.55%</td>
</tr>
<tr>
<td>Brant, Ontario [CD3501290000]</td>
<td>12,421</td>
<td>0.40%</td>
<td>16</td>
<td>0.63%</td>
</tr>
<tr>
<td>Hamilton, Ontario [CD3501250000]</td>
<td>6,816</td>
<td>0.22%</td>
<td>20</td>
<td>0.78%</td>
</tr>
<tr>
<td>Dufferin, Ontario [CD3502220000]</td>
<td>27,865</td>
<td>0.90%</td>
<td>28</td>
<td>1.10%</td>
</tr>
<tr>
<td>Niagara, Ontario [CD3501260000]</td>
<td>42,181</td>
<td>1.37%</td>
<td>39</td>
<td>1.53%</td>
</tr>
<tr>
<td>Elgin, Ontario [CD3501340000]</td>
<td>97,937</td>
<td>3.17%</td>
<td>56</td>
<td>2.19%</td>
</tr>
<tr>
<td>Chatham-Kent, Ontario [CD3501360000]</td>
<td>110,214</td>
<td>3.57%</td>
<td>66</td>
<td>2.58%</td>
</tr>
<tr>
<td>Haldimand-Norfolk, Ontario [CD3501280000]</td>
<td>132,389</td>
<td>4.29%</td>
<td>67</td>
<td>2.62%</td>
</tr>
<tr>
<td>Simcoe, Ontario [CD3502430000]</td>
<td>31,276</td>
<td>1.01%</td>
<td>71</td>
<td>2.78%</td>
</tr>
<tr>
<td>Grey, Ontario [CD3502420000]</td>
<td>33,914</td>
<td>1.10%</td>
<td>96</td>
<td>3.76%</td>
</tr>
<tr>
<td>Lambton, Ontario [CD3501380000]</td>
<td>253,900</td>
<td>8.22%</td>
<td>120</td>
<td>4.69%</td>
</tr>
<tr>
<td>Bruce, Ontario [CD3502410000]</td>
<td>108,112</td>
<td>3.50%</td>
<td>121</td>
<td>4.73%</td>
</tr>
<tr>
<td>Middlesex, Ontario [CD3501390000]</td>
<td>296,334</td>
<td>9.59%</td>
<td>141</td>
<td>5.52%</td>
</tr>
<tr>
<td>Wellington, Ontario [CD3502230000]</td>
<td>236,144</td>
<td>7.65%</td>
<td>207</td>
<td>8.10%</td>
</tr>
<tr>
<td>Waterloo, Ontario [CD3502300000]</td>
<td>110,864</td>
<td>3.59%</td>
<td>210</td>
<td>8.22%</td>
</tr>
<tr>
<td>Huron, Ontario [CD3502400000]</td>
<td>557,877</td>
<td>18.06%</td>
<td>279</td>
<td>10.92%</td>
</tr>
<tr>
<td>Perth, Ontario [CD3502310000]</td>
<td>455,726</td>
<td>14.75%</td>
<td>305</td>
<td>11.93%</td>
</tr>
<tr>
<td>Ontario [PR3500000000]</td>
<td>3,088,646</td>
<td>100.00%</td>
<td>2,556</td>
<td></td>
</tr>
<tr>
<td>Canada [0000000000] (3)</td>
<td>12,679,104</td>
<td>100.00%</td>
<td>7,371</td>
<td></td>
</tr>
</tbody>
</table>

Derived from Table 004-0223 Census of Agriculture, pigs on census day, every 5 years.
The 2011 Agricultural census classifies the counties canvassed for this dissertation as the following agricultural regions: Wellington (23), Waterloo (30), Perth (31), Oxford (32), Middlesex (39), Huron (40), and Bruce (41). Each agricultural region is further divided into census divisions and subdivisions:

**23 - Wellington**
1 Puslinch
9 Guelph/Eramosa
17 Erin
25 Centre Wellington
33 Mapleton
43 Minto
50 Wellington North

**30 - Waterloo**
4 North Dumfries
10 Cambridge
13 Kitchener
16 Waterloo
20 Wilmot
27 Wellesley
35 Woolwich

**31 - Perth**
13 Perth South
25 West Perth
30 Perth East
40 North Perth

**32 - Oxford**
2 Norwich
12 South-West Oxford
27 Zorra
38 East Zorra-Tavistock
45 Blandford-Blenheim

**39 - Middlesex**
5 Southwest Middlesex
15 Strathroy-Caradoc
27 Thames Centre
33 Middlesex Centre
36 London
41 North Middlesex
47 Adelaide-Metcalfe
60 Lucan Biddulph

**40 - Huron**
5 South Huron
10 Bluewater
25 Central Huron
40 Huron East
46 Howick
50 Morris-Turnberry
55 North Huron
63 Ashfield-Colborne-Wawanosh

**41 - Bruce**
4 South Bruce
15 Huron-Kinloss
24 Kincardine
32 Brockton
43 Arran-Elderslie
45 Saugeen Shores
55 South Bruce Peninsula
69 Northern Bruce Peninsula
In order to ensure a more representative sample of participants, an advertisement space was taken out in the July/August edition of The Meat Locker, the Canadian Meat Business Magazine’s sister online publication (Please see Appendix C: Canadian Meat Business Magazine Advertisement). Additional industry magazines, such as Better Farming and Better Pork, were also contacted regarding possible advertisement space in their respective publications; however, the cost of even the smallest ad was prohibitive, and therefore not pursued for this study. However, no participants were recruited through this avenue. I reconfigured my recruitment poster to be a much simpler, easy-to-read, call for participation (Please see Appendix A: Original Participant Recruitment Poster and Appendix B: Revised Participant Recruitment Poster) for use in all recruitment attempts. Unlike the first attempt to recruit producers, this more straightforward call alone yielded 12 pig producers willing to participate.

A number of pork organizations that have contact with Ontario pork producers, such as The Huron County Pork Producers' Association, were also contacted directly to send out the recruitment call on my behalf to their websites, mailing lists, and listserves. The Ontario Pork Producers' Marketing Board (otherwise referred to as Ontario Pork) was also contacted to send out a call for participation on my
behalf. Ontario Pork is the marketing board for pork in Ontario, and thus responsible for compliance with the Farm Products Marketing Act (to be discussed in Chapter 7 on Pork Retailing). All producers, except those producing solely for their own consumption, must register with the Board, and therefore the list of potential participants would have been current and complete at time of request. All producers on Ontario Pork’s producer mailing lists for Waterloo Region, and Wellington, Oxford, Huron, Bruce, Perth, and Middlesex Counties were sent my call for participation. I also contacted a number of Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) contacts in the pork sector, and was consistently told to contact Ontario Pork, as this Board has the most current list of producers in Ontario.

In addition to these organizations advertising my revised recruitment poster on my behalf, I also actively pursued participants involved in a spectrum of production sizes and methods (conventional-commodity, mixed-farming, small-scale, organic, pasteurized etc.) through Twitter, particularly under the hashtags (#) #ontag (Ontario agriculture) and #RealPigFarming, both of which are popularly posted by producers. These hashtags are also searchable which allowed my poster to be displayed when a Twitter user searches either of these terms, permitting a very wide pool of potential participants. While the #RealPigFarming handle is frequented by producers, there are also a number of animal rights and compassion-based activists using #RealPigFarming to post pictures of confined, large-scale pig production sites, stating that this is indeed what real pig farming looks like. However, the most effective response came when I directly contacted a farmer in my sample counties (as revealed on their public Twitter profiles) and in keeping with 140 character limit stated: “Hi, I’m a U of G student – interested in a chat about the pig industry?” While I would provide more details about the purpose and aim of the study in subsequent emails/phone calls, much like the recruitment poster, accessing pork producers was much more effective when the request was brief and direct. I also directly contacted participants from publicly-available email addresses, following extensive online searches.

I was also able to secure a table at the 42nd annual Ontario Pork Congress trade show in Stratford, Ontario, (within Perth County) from June 17th-18th, 2015, to recruit potential participants. In the weeks preparing for Pork Congress, I was told by the main organizers that this trade show is the largest pig-centred event in Canada (Porkcongress.on.ca 2015). The trade show, aimed at producers and industry leaders, saw a drastic change in the 2014 program with the omission of live animals at the annual Bacon Maker Classic, a best-in-show for pigs, due to the outbreak of the highly contagious PEDv (porcine epidemic diarrhea virus) on Ontario farms last year. However, despite this change, the 2014 show saw over 200 exhibitors and 2000 attendees (Porkcongress.on.ca 2015). This was a tremendous opportunity to speak informally with a number of different people involved in the pork sector about their personal experiences, but also served as an invaluable place to recruit producers for in-depth interviews.
A total sample of 26 pork producers were consulted for in-depth, semi-structured interviews, using the interview questions found in Appendix E: Producer Interview Guide. Interviews ranged from about 35 minutes to well over two hours in length, with most interviews lasting about an hour. In some cases, I ended up staying most of the day at some producers’ farms. In all but three interviews, it was made clear that I was not going to be able to go inside the barns or see the pigs, even if the site was adjacent to their house where the interview was conducted, due to biosecurity. In a few cases, producers asked that we meet off-farm, as they had concerns about anyone knowing where their production site was, due to damage from animal-rights activists.

A complete list of the producers, all of whom have been given pseudonyms, is provided below which outlines their county, annual production, and type of production site.
Table 4 Complete list of Ontario hog producers, with assigned pseudonyms, interviewed during data collection. Table by author.

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>County</th>
<th>Type of Production</th>
<th>Pigs produced/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perseus</td>
<td>Bruce</td>
<td>farmer (Finisher)</td>
<td>3,200</td>
</tr>
<tr>
<td>Percival</td>
<td>Bruce</td>
<td>farmer (Farrow-Finish)</td>
<td>2,000</td>
</tr>
<tr>
<td>Patricia</td>
<td>Huron</td>
<td>farmer (Wean-Finish)</td>
<td>15,000</td>
</tr>
<tr>
<td>Porter</td>
<td>Huron</td>
<td>farmer (Farrow-Finish)</td>
<td>60,000</td>
</tr>
<tr>
<td>Poppy</td>
<td>Middlesex</td>
<td>farmer (Farrow-Wean)</td>
<td>40,000</td>
</tr>
<tr>
<td>Pearce</td>
<td>Middlesex</td>
<td>farmer (Farrow-Finish)</td>
<td>3,600</td>
</tr>
<tr>
<td>Philip</td>
<td>Middlesex</td>
<td>farmer (Farrow-Finish)</td>
<td>5,000</td>
</tr>
<tr>
<td>Paige</td>
<td>Middlesex</td>
<td>farmer (Farrow-Finish)</td>
<td>7,000</td>
</tr>
<tr>
<td>Packard</td>
<td>Middlesex</td>
<td>farmer (Farrow-Finish)</td>
<td>7,000</td>
</tr>
<tr>
<td>Parker</td>
<td>Oxford</td>
<td>farmer (Farrow-Finish)</td>
<td>16,000</td>
</tr>
<tr>
<td>Pierre</td>
<td>Oxford</td>
<td>farmer (Finisher)</td>
<td>20,000</td>
</tr>
<tr>
<td>Perry</td>
<td>Perth</td>
<td>farmer (Farrow-Finish)</td>
<td>7,000</td>
</tr>
<tr>
<td>Preston</td>
<td>Perth</td>
<td>herdsman (35 years working in pig barns)</td>
<td>na</td>
</tr>
<tr>
<td>Paul</td>
<td>Perth</td>
<td>farmer (Farrow-Finish)</td>
<td>2,600</td>
</tr>
<tr>
<td>Pamela</td>
<td>Perth</td>
<td>farmer (Farrow-Finish)</td>
<td>25,000</td>
</tr>
<tr>
<td>Paddy</td>
<td>Perth</td>
<td>farmer (Finisher)</td>
<td>13,000</td>
</tr>
<tr>
<td>Pedro</td>
<td>Perth</td>
<td>farmer (Finisher)</td>
<td>4,000</td>
</tr>
<tr>
<td>Payton</td>
<td>Perth</td>
<td>ex-farmer</td>
<td>na</td>
</tr>
<tr>
<td>Patrick</td>
<td>Waterloo</td>
<td>farmer (Farrow-Finish)</td>
<td>140</td>
</tr>
<tr>
<td>Pheonix</td>
<td>Waterloo</td>
<td>farmer (Finisher)</td>
<td>2,700</td>
</tr>
<tr>
<td>Percy</td>
<td>Wellington</td>
<td>ex-farmer</td>
<td>na</td>
</tr>
<tr>
<td>Pablo</td>
<td>Wellington</td>
<td>Sow operator (Farrow-Wean)</td>
<td>32,000</td>
</tr>
<tr>
<td>PJ</td>
<td>Wellington</td>
<td>farmer (Farrow-Finish)</td>
<td>7,000</td>
</tr>
<tr>
<td>Pavel &amp; Paula</td>
<td>Wellington</td>
<td>farmer (Farrow-Wean)</td>
<td>16,000</td>
</tr>
<tr>
<td>Pheobe</td>
<td>Wellington</td>
<td>farmer (Farrow-Finish)</td>
<td>60</td>
</tr>
</tbody>
</table>

Sample: Key Industry Informants

As an additional thread of enquiry, key pork-industry informants were also contacted to take part in a semi-structured in-depth interview, using Appendix F: Industry Informant Interview Guide. As noted, this component of the research aimed to bring further context and depth to the analysis of the Canadian pork industry as a whole by seeking prominent key informants along the pork commodity chain. These individuals were selected based on their roles and place of employment within the industry, and contacted using publicly-available email addresses or phone numbers. While I have omitted my informants’ names, internet searches could potentially reveal the identities of these individuals. I made each of my informants aware of this confidentiality issue, and they were still willing to speak with me. For this component of the
research, a total of 18 key pork industry informants were consulted for in-depth, semi-structured interviews. Like the interviews conducted with producers, both recorded interviews and those reliant on field notes, where consent to record was not permitted, were fully transcribed and analyzed for themes. The complete list of industry interviewees, with pseudonyms, is displayed below.

Table 5 Complete list of key hog industry informants, with assigned pseudonyms, interviewed during data collection. Table by author.

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Position/Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivan</td>
<td>Canada Pork International director</td>
</tr>
<tr>
<td>Idris</td>
<td>Upper Management - Maple Leaf Foods</td>
</tr>
<tr>
<td>Irving</td>
<td>Canada Pork International director</td>
</tr>
<tr>
<td>Imran</td>
<td>Upper Management - Olymel</td>
</tr>
<tr>
<td>Izra</td>
<td>Upper Management - Ontario Pork Producers' Marketing Board</td>
</tr>
<tr>
<td>Ignatius</td>
<td>Upper Management - duBreton</td>
</tr>
<tr>
<td>Isiah</td>
<td>Manager - The Bauer Butcher</td>
</tr>
<tr>
<td>Iggy</td>
<td>Agricorp Policy Representative</td>
</tr>
<tr>
<td>Irene</td>
<td>Ontario Pork Industry Council director</td>
</tr>
<tr>
<td>Iris</td>
<td>Farm and Food Care Representative</td>
</tr>
<tr>
<td>Isaac</td>
<td>PigTrace Representative</td>
</tr>
<tr>
<td>Igor</td>
<td>Chicago Mercantile Exchange hog futures trader</td>
</tr>
<tr>
<td>Ian</td>
<td>Pig broker</td>
</tr>
<tr>
<td>Irwin</td>
<td>Owner of a Livestock Transport Company</td>
</tr>
<tr>
<td>Innis</td>
<td>Upper Management - Maple Leaf Foods</td>
</tr>
<tr>
<td>Indiana</td>
<td>OMAFRA swine market specialist</td>
</tr>
<tr>
<td>Ibrahim</td>
<td>Upper Management - Conestoga Meat Packers</td>
</tr>
<tr>
<td>Immanuel</td>
<td>Upper Management - Quality Meat Packers</td>
</tr>
</tbody>
</table>
Positionality Statement: Bridging My Rural-Urban Divide:

I have also attempted to immerse myself more fully in all aspects of pork production through to consumption. One passerby at my table at Ontario Pork Congress, upon learning that I was not a farmer, declared “How can you begin to understand what’s involved in [pig] farming?” I believe that my positionality as an outsider to this industry was somewhat beneficial to the iterative process of data collection, as I was actively learning through engaging those with far more knowledge than myself within this industry. I have taken part in a pig butchery workshop where I was able to experience a half pig carcass broken down into primal cuts and then further processed into retail cuts – more emblematic of what lines our grocery shelves. I have also visited and spoken with the producer who raised the pig used in the workshop, to gain a fuller understanding of this complex industry (though this particular chain was quite short). Another producer, Phoenix, following our interview at his farm, asked if I would like to stay and watch him “do a pig.” After being told that the pig had irreversibly injured her legs, rendering her a downer that would be deemed unfit for transport or processing by the packing plants, and needing to be terminated regardless, Phoenix showed me how to effectively shoot the pig to cause instant death, how to hoist, and process the pig for him and his family’s consumption. Phoenix, who was also a former Canadian Food Inspection Agency (CFIA) meat plant inspector for much of his employed life, showed me how carcasses are valued-based on the amount of back fat and muscle, and how to identify potentially-diseased organs, as would be done on the kill floor of processing plants. I was also invited back the next day to make sausages with him and his family. In addition, after much persistent emailing, I was provided the opportunity to sit through a Professional Animal Auditor Certification Organization (PAACO) Meat Plant Audit certification course in August 2015. This unique opportunity allowed me to receive instruction on best-practices meat processing and handling from a number of leading industry educators, including the influential animal behaviourist, Dr. Temple Grandin (Please see full brochure in Appendix G: PAACO Meat Plant Auditor Course). While I was originally told that I would be able to take part in the plant-based sections of the course, I was informed in the days leading up to the course that this was not possible, as I was not a paying course-attendee. Regardless, the very thorough and graphic in-class instruction yielded important insight into the small window of time when live animals transition into carcasses, and the countless welfare issues that can emerge once livestock leave the farm, are transported, and arrive for processing. Consideration of my positionality as an ag outsider and a non-farmer must also be recognized. While some of my interviewees were excited to talk to me about what they do in their hog barns on a daily basis, and welcomed me to speak with them, I do believe that my position as a non-farmer was also off-putting to a number of potential recruits. With a heightened awareness of both disease and activists, many hog farmers whom I attempted to recruit for this study felt that the risk of participating far outweighed any potential gains. This contradicted some other producers, who spoke of
the need to educate people who are not from agricultural backgrounds; while I was actively looking to be educated by farmers, many refused because I was not pursuing an agricultural degree. In a similar vein, during a number of recruitment calls, I was asked with which program within the Ontario Agricultural College (OAC) I was affiliated. When I informed potential recruits that I was not in the OAC, but rather Sociology, one potential recruit rebutted that Guelph, while a great ag school, also has an enormous “alternative population” and that he would not be able to speak with me for this research. While I am grateful to the many producers who spoke with me, this was an issue of contention for me as a researcher, as I was often discredited as not being ag enough to have a discussion with a farmer about ag issues. One producer stated that he was upset by the fact that not one person, himself included, was willing to grant me admittance into their barn throughout the data collections process.

Pearce stated:

That’s a pretty short-sighted attitude I think, so if, if you are told you can’t ever see a farm, what are you gonna do? You’re gonna talk to friends and in conversations you’re going to talk about what you’re doing and they’re gonna say “so did you see a pig farm?” “No, they won’t let me in, nobody would let me see it.” What does that say, right? That doesn’t - right now there’s, there’s what do they call it, open farm days for the dairy farmers so they have a host farm, you can, it’s like anybody comes, right, and they have a big luncheon and anybody from the city can come, you just show up. Well what a great way to promote your industry, right? We would be afraid to do it for disease reasons and, you know, activist reasons but as an industry you’re kinda, you’re not really sending a very good message if you won’t allow anything like that happening.

Once interviewees had agreed on a time and place to talk, I was often asked many times, again, in person, if I was associated in any way with animal rights’ groups, or if I was an activist. One producer during our interview stated, “When you called me that you wanted an interview my first thing is - Not going in our barn, ‘cause I don’t trust you”. I worry how hog farmers seek to bridge the informational gap that they so frequently spoke about between themselves and the consumer, when so many were unwilling to speak with me via a university-backed, ethically-cleared research study on their experiences of the hog industry.

While I am grateful to the producers who provided me with photos, video, and live demonstrations for this research in lieu of a barn visit, I do feel that this does indeed provide a skewed perspective of the most dominant production style of pork production. While I did get to interact with niche-hogs, including pregnant sows, who are seen as needing the most biosecurity, I believe entering a commodity barn (smelling the crowded barn, feeling the cling and heaviness of high humidity, and
hearing vocalizing pigs) and the process to do such (showering-in, changing into barn-issued work clothes and boots, showering-out) would have added a more realistic view of this production style which is most dominant within Southwestern Ontario.

**My Relationship to Meat:**

Due to the sensitive nature of many of the various aspects of hog production that are fleshed out in the later chapters of this dissertation, I feel it is appropriate to outline my personal relationship to meat here so that I may clarify the position that was also presented to interviewees. I feel that it is appropriate to briefly outline the personal experiences that have shaped my relationship to meat as both an eater and as a researcher, and therefore provide the following anecdotally-infused positionality statement.

As I began this dissertation, I had already adopted a primarily vegetarian diet for many years. Growing up, my family ate very little meat. While we would go for the occasional chain hamburger, or chicken fingers from restaurants, my mother would often cook meals with little meat. Stews, soups, and Sheperd’s pies would often contain some meat, but it was often split between the entire pot, and many meals. I don’t believe I had my first steak until I was into my 20s, and had dinner with my partner’s family who ate a very meat-centric diet. When I had taken my first food-based course with Dr. John Phyne at St. Francis Xavier, I was perplexed about the deeply problematic modern food system, which was, and still is, so meat-laden. Other courses also taught me the environmental issues that emerge from intensive livestock farming and the impacts on local rural communities as there is a switch toward single species production in both the Global North and South. As I continued my education into my Master’s in Newfoundland, cost became a central driving force for sculpting my diet. Living in St. John’s was immensely humbling. Having lived in Southern Ontario for most of my life, I was astounded to see both the cost and poor availability of food in St. John’s. Being heavily reliant on imports, anything fresh in St. John’s was often second-rate and low quality, or prohibitively expensive. While we did have a tremendous opportunity to enjoy a moose burger from a local hunter, meat continued to dissolve from my diet as bean-based stews, with loads of onions and turnips (two local staples we could source rather cheaply) became a regular dish.

I am still reluctant to call myself a true vegetarian, as even now I do take part in our family’s Thanksgiving and Christmas turkeys. I also eat dairy and eggs. While I do not eat either of these in any great quantity, I do realize that cows need to be impregnated for milk production. I also realize that modern layer hens’ ability to lay upwards of 300 eggs per year is an enormous leap from their ancestral jungle fowl’s annual clutch of just 12-16 eggs. I will order our turkeys a year in advance from the Martin family; a small mixed, organic farm in Ethel, Ontario. This past summer, on the way back to Guelph from
an interview with a hog farmer for this dissertation, we stopped in to the Martins’. We were happily shown our growing heritage turkeys pecking around with the Martins’ laying flock, and I stated “Don’t forget - two of those birds are mine!” I know these birds will die. I also know that these birds have been treated in a manner that satisfies their natural urge to roost and scratch and that, through my purchase, I am able to provide the Martins with some cash. I pay, and dearly, for the rare treat of a bi-annual turkey. For eggs, my partner and I have decided to take advantage of the City of Guelph’s allowance of backyard poultry; we raise four layer hens for our personal consumption. I also think they taste better than any other eggs I’ve ever had, as I internalize the amount of work, feed, and eventual droppings that are required to have the privilege of eating an egg. Much like the Martins’ turkeys, these birds, too, will die someday. Whether it will be from a hawk or raccoon, old age, or via my hand if needed, these birds have provided a food source, and will eventually die for it. When at a social function, I will RSVP for the vegetarian meal; it is simply easier to do so. There seems to be growing acceptance for one’s choice for a vegetarian diet, rather than the I-only-eat-meat-that-I-know-is-socially-responsible diet. When such discussions pop up over the dinner table, or in social settings, I usually just reply that my diet “is complicated” and allow people to deduce what they wish.

When asked by my interviewees if I was associated with PETA or similar animal rights’ groups, I replied “no,” as I was not, nor am I today. I do, however, acknowledge activists’ strength to persevere in light of being continuously mocked by those advocating on behalf of the agricultural sector, known as agvocates. I feel that while such groups have brought general public awareness to intensive livestock production, many of their tactics are undoubtedly one-sided. Animal rights’ groups and livestock farmers’ assessment of them tends to be in absolutes; in black and white, as a yes or no. However, both sides of this impassioned discussion are much more nuanced than either side cares to acknowledge. When asked whether I ate meat, I gave a similar response to what I have stated above, that meat did not compose a great deal of my diet. Despite the sensitivity of my relationship to my interviewees, all of who were involved in the hog industry in some form, as a quasi-vegetarian, I was only outright asked twice, both times by upper management, if I actually consumed meat before they would agree to be interviewed. During recruitment, I continually emphasized that I sought to understand the structural and economic conditions of the hog industry from those closest to it. I was very honest about the fact that I was born and raised in a condominium in Toronto, and that I didn’t know what it was like to be in a barn. I acknowledged to my interviewees that animal rights’ groups are indeed very effective in sensationalizing the problems of animals in agriculture. Interviewees acknowledged their effectiveness as well. I do and will continue to consume a predominantly vegetarian diet as I believe it is healthiest for my body. However, animal ethics and health aside, throughout this dissertation process I have noticed my growing personal unease with a broader agricultural system that serves to squeeze out family farms and increase
rural food insecurity. When numerous hog producers stated that they were at times unable to feed their own families, I was shocked. It is unsettlingly ironic that those who produce our food may not, in turn, be able to feed themselves. As an eater, such an incongruent dynamic is both literally and figuratively unappetizing. As a researcher, I wanted to understand how and why this disparate system emerged within such a politically-charged agricultural sector. My intention was to learn and understand the intricacies of the hog industry from those most closely working within it, and by those most affected by its volatility.

**Interview Question Development:**

The questions for this dissertation were generated with three main outcomes: to understand and assess the economic conditions that are present within the contemporary hog industry; to understand and assess the political environment that supports the hog industry; and to understand and assess the role, relationship, and power of food retailers. My previous work has looked at the increasing power of food retailing in Canada; I wanted to understand if such information was corroborated within the hog/pork industry as well.

The interview guides and their respective questions used in this dissertation were derived largely from review of the literature surrounding meat production in Canada. For the producer interview guides, I aimed to capture information particularly surrounding the economic and political conditions faced by hog producers. I sought to keep my opening questions rather broad in order to build rapport with interviewees and allow space for anecdotal responses. Noting the emergent shift towards contracting and segregated, specialized production, I also wanted to capture the size, scale, and type of hog farms my interviewees were operating. Having subscribed to numerous online publications about the meat and pork industries, there was substantial attention in these documents to trade issues, particularly concerning mandatory country of origin labelling (mCOOL) and the Trans-Pacific Partnership (TPP). Question 7 in particular, which asks where hogs are shipped once arriving at market weight, was adapted from Statistics Canada’s Livestock Questionnaire (please see Appendix E: Producer Interview Guide).

During my time at Pork Congress, both the informal conversations with hog-industry personnel, and my own observation of the massive technological systems on display at the conference, prompted me to ask producers how they were adapting to the changes in housing technology. The sensitivity of the agricultural media’s polarizing treatment of the legislated changes to sow housing, in particular, promoted me to inquire how producers felt about these large scale and expensive changes, leading to the development of question 13 (please see Appendix E). The rather recent launch of the Ontario Pork Producers’ Marketing Board’s (OPPMB) Ontario Pork logo, which aims to gain exposure on the increasing momentum of the local food movement, was a tremendous opportunity to bridge food
retailing/marketing with producer’s opinions of their provincial marketing board.

The questions developed for use within interviews with key industry informants also sought to bring understanding to the economic and political conditions faced by hog producers, and to corroborate these concerns with the broader hog industry. These interviews brought deeper understanding of specific organizations and corporations pertinent to the hog industry. Much like the producer interview guide, I wanted to understand how trade issues and a prevalent export sector were constructed and understood from the perspective of hog industry personnel. There is some overlap of the questions used for interviews with key industry informants and producers. Please see Appendix F: Industry Informant Interview Guide for a sample of the interview guide used during this component of the data analysis.

**Coding of Data:**

For this dissertation, the qualitative software NVIVO was not used for coding or thematic analysis. Rather, as a visual-kinesthetic learner, I found manual highlighting on paper to yield the most robust method of theme discovery as I was able to fully immerse myself in the data collected, in a format most conducive to my knowledge formation. For this process, each of the transcribed interviews was printed in its entirety. Each transcript was fully read, numerous times. A word web was propagated from coded explicit terms and phrases, or manifest content, that were repeatedly used by multiple interviewees such, as “activist” and “kill space”. A structured coding framework was developed from the terms and phrases that emerged from the transcribed interviews, and these codes became the main themes of analysis for this dissertation. Each coded theme was allotted its own color of highlighter to maintain visual and thematic consistency between the mass of transcripts. The explicit coded themes identified within this research were: a lack of kill/shackle space in Ontario, no control over hog pricing, and the influence of animal rights groups.

A similar process was followed to uncover coded implicit themes, or latent content, within the data set. This again required that I reread each of the transcripts reflexively to assess both the intended meaning and usage of the interview response, as well as, the comparability of implicitly coded themes across the data set. Here, phrases and terms were highlighted and again developed into a word web. For example, interview responses such as “we need to increase domestic consumption” and “Japan’s the golden ticket” were structured under the coding framework of Export Dependence. The implicit coded themes identified within this research were: overproduction, the contradictory stance on the value of agricultural subsidies versus agricultural safety-nets, and intra-producer conflict including the tendency to consumer-blame.
The fact that there are 3 of each type of theme, implicit and explicit, is largely coincidental. I did not intend to provide this round number, but rather resulted when theoretical saturation was reached during coding, meaning these ideas were presented most consistently across transcripts during content analysis. There were other threads that did emerge from interviews, that could be considered a political or economic challenge, such as land use/zoning/non-farm neighbors, but these were not reiterated with any consistency across interviews, and thus could not be interpreted as representative for hog producers in Southwestern Ontario. These theoretically saturated themes were also present in the broader literature, further indicating their applicability and generalizability to the Southwestern Ontario case.

Having outlined the methods for this dissertation, the first node of the GVC will be on pork production. While pork in particular will be outlined, this section will begin with a historical analysis of the role of meat production in Canada, and Ontario more specifically, before transitioning into the current state and structure of pork production.
4. “Nobody is forcing you to farm, it’s a privilege to farm...”: Pork Production in Southwestern Ontario

“I mean there’s a number of different reasons why I believe this is a good way to do it, of course you get the cheap protein argument, and I don’t buy that, if we really wanted cheap protein, we would buy peas, and grow more peas, so it’s not just about cheap protein... eat less of it, eat better stuff, have a better relation to it” (Patrick)

“I’m not a shill for some multi-national, I’m not getting paid tens of thousands of dollars by chemical companies to support their products, I’m making enough pork to feed 35,000 Canadians every year, but yet I’m the one that gets demonized in public for being part of this system where we raise animals...we’ve got people working for $12 an hour – they don’t have the luxury of buying organic bacon, but they do need cheap protein” (Perry)

In order to fully conceptualize the breadth of pork production in Southwestern Ontario, and Canada more broadly, it is important to first outline how pork production became so prominent within Canadian agriculture. This chapter will outline some of the pertinent economic policies and trade agreements that set the foundation for pork production in Canada, and in Ontario specifically. In the following four chapters on production, processing, and retailing, I aim to provide a contemporary analysis of Ontario hog industry. Consequently, I provide some historical context to better situate and frame the contemporary context, rather than providing a comprehensive historical overview of these three major nodes in the hog GVC. In this chapter, I also draw on information provided by my interviewees. As illustrated in the above chapter, all interviewees’ names have been replaced with pseudonyms for confidentiality purposes. Interviewees who were pork producers have been provided a pseudonym beginning with the letter P (Porter, Parker, Philip), and interviewees who were key pork-industry informants have been provided a pseudonym beginning with the letter I (Ivan, Iris, Ibrahim).

Here, I should clarify that I also use the terms commodity-hogs or commodity-production in reference to the CAFO-style hog production practices predominately taking place in Southwestern Ontario. This is the language used by the producers with whom I spoke, and does align with the CAFO production model: Production is predominantly indoors, a largely standardized breed is used for fast feed-conversion and uniformity at market weight, production takes place over slatted floors (Figure 5) with
underground sewage pits draining to an open-air storage tank or lagoon (Figure 6). As the CAFO model is the dominant type of production in Ontario, and Canada, corresponding social, environmental, and ethical issues will also be outlined.

Figure 5 Photo showing the construction phase of a modern sow barn operation. The thick, concrete slatted floors can be seen on the left-hand side of the photo. This allows for all pig excrement to fall through the floor into the deep manure pits below, as seen on the right hand side of the photo. Also note the large fans on the existing sow barn in the top-left of the photo. These large fans are vital to keeping breathable air-flow, and the pigs and workers alike alive inside the barns. Photo provided by producer.
Figure 6 Aerial view of modern sow barn being constructed, joining existing sow barns on right. Note the vertical trenches for placing pipes. These pipes will then connect and drain to the circular open-air manure storage tank on left. Photo provided by producer.
Figure 7 A sun hut for pasture-raised pigs. Photo by author.

**Agricultural Production in Canada:**

The current state and condition of a number of commodities that are seen as commonplace are the result of specific political, social, historical, and economic conditions. The food regime literature is important to contextualize so that a representative understanding of the current Canadian pork industry can be provided throughout this dissertation. This food regime approach, it is argued, has risen out of the limited scope of the emergent 1970’s New Rural Sociology school perspectives that tended to limit analysis to the point of production, limiting wider food dynamics (Campbell & Dixon 2009). The food regime approach thus forces a broader historical contextualization of the production and consumption of food, as well as the social reproduction of capital (Campbell & Dixon 2009; McMichael 2005). The available literature on food regimes categorizes the historical changes in production and consumption into two periods, but also explores the possible emergence of a new, third food regime. Each of these periods will be outlined below as they are central to situating the social, economic and political processes involved in the construction of the current pork industry within Canada.

**First Food Regime (1870-1914):**

The Colonial-Diasporic Food Regime, or First Food Regime, was situated under British colonial and hegemonic rule and was centered on European wheat and meat imports from British “settler states” (Friedmann & McMichael 1989:95) such as Canada. These settler imports were largely produced by family labour and were considered to be a central, yet opposing, condition for the development and
formation of nation-states and eventually national economies (Friedmann & McMichael 1989). With the development of an internal national economy, the settler states quickly gained the political independence to expand and integrate sectors of production for a growing home market (Friedmann & McMichael 1989) as well as compete with British-produced goods.

![Image](image.png)

**Figure 8 “Canada's pork opportunity” by E. Henderson. Canada Food Board Poster, circa 1918, to encourage colonial-Canadian pork production for export to Britain (Library of Congress 2015)**

**Second Food Regime (1947-1993):**

The Mercantile-Industrial Food Regime, or the Second Food Regime, was historically situated at the decline of British, and the rise of US hegemony. The development of independent nation-states that was central to the First Food Regime was further extended in the Second, especially to former colonies such as Canada. Independent state governments that arose from the maturation of the nation-state system, central to the First Food Regime, allowed for the development and regulation of political and economic policy. Protectionist state policies favouring accumulation via durable inputs for food manufacturing set the conditions for the transnational restructuring of agriculture by agro-food capitals into specialized sectors, and eventually “undercut the independent capacities of states to regulate domestic production and trade” (Friedmann & McMichael 1989:94). This eventual undermining of the state authority led to a shift where capital became “the dominant structuring force” (Friedmann & McMichael 1989:112).

The opposing trends of wheat importation in lieu of domestic production, and the restructuring of
agriculture as an industrial sector (Friedmann & McMichael 1989), are key features of this regime. Due to
the industrialization of agriculture, production shifted away from final use products to largely subsidized
industrial inputs for manufactured foods, which led to the intensification of agricultural specialization
(Friedmann & McMichael 1989). Such commodity specialization alongside the domestic production of
previously imported inputs provided a space for the mass production of standardized products for mass
consumption (Friedmann & McMichael 1989). The mass production of commodity inputs serves as a
basis for the widespread distribution of cheaply-produced food products that form the basis of our highly
processed diets.

Other notable features of the Second Food Regime include the development of a food aid regime
(McMichael 2005) as a solution to the overproduction of US agricultural commodities. As a result,
surpluses in production were often provided to underdeveloped countries as food aid assistance (McMichael
2005; Friedmann 2005). The development of a food aid regime, which includes cost-price squeezes for
farmers and the increasing inability for national food self-sufficiency, originate in the overproduction of
food commodities (McMichael 2005).

While current hog production in Canada is characterized by overproduction, the dependency on
export markets and the perpetual volatility of cost of production serve as a significant price squeeze for
producers. Two farmers with whom I spoke had noted that they would frequently watch retailer flyers for
sales, even on pork products, as it was cheaper to buy product pre-processed from a store than it would be
for them to grow and process one of their own hogs for their personal consumption. Pamela stated “I like
when it [pork] goes on sale too, as a consumer, and we can’t produce it for that. So you know, when it
comes on sale, I will, I buy it too because it’s cheaper than me going and getting my own, like that’s sad
isn’t it? Like that’s really a mind boggling concept.” This is just one example specific to this dissertation
of how production systems based on surplus and export have served to further degrade our food system.
Many producers see it as their duty or a privilege to farm, and see themselves as stewards of the land and
the animals they raise. Many feel it is an achievement to provide food and cheap protein for a global
marketplace so that they may feed the world. However, many producers also felt that the volatile cost of
production and little control over the prices received for their pigs left them, at times, unable to make ends
meet to feed their own families. Pricing schemes, both for producers and within this dissertation, plays a
considerable role. The price received in commodity production is directly linked with processor grading.
In this pricing scheme, a contract is drawn between processors and the producer, following the removal of
Ontario Pork’s third-party sign-off on single desk contracts. A more thorough breakdown of cyclical hog
pricing is provided in the following chapter on processing, including analysis of how such processor-led
mandates are impacting pork producers.
A Third Food Regime? (1995- Current):

There is still debate as to the existence of a new regime, or if the current political and economic events are an extension/reconfiguration of the Second Food Regime. However, I list the emergence of this third scenario of agro-food politics as beginning in 1995 – the year that the WTO’s Agreement on Agriculture (AoA) was signed under the Uruguay Round of the General Agreement on Trades and Tariffs (GATT). The AoA is noted to be the “vehicle [for] corporate-driven processes” (McMichael 2005:273) and signals the deepening of international market relations and the growing inability for national food self-sufficiency as both producers and consumers become reliant on the whims of volatile open-market. This increasing dependence on global export markets is a main consideration in this dissertation.

Friedmann (2005) terms the possible emergence of a Third Food Regime as the Corporate-Environmental Food Regime, while others have considered the current period of food production/consumption as a new moral economy of food (Morgan, Marsden & Murdoch 2006) or a world agriculture (McMichael 2005) centered within a transnational space of industrial agriculture. While perspectives vary, there is general agreement that the current era of food relations is changing. Whether this change will be a positive one for producers and consumers, or will serve further “accumulation by dispossession” (McMichael 2005:282) of agricultural production from farmers, remains to be seen.

In regards to the emergent change in food production and consumption, Friedmann’s corporate-environmental food regime (2005) notes that consumption patterns are tied to income. Taking place amongst a declining US hegemony, which was central to the Second Food Regime, Friedmann (2005) claims that the rise of green capitalism stands to position consumers within a two-tier corporate strategy. This two-tier approach will see that privileged consumers receive food that is fresh and relatively unprocessed, while poor consumers will be left to choose from a myriad of highly engineered edible commodities (Friedmann 2005) or “pseudo-foods” (Winson 2013:25). This corporate approach to food choice also has foreseeable impacts on the health to both groups of consumers, notably the decline of the latter group. The notion of a class-based diet is by no means a new phenomenon, as illustrated by Mintz (1986) in his historical trajectory of the global sugar trade. While the seemingly endless supply of poor nutritional options can be traced back to the early 20th century (Winson 2013), a newer feature of this food regime is the inundation of mass advertising needed to promote these products. Many of these products are high in sugar, salt, and fat which stand to deprive the human body of nourishment, as many of the affordable modern foods come at the expense of being biologically maladaptive (Ulijaszek, Mann & Elton 2012), and can be attributed to the emergence of chronic human disease. Here, a link must be made back to pork production in Ontario, and the structural composition of the industry. A key trend that emerged from many commodity-producer interviewees, was the prevalence of processor-mandated hog carcass leanness. Lean hogs serve as a key *input* for further processed goods. Value-added pork products
like breakfast sausages and deli cold cuts, pre-cooked microwavable bacon, and frozen pizza toppings, are all items that command a greater profit margin for larger processor/integrators like Maple Leaf Foods and Olymel. Therefore, the processor-led push for hog leanness is a deeply problematic theme that is analyzed throughout the dissertation.

In addition to the food regime literature mentioned above, some attention will be paid to staples theory here. A prominent resource-based analysis of Canadian political economy is the staple(s) theory/thesis/approach (Innis 1956; 1967; Watkins 1967). Particular attention is paid to this body of literature here, as an extractive, resource-based economy has been, and largely still remains, central to Canada’s economic and political development. While staples theory has been met with a fair share of criticism, both proponents and critics must acknowledge the dominance of this discussion in the socio-historical fabric of Canada’s colonialist expansion, and thus its importance to situate pork production in Ontario. As later chapters of this dissertation will explore, as in the past, export-oriented Canadian production is imperative to the pork industry. A central theme within the staples approach is the production/extraction/capture of relatively unprocessed goods for export (Watkins 1967). These goods, once exported, necessarily impact the home economy and thus, as Innis claimed, the social and historical foundations of the exporting nation. The trade ships travelling from Britain to pick up staple goods were often filled with labourers set for Canada, which led to further economic expansion and diversification (Innis 1956; Spry 1999). Innis (1967) also acknowledged the importance of affluent metropolitan demand in colonial Britain, as many of the goods produced in Canada were seen as luxuries. This demand was central to the further development of staples-based production/extraction (Watkins 1967). Because demand by an affluent population necessitated the further entrenchment of a staples-based economy in Canada, Innis notes that the entire economic history of Canada is one of discrepancy between “the centre” (Britain, and later US) and “the margin” nations (Canada, and other colonies) (1967:18).

Bertram discusses the relationship between the motherland and her satellite nations by outlining the development of a staples-based economy (Bertram 1967). Further demarcating the progression of staples production, Bertram (1967) claims that growth within the Canadian industry sector required the development of primary and secondary manufacturing. This progression is also telling of the steps needed to successfully sustain a home economy (analysis of this in Ontario and the Maritimes and Quebec will follow). Seen as the final step in staples production, primary manufacturing involved relatively minor processing of domestic resources/inputs for export (Bertram 1967). Secondary manufacturing emerges with a higher level of processing. What is integral to both the establishment and continued success of secondary manufacturing is the greater dependence on domestic markets (Bertram 1967).
While Canada officially became a dominion in 1867, this landmark year also signalled the establishment of the *British North America Act of 1867*, which joined Britain and North America politically (Bertram 1967). While I will not spend much time here outlining the trajectory of Canadian railway development, this development is important to contextualize how the push and pull of politics and economics helped to re-shape Canada (Innis 1967). Acknowledging the period of time “when wheat was king” (C.C. James quoted in Mackintosh 1967:12) brings light to the heavy-handed push for railroad construction and thus the further development of historical staples-based economies. The creation of a national government was the first step towards fostering the industrialization of Canada based on a protectionist tariff (Fowke 1967). Here, it is clear that the form of production was indeed connected to political policy, which in turn fostered economic growth and the further perpetuation of staples-based production. This is an example of Canadian political economy at work. *The National Policy*, established in 1878, was a system of protective tariffs to strengthen Canada and Britain’s relationship in response to the increasing “north-south pull of US markets” (Bertram 1867:204). The construction of a railway system allowed wheat to travel quickly to ports for export, while permitting further expansion into the Western prairies (Bertram 1867). With Canada’s full autonomy not brought into policy until 1931, through the signing of the *Statute of Westminster*, it is clear that the entrenchment of British political thought and ideals were well enmeshed in a newly-formed Canada.

There is some overlap between staples theory and the food regime literature, regarding the broader historical and political influences that have shaped production of food and food products more specifically. Natural resources have been a central component to the development, and progressive success, of the Canadian economy, and thus Canadian nationalism and identity. However, while Innis was a leading voice in staples theory, he also felt that staples exports to foreign markets in the UK and the US served to “falsify” (Stamps 1999:59) Canada as the social and geographical context of staples commodities were not included in the price of the goods. Because staples were seen as commodities, they were falsely defined by their quantity and price only. By relying on single source commodities that were largely natural resources, Innis asserts that Canada had placed itself in a weak partnership with Britain and then the United States. Innis further analyzed the status and relationship of Canada as a staple exporter in a dialectical manner. Because trade between the UK and the US only occurred under stable conditions, the exchange of goods required lengthy shipping times, and the development of trading posts within Canada that served to reshape the “economic and political landscape” (Stamps 1999:109) of Canada as an exporting nation. The dialectical relationship between Canada and the nations it exported to, and the resultant impacts that external demands had on the Canadian geographic, political, and economic landscape also caused Innis to note that throughout its history, Canada has moved “…from colony to nation to colony” (Innis, 1956:405; Spry 1999), noting that the axis of hegemonic global power has
shifted over time.

Despite the relative success of staples-based development within Canada, sustained successes were not widespread. As illustrated by Winson’s (1985) study of development in Ontario and the Maritimes and McCallum’s (1990) analysis of Ontario and Quebec, both of which will be outlined more fully in Chapter 4 on pork production, sustained growth requires the capacity to shift and diversify markets (Watkins 1967). Staples production needs to grow rapidly enough to establish linkages and diversity into entrepreneurial and manufacturing sectors in order to sustain growth (Watkins 1967). Those places unable to diversify fall victim to the short-lived boom and eventual bust of a “staples trap” (Watkins 1967:63).

Past Agricultural Production in Ontario:

Having outlined the historically-tied periods of ideological power that set the framework for the political and economic conditions of the present food environment, attention must now be paid to some of the unique production practices that have evolved within Ontario.

Jones’s (1946) book on Ontario’s agricultural history, while dated, provides substantial insight into Ontario’s agricultural production from the 1600s to just after Confederation in 1880. Jones (1946) notes that late 1860s marked a pivotal time in the economic shift of Ontario’s agricultural sector. Jones (1946) states that the dissolution of the US Reciprocity Treaty in 1866, and the production of peak wheat, alongside the establishment of the alternate agricultural sectors such as livestock rearing, emerged during this time period. As noted, natural resources, best outlined by the many re-iterations of Innes’ staples theory (1956) have been a central component to the development and success of the Canadian economy, and thus Canadian nationalism.

Another theme of considerable importance within the political economy of agriculture literature points to the role of capital in establishing historical processes for further capital accumulation (Winson 1985). Speaking specifically to the Canadian wheat boom of the 1870s, Winson (1985) argues that the creation of a home market for produce, and thus capital accumulation with the early industrial development in Ontario, was important for the development of agriculture. However, where the home market was absent, as in the Maritimes, agriculture was disadvantaged as Maritime farmers were unable to diversify their sources of production. The creation of a home market, and the establishment of forward and backward linkages to the agricultural sector, as well as industrial manufacturing, provided the internal sources of capital and thus the basis needed for future development and further capital accumulation in Ontario (McCallum 1980).
Of notable importance to the context of economic history within Canada and the sustained growth of agricultural products from pre-Confederate Ontario is the *Reciprocity Treaty* spanning from 1854 to 1866 (McCallum 1980). At a time when wheat made up more than half of all exports from present-day Ontario, the Treaty eliminated tariffs between British colonies and the United States (McCallum 1980). In the comparative study of pre-1870 development of Ontario and Quebec, McCallum (1980) notes that the more favorable climate conditions and the relative success from the boom on wheat exports provided sufficient capital for Ontario to diversify its agricultural production. Here, comparing the agricultural successes of Ontario to both Quebec and the Maritimes infers a relative avoidance of a staples-trap (McCallum 1980). The ability for Ontario to diversify its production was further enhanced by the development of a home market, which the Maritimes and Quebec failed to establish (Winson 1985; McCallum 1980).

McCallum (1980) also recommended that if a staples approach is to be followed within Canadian resource production, it must be modified so that production is meeting an existing demand. Here, it is determined that “cumulative causation” (McCallum 1980:111) be factored into staples production. “Cumulative causation” (McCallum 1980:111) is based on the notion that aggregate income and population tend to widen over time. This notion is further echoed by the linkages and dependency that farming directly has with industry and the presence of an urban population (Winson 1985). Such growth over time, further compounded by Ontario’s ability to capitalize and diversify its production, thanks to the wheat boom in the 1870s (Winson 1985; McCallum 1980), is telling of the rich and complex socio-political changes that have framed our current production practices and types, such as hog production. Even today, many hog producers have noted the importance of the rich, resource-based “Canadian story” (Perry; Parker).

**Role of Feed Mills:**

As noted, wheat production was of central importance to Ontario’s early development. However, it is also important to note the integral relationship that existed between cropping and livestock (Derry 2001). Derry notes that a symbiotic relationship developed between crops and animals. Crops, which needed natural animal fertilizers to flourish, also provided forage for animals (Derry 2001). While I focus on hog *production* within this chapter, it is imperative to first flesh out the role of commercial feed production. Modern industrial hog production could not take place without the availability of industrial livestock feed. The modern method of intensive livestock production is prefaced by the modern method of feed production and distribution.
As both animal unit densities\(^8\) (Canada Pork International 2011), and single species specialization increases, farmers, often referred to as producers or growers (Stull & Broadway 2004, Canada Pork International 2011), are increasingly reliant on shipped-in feed from feed mills. Large land-locked hog production sites, are able to far exceed the number of head of hogs that could be supported off the land that confined hog barns are built upon. Because feed is so pivotal to the broad-scale production of meat animals, there is a substantial amount of research on how feed inputs can be better supplemented to reduce costs. Those producers purchasing feed grain or feed ration from the open market must also compete with the increased domestic and global demand for corn for biofuel production. For hogs in particular, dried distiller grains (DDGs), the spent grain from ethanol production is currently being used in hog rations. As feed is jointly integral to hog production and arguably the most expensive input for producers, there is an increasing aim to derive more output on less input. Franklin outlines this tragic slippery slope further stating that feed is increasingly being supplemented with cheaper fillers – from manure from poultry housing and industrial sewage, to “cardboard, newspaper, cement dust and plastic” (1999:142). Canada’s primary policy concern for agricultural productivism (MacRae 2012) is illustrative of policy based upon a simplistic input-output model (Waltner-Toews & Lang 2000). This model is based on the idea that a general increase in production (input) will result in an increase in health (output) (Waltner-Toews & Lang 2000). A similar comparison can be made with animal feed. When literal waste, such as feces and garbage, are being used as an input for hog growth, production based upon this oversimplified model has manifested itself as a broken agricultural system. Production and consumption no longer compose two moments of a totality as Marx (1887) contended, but rather serve as innovative sources of profit, based on artificially-cheapened agricultural inputs.

The prominence of corn grain within hog rations can be traced back to the 1920s. During this time, hog farmers feeding their pigs corn were able to put more weight on their animals, faster (Stull & Broadway 2004). As corn-fed hogs were also noted to have an improved taste, there were numerous financial benefits to raising hogs on corn (Stull & Broadway 2004). At the abattoirs, physically larger pigs commanded a larger price premium. Fattier hogs allowed for more meat and more rendered lard per animal, and thus higher profits per pig as well (Stull & Broadway 2004). Corn as a feed, even today, is deemed as one of the best feeds in terms of both value and conversion rate (Derry 2001; Canada Pork International 2011).

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\(^8\) Canada has a relatively low hog density rate at 0.2 head per hectare in comparison to the Netherlands at 15.5 head per hectare (Canada Pork International 2011).
Modern Pork Production in Ontario:

Having provided some historical context for the presence of livestock production in Ontario, this section will outline the conditions that shape the current and dominant forms of hog production in Southwestern Ontario. Many of the producers that I had the privilege of spending time with for this research were middle-aged, near or already retired; many others noted knowing hog farmers that had left the business. One producer stated,

we drop about half our hog producers every ten years – the seventies, we were twenty thousand, the eighties - ten thousand, nineties - five thousand, and now about sixteen hundred. This number will shrink again. I’ve got four kids, only one is maybe interested in hogs – there’s lots of other opportunities that don’t make kids smell like I do most days (Porter).

The trend for fewer producers is also being echoed in Canada more broadly, with close to 30,000 hog farms producing an average of 340 animals in 1991, to under 7,400 hog farms producing an average of 1,700 animals in 2011 (Statistics Canada 2012).

In addition to the detrimental trend of older and fewer farmers (and not just in hog farming) is the alarmingly disproportionate value of hog farms. Hog farms have the highest proportion of farms producing $1 million dollars, or more, in cash receipts, at 17.8%; more than any other farm type in Canada (Statistics Canada 2006). Here, the split between highly productive and profitable hog farms can be seen, as there is a trend for larger, and as it appears, much more lucrative operations.
Table 6 Value of farm receipts in Canada, 2006 Agricultural Census. Table sourced from (http://www.statcan.gc.ca/ca-ra2006/articles/finpicture-portrait-eng.htm).

<table>
<thead>
<tr>
<th>Farm type</th>
<th>Number of farms</th>
<th>Less than $25,000</th>
<th>$25,000 to $99,999</th>
<th>$100,000 to $249,999</th>
<th>$250,000 to $999,999</th>
<th>$1 million and over</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy</td>
<td>14,651</td>
<td>3.4%</td>
<td>6.7%</td>
<td>32.6%</td>
<td>52.8%</td>
<td>4.5%</td>
<td>100%</td>
</tr>
<tr>
<td>Beef</td>
<td>60,947</td>
<td>38.3%</td>
<td>36.3%</td>
<td>17.0%</td>
<td>6.9%</td>
<td>1.4%</td>
<td>100%</td>
</tr>
<tr>
<td>Hog and pig</td>
<td>6,040</td>
<td>7.7%</td>
<td>13.4%</td>
<td>21.8%</td>
<td>39.4%</td>
<td>17.8%</td>
<td>100%</td>
</tr>
<tr>
<td>Poultry and egg</td>
<td>4,578</td>
<td>27.8%</td>
<td>6.3%</td>
<td>9.3%</td>
<td>41.1%</td>
<td>15.4%</td>
<td>100%</td>
</tr>
<tr>
<td>All other animal</td>
<td>30,594</td>
<td>65.1%</td>
<td>22.0%</td>
<td>7.9%</td>
<td>4.2%</td>
<td>0.9%</td>
<td>100%</td>
</tr>
<tr>
<td>Field crops</td>
<td>91,277</td>
<td>35.3%</td>
<td>28.9%</td>
<td>19.8%</td>
<td>14.5%</td>
<td>1.5%</td>
<td>100%</td>
</tr>
<tr>
<td>Fruit and vegetable</td>
<td>12,532</td>
<td>51.8%</td>
<td>23.3%</td>
<td>12.6%</td>
<td>9.8%</td>
<td>2.6%</td>
<td>100%</td>
</tr>
<tr>
<td>Greenhouse, nursery and floriculture</td>
<td>8,754</td>
<td>47.7%</td>
<td>20.4%</td>
<td>12.0%</td>
<td>12.3%</td>
<td>7.5%</td>
<td>100%</td>
</tr>
<tr>
<td>All farms</td>
<td>229,373</td>
<td>38.5%</td>
<td>27.0%</td>
<td>17.4%</td>
<td>14.4%</td>
<td>2.6%</td>
<td>100%</td>
</tr>
</tbody>
</table>

A similar sentiment was also echoed by many of the producers, both large and small, with whom I spoke. Many felt that the future of the industry would be marked with increased consolidation, and a steadily decreasing number of producers. One industry interviewee noted that we can expect fewer, smaller farms, stating “… it’s just the scale of production, right – the nature of the beast” (Irene). I hope to provide fuller context below for why, in light of increasing volatility, export-dependency, increasing regulatory requirements, and processor-led initiatives, there is a trend for larger, more efficient, hog operations in Southwestern Ontario.
Types of Pig Production:

Within the Canadian hog industry, there are a number of different types of production sites or farms. There are also different forms of production: commodity-hog producers and niche producers. For this section, the edited volume of *Whittemore’s Science and Practice of Pig Production* (Kyriazakis & Whittemore 2006), which is a leading and comprehensive overview of pork production practices, has been an invaluable resource to equip me, a social scientist with no farming background, with appropriate industry-oriented language throughout this project. I would also like to acknowledge the many patient farmers who assisted with terminology here, after asking exactly what part of the city I was from. The counties and the producers that I canvassed in Southwestern Ontario are illustrated by a variety of production sites/farms. Each of these types of production sites is scalable and flexible; one particular type of production is not reflective or indicative of the size of production. However, Ontario Pork reports that, around 40% of all hog producers in Ontario, market between 500 – 3000 pigs per year (Ontario Pork 2015a). I will outline the most commonly-found types of production sites; however, I was informed early in my interviews that there are “…a thousand ways to do pigs” (Patricia). These types of farms/sites include:

Farrow-to-Finish:

Farrow-to-finish is a fully integrated approach to production; producers maintain gilts (female pig that has not yet given birth to her first litter) and/or sows for breeding. Boars are sometimes kept for breeding, but artificial insemination (AI) is also often used for breeding, with many Ontario companies specializing in frozen boar semen for shipment such as FastGenetics, EastGen, and Genesus. Similar insemination models exist for dairy and beef cattle as well. Producers oversee impregnation, farrowing (birth) of piglets, and will raise weaned piglets to market weight for slaughter. Based on the breed being used, the length of time from farrow-to-finish ranges from under six months to over fifteen months, as was the case with one producer raising wild boar for specialty butcher shops and upscale restaurants. Farrow-to-finish sites was the most common model of production represented by interviewees. Many of these farmers had smaller herds, and oversaw all aspects of the pigs’ lives. Many of the farmers who operated farrow-to-finish sites emphasised their preference to control all components of production.
Farrow-to-Wean:

In farrow-to-wean production, producers maintain sows for breeding, and raise piglets until weaned-off sow. As in farrow-to-finish production, boars are kept or AI is used. The length of time in which piglets wean largely depends on the type of operation, but can range from a few days (Ménard 2015), so that sows can be re-impregnated, to up to 10 weeks. Lawrence and Stott (2010) note that within sustainable hog production, the natural weaning period lasts up to 17 weeks. This would also be the first stage within a multi-site/three-site production loop, which is further outlined in Chapter 6.

Figure 9 Sows/gilts within gestation crates, having AI applied. Photo source: Knox, Willenburger and Miller (2016).
**Nursery:**

A nursery is a barn where weaner pigs are held until moved into feeder/finishing barns. This would also be the second site in a three-site production loop. The shift to three-site production underscores the separation of immunologically-weaker younger pigs from adult pigs to help manage and prevent disease transmission (Harris 2009). None of my interviewees were employed on, or operating, a weaner nursery barn.

**Wean-to-Finish:**

In wean-to-finish production, producers do not maintain sows for production; piglets are farrowed at another site, often at a farrow-to-wean operation. Producers will receive/purchase young pigs (often called weaners or weanlings) and raise them until market weight for slaughter.

![Figure 10 Young pigs that have been weaned. Photo source: Agricultural Photo Library (Farm & Food Care 2016).](image)

**Feeder/Finisher:**

The feeder/finisher barn is the last stage of growth for markets hogs before slaughter (Brisson 2014), and the third stage in a three-site production loop. Hogs are leaned-down to ensure a processor-mandated lean index grade, which includes a probe of the carcass to calculate what is called the “percentage yield” (Indiana). A leaner hog based on grade index will result in a monetary bonus for the
producer. Fattier hogs based on grade index will result in a penalty; a percentage of the price is docked from producer cheques. Lean hog production has been a prominent factor for commodity-hog producers; however, many of the producers of lean-hogs feel that too much fat has been bred out, resulting in a less palatable cut. When asked why they felt there was a push toward continuous leaning, many producers claimed that it was the health-conscious, fat-fearing consumer’s pull on the industry. However, there is discussion in Chapter 7 on marketing/retailing that points to further-processors as a major influence in the leaning of hog carcasses. Further-processors, or downstream-processors, like Maple Leaf Foods in Ontario, are shifting toward value-added processing rather than expansion of kill/pack plants. The takeover of Maple Leaf’s Burlington, Ontario plant in 2009-2010 by SoFina Foods, marked the end of Maple Leaf’s claim on kill plants/primary processing in Ontario, despite having been the largest capacity kill plant in the province. With over 70% of all processed meat in Canada, such as cold cuts and sausages, made with pork (Agriculture and Agri-Food Canada 2014), there is reason to believe that much of the hog leaning permits the production of a high-volume, cheap protein input for more profitable further-processed goods.

Boar Stud:

A boar stud refers to a sexually mature, uncastrated, male hog kept for breeding stock (Canada Pork International 2011). Some producers will keep a boar as a part of their herd; however, most commercial production sites use AI. Top-stock genetic boar semen, from 34 governmentally-approved insemination centres, is frozen and shipped globally to over 40 countries (Canada Pork International 2011). Canada, in particular, is well-renowned for high-quality breeding stock with a number of genetics companies specializing in large litters per sow, and high feed-conversion rates (Canada Pork International 2011).

Commodity-hog/ Conventional production:

This type of production is typically performed in indoor facilities, with high-volume, low-margin production. While there exists a substantial sector of the pork industry based in genetics, and breeding stock for domestic and international herds, I do not spend a great deal of time on this form of production in this thesis. However, the breed of pig frequently came up throughout the course of the interviews, and there are marked differences between breeds chosen for commodity-hogs versus niche-hogs. However, particular breeds are chosen based on desirable market traits, such as feed-conversion rate, in-barn durability, high litters, and leanness. Niche-hog breeds are also chosen based on desirable traits suited to
smaller-scale production, such as high pasture-conversion and motherliness

The type of pig produced in this conventional form of operation is also rather standardized, with a number of my producer interviewees reporting raising a three-way cross F1 breed, a Landrace crossed with a Yorkshire female, bred to a Duroc boar (Parker; Packard; Pamela; Pierre; Pearce; Canadian Swine Breeders Association 2015). This blend of genetics is touted as the premium hybrid for commercial production as the pigs have strong feet and legs, able to withstand slotted concrete floors, and is “the most uniform commercial growing finishing pig, as well as the most consistent carcass in the slaughterhouse” (Canadian Swine Breeders Association 2015). This variety also has optimal feed-conversion rates (optimally around 2.75 lbs of food to add 1lb of pig), allowing for market-weight hogs (about 220-240 lbs) in under six months from farrowing (OMAFRA 2015). A more average feed conversion rate rests at around 3lb of feed to 1lb of meat produced (Essig 2015). Broiler chickens, which have seen a substantial decrease in feed-conversion from 3:1 in the 1940s to modern estimates of under 2:1 per pound of live weight of bird (Boyd & Watts 1997), also illustrates the commercial meat industry’s trend to derive more output on less input. In addition to the notion that housing pigs indoors was for their own safety, technological improvements to housing structures have also been paired with an improved feed-conversion rate. In addition to these highly desirable traits for large-scale production, commercial F1 hogs have been bred for leanness. Fat, particularly intra-muscular fat, which is desirable for high-end retailers, takes more energy and thus more feed to put on (Pierre). Producers must produce lean carcasses as it “costs more and [we] are paid less” (Pierre) from the processor when fatter carcasses enter the processing line. While a fuller discussion on the marketing of commercial pork will unfold in Chapter 6 on retailing, many producers felt that there was a need for there to be more consumer education on how pork could be integrated into the diet, and thus spike domestic demand. Another area of contention between producers, production for export, alongside importing, is the use of ractopamine (Pay-Lean). Ractopamine is an oral feed additive used during hog finishing (as well as finishing turkeys and finishing cattle), that increases feed efficiency and permits hog leaning. Many international markets such as Russia and China have banned its usage in meat production, leaving Canadian pork without market access.

Niche-Hog producer:

This type of production tends to follow a low-volume, high-margin model. In comparison to the commodity-hogs that are largely some blend of Yorkshire/Landrace/Duroc, and at times Pietrain breeds

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9 Multiple niche producers mentioned the extreme care their Tamworth sows took when laying down, taking upwards of 5 minutes to lower themselves to ensure piglets had ample time to clear her massive body.
10 Many producers mentioned that there was an increasing preference for heavier hogs from processors, with some hogs weighing closer to 300lbs. One producer noted that this trend exists because processors are able to make more money per pig, whereas he loses money in feed costs, to add 50lbs of extra weight per hog (Packard).
(Canada Pork International 2011), there is a much greater variation of breeds used in niche-production. Certain breeds, such as the Tamworth are favoured by those engaging in pastured-raised production as this breed is able to derive most dietary requirements from pasture (Patrick). Piglet crushing is a persistent issue within the hog industry, and has been the part of the reasoning behind the implementation of farrowing crates or dry sow stalls for farrowing. There is changing legislation on sow dry stalls, which will be laid out more fully below. Different types of heritage breeds tend to grow much slower to market weight, like the wild boar pictured below, and will take upwards of 15 months from farrowing to reach market weight (Paul), more than double the time needed to grow a commodity hog. Unlike the commodity producers who largely struggled to connect the consumer with their pork, the three niche producers I spoke with were unable to keep up with the demand for their more expensive pork. One producer stated that the demand for his product is so high, that customers have learned his delivery routes to ensure they can purchase his pork as soon as it is unloaded at the butcher shop (Paul). Another producer mentioned that, “based on demand, markets tells me I should charge more, but I don’t want an elitist product, you should be able to eat good food that’s affordable” (Patrick).

Figure 11 Wild boar sow with piglet as one example of a niche-hog. This particular producer sells to select butcher shops, and high-end restaurants in Toronto. Note their thick, bristly hair, which allows the pigs to better handle the elements. Photo by author
An additional consideration for types of production is whether the producer is in land-based or land-locked production. In land-based operations, producers are able to offset some of the costs of feed, which has unanimously been reported amongst my interviewees, as the most costly input for production, by growing cash crops either to integrate with premixed vitamins and minerals to create their own pig feed, or to sell to feed mills for profit. Land-locked producers are required to buy feed at the current market cost as there is no cropping to offset costs. The cost of feed is largely tied to the market price for corn – the largest proportion of the pig ration- and is therefore a volatile input for producers to budget for. The often unpredictable cost of production creates dire pricing schedules for producers who may be unable to hedge monthly expenses/incomes. One producer noted that his type of production site is what allowed him to stay in pig production, stating that “the only reason we’re still in pigs is because we’re farrow-to-finish and land-based, we can kinda manage our risks that way, because [we] have the acres to grow to feed the pigs, but if we were, say, land-locked, and had to buy in all our feed at cost… we might not still be in pigs” (Parker).

An emergent, yet vitally important concern stemming from producers, industry, and consumers alike is antibiotic usage, and antibiotic residue potentially stemming from on-farm application. While there will be a greater discussion on antibiotic residue in the chapter on Retailing, as there are tests...
performed in-plant to ensure producers are using antibiotics in a responsible fashion, I mention this here, as antibiotic residue served as a perfect bridge to the emergent Le Viandes du Breton brand.

“We do humane pigs”: Les Viandes du Breton:

“Humane pigs” (Pavel & Paula; Ignatius) is the production style mandated by Les Viandes du Breton, a processor/brand based out of Rivière-du-Loup, Quebec. This company has emerged as a tremendous force for their organic, rustic, and naturally-raised pork in the tightly consolidated processor space, on both the processing and marketing side of the pork industry, and will be discussed more fully in the following two chapters, some of the producers with whom I spoke in Southwestern Ontario had or still have contracts to supply pigs to du Breton’s plant. The producers often mentioned “doing humane pigs” (Pavel & Paula; Pierre; Percival). A major source of contention emerged from du Breton’s protocol that states that pigs must be produced completely without the use of antibiotics (du Breton 2015a). Some producers felt that the absoluteness of du Breton’s mandate for zero antibiotics was contradictory to their slogan as being humane. One producer, Percival, mentioned that under his now null contract with du Breton, he was unable to provide antibiotic treatment to an injured pig, and the pig slowly died from infection, which he felt was not humane at all. Another producer mentioned that if producers do in fact give antibiotic shots to sick pigs while under the du Breton program, they are responsible for finding another processor stream to fit these pigs into, as du Breton will not accept them at their Quebec processing plants (Packard). Much like du Breton’s production standards, Ontario pig producers are required to follow three key documents tied to national production standards; these will be outlined next.

Production Standards: Canada Quality Assurance (CQA), Animal Care Assessment (ACA) and National Farm Animal Care Council’s (NFACC) Code of Practice:

The production of hogs in Canada, and thus Ontario is based on three key documents: Canada Quality Assurance (CQA), Animal Care Assessment (ACA) and the National Farm Animal Care Council’s (NFACC) Code of Practice. Each of these documents is federally applicable, and is aimed at effective and efficient hog production. Each of these will be outlined.

Canada Quality Assurance for Canadian Hog Producers (CQA):

CQA is a best practices, federal approach for effective on-farm production, launched in 1998 by the Canada Pork Council. Based on Hazardous Analysis Critical Control Point (HACCP) principles (Canada Pork International 2011; Canada Quality Assurance for Canadian Hog Producers 2004), CQA has become a market requirement as many federally-regulated processing plants require hogs from producers certified by CQA and ACA (Canada Quality Assurance for Canadian Hog Producers 2004). This manual emphasizes food safety principles such as potential sources of biological and chemical
risks\textsuperscript{11} and physical risks such as the presence of broken needles in pork post-processing from shots given on-farm, and how these risks can be mitigated.

**Animal Care Assessment for Canadian Hog Producers (ACA):**

The Animal Care Assessment for Canadian Hog Producers guide was produced in 2005 by the Canada Pork Council (CPC), which is the national voice of the pork industry\textsuperscript{12} and a voluntary program for producers to participate in. Producers must, however, be participating in the CQA program as of January 2012 to take part in the ACA (Canada Pork International 2011; National Farm Animal Care Council 2014). The ACA runs producers through a series of questions to self-assess the state and condition of animal welfare on their particular operation, questions such as “When tail trimming is practiced, is it performed by trained staff within a few days of the pig’s birth and only when necessary?” (Animal Care Assessment for Canadian Hog Producers 2010:2-2). This manual is diagnostic and farmer-centred, allowing producers to assess where their operation fits within the suggested practices. Another key document involved in pork production is the much more prescriptive Code of Practice requirements, outlined next.

**National Farm Animal Care Council’s (NFACC) Code of Practice for the Care and Handling of Pigs:**

The NFACC’s newest iteration of the Code of Practice, published in 2014 with the assistance of Agriculture and Agri-Food Canada (AAFC) and a diverse stakeholder committee consensus\textsuperscript{13} replaces a 1993 version, and will help inform the next iteration of the ACA guide (National Farm Animal Care Council 2014). The Code overviews a number of production processes on-farm, from housing to euthanasia. Each section also overviews \emph{required} and \emph{recommended} management practices. The recommended suggestions are better aimed at improved animal welfare goals, the required guidelines are

\textsuperscript{11} The CQA manual lists numerous risks from cat-borne toxoplasma, to other parasites such as tapeworms that can be passed onto humans through pork consumption. The manual also notes: “Our cold climate, good hygiene, and the fact that we rear pigs indoors, make this risk negligible” (Canada Quality Assurance for Canadian Hog Producers 2004:C-2). Such biological hazards, and not a critique of the massive scale or rate of production, further reinforces the need for completely sanitized, indoor growing facilities for hogs.

\textsuperscript{12} Part of the CPC’s funding is derived from the Licensing Fee that is universally collected from producers by Ontario Pork – the provincial marketing board. The Licensing Fee is 95 cents for each hog that is produced in the province. This fee goes to research and development, marketing, and the CPC lobbying efforts (Izra). Izra informed me that Ontario produced about 5.1 million hogs in 2014 and was projected to produce close to 5.4 million hogs in 2015. This would result in a budget of well over $5 million dollars collected from Ontario pork producers from this mandatory licensing fee alone. One producer stated that the fee was collected “because they can… somebody’s building an empire” (Patrick).

\textsuperscript{13} The Code of Practice states that a consensus was established, but that “consensus results in a decision that everyone agrees advances animal welfare, but does not imply unanimous endorsement of every aspect of the Code” (National Farm Animal Care Council 2014:4).
“a regulatory requirement or an industry imposed expectation” (National Farm Animal Care Council 2014:3) to which producers are expected to adhere. Similar guides are also available for other livestock industries from veal and turkey, to fox and mink for fur. The new mandate for sow housing has provoked a vocal and vibrant discussion amongst both farmers and animal welfarists/activists\textsuperscript{14}.

The changes to sow housing, for all producers, was an intriguing point of conversation. Sows in CAFO-style production sites are moved between gestation crates (Figure 13) and farrowing crates (Figure 17) throughout their lives. The gestation crates allow for each sow to be individually fed and inseminated as needed. Sows will remain in these feeding crates until farrowing, just under 4 months from successful

\textsuperscript{14} Many of the producers noted that there was a stark difference between welfarists, whom they could work with on making improvements, and activists, whom they felt touted a “vegan agenda” (Iris, Ibrahim, Pamela, Perseus) which ultimately sought to remove all animals from all forms of agriculture.
insemination (Canada Pork International 2011). At this point, sows are placed in farrowing crates which are equipped with an anti-crush roll bar, and an adjoining creep area for piglets, once born. Whether highly in favour of the switch to more naturalized housing, or strongly opposed to the idea that the changes were “ridiculous” and stemmed from people who have “never been in a barn and don’t know how it’s done” (Poppy), this is an emergent change that will need to be monitored well into its final implementation date of July 1st, 2024 (National Farm Animal Care Council 2014) allowing time for newer barns to be retrofitted or older barns to be replaced. As of July 1st, 2014, all newly-built barns must house sows and mated gilts in group housing, and stalls may only be used up to 28 days after last day of breeding to prevent miscarriage (National Farm Animal Care Council 2014). In comparison to gestation crates, loose group housing allows sows to be in group pens. Sows in group housing can be fed in two main ways: Through electronic sow feeders (ESF) or a competitive feeding system (Prairie Swine Centre 2016a; 2016b). In competitive feeding systems, which include stall, floor, and feed tube systems, feed is dropped and distributed throughout the group (Prairie Swine Centre 2016a). Because this system dispenses feed group-wide, there can be increased aggression between sows as they compete for feed rations (Prairie Swine Centre 2016a). This feeding system requires less time and money, particularly in barn conversions, as existing feeders can be used (Prairie Swine Centre 2016a). In contrast, ESF systems are much more technologically advanced, and require sows to be trained on their use (Prairie Swine Centre 2016b). Individual sows can have diet profiles tailored to their needs; trained sows will enter feeding stalls where their personalized rations are dispensed (Prairie Swine Centre 2016b).
Many of those in favour of the benefits of loose sow housing were or currently are on the du Breton “humane pigs program” (Pavel & Paula), had a similar system already in place in their barns, or were accustomed to this type of production as they felt it was better for the health of the sows. Many of the mandated changes require the producer to better manage the animals, and thus will require more labour inside the barns. One commercial producer, who had used loose housing before any changes to production practices were in talks, stated “I like to have the pig happy – when you’re living with pigs as long as I do, they have their own language, and they will tell you, you know what it is that’s wrong – a fight, or one being crushed - they’ll tell you whether they’re happy” (Percival). However, in-barn labour and the availability of sourcing hard-working help were reported as problematic by a number of the producers interviewed. Grier (2007) claims that access to a quality labour force is a critical factor in

Figure 14 ESF system within a dry group/loose housing system. Figure source: Prairie Swine Centre (2016b).
determining the future competitiveness of Canada’s hog industry; however, this particular report was written prior to the closure of Quality Meat Packers (QMP) in 2014. While access to labour is undoubtedly important to the vitality of the Canadian hog industry, consideration of the squeeze on packing space would have impacted this report’s findings. There may, however, be an opportunity to further investigate the role of skilled herdsmen in-barn, and the potential for training programs to better equip young and emergent hog farmers to the smells and sounds of distressed hogs during barn work, thus resulting in improved animal management.

While many of the producers I spoke with were displeased with the changes to loose sow housing, many also admitted that either system – loose/group housing or stalls/crates have both benefits and downsides to production. Producers were confident that they could weather the changes, and make it work, again reaffirming the strong, independent work ethic that many farmers maintained as unique to Ontario-based producers.

Farrowing Day:

Another layer of complexity to the different forms of production is the manner in which sows are assisted/not-assisted during the birthing or farrowing of their piglets. This is a particularly labour-intensive part of pork production, especially for commodity- hogs where piglets are given iron shots, have their wolf or needle teeth clipped, tails docked, and male pigs are castrated within days of farrowing (Canadian Pork Council 1975). Niche-hog producers may do a combination of the above – one producer with whom I spoke does not interfere with the piglets at all; others have chosen to dock tails or clip teeth on occasion. An interesting theme that emerged here surrounds the bodily conditions of sows farrowing, as well as their housing conditions. One producer, Patrick, informed me that his pasture-raised sows will separate themselves from the group to birth their piglets, and return a few days later. He stated that because his sows are able to move freely throughout the acreage, they develop adequate pelvic muscles to birth piglets naturally. He stated that “farrowing day is no one’s favourite day” (Patrick) in the commodity side of the industry, as commodity sows’ muscles are so weakened due to their confinement in stalls that farmhands need to be present the moment the sow goes into labour to essentially pull the piglets out of her body. The sow is unable to push her litter through the birth canal under her own strength, and if manual assistance is not present to intervene, the piglets can be stillborn. This sentiment was also echoed by commodity producers raising commodity sows in loose housing. Though completely indoors, the sows are set-up in group housing in pens, which allows for walking and other movement, and which again serves to build these pelvic muscles and assists in farrowing.
Figure 15 Dry sow group/loose housing with a competitive-style feed tube system with trough. Photo source: National Sow Housing Conversion Project (2016).
Batch-Farrowing:

Due to the intense labour requirements needed during farrowing, there is an industry trend, particularly within larger production sites, towards batch-farrowing. Here sows are scheduled into labour so that all piglets are born over the span of a single week (Ménard 2015). Rather than having sows constantly go into farrowing, one week a month is scheduled for sow and piglet labour. Ménard (2015) claims that there was an industry standard for producers to induce sows into labour after a 114-day gestation period. Producers are able to cut labour costs (when hiring labour in the first place) by knowing exactly when farmhands/in-barn work is needed. Much like the efficiency of splitting up production sites into specialized components of the pig lifecycle, batch-farrowing allows for greater control of biological phases which would otherwise require more in-barn management.
Split-Suckling:

Due to the advancements in genetics, there is a greater push towards increased sow productivity, including greater litter sizes (Brisson 2014). While a typical sow has between 14-16 teats, many genetics companies claims that their stock consistently births litters of 14-24 live piglets. There is an obvious miscalculation here. Litter variation will also see the emergence of different-sized piglets (Ménard 2015). Larger and stronger piglets vie for teat order, and often feed better than smaller, weaker piglets – a sort of pig pecking-order is established quickly after farrowing (National Farm Animal Care Council 2014). As a result, in commercial operations, piglets may often be reorganized into like-sized groups, and may not be nursed by the same sow that birthed the piglet (Ménard 2015). Split-suckling and piglet reorganization is another reason why sows are scheduled to farrow, so that all sows will be dropping milk at the same period of time. One producer stated that the movement of piglets between different sows for optimal nutritional intake in conjunction with the anti-crush rails of the farrowing crates allowed his operation to “save every piglet” (Pablo).
Figure 17 A modern barn farrowing dry-stall for farrowing sows. The sows are given enough room to stand up and lie down. Higher-tech crates will also have a fan to blow onto piglets when it senses the sow is lowering to encourage piglets to get out from under sow. Photo provided by producer.
Figure 18 Pastured Tamworth sow, with 10-day-old piglets in tall grass on the left side of photo. Photo by author.

Figure 19 Unlike the farrowing dry-stall in Figure 10 above, where sows go just before giving birth, to-be fertilized gilts and sows spend the remainder of their life in individual feeding crates known as gestation crates. Photo provided by producer.
Areas of Contention – Even Amongst Producers:

Castration/Boar Taint:

The NFACC’s Code of Practice outlines the in-coming legislation in the castration of male piglets. This procedure is typically done within 7 days of birth to male piglets, to avoid the development of boar taint. Boar taint is caused by the release of the reproductive hormones androstenone and skatole from intact males that have reached puberty (European Food Information Council 2015). Pork from uncastrated, sexually-developed male pigs can create a foul smell during cooking and produces a much more gamey taste. One couple with whom I spoke mentioned that the criticism they face for castrating male pigs could be completely avoided if there was more marketing available to educate consumers on this type of meat, and possibly create a market for it. Pavel and Paula, farrow-to-wean producers, stated that increased consumer education on boar taint “…could really help us a lot, to create a market for it here [in Canada]”. Another producer, while in favour of many of the “common sense” (Percival) points within the Code of Practice, felt that the recommendation for providing painkillers for castration was unreasonable.

With the European Union’s (EU) outright ban on all pig castration predicted to be in place by 2018, international pork producers are currently researching two alternate methods: immuno-castration and production of intact male hogs (Epp 2015). Immuno-castration involves vaccination that delays the onset of puberty until after the projected slaughter time (Epp 2015). Immuno-castration, also called “immunization against boar taint” (National Farm Animal Care Council 2014:33), has seen a slow industry uptake in Canada, despite its usage in many European nations (Epp 2015). The second method, production of intact males, poses potential welfare challenges, as male hogs tend to be more aggressive than females (National Farm Animal Care Council 2014). However, despite the negative attention that male hog meat is tainted, retail success has been reported in the Netherlands (Epp 2015). As the 2018 EU deadline is still speculative, it is unclear how Canada’s participation in the Comprehensive Economic and Trade Agreement (CETA) with the European Union will be impacted, or if the current Code of Practice which allows for castration will require revision.

Tail Docking of Piglets:

In CAFO-model production sites, pigs are unable to access outdoors and are largely under-stimulated (National Farm Animal Care Council 2014). While there is debate on the intelligence level of pigs, there is agreement that crowded indoor pens can result in tail-biting between hogs (National Farm Animal Care Council 2014). Tail-biting can range from mild bleeding to massive abscess development along the anus and spine which can result in paralysis and death (National Farm Animal Care Council
2014) if not noticed and treated promptly. Paul felt that there was substantial misinformation surrounding tail-docking, which he did to his commodity hogs. Paul stated that the 1/3 of the tail that he clipped would bleed when cut, but that it was painless to the piglets. While the Code of Practice broadly states that producers should perform docking “when necessary” (National Farm Animal Care Council 2014:34), there is a large emergent industry surrounding the development of enrichment toys to deter tail-biting and fighting between severely under-stimulated hogs, particularly in line with the NFACC’s required guidelines that “pigs must be provided with multiple forms of enrichment that aim to improve the welfare of the animals through the enhancement of their physical and social environments” (National Farm Animal Care Council 2014:19). In comparison, a niche producer felt that his pastured hogs, with full tails, were engaged enough by their ability to move, root, and dig, that enrichment toys and tail-docking were not needed on his farm.

Wean-Time and Influence on Health of Animal:

While this was not a prominent theme that emerged from the interviews, wean-time is well worth considering here as an area of contention. Weaning is when piglets are feeding off-sows. As noted, in commercial production, piglets may be rearranged and paired with like-sized piglets from other litters and to fill in gaps in litter size if a sow has a particularly large litter. While all the producers noted the need for piglets to wean quickly following birth to ingest the immuno-rich colostrum from the sow, which assists in building the immune system, there was a substantial range in the length of wean-time (Ménard 2015). The niche-hog producers with whom I spoke emphasized the need for much longer wean times, which they felt contributed to healthier piglets and pigs post-wean. One niche producer had mentioned that the commercial industry feeds piglets a plasma meal protein in lieu of sow’s milk following a 14-day wean period. He noted that this, and not barn-to-barn movement, was a major factor in the transmission of PEDv in 2014 that resulted in huge animal and economic losses. Similarly, another niche-hog producer claimed that she allows her piglets to wean for up to 8 weeks post-farrow (Phoebe). Wean-time amongst a number of other production methods, as outlined above, has emerged as an area of much contention between both producers and consumers.

This chapter has outlined some historical context for Ontario’s place in pig livestock production, the many types of production sites, the political and economic pressures helping to shape production, and trends that emphasize a decreasing farmer population, alongside a boom in multi-million dollar barns and sustained pig herd populations. The next chapter is on Processing, where live pigs are quickly and efficiently transformed into pork. This chapter will begin with a contextual discussion on the many business mergers, takeovers, and closures in the primary processing sector (kill plants) in Ontario.
5. Pork Processing in Southwestern Ontario, and beyond

“...Loblaw’s, a Costco, will tell the wholesaler, ‘we’re paying you so much for back ribs,’ it’s not the wholesaler saying, ‘this is what we want for back ribs, or for a pork loin, or bacon, or for a belly or a ham’ - no! Loblaw’s says that, Costco says that, ‘well we can pay you this much and we want to put it on special for $1.88, so we’re going to pay you a buck, we want our margin’, they get their margins, so then a wholesaler says, ‘ooh, no problem, how much do you want, you get it next week’, he turns around tells the packing plant, ‘oh folks, by the way, a buck, minus my mark-up, this is what we are paying you for back ribs or whatever’, packing plant says ‘no problem’ and they’ve got their computer programs and they punch it in, ‘ok works out to so much a carcass’, and turn around and say ‘farmer – this is what you’re going to get’, farmers is sitting there, saying ‘thank you very much’ and that’s how it works...”

(Paul)

“Processors hold the hammer – and are swinging pretty hard” (Philip)

“Well if we’re going to have pigs and not make any money, they might as well be our pigs” (Pierre)

In the preceding chapter, some historical context of pork production in Canada, and in Ontario specifically, was provided. This chapter will further unpack the complexities of the Canadian pork industry by analyzing the meat processing sector of the commodity chain. I outline the current structure and organization of large processing facilities that are capable of pig slaughter and with which producers must engage, and flesh out a fuller understanding of how these facilities have changed over time. In addition to providing some historical context to best frame the contemporary processing scene, I also outline the relevant pieces of provincial, federal, or international legislation that are in place concerning processing.

Ante-Mortem CFIA Inspection:

Once hogs come to market size, they are transported off-farm for processing. Once a trailer of hogs reaches the processing plant, if in Canada, they are unloaded off-trailer into a holding pen. A similar process is also used in US processing plants (PAACO 2015c). Here is also where the initial CFIA inspection of the hogs takes place. It is the responsibility of the truck’s driver to unload the hogs in a manner that prevents slips, falls, or unnecessary stress (PAACO 2015c). Much like the loading process on-farm, if a hog becomes a downer, or non-ambulatory during transit, and unable to move itself, or if it is in visible pain, the hog is deemed unfit for human consumption (Meat Inspection Regulations 1990 SOR/90-288; Canadian Food Inspection Agency 2013b; Haines 2004) and will be euthanized in-truck. The hog must move itself under its own power off the truck, into the holding pens (Canadian Food
Inspection Agency 2013b). CFIA inspectors complete the *Form CFIA/ACIA 1438 – Ante-Mortem Veterinary Inspection Report* (Canadian Food Inspection Agency 2013b), noting the physical conditions of the hogs as they are unloaded at the federal plant.

In cases of extreme weather, or lengthy transit time, hogs can become physically exhausted, and may return to an upright position; however, if the hog does not regain the ability to move under its own power in a timely manner, it will be euthanized either in the truck hauler, unloading ramp or holding pen (PAACO 2015c). There is a stark difference in legislation between the US and Canada here. US processing plants allow plant employees and truck drivers to assist fatigued or immobile pigs out of the way, or off trailer, with the assistance of sleds or stretchers (PAACO 2015c). However, the CFIA requires that no animals unable to move under their own strength be assisted, either requiring a quick return to movement, or be euthanized on-truck (Canadian Food Inspection 2013b; PAACO 2015c; *Health of Animals Regulations* 2015). Once in the holding pens, access to water is provided, and there must be ample room for all hogs present in the pen to lie down at the same time (PAACO 2015c). The capacity of the holding pens will vary based on plant size; for example, Conestoga Meat Packers has an 800-head holding pen capacity. From here, hogs will be led by a handler further into the plant, towards the kill floor. This section will provide a brief historical context of the consolidated Canadian meat-packing sector, which by the 1930s, saw only three national companies in operation (MacLachlan 2001). This will be followed by an overview of the major plants pertinent to producers in Southwestern Ontario.

**Processing Plants:**

**Acquisitions and Exports:**

In reading the historical context for this component of the dissertation, there was a drastic switch in the form of language used to speak about meat processing. Now, the term *processing* denotes both the slaughter (primary processing) and the curing, baking, smoking, and reformulation of meats (further processing). Historically, the term *packer* was used, in reference to the method of curing where salted pork cuts were packed into wooden barrels, and covered in a salt brine to be preserved (Meat Packers Council of Canada 1969; Canada Packers Limited 1943). This marked a significant shift in pork, as its consumption was largely seasonal due to previously ineffective curing and preservation methods. One of the most significant contributors to meat processing in Canada was William Davies.

After the success of his sausage-making stall in the still-standing St. Lawrence Market in Toronto, William Davies established a packing house in 1861, in Toronto, which was capable of hog slaughter and pork curing (Meat Packers Council of Canada 1969). These efforts were foundational as
Davies also set in motion Canada’s bacon\textsuperscript{15} trade with Britain. Davies is also credited with the substantial movement towards improved pig genetics, as his Toronto packing plant offered increased premiums for better quality carcasses (Meat Packers Council of Canada 1969).

The mid 1850s were a time of much development and change. In Western Canada, Pat Burns began the P. Burns & Co. Similarly, Donald Gunn established the D. Gunn & Co., which grew into Gunn Limited. William Harris established the Harris Abattoir Company in 1896 (MacLachlan 2001) with a focus on beef slaughter and processing. The 1885 completion of the Canadian Pacific Railway (CPR), combined with advancements in ice-block refrigeration, allowed packing plants to delay meat deterioration, while improved curing techniques allowed packers to take advantage of previously scrap cuts of pork (Meat Packers Council of Canada 1969; MacLachlan 2001). The use of meat trimmings marked a pivotal switch in the industry; it is noted that “the most efficient packers used every by-product to advantage, and the range of end products from slaughter was staggering – some times as many as 150 items were produced from the byproducts alone” (Meat Packers Council of Canada 1969:19). Even at these early stages of development, the packing industry was becoming quickly consolidated, with over 90% of the plants in business in 1890 closing by 1900 (Meat Packers Council of Canada 1969).

In Western Canada, US packing firm Swift & Co. purchased J.Y. Griffin & Co. in 1902, and changed the company name to Swift Canadian Company. In a similar vein, US packing firm Allied Packers was purchased by Matthew-Blackwell Co. and formed Canada Packing Co. Limited in 1911. In 1927, Canada Packing Co. Limited was acquired by Harris Abattoir, and merged with William Davies Co. and Gunn Limited to create Canada Packers Limited (Meat Packers Council of Canada 1969). By the 1930s, there were only three national companies running Canadian meat packing: Canada Packers Limited, Swift Canadian Company and Burns & Company (Meat Packers Council of Canada 1969; MacLachlan 2001). MacLachlan states that the oligopolistic model, upon which these three plants were based, was largely derived from US operations (MacLachlan 2001)

\textsuperscript{15} Often referred to as simply bacon, this often was referring to a Wiltshire bacon side – which is essentially a half-hog, with the jowl, front and rear hocks removed, and not the cured cut we are familiar with today.
Fearman’s Pork to Sofina Foods:

Much like Davies’ vital role in the establishment of meat processing in Canada, is the work of Fredrick William Fearman, an English immigrant, who began curing pork as a side business, eventually establishing the successful Fearman’s Pork in the early 1850s (Canadian Meat Business 2015; Fearmans 2015; Meat Packers Council of Canada 1969). Despite the acquisition of Fearman’s by Sofina Foods in 2012 (Better Farming 2012), Fearman’s Pork is still used on packing slips, as seen below, and is considered the oldest pork processor in Ontario (Canadian Meat Business 2015). Sofina Foods is a Burlington, Ontario-based, privately-held meat processing company (Sofina Foods 2015a), and owns one of the just two federally-licensed hog plants in Ontario. This Burlington hog plant has the capacity to slaughter 32,000-35,000 hogs per week (Better Farming 2012). Sofina Foods purchased the plant from US private equity firm Sun Capital Partners Inc. in 2012, following its sale from Maple Leaf Foods in 2010 (Innis; Better Farming 2012). The sale came following Maple Leaf Foods’ decision to focus on “further processing demand” (Innis) in light of tremendous market fluctuation stemming from hog production and primary hog processing.

Sofina Foods has also recently purchased a hog processing plant from Great Lakes Specialty Meats, a subsidiary of Quality Meat Packers, with plans to convert it to a turkey processing facility, bringing the number of plants under Sofina’s ownership to eighteen (only 1 residing in the US), plus three poultry hatcheries (Real Agriculture 2015; Better Farming 2015). The decision to transition the Mitchell, Ontario hog plant to turkey processing, despite the desperate need for increased hog processing capacity in Ontario (Heppner 2015), is interesting, and keen attention to the Ontario turkey industry should be paid in the coming months and years.16

Despite numerous attempts to contact somebody at Sofina Foods for an interview, I was abruptly told numerous times that no one was interested in speaking with me. With the few publicly-available email addresses I was able to glean from internet searches of current Sofina employees, to enquire about the possibility of an interview, of the emails that actually received a response, I was told ‘no’ three separate times. One employee responded with “Sorry we are not interested and please contact Ontario Pork Producers (sic) Marketing Board”. Another employee, after numerous emails, the last of which included my question sheet, stated, “Unfortunately, I cannot pass on this information on to you.” At one point during data collection, another representative at Sofina Foods had originally agreed to answer my questions, if they were provided ahead of time, rather than via a face-to-face interview. However, following multiple

16 The now holiday-based seasonality of turkey consumption, the increasing leanness of this poultry paired with the incredible feed-conversion improvement rates seen in broiler chickens makes the turkey industry an interesting, and untapped, portion of the meat sector that warrants further research.
emails back and forth, I was eventually provided the following response:

My apologies for the delay in getting back to you. I’ve reviewed the questions with several people within the organization, but, in the end, it has been determined that we will be unable to participate in your interview/research. There is a level of sensitivity in a competitive environment, and much of the requested information is proprietary.

Similarly, one respondent had also mentioned to me that Sofina Foods is a “secretive company” (Immanuel). This was also confirmed by Innis, who stated that Sofina Foods’ main business is processed private-label products. Innis claimed, “they’re sorta the private label processor, you wouldn’t know, sort of that, they’re invisible but then when you start actually figuring out who the heck they are you’ll go “holy smokes they’re a pretty big company” (Innis). Sofina Foods operates under a number of private-label brands including: Mastro, Lillydale, San Daniele, Janes, Cuddy, Vienna, Fletcher’s, Fearman’s, and Quality Meats17 (Sofina Foods 2015b).

Figure 20 Packing label on a shipment of whole pork loins from Sofina Foods’ Burlington, Ontario plant, under the Fearman’s brand label. The Canada logo in the top-centre of the white label is the federal inspection stamp. Photo provided by key informant.

17 Not to be confused with the now-bankrupt processing plants Quality Meat Packers.
Quality Meat Packers, Great Lakes Specialty Meats, and Legacy Pork:

Following the passage of a regulation in 1800, which forbade hogs from running within city limits in what is now Toronto (Canada Packers Limited 1943), the slang Hogtown was adopted as homage to the early centrality of hogs and hog processing. The Schwartz family began a custom slaughter business in 1914 under the name Toronto Abattoirs Limited, also referred to as Toronto Municipal Abattoir (MacLachlan 2001). In the 1960s, the son of founder Nathan Schwartz bought the company under the name Quality Meat Packers Limited (Immanuel).

Quality Meat Packers (QMP) and adjacent company Toronto Abattoirs Limited filed for bankruptcy on April 3rd, 2014, suspending all hog slaughter (Better Farming 2014). Just before the plant’s closure, Quality Meat Packers had an operating capacity for 29,000 hogs per week between their Mitchell, Ontario plant, and downtown Toronto plant. Producers received no payment for any hogs shipped for slaughter at QMP between March 31st to April 3rd 2014 (Better Farming 2014). Still under the ownership of the Schwartz family, there are reports that Quality Meat Packers owes close to $70 million to farmers, transport companies, and a lengthy list of other creditors (Ontario Court of Justice 2014: Court File #31-1855569). For many of the producers with whom I spoke about Quality Meat Packers’ closure, the wound was still fresh, and anger was still present. One producer stated,

Quality Meats, that was a planned and that was like a crime against humanity or crime against pig farming, that was planned, that was dirty, that was really, really bad…Took the pork producer for about seventeen million and there’s no compensation for that, there’s no rules against that, they can get away with that, it’s just stupid (Pablo).

Another interviewee, a previous employee at Quality Meat Packers stated “QMP ran out of money – don’t think the closure was intentional despite what you might hear others say, the closure came up too quickly. I was at a meeting discussing hiring a new person on Friday – we were closed the following Tuesday” (Immanuel). The latest iteration of this company was Toronto, Ontario-based Tasty Chip, which offered a brand of ready-to-eat pork products under the name of Legacy Pork brand (Legacy Pork 2014). While the website for Legacy Pork is still operational, the QMP facility at 2 Tecumseth Street in Hogtown is very much closed.
Canada Packers Limited to Maple Leaf Foods… to Sofina:

As noted above, Canada Packers Ltd. has had a prominent place in Canada’s meat processing history. Canada Packers Limited was formed through the amalgamation of the Harris Abbatoir Company, Gunns Limited, and the William Davies Company in 1927 (Maple Leaf Foods 2015). The Maple Leaf brand was once a leading brand under Canada Packers Limited (Canada Packers Limited. 1933). The Maple Leaf Milling Company Ltd. and Purity Flour Mills Ltd. merged to create Maple Leaf Mills in 1961 (Maple Leaf Foods 2015). UK-based Hillsdown Holdings, owned by Harry Solomon, sought to enter the North American food market and purchased Maple Leaf Mills in 1987 (Winson 1993). Intending to rationalize Canada Packers’ operations, Solomon sought a drastic shift in the company’s focus from a primary processor to one “of a more value added food-processing company” (Winson 1993:195). The 1991 merger between Canada Packers Ltd. and Maple Leaf Mills created Maple Leaf Foods (Maple Leaf Foods 2015). In 2004, Maple Leaf Foods acquired Kitchener, Ontario-based J.M. Schneider (Maple Leaf Foods 2015). While the J.M. Schneider plant is closed, the brand and labelling has been maintained, and Maple Leaf Foods has utilized Schneider’s 120-year long history as a selling point, claiming that “Schneider Foods has been bringing people together to make moments even better with quality meats” (Schneider’s 2014).

Once the largest processor in Ontario, the sale of the Burlington facility ended the reign of Maple Leaf Foods’ primary processing sector. With just 40-45% of pork sourced from Maple Leaf kill plants across Canada, one respondent, a member of upper management at Maple Leaf Foods, stated “we’ll never operate another plant in Ontario, ever again, ever” (Innis), following a re-evaluation of the company’s aspirations to build upon their branded, further-processed goods (Maple Leaf Foods 2015). As noted, the Burlington plant is now owned by Sofina Foods.
Conestoga Meat Packers Co-operative:

Conestoga Meat Packers is the second of two federally-licensed plant in Ontario, with Sofina Foods’ Burlington plant being the other. The Breslau processing plant, which began as an on-farm abattoir, was purchased in the late 1990s by a father and son from Waterloo, who had previous meat-packing experience (Ibrahim), establishing Conestoga Meat Packers. The Progressive Pork Producers’ Cooperative (PPPC) purchased Conestoga Meat Packers in 2001 (Ibrahim). The founding members of the cooperative were Dutch immigrants, who were accustomed to cooperative models (Ibrahim). Currently, there are 170 Ontario hog producer-members with Conestoga Meat Packers. The plant underwent an extensive expansion in 2014, increasing slaughter capacity from 15,000 hogs per week, to 30,000 hogs per week. Members are guaranteed a place to bring their hogs to be slaughtered, which has become an integral feature of this fairly-new plant model, with the closing of Quality Meat Packers, and thus decreased shackle capacity available to producers. Conestoga Meat Packers also utilizes a Butina CO$_2$ stun system, which will be outlined more fully below.

Despite the relative success of implementing a co-operative meat processing facility, where previous attempts to do so have failed (MacDowell 1971), it is unclear whether Conestoga’s organization is as beneficial to producers as it may seem. As will be further discussed in Chapter 7, Conestoga’s membership is rather limited and requires buy-in of “serious share capital”, according to one interviewee. While it is unclear what the amount is, costs may be prohibitive for smaller producers to consider joining. Grey (2000) notes that some Iowa-based producers have sought to develop cooperative models of hog packing ownership in an attempt to compete with large integrators. However, Grey also notes that there was a tendency for such large co-ops to be very “capital intensive”, at times “forcing members to take on considerable debt” (2000:171). Grey (2000) concludes that such co-ops in this form are sometimes no better than large integrators as they too serve to disenfranchise and displace smaller producers.
Quebec Processing Plants – Tightly Integrated:

While the aims of this dissertation are to understand and assess the current challenges of Southwestern Ontario hog producers, and the Ontario hog industry, mention must be made of two prominent Quebeccois processing plants: Olymel and Les Viandes du Breton. These two plants reside outside of the study area; however, the sheer size of Olymel’s operations warrants mentioning here. Du Breton, on the other hand, while smaller in scale, boasts a cutting-edge processing plant that is unparalleled to others in Canada. Du Breton is also the first and only integrated producer of humanely-raised pork in North America. In a similar vein, a number of the producers with whom I spoke either had, at one time, a contract to supply hogs to a Quebec-based plant, or had shipped hogs to Quebec to be processed when shackle-space was not available in Ontario. Each of these plants will be briefly outlined here to provide context, and as a comparison to the scale of production that is currently taking place in Ontario. Both of these plants will also be discussed in the following chapter on pork retailing as well, as both plants also produce branded goods.
Olymel:

Olymel Foods developed from the 1991 merger between Groupe Olympia\textsuperscript{18} and La Coop fédérée with aims to consolidate the Quebec pork industry (Imran; Olymel 2015). In 2001, Olymel purchased a plant in Red Deer, Alberta, in conjunction with US Bacon America Company, and also opened a bacon-specific processing plant (Imran). In 2013, Olymel acquired Big Sky Farms, the third-largest hog producer in Saskatchewan, with a sow herd of over 42,500 animals across 25 sites (Olymel 2015; Qualman 2001). With Quebec-based slaughter alone, Olymel had slaughter capacity for 3.5-3.75 million hogs per year, and with Western Canada a capacity for another 2 million hogs, Olymel is currently the largest slaughter group in Canada.

Les Viandes du Breton:

The du Breton operation is fairly recent in the history of Canadian pork processing. The Breton family established the Breton Tradition brand in 1944, under the guidance of Napoleon and Adrienne Breton (du Breton 2015a). Currently under the operation of the Breton’s grandchild, president and CEO, Vincent Breton, du Breton has a decidedly different approach to their model of procurement by seeking hogs to fill their Organic, Rustic, and Antibiotic-Free branded consumer lines. Du Breton is currently the leading purveyor of Certified Humane Raised and Handled pork in North America. With du Breton’s recent announcement to include 300,000 more crate-free pigs by 2018 (du Breton 2015b), well ahead of the national Code of Practice’s full implementation of loose sow housing in 2024, this integrated processor has the potential to shift production practices across Canada, or overtake market shares of Ontario commodity pork.

\textsuperscript{18} Groupe Olympia and sister company Agri-Marché are operated by the Brochu family; they run five animal feed mills throughout Quebec and Ontario (Agri-Marché 2015)
Despite the tightly consolidated state of Quebec and Ontario hog processing facilities, many producers and industry respondents spoke enthusiastically of plans for a 2017 Coldwater, Michigan pork processing plant, to help with much needed shackle space (Food Processing Technology 2015; Ibrahim; Philip; Pierre; Pablo) The $225.7 million dollar facility will be jointly owned by Michigan-area hog farmers and the vertically coordinated Clemens Food Group from Pennsylvania, PA, and is projected to have a daily capacity for 10,000 hogs (Food Processing Technology 2015). While hopeful, it is still unclear how much of the plant’s capacity will be available to Canadian hog producers, if any at all, or if the vertically-integrated model will best serve producer interests (Novek 2003; Qualman 2001; Boyens 2001).

The previous sections have outlined the major federally-licensed processors involved in the broader Canadian pork industry. I chose to focus on federally-licensed plants, rather than provincially-inspected plants, due to the scale of output and the need for federal inspection for export (Haines 2004; Canadian Food Inspection Agency 2013). This focus is intended to highlight both the tightly-consolidated processing sector, alongside increasing export dependence. Interestingly, authoritative documents on the broader Canadian hog industry, like Grier’s (2007) report, also fail to mention the role of provincial plants, again underscoring the centrality of exports to the viability of current production. Provincially-inspected plants do serve a considerable role in the Ontario hog industry; however, this is decreasing. Haines (2004) notes that the number of provincially-licensed processing plants, or abattoirs, is steadily
declining. In 1998-99, there were 267 operating abattoirs in Ontario (Haines 2004). This number had dropped to 1991 operational abattoirs in 2004-05 (Haines 2004). This is concerning; as hog herd size grows, producers may be unable to gain access to provincial plants (Brisson 2014). Similar to federal legislation, no meat can be sold, even though its sale is limited to Ontario, unless stamped and labelled (Haines 2004). A further explanation of provincial labelling is provided at the beginning of Chapter 7 on retailing as well.

The next section will move to the kill floor, an integral place in the conversion of pigs into pork. This section will then be followed by an overview of the two first-hand experiences with pig processing that I had during my data collection.

The Kill Floor – from Pig to Pork in Seconds:

As noted above, the progression of meat processing in Canada saw the increase of technological advancements into the efficiency of production. One vital component of bringing animals to a consumer’s plate is the processing plant’s kill floor. The primary processing of animals for human consumption is increasingly becoming an area of contention for both consumers of meat, and those deeply opposed to it (vegan/vegetarian groups). Primary processing differs greatly from further processing. During further processing, there is emphasis on product transformation, as raw materials are processed into convenience cuts (deli meats), or value-added products (wiener). In comparison, during primary processing, there is a section of the plant, and a person’s job, to perform slaughter. While a fuller discussion will take place in Chapter 8, it is worth mentioning that the kill floor of the plants serves as a dichotomous, blended space, what Pachirat calls “alive/dead, clean/dirty” (2011:53-61). I will outline a few of the prominent kill floor methods currently in use, and the issues arising from these methods. There is also increasing discussion on the humaneness of animals slaughtered under religious law. Much of the controversy stems from the lack of stunning, and conscious arterial bleed, which animals must undergo within halal and kosher laws. While pork is considered a forbidden food under both Jewish and Muslim law, and not applicable for any of the producers or industry interviewees with whom I spoke, it is worth mentioning that religious slaughter may emerge as a contentious issue in the future discussion of meat consumption.

I also had two unique, first-hand experiences, in relation to pork processing during my data collection. One hog producer, Phoenix, showed me how he processes pigs for his own consumption on-farm. I was also able to sit in on an audit certification course for the Professional Animal Auditor Certification Organization Inc. (PAACO), which was co-taught by the influential Dr. Temple Grandin. Regular PAACO audits are becoming increasingly standard practice within processing plants, and more
and more retailers are seeking to ensure their meat is sourced humanely, or at least without glaring animal abuse issues. The PAACO audit program notes that its mission is to be the “standard of excellence in animal welfare auditing” (PAACO 2015).

Phoenix: An Unplanned Processing Lesson:

After discovering a downer in his finishing barn that would be rendered unfit for transport, and thus would not be accepted by livestock transportation companies, or their receiving processors, Phoenix decided to kill and process the pig himself. Following our interview, Phoenix asked if I wanted to stay and watch him “do a pig” (Phoenix). I watched Phoenix help the hog with the injured leg out of the barn, take out his rifle, and shoot it just above the hog’s eye-line, close to the forehead. While the hog jerked and flopped around for a few seconds after the shot, Phoenix assured me that the hog was dead, not stunned, and that the movement was the nerves dying. Phoenix then took his tractor, and two chains, and hoisted the hog up to his eye-level by her hind haunches. Here, Phoenix told me to look away, as he said “they bleed quite a bit”, and stuck the pig to bleed it. Phoenix then took out a propane-powered blowtorch and burnt the light-colored hair (this was a commodity hog) covering the hog. This was followed by a power wash, to remove the burnt hair, leaving a smooth and cleaner hog. Next, Phoenix grabbed a steel bucket and a sharp knife and began the evisceration. Opening up the hog, Phoenix showed me the organs, and told me what his observations were of their condition, before tossing them into the bucket. He had mentioned that some people use them, but he doesn’t. Phoenix also mentioned that this pig had contracted pneumonia based on the state of her lungs, which he felt was probably due to the fact that she was unable to move around. The hog’s head was removed, and a reciprocating saw made short work of splitting the hog in two. Even though just minutes earlier this hog was alive, at this point in the process the provenance of the animal was quickly fading as it was being transformed into a product. It was remarkable how quickly the hog had changed from something alive to just something more akin to what we encounter regularly on our stores’ shelves. This dis-association continued as Phoenix took each half-hog and, with his steel knife, further broke the hog into primal cuts. Now in manageable pieces, the hog that I had just heard snorting and squealing seemed awfully distant. A Styrofoam plate, some cellophane and price sticker was all we needed, and the transformation into mere consumable protein would be complete.
Figure 23 Phoenix burning the hair off the downed hog pre-evisceration. Photo by author.
Figure 24 Phoenix’s downed hog following evisceration. As Phoenix also worked with the CFIA, he showed me what inspectors look for in the organs when performing a visual post-mortem inspection in federally-licensed processing plants. Photo by author.
PAACO:

The Professional Animal Auditor Certification Organization Inc. (PAACO) was developed in 2004 from a coalition of five founding animal organizations: American Association of Avian Pathologists, American Association of Bovine Practitioners, American Association of Swine Veterinarians, American Registry of Professional Animal Scientists, and Federation of Animal Science Societies (PAACO 2015a). This organization emerged in response to the onslaught of the US animal rights movement in the 1980s, and is based upon Dr. Temple Grandin’s work on improved animal handling and welfare practices (PAACO 2015c). PAACO seeks to improve animal welfare via plant-based auditing and assessment tools (PAACO 2015a). PAACO is oriented around the North American Meat Institute (NAMI) guidelines, which have just recently expanded to include material on effective and humane transportation audits in conjunction with Transport Quality Assurance (TQA) for US swine movement (PAACO 2015c).

Plant training and certification began in 2006, and there are two main streams offered: Meat plants (cattle, hogs, sheep) and poultry plants (turkey, broiler chickens, spent layer hens) (PAACO 2015a). As noted in Chapter 3, I was given the opportunity to sit-in during a PAACO certification course that took place in Guelph in the summer of 2015. I was able to hear leading American and Canadian authorities train a room full of potential meat plant auditors. This 2-day course outlined proper handling methods, and how simple changes in lighting, floor material, and railing types can have drastic improvements in animal flightiness when being moved throughout the plant, toward the kill floor, thus reducing animal stress. There is an increasing requirement from suppliers for plants to be audited by third-party organizations such as PAACO. One informant from Conestoga Meat Packers noted that the plant was PAACO certified to show the company’s commitment to increasing animal welfare (Ibrahim; Conestoga Meat Packers 2009). As the purpose of the PAACO course was to train auditors on how to visually spot potential welfare concerns, we were provided a graphic and thorough look into meat plants that have both high and devastatingly low animal welfare practices in place. One particularly interesting place in the processing line is in the stun/stick positions. Here, the defining transition from animal to meat takes place. Therefore, I believe it is imperative to outline stunning, and the commonly used stun methods in meat processing facilities.
Stunning:

Stunning is the act of rendering an animal unconscious, insensible or brain-dead (PAACO 2015c). Stunning is preformed to ensure that the animal is unconscious during its bleed-out. Effective stunning is conducted to ensure that the vascular system is functioning, so that the animal quickly and completely bleeds out (PAACO 2015c). Stunning, while noted to be an effective method of rendering animals unconscious, is heavily dependent on a subsequent quick arterial bleed, immediately following the stun for immediate death. As stunning can be reversible, the animal may regain consciousness if not stuck quickly enough following the stun. Animals need to progress to the bleed-rail quickly (10-60 seconds) after stun to ensure insensitivity is maintained during bleed-out (PAACO 2015c). The method of stunning will vary greatly based on the type and size of plant, but I have outlined those most commonly used, including those relevant to Conestoga Meat Packers.

Carbon Dioxide Gas Stunning:

Butina A/C, a Danish company established in 1972, specializes in carbon dioxide (CO₂) stunning chambers, blood collection for processed goods, and hog holding pens/gate systems (Butina 2015). In CO₂ gas stunning systems, hogs are led into gondolas or chambers in groups of 2-9 animals and then exposed to a 90% CO₂ gas concentration to induce surgical anesthesia (PAACO 2105c). As a CO₂ stun is reversible, the chambers need to maintain adequate gas concentration and dwell-time, and must not be overloaded, as more pigs will decrease the overall CO₂ concentration present in the chamber (PAACO 2015c). Variation in pig genetics and breeds often requires different CO₂ concentrations and dwell-time within the chambers (PAACO 2015c); therefore, there is a processor-driven preference for uniformity of breed and size. Thoroughly gassed hogs will flop¹⁹ out of the back end of a CO₂ gas stunning system, onto a conveyor belt to be shackled, stuck, and then further processed. A CO₂ gas stunning systems system is currently used at Conestoga Meat Packers in Breslau, Ontario.

Electric Shock:

Also referred to as hot-wanding, this stun is performed on the head only and is reversible. Some electric shock wands are called head-to-back, whereby electric currents cause simultaneous cardiac arrest and epileptic seizure, and is irreversible if performed correctly (PAACO 2015c). Adequate amperage and voltage is needed for effectiveness – sufficient to induce a grand mal epileptic seizure (PAACO 2015c). However, it was noted by Temple Grandin, the leading authority on humane animal handling, that despite her encouragement to use a second electrical stun under the front leg of the hog to ensure cardiac death,

¹⁹ Hog floppiness was something the instructors at the PAACO course instructed trainee auditors to look for to ensure animal insensibility when auditing plants with Butina systems.
there is reluctance at the processor-level due to fears that the shock to the body will reduce meat quality (PAACO 2015c). Hogs’ exposure to stress at any point before death, as in beef (MacLachlan 2001), is an issue to pork processing, as will be outlined below.

**Captive-Bolt or ‘Knock Box’:**

This is the method most often used on cattle, and captive bolt machines can be corded or cordless. Here, a captive-bolt (versus a pistol-type shell) penetrates the skull, striking the brain, and rendering the animal brain-dead (PAACO 2015c). This method should be permanent if applied correctly (adequate equipment maintenance and air-pressure supply needed for effectiveness), and requires only one shot (PAACO 2015c). Another method of irreversible stunning, to cause death, would also be a gun shot on the hog’s forehead, just as was witnessed during my time with Phoenix. Firearms are also acceptable for use under CFIA Meat Inspection Regulations.

**Stressed-out Swine:**

Hogs also present an additional challenge to the processing industry. If stressed before slaughter, soon-to-be pork can rapidly decrease in quality post-slaughter. In hogs, stress can cause the release of lactic acid, which causes meat post-processing to become pale, soft, and exudative (PSE) or watery (Fairbairn 1989; CPI 2011). Another cause of PSE meat stems from a genetic predisposition to porcine stress syndrome (PSS) in some hogs, causing the release of a halothane gene (CPI 2011). Such a predisposition is present in about 10% of all market hogs for slaughter (Fairbairn 1989). Since chilled pork, not frozen, is particularly sought for export to Asian markets, there is an emphasis along the commodity chain to reduce hog exposure to stress.

One producer, Paul, mentioned the close relationship that he has with his small abattoir, which allows the animals to be shipped on a Friday and rest in the plant’s holding pens over the weekend, with slaughter first thing on Monday morning. Paul mentioned that, when cooking meat, it must be let to rest after cooking to allow the muscles to ease, and he felt that this same principle allows him to provide the highest quality products to his customers. Allowing the pigs to relax in the holding pens after the hour drive from his farm resulted in a better product, due a less-stressed animal.
Humane Slaughter\textsuperscript{20} and Bleed-rail Insensibility:

During the PAACO course, auditors were trained on how to identify animal insensibility on the bleed-rail line (Wilson 2007). Once hogs are stunned in one of the methods listed above, the animal is hoisted and shackled into the air, stuck, bled-out above a metal rail to catch the blood, and then scalded to remove the hair that covers the hogs’ bodies\textsuperscript{21}. From here, the hog is eviscerated, and again inspected before further processing. However, the few seconds post-stun are a crucial time-period for humane slaughter. As the PAACO course is based on US material, bleed-rail insensibility, and the failure to ensure it, is covered under the \textit{Humane Slaughter Act} which states that “all animals are rendered insensible to pain by a single blow or gunshot or electrical, chemical, or other means that is rapid and effective, before being shackled, hoisted, thrown, cast or cut” (1987). Unlike the US law, Canadian laws on slaughter are quite broad and non-specific. The \textit{Meat Inspection Act} (1985 R.S.C.,c.25) states that “No food animal shall be handled in a manner that subjects the animal to avoidable distress or avoidable pain”; however, as of September 30, 2015, this Act is under amendment and it is hoped that the revisions be more detailed. Haines (2004) further recommended that, at the provincial level, standardized handling methods and plant staff training on humane slaughter should be established by OMAFRA to better reflect improved handling methodologies available outside of Canada. PAACO recommends the time from stun to bleed-out be less than 60 seconds and in some cases, where only head-only electric shock is performed, less than 10 seconds (PAACO 2015c). Processing plant workers are trained to identify the signs of properly stunned animals as well as the signs that the animal is returning to sensibility\textsuperscript{22}, and external auditors like PAACO assess the efficacy of a number of criteria, including stunning and insensibility.

This audit criterion notes that the acceptable stun rate for hogs is 99\% or less (95\% or less for cattle and sheep) and acceptable insensibility rate is 99.9\% for hogs and sheep (99.8\% for cattle) (PAACO 2015b). While Dr. Temple Grandin had declared numerous times throughout the course that “no system is perfect,” and that she actively works to increase animal welfare, scale of operation becomes a glaring place of conflict. In his journalistic exposé of the ever-increasing turnout of a Hormel hog

\textsuperscript{20} This seemingly oxymoronic statement was a clear place of contention by a number of Guelph animal activists that picketed outside a talk given by Temple Grandin, the same night as the PAACO course, which I also attended. Numerous activists held signs and chanted “humane slaughter is a lie, animals did not want to die”, even going so far as to rush into War Memorial Hall where the talk was taking place. Even here, it was so interesting to see the huge divide between ‘ag’ folks and activists, and the inability for a middle-ground, constructive discussion to take place – the ag crowd mocked the activists, and the activists yelled at everyone entering the building.

\textsuperscript{21} This is another desirable trait in commodity hogs – light, thin hair of commodity hogs versus the hardy, bristly hair of pastured breeds like Tamworth, and Wild Boar.

\textsuperscript{22} This includes rhythmic breathing, corneal reflex and blinking, and attempts by the animal, when hoisted into the air, to correct its position and raise its head, even after being stuck. This part of the PAACO course, and the accompanying photos of slaughterhouses where such acts happened, was truly a difficult experience for me to sit through.
slaughterhouse in the US, Genoways notes “Nothing, in short, would slow down the line” (Genoways 2014:22). While increased line speeds are problematic for both human health and humane slaughter, Grier (2007) contends that Canada’s speed lines are generally slower than those in the US. Increased line speeds do, however, provide a “significant increase in labour productivity” (Grier 2007:36). This increase in line productivity has translated into lower plant costs for US processing plants in particular (Grier 2007), but this may come again at a high social cost as this line of work has become increasingly dangerous. With decreasing slaughter capacity province-wide (Haines 2004), a similar sentiment echoes for Ontario. Overproduction and limited hoof-space has created a volatile environment where producers are left scrambling to find a slaughterhouse for their hogs, and processing plants run ceaselessly. This, paired with the high rates of worker injury from working in cold, damp conditions with sharp machinery (Thompson 1983; Genoways 2014) that have been documented in many processing plants in Canada and the US, is evidence that more work must be done to ensure human and animal welfare in meat harvesting plants.

Post-Mortem CFIA Inspection:

One of the last steps before the now-slaughtered pig can be sent along the line for further processing, and eventual retailing, is the post-mortem inspection. Here, the kidneys are kept within the carcass, slashed, and exposed for inspection. CFIA inspectors will thoroughly assess each carcass on the grade-rail, and will stamp the carcass if deemed acceptable for human consumption. Those carcasses deemed unfit will be rerouted towards non-consumable rendering (soap, pharmaceutical) or compost.

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23 Harvest was the term frequently used during the PAACO course, which I believe strongly, and intentionally, serves to even further disassociate consumers from the slaughter and processing that must take place to bring meat to the table.
Figure 25 Phoenix showing me the hog’s heart (on right) and lungs (left). He had mentioned that it’s “important to know what you’re looking for” when inspecting the organs, and that an untrained eye might miss a parasitic or bacterial infection. Photo by author.

Carcass Residue Testing: Ractopamine

Once the hogs have been inspected post-mortem, and are deemed fit for human consumption, hogs destined for export may be subjected to further residual and microbial testing (Canadian Food Inspection Agency 2013b). There has been much recent media coverage regarding the availability of antibiotic-free meats, with a number of fast-food chains nothing their commitments to transition to antibiotic-free meat (A&W, McDonald’s, Subway). However, another problematic feed additive that receives much less media attention is ractopamine hydrochloride, or Pay-Lean, which has been discussed earlier. Used in-barn, during the hog finishing stages, ractopamine is an oral feed additive that is used “For increased rate of weight gain, improved feed efficiency and increased carcass leanness” (Federal Department of Agriculture 2006). Unlike antibiotic usage in livestock, which will be discussed more thoroughly in the next chapter, there is no withdrawal period for ractopamine before slaughter (Animal Nutrition Association of Canada 2013). There are four varying concentrations of ractopamine
hydrochloride currently approved for use in Canada, under the Canadian Food Inspection Agency (CFIA), for use in finishing hogs, finishing turkey, and finishing cattle (Canadian Food Inspection Agency 2014). In both the US Federal Department of Agriculture’s (Federal Department of Agriculture 2006) assessment of Pay-lean, and the CFIA’s assessment, the drug was deemed safe for use in finisher hogs. However, it was reported that during the final stages of growing, there was increased hog lameness, leg injuries, and downer pig syndrome reported (Federal Department of Agriculture 2006; Canadian Food Inspection Agency 2014). Despite the obvious controversy of the additive and its effects on humans, the monetary gains in providing leaner hogs to processors may be overshadowed by an increase in the number of lame animals, which would be refused by the transport company or processor upon arrival (Canadian Food Inspection Agency 2013b). In this scenario, producers will lose the monetary return on the lame animal, or worse, have paid for months of feed and water to grow the hog to market size, and experience a leg injury or lameness that would render the animal unfit for human consumption, and thus be terminated on-farm, or euthanized at the processor’s unloading dock.

One of the greatest challenges faced by Canadian and American processors, reliant on export, is the presence of ractopamine. Before the closure of Russian markets to Canadian pork, my interviewee, Ivan, stated that Canada was “the largest supplier of pork meat and pork products to Russia” (Ivan; Canada Pork International 2011). However, Russia had banned the presence of ractopamine in beef and pork in 2012, following suit with the European Union (EU) who already had a ractopamine-ban in place (Animal Nutrition Association of Canada 2013). The Ractopamine-Free Pork Certification Program was developed in 2013 in conjunction with the CFIA, feed mills and the FeedAssure program, and producers, to assure negative residue-tests for ractopamine, to supply export markets to Russia, and beyond (Canadian Food Inspection Agency 2013c). As China is emerging as one of the largest consumers of pork globally (Schneider 2011; Schneider & Sharma 2014; Sharma 2014), their ban on ractopamine-laced pork leaves Canadian pork with little market access (Imran; Idris; Ivan; Singh 2015). One processor I spoke with had just earlier in the day received clearance for his plant to resume pork export to China, following a commitment to provide negative ractopamine24 test slips (Ibrahim). One Quebec processor also noted that Quebec plants will pay a premium to producers for ractopamine-free hogs to export to China (Imran). As there is an increasing trend for purer foods by consumers, it will be interesting to observe how ractopamine will be managed by both the Canadian and American pork industries.

24 Interestingly, while I believe that the popular Dr. OZ Show tends to both sensationalize and over-simplify a number of health-related issues, his October 17th, 2015 television show on ractopamine used in consumable livestock may be a step in the right direction towards informing the public about this drug additive. http://www.doctoroz.com/episode/truth-about-pork-what-big-change-coming-your-grocery-store?video_id=4568429378001.
This chapter has linked the movement of market-weight hogs post farm-gate by providing a picture of the form and extensiveness of live animal transport. This section has also provided a contextual overview of the meat processing sector in Canada, the plants and major players in primary processing, as well as detailed explanation of the omnipresent ethical challenges that are faced on the kill floor. Now that the pig has been broken down into tidy, clean, manageable pieces, ready for retail shelves, the next chapter will outline the various marketing strategies used to increase the consumption of pork – domestically and abroad. The following chapter begins with a discussion on hog transportation, pricing, and hog/pork marketing.
6. “Pigs are different than pork”: Live Animal Marketing

Following the hog/pork GVC, this chapter will outline a number of topics that are pertinent to contextualizing the broader industry as pigs become pork. This chapter begins with discussion of the various types of production loops that serve to split-up and simplify production (Stull & Broadway 2004). From here, discussion regarding sow-culls, traceability, international trade agreements is provided. This chapter concludes with analysis of the Ontario Pork Producers’ Marketing Board (OPPMB) and the complicated hog carcass grading system that producers must adhere to.

Three-Site Production Loops:

I was informed by a number of producers, especially those who had been involved in the hog industry for most of their lives, or whose parents were pig producers, that it was common to be a farrow-to-finish producer. In addition to raising hogs from birth to market, crops, and at times other types of livestock were raised either for either personal consumption or sale. However, in the 1990s there was a shift to three-site production loops (also referred to as two-site/three-site, multi-site, or 3P loops), which essentially splits the pig lifecycle into multiple farm/sites, allowing specialization, rather than a more fully integrated approach by individual farmers (Novek 2003; Grey 2000; Stull & Braidway 2004). A three-site production loop breaks up sows/farrowing/weaning, feeder barns, and finishing barns, as noted previously.

The implementation of three-site loops in Canada is based on American and UK models of multi-site production. In the UK, on-farm separation of different life stages of hogs had been implemented in outdoor systems for decades (Harris 2000). However, in 1988, CRB Farm near Columbus, Nebraska, under owner/operator Chuck Sand, became the first modern multi-site operation, and led the industry movement towards completely confined hog rearing in the US (Harris 2000; Broadway 2006). The transition to completely indoor-production facilities is noted to have emerged from breeding stock suppliers seeking to sell farmers both boars and gilts with the promise of improved genetic lines (Harris 2000; Novek 2003; Broadway 2006; Stull & Broadway 2004). By introducing new breeding stock, rather than replacing worn-out sows with hogs born on-farm, there was increased potential to also introduce disease. Therefore, breeding stock suppliers sought to develop “high-health status pigs” (Harris 2000:7) which could be used as competitive advantage against other breed-stock companies. The emphasis on confinement as beneficial to disease elimination has deeply impacted the Canadian industry as well as the national production guidelines – the Canada Quality Assurance (CQA) manual, outlined in Chapter 4. This strict biosecurity was echoed by many of the commodity producers with whom I spoke. There was zero discussion about whether or not I would be able to enter CAFO-style barns due to the producers’
extremely heightened concern for a disease-free herd. I was told numerous times that I should not take this closed-door policy personally, but rather that the financial risk of me possibly introducing a pathogen/bacterium off my clothing or hair was far too great for producers to bear. This lack of access to commercial hog barns is also reflected in the photos used in this dissertation, as all photos of commodity production at any life stage have been provided by the producers themselves. While many producers acknowledged the benefit of high-health herds, there was also discussion about how the inability to have people in their barns, and the secrecy surrounding what goes in on these closed barns, serves to paint the industry in a poor light. Another key theme in the makeup of the Ontario hog industry was the prevalence of contracting, which will be outlined next.

Contracts Abound:

There has been a substantial shift in the form and types of contracts signed between producers (producer-processor contracts), the Ontario Pork Producers’ Marketing Board (OPPMB), and receiving processors once hogs come to market weight. However, contracting has also emerged at the farm-level, particularly following the onslaught of three-site production loops. There are two main types here:

Intra-Site Contracts:

First, if production, and the animals remain owned by the producer on a wean-to-finish site, there may be a contract with a farrow-to-wean producer to supply those weaner pigs to their growing barns. This type of intra-site contract binds producers, each specializing in a different component of the lifecycle together. The animals are owned by the owner of the site. Patricia outlined this more fully by stating:

…so we technically still are farrow-to-finish, only they own the whole farrowing, and we own the whole finishing, so you’re able to control those factors- you know the breed, its constant, and, um, the health and then you’ve got a constant supply, like you don’t wanna mix and mingle pigs, causes that’s, um, a sign for disaster…we take everything, everything from them, and we’ve have the relationship, oh, 7-8 years now, yes, at least, and it is good because, uh, the contract we have is like a one-pager, it’s kind of like, give us notice if you don’t want to work together, cause there’s no sense in having a zillion pages…
Barn-for-Hire Contracts:

The other type of contract for production exists between companies/integrators such as Synergy Swine and producers (Harper 2009; Thompson 200; Qualman 2001; Boyens 2001). This was the dominant contract with the finisher producers who were interviewed. Here, in a barn-for-hire contract, the producers did not take ownership of the pigs, but did own the barn in which the pigs were raised. The integrator would provide the weaner pigs, the feed, and arrange transportation to slaughter once pigs came to market-weight. These finisher producers were also responsible for the waste produced. Some producers were happy for the “great manure” (Pedro) to supplement their fertilizer inputs for cash-cropping. Another producer noted that such contracts were preferred by producers, as having a signed agreement with a hog company allowed for easier financing. Paddy mentioned that he began to search for such a contract before designing or building his finishing barns, so that he would have better access to banking services, as he felt that the banks were aware of how volatile the hog industry has become over time. However, to the detriment of the farmer-owned operation, contracting on a for-hire basis, both for production companies like Synergy, and integrator/processors like Maple Leaf Foods, are paying producers just enough to float the cost of their now-financed barns. Paul again commented on how for-hire contracts are established, and enthusiastically so, with the allure that the barn is the producers to keep; “farmers have that promise that when loan is paid, the barn is there – by time the barn is paid for, it’s worn out” (Paul). Producers may then need to renegotiate a subsequent contract to be able to access further financing to make improvements to this now worn-out barn, unable to gain enough capital to distance themselves from for-hire contracts. While neither party is fully shielded from risk, as integrators are still subject to feed price volatility, and financial risk exists from disease transmission (Harper 2009), integrators may have more capital to hedge risks than a hog producer on a for-hire contract.

One producer described how his family’s farm had been in farrow-to-finish production initially, before taking part in producing “little pigs” on a three-site production loop; he stated that, “the system was predicated on contracts, we went through a lot of different contracts, and, uh, what started as being very lucrative – you didn’t have much control, so in 2003 we purchased another farm and went back to being farrow-to-finish” (Perry). Another producer, who decided to completely take control of his own branding, marketing, and distribution, described how there were signs that the pork industry was headed towards choppier waters when production loops were being implemented in Ontario. Paul stated, “farrow-to-finish, we had it down pat; when this was disassembled, I knew this was the end of the pork industry”. Paul also connected the implementation of three-site loops to the boldness of Maple Leaf Foods’ CEO Michael McCain, and his attempt to buy-out Ontario hog producers and drive processor-integration in Ontario. Paul recalled how McCain had frequently lobbied Ontario Pork as “he loves to be the king of
everything”. Percival also stated how McCain’s vie for Ontario’s hog herds irrevocably changed the design of contracting in the industry. Percival stated,

McCain was all bad for us, tried to do contracts, and drive prices down. I was against him. McCain did make some bad changes – made a lot of presentations to the Board, and they were horrified about allowing contracting – he did get a lot in his favour, but not enough to totally change things. We will never change back what he did get in (Percival).

Maple Leaf Foods’ adherence to the US integrator contracting model, was also echoed by industry informants, claiming that McCain and Maple Leaf Foods wanted “ownership all the way through” (Izra; Qualman 2001; Boyens 2001).

Federal Sow Buyout of 2009:

Another large change in the structure of the industry came in 2009 with the federal sow buyout program, called the Cull Breeding Swine Program (CBSP) (Brisson 2014). During a devastatingly low period in pricing, producers were given the option to take part in a federal buyout to reduce the number of the national sow herd, and thus their individual production on-farm (Brisson 2014). The $75 million federal program offered producers an average price of “$765.52 per animal unit” (Better Farming 2009) to resign their sows. In Ontario, the province-wide sow herd decreased from 350,000 animals to about 305,000 animals (Izra). Nation-wide, the CBSP resulted in an 8.4% reduction in the national sow herd (Brisson 2014). The CBSP, in conjunction with the Hog Farm Transition Program (HFTP), facilitated the transition for farmers out of hog production, further reducing the Canadian hog herd by 5.4%, and resulting in the removal of 671,600 hogs (Brisson 2014).

Sow-Culls in Canada:

Despite the obvious centrality of owning or accessing sows in some manner for any type of production to take place, there are no Canadian facilities able to deal with sows that are to be culled. While there is much debate on when a sow has reached her productive limit, and some producers do tie a longer productivity period to improved housing conditions (2 years versus 8 years of age), when the sow is sent to be culled, a vast majority are sent to the US for processing (Isaac; Poppy; Pierre). This does not account for sows being culled on-farm, which can also happen, yet producers would not be paid the value of the sow’s carcass. A Wyoming, Ontario-based transportation company, Zantingh’s, is the main connection between producers seeking sow-cull services and US processing plants. Due to the enormous size of sows (400-600lbs), there are no kill plants in Canada equipped to cull sows. One producer stated, “all Ontario sows are culled in US – you know Denny’s sausage in the US? That’s made with culled sows” (Poppy). Another key aspect of the Ontario hog industry, particularly due to an emphasis on export, is disease status; this will be discussed in the next section.
January 22\textsuperscript{nd}, 2014, was a disastrous day for hog farmers in Canada, with the detection of porcine epidemic diarrhea virus (PEDv) in Ontario and PEI farms, quickly spreading to Quebec and Manitoba farms by February 2014 (Misener 2015; Ontario Swine Health Advisory Board 2012). Seventeen of the 76 cases of Ontario PEDv reported up until February 2015 have been linked to infected feed, largely from contaminated trucks and containers (Misener 2015). However, the Canadian losses were far out-shadowed by the US prevalence of PEDv, with reports that more than 50\% of the US national sow herd was exposed to the deadly virus that quickly infects and kills piglets (Misener 2015). Reports estimate that less than 1\% of the Canadian sow herd had PEDv exposure (Misener 2015). While a new and devastating disease for the commercial hog industry, Canadian producers, and many of the Southwestern Ontario farmers with whom I spoke, had pegged 2014 as a once-in-a-lifetime pricing opportunity, as the US, the largest importer and exporter, was unable to fill feeder/finisher barns. Canadian-born weaner pigs were sold at a premium price in 2014 due to a limited US weaner supply amidst increasing global demand for pork (Brisson 2014). Since the emergence of PEDv, a number of industry initiatives have been developed to better manage crises following disease outbreaks to help mitigate financial losses (Ontario Swine Health Advisory Board 2012).

PigTrace is an emergency preparedness traceability plan following PEDv, so that, in the event of a subsequent disease outbreak, “pig zero” (Isaac) can be found in order to minimize economic impact. PigTrace emerged from collective initiatives by the Canada Pork Council (CPC), Ontario Pork, the Canadian Food Inspection Agency (CFIA), and the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA). PigTrace is a legislative requirement for all producers as of July 2014 under \textit{Section 15: Health of Animal Regulations}. However, many producers with whom I spoke felt that the paperwork and frequency of reporting pig movement was not practical or conducive to performing in-barn tasks, and many were quite open about the fact that they did \textit{not} tag their pigs.
Another industry-led preparedness initiative that has seen considerable positive reaction from producers stems from the Ontario Pork Industry Council’s (OPIC) Ontario Swine Health Advisory Board (OSHAB) database for Area Regional Control and Elimination (ARC&E). Here, producers are asked to voluntarily submit disease status of their pig herds for both PEDv and Porcine reproductive and respiratory syndrome virus\(^{25}\) (PRRS – pronounced *purrs* by producers), to work collectively towards tracking and preventing the further spread of on-farm disease. Farms testing positive for these two diseases send samples to the University of Guelph’s Animal Health Laboratory. Amongst the farmers with whom I spoke there was a much more positive reception to the work being done by OPIC and OSHAB; this was also reflected by the over 1000 voluntary registrations since the project’s implementation in 2009-2010 (Irene). There was apprehension towards the role of government regulation by producers, and perhaps this is why, on the surface, the PigTrace program is viewed as more top-down than the OSBAB project.

However, OSHAB is highly reliant on the funding made available through the provincial-federal partnership program, *Growing Forward 2*. One producer who sought *Growing Forward 2* funding mentioned that the application process was prohibitive to farmers (Patricia). Patricia stated that many farmers, herself included, chose to hire consultants to help navigate the complex submission forms, and was denied funding without an explanation. Another source of differentiation for producer compliance

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\(^{25}\) Unlike PEDv, PRRS has plagued the hog industry for close to 15 years. I was informed that PRRS is not a new or emergent disease, so it lacks the punchy media attention that PEDv was given. However, one interviewee also noted that “PRRS still causes probably the greatest economic losses in terms of disease in Ontario, and probably Quebec too for that matter” (Irene).
may also lie at the level of governance. PigTrace is a national program that applies to all pigs, in all sizes of operations, in all parts of the country. Producers can be fined for non-compliance beginning in Fall 2015, and the main facets for traceability by PigTrace is to provide a competitive advantage as a swine health leader for international markets, and to hedge against financial loss by avoiding market disruptions in the event of disease outbreak (Pigtrace.ca 2015). This is in contrast to OSHAB where producers voluntarily take part, to share information so that the industry as a whole improves through improved herd health. This is much more indicative of a for-us, by-us solution to disease tracking that complements the independence and entrepreneurial nature of many of the producers I met. Another initiative that is still in an implementation stage is TraceCanada, a non-profit organization seeking to build a world-class, multi-species database (TraceCanada.ca). I asked how this program compares or complements PigTrace specifically, and was told that the data collected for PigTrace will be shared with TraceCanada’s database. In addition to monitoring disease on-farm, traceability programs serve to provide consumer assurance that their pork chop can be promptly sourced back to the operation it came from to ensure food safety26.

It is important to outline the vital role that transportation, particularly by transport haulers, plays in our commoditized food system. This is particularly the case for hogs. Once the hogs come to market weight, they need to be shipped to a processing plant in a timely fashion. As hogs will continuously eat costly feed and gain weight, as is evident in the case of sows which can reach upwards of 600lbs, it is imperative for hogs between 220lbs -270lbs to be processed and to ensure available packing plants can facilitate the slaughter. One producer, Paddy, who finishes hogs under contract, stated that when his hogs come to the preferred weight range, all he does is call the contracting company with the quantity of pigs needing slaughter, and the rest of the process is done for him. He stated, “It’s out of my control and that’s fine, it doesn’t bother me… I have to call in on Thursday saying how many pigs I have and they tell me where they’re going to go the next week” (Paddy). He is then provided a timeframe when a livestock hauler will pick up his hogs and transport them to the receiving processing facility – which Paddy also has no control over. In other cases, the producers will draw up a contract between themselves and a livestock hauling company to pick up hogs from their farms. While breed uniformity assists with uniform growth rates, especially in commodity production, inconsistencies or smaller production sites may result in too few hogs at market size to completely fill a trailer. In this case, hogs are brought to an assembly yard. Here pigs are unloaded off-truck, and kept in a holding until a full load of hogs is gathered for a processing plant (PAACO 2015c; Irwin; Ian). Some producers will also need to divide their market-ready

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26 Traceability has lucrative retailing potential as well, like the DNA-traceable beef program being offered in many of Loblaw’s grocery outlets, which can be a competitive advantage, and help build brand and store loyalty.
hogs amongst various plants, at times needing to ship some hogs to Ontario facilities while shipping others elsewhere. A few producers with whom I spoke will also bring their hogs directly to the processing plants themselves, to ensure that the trucks are thoroughly sanitized before loading to reduce the possibility of disease transmission.

Transportation to Slaughter:

While Ontario is indeed an agriculturally-rich place for a diverse number of crops and livestock, there is also a fair share of extreme weather: Piercing cold in the winter months and scorching heat and humidity in the summer pose unique challenges to the truly season-less hog harvest. A fifty-three-foot-long livestock hauler can hold between 270-310 live hogs (PAACO 2015c; Irwin). In the summer, dehydration can quickly ensue, and overcrowded haulers can cause excessive body heat to build within the trailer and lead to heat exhaustion and death (PAACO 2015c). Similarly, overcrowded haulers in the winter months can cause the formation of “punch-hole marks” or frostbite on hogs’ bodies in the shape of the transport’s air-holes (PAACO 2015c). In extreme winter weather, the hog can become fully frost-bitten and become fused to the sides, or bottom of metal trailer (PAACO 2015c). Such a scenario would also open further CFIA investigation into possible acts of animal abuse or neglect, as was the case in
2008, when Maple Lodge Farms’ Brampton, Ontario facility, was charged with animal abuse after 1,500 broiler chickens froze to death on the truck awaiting unloading (Canadian Food Inspection Agency 2013; Slaughter 2013).

Another increasingly important consideration within the livestock transportation sector is biosecurity. As a single hauler may circle between various farm sites and processing plants, there has been a shift towards truck washes and disinfection. Here, livestock haulers, the accompanying exterior driver cab, and all wheels are washed, disinfected with degreasers to remove animal biofilm, dried, and then inspected (Ontario Swine Health Advisory Board 2012). With the outbreak of PEDv in 2014, and the ongoing effects of PRRS, many livestock-hauling companies offer truck wash/disinfect services, for an additional fee, so that producers can have peace of mind that the truck entering their barns has been thoroughly cleaned (Ontario Swine Health Advisory Board 2012). However, truck washes are completely optional (Ontario Swine Health Advisory Board 2012). One interviewee noted that “…at the end of the day, it is the producer’s responsibility to pay for whether a truck gets washed or not, so that it is a cost of production that is borne on the backs of producers” (Irene). Irene also mentioned that while most producers will incur the extra cost to ensure biosecurity is maintained on their farms, in some cases up to $500 per load of hogs, there is a trend for farmers to skip truck washes when hog prices are low (Irene).

Although processing facilities are receiving hogs from a number of different farms on any given day, there is also no requirement from the processor for trucks to show proof of disinfection. However, because there are many trucks coming from many places, there is potential for the processor’s receiving gates to become hotbeds for microbial disease transference (Ontario Swine Health Advisory Board 2012; Irene). The livestock hauling company with whom I spoke rolls the cost of a truck wash into their price, so that all trucks leaving the facility are thoroughly cleaned (Ontario Swine Health Advisory Board 2012; Irwin; Ian). While not a substantial point in this dissertation, mention must be made of the considerable amount of natural resources, such as water and oil, needed to facilitate the germ-free transportation of highly susceptible pigs across Ontario and beyond.

This Little Pig Goes to Market Far, Far, Away: Export-Dependency of Canadian Production:

A noticeable trend within the pork industry in Southwestern Ontario, and Canada more broadly, is the massive amount of over-production. The 2011 Canadian Pork Handbook, provided to me by a Canada Pork International (CPI) director, notes Canada’s strong export dependency, reporting that over 60% of total production is exported, and that this figure reflects a three-fold increase in pork exports over a 20-year span (Canada Pork International 2011). Of these foreign markets, pork-exporting nations like Canada and the US are vying for market access in Japan (Canada Pork International 2011). Due to their high
population of relatively affluent people, little land for livestock, and an emphasis on high-quality product, the Japanese market is often referred to as “the golden ticket” (Ivan; Idris) for pork markets, as many products are sold at a premium, yielding up to three times what the domestic market would pay. Interestingly, many Canadian-born weaner pigs are also shipped to US finisher lots to be fed and processed, and sold back into Canada as value-added product, with estimates that “almost 30% of the Canadian domestic market for pork is supplied by the US” (Manitoba Pork 2013).

Trans-Pacific Partnership Agreement (TPP):

Market access to Japan and other Pacific Rim nations is a central driver for support in the Trans-Pacific Partnership Agreement (TPP27) talks that were finalized on October 5th, 2015 (Foreign Affairs, Trade and Development Canada 2015). For the commercial producers and industry leaders with whom I spoke, there was unanimous support for Canada’s role in the TPP talks, as a loss of international market access when so much of our production is dependent on export could spell devastating losses for producers and industry alike. One industry leader stated that “we can’t be out of it” (Izra) when asked what his thoughts were if Canada was unable to secure a place in the TPP talks. A common area of contention expressed by many commodity-hog producers28, particularly in relation to the TPP, was the stark differences between open-market production (hogs and beef cattle), and supply-managed production (broiler and layer poultry, turkey and dairy). Seen as a governmental subsidy by many open-market producers, and by producers in international markets seeking export for their poultry and dairy products, Canada’s supply-management or quota system29 has been criticized as protectionist policy. Proponents of supply-managed production hail it as a way to provide a fair, consistent price for domestic farmers to produce for domestic consumption. Critics feel that supply-management inflates consumer costs, and reduces the amount of choice available on grocery stores’ shelves (Montgomery 2015; Adomait, Mintz and Ragan 2015).

One producer’s thoughts on the TPP talks and supply management as a possible barrier to Canada’s participation in the TPP claimed “… the quota guys need to accept some imports, the quota system is doomed to fail – no one can get in” (Percival). The ability to get in to a livestock industry was another interesting point of discussion in many of the interviews conducted, and was a prominent feature

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27 The twelve countries in the TPP trade agreement are Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States, and Vietnam.
28 I specify commercial hog producers here, as the niche producers with whom I spoke had their pigs processed at provincial rather than federally-licensed plants; as a result, this pork remained in Ontario. However, none of the niche producers felt this was a problem as they had adequate demand for their products locally.
29 Under a quota system, more consistent pricing is available to producers as there is controlled supply of poultry/eggs/dairy being produced. Not seen as a governmental subsidy, but rather a stable cost of production tool, supply-managed producers feel that “farmers are paid what it costs to produce their product in the market” (Dairy Farmers of Ontario 2015).
that separated older and younger producers. While some of the at-or-near retirement-aged hog farmers with whom I spoke reminisced about the heated discussion surrounding the viability of pork under supply-management in the 1970s many chose to raise hogs over dairy or poultry because they like the challenge (Porter), like pigs’ personalities (Poppy; Pamela; Preston) or hated chicken dust (Paul). However, many of the younger farmers (though not much younger) or those newer to livestock mentioned the ease of getting into growing pigs, as compared to the now-prohibitive costs of buying poultry or dairy quota. Many of the experienced farmers stated that supply-management had indeed been considered as a route for pork in Canada, but that the implementation of such a system today would not be feasible as production would need to be severely cut. Many producers and industry informants were quite clear that if Canada fails to take part in the TPP, and the US manages to secure a bilateral agreement and thus market share with Japan, there will be absolute devastation for the Canadian hog industry. The TPP talks have not yet been finalized, and the coming months will provide a better picture of how and if Canada’s hog industry will be included in this negotiation. Next, I will outline Country of Origin Labelling, which has emerged as another trade-related talk that serves to greatly impact Ontario hog farmers.

Country of Origin Labelling:

The current debate amongst the World Trade Organization (WTO), the US, Canada, and Mexico is on the introduction of mandatory country of origin labeling (mCOOL or COOL). COOL came into being following the Congressional passage of the 2008 US Farm Bill, which stipulated that livestock born, raised, or processed outside of the US must be labeled as such. Many of the producers with whom I spoke scoffed at COOL, claiming it was an attempt to implement an illegal trade barrier. COOL is seen as a poor-intentioned move by the US, made behind claims to make the pork supply safer, following bovine spongiform encephalopathy (BSE or mad cow disease, the main vector causing variant Creutzfeldt-Jakob Disease (vCJD) in humans) which hit Alberta in 2003 (Canadian Food Inspection Agency 2013). Due to the porosity of the US-Canada border, especially in relation to pigs, many Ontario producers felt COOL was an attempt to squeeze out Canadian market-share, and that regardless of whether it passed or not, the damage resulting from fighting it could in no way be reimbursed to producers. Texas Republican congressman Michael Conaway put forth Washington Bill (H.R.2393) to amend the Agricultural Marketing Act of 1946 to repeal country of origin labeling requirements on beef, pork, and chicken products. Despite this move and a warning by the WTO to the US that COOL is in indeed a violation of the North American Free Trade Agreement (NAFTA), and that participant nations are able to seek billions in retaliation fees, the US is slow to move on this issue, which at time of writing has not been resolved and looms over the commercial hog industry in Southwestern Ontario.
Having outlined two prominent and timely governmental trade talks that will inevitably shape the future of the Ontario (and Canadian) hog industry, I will now discuss hog carcass pricing, which is based on US market prices (Grier 2004). Grier (2004) further contends that both pigs and pork prices are based on US valuation for two reasons: due to hog futures, and the fact that the Canada-US market is more emblematic of a singular North American market.

**Pricing:**

For many of the producers with whom I spoke, the pricing of hogs often came up as a sore point, due to the high volatility of the open-market. While one niche producer, unhappy with the price points he was receiving, decided to completely create his own price list and marketing campaign, this was not the case for any of the commodity producers with whom I spoke. The payment received per hog is linked to the processor that issues the cheques to producers, anywhere from 48 hours to 7 days following slaughter.

There are a few factors that also need to be considered in constructing hog prices. For many commodity producers, the base price is set in American dollars, upon the Chicago Mercantile Exchange (CME), a speculative hog futures stock exchange (Grier 2004). As a result, the projected prices are set months ahead of time. One interviewee with whom I spoke in July 2015 was a hog trader at the CME, and was working on price setting for October 2015 hogs. Futures trading at the CME is historically based on the sale of butter and eggs during the 1850s at the Chicago Board of Trade (CBT). The CBT allowed speculative traders to set prices for agricultural products ahead of time, to help hedge risks such as price volatility due to seasonal supply and demand (Igor). The prices established at the CME use a number of information sources, from Internet chatter and speculation, to USDA cash number products for select pork cuts that are released on a daily basis (Igor; Grier 2004; OMAFRA 2015). Processors will take this array of numbers and, using a similar formula to what OMAFRA provides as a planning and budgeting tool for producers, will establish a price.

OMAFRA will also release a weekly document called Hog Margin Tracker$, using CME data, to provide futures forecasting in Canadian dollars (Indiana; OMAFRA 2015) as a tool for producers. The price is illustrated per 100kg, and is referred to as the 100% Formula Price, and a 100 index, or (C$/ckg, 100index) (Indiana). A producer can have hogs rated at a 110 index, for example, which would result in a 10% increase or bonus (Indiana; Philip; OMAFRA 2015). Such bonuses are often tied to decreased hog backfat or leanness. In June 2015, for example, the average price per /ckg was $203.76 (Indiana). Another example of a price formula for an Ontario hog cost is illustrated below, using the same example provided to me by an OMAFRA swine specialist from June 2015’s swine budget:

\[
\text{Market pig @ 101% of Formula Price $180.78/ckg, 100 index, 100.31 kg plus $2 premium = $203.47}
\]
While pricing did frequently become a point of conversation, there were a number of producers who were not fully aware of how the prices for their hogs were established. Based on the formula above, I can fully appreciate producers’ confusion. There are a number of factors to consider in the establishment of hog pricing, but also to factor in the cost of production. Much like speculative hog trading, a main component of the hogs’ feed is corn, which, in commodity production, largely stems from open-market trading. Producers, if not land-based and able to supply some or all of the corn needed for hog feed, need to accept the current market cost of corn, which often fluctuates due to increased interest in ethanol biofuels.

The below grading grid (Table 7), which was provided to me by the Ontario Pork Producers' Marketing Board (OPPMB), is from 2001, and is therefore no longer considered active. However, I have included it to illustrate the targets mandated by processors for weight and lean yield targets. It should also be noted that this grading grid is based on heavy hogs, which in 2001, a 100kg/220lb hog would only receive 70% of the 100% Formula price. There is currently a processor-led trend to encourage the production of heavier hogs. The implications of this preference for heaviness is further discussed in Chapter 8.

**Grading Name:** Heavy Ontario Grid  
**Date:** February 21, 2001

<table>
<thead>
<tr>
<th>Weight Class</th>
<th>40.0 to 64.9kg</th>
<th>65.0 to 69.9kg</th>
<th>70.0 to 74.9kg</th>
<th>75.0 to 79.9kg</th>
<th>80.0 to 84.9kg</th>
<th>85.0 to 89.9kg</th>
<th>90.0 to 94.9kg</th>
<th>95.0 to 99.9kg</th>
<th>100.0 to 104.9kg</th>
<th>105.0 to 109.9kg</th>
<th>110.0 to 190.0 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield Class</td>
<td>64.30-100.00%</td>
<td>10</td>
<td>10</td>
<td>50</td>
<td>90</td>
<td>112</td>
<td>114</td>
<td>114</td>
<td>114</td>
<td>110</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>61.80-64.29 %</td>
<td>10</td>
<td>10</td>
<td>50</td>
<td>90</td>
<td>110</td>
<td>112</td>
<td>112</td>
<td>112</td>
<td>108</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>59.60-61.79 %</td>
<td>10</td>
<td>10</td>
<td>50</td>
<td>90</td>
<td>108</td>
<td>111</td>
<td>111</td>
<td>111</td>
<td>107</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>57.70-59.59 %</td>
<td>10</td>
<td>10</td>
<td>50</td>
<td>90</td>
<td>106</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>107</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>56.10-57.69 %</td>
<td>10</td>
<td>10</td>
<td>50</td>
<td>90</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>106</td>
<td>106</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>54.70-56.09 %</td>
<td>10</td>
<td>10</td>
<td>50</td>
<td>90</td>
<td>93</td>
<td>97</td>
<td>100</td>
<td>97</td>
<td>97</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>20.00-54.69 %</td>
<td>10</td>
<td>10</td>
<td>50</td>
<td>81</td>
<td>88</td>
<td>90</td>
<td>90</td>
<td>88</td>
<td>81</td>
<td>81</td>
</tr>
</tbody>
</table>

Table 7  An example of a 2001 heavy hog grading grid. Hog weight targets run along the x-axis, while yield class runs along the y-axis. Yield class is based on the calculation of the average yield percentage that is based on the measurement of millimeters of muscle tissue relative to millimeters of backfat, and then factored into a formula calculation. The most lucrative hogs, highlighted in red, are illustrated by a higher base price, with 114% as the highest prices a producer can expect to be paid during this time. Note the heavy penalties issued if a hog is too light or too fat, receiving just 10% of the 100% Formula price. Reproduced with permission from the Ontario Pork Producers' Marketing Board (OPPMB).
**Processor Grade Index:**

Performed at the processing plant, while the now CFIA-stamped hog is still on the rail, a processor grade index is taken to calculate carcass leanness. The grading grid, also called an *average yield percentage*, is based on the measurement of millimeters of muscle tissue relative to millimeters of backfat, and then factored into a formula calculation (Izra; Indiana; OMAFRA 2015). Based on this processor-mandated grading system, hogs with more backfat will receive a lower grade index, and thus producers will receive less pay (OMAFRA 2015; Ufkes 1995; 1998).

An example of average yield percentage is as follows: Between June 12\textsuperscript{th}-18\textsuperscript{th}, 2015, the weekly average fat measurement of Ontario hogs was 18.71mm, and the weekly average muscle measurement of Ontario hogs was 65.87mm, resulting in a 60.87 average yield percentage, and thus an implied premium of $16.66 (Indiana). It became evident that producers must not only master in-barn roles, but also be quite astute at reading futures market information and performing complex math problems. It is easy to see how many producers were unable to even somewhat accurately establish their cost of production, let alone budget, when so many factors and complex calculations are needed to construct a cost of production scheme, which changes on a daily basis.

Another industry informant, Ivan, had mentioned the premium price that high marbled pork brought; I was provided with a tool (Figure 28) that is used in the industry to gauge marbling and thus quality. Ivan stated,

We [CPI] created a little ruler, plastic ruler, and the idea is that our packers can use our ruler to measure the color of the fat, the color of the meat, and the marbling content in the product. Why? Because if you’re a further processor, you don’t need marbling, you need darker meat ‘cause it’s going to sausages and cooked items, right, so you don’t need to pay for fat, but if you’re a retailer, or food service provider, you do need that fat, cause that will provide the juiciness and the taste of the meat (Ivan).
Role of Ontario Pork:

While Ontario Pork, or the Ontario Pork Producers’ Marketing Board (OPPMB), will be discussed more in the following chapter on retailing, particularly following their soft-launch of a new branding campaign in conjunction with Loblaw’s stores, their role in pricing has changed considerably over time, and must be mentioned here. Ontario Pork, until 2010, served as a third-party bargaining group, and the middleman between producers and processors (Broadway 2006; Boyens 2001; Qualman 2001; Novek 2003; Ontario Pork 2104a; 2015b). Now, producers can directly negotiate their contracts with processing plants, and this comprises a vast majority (more than 85%) of all pricing contracts (Izra; Ontario Pork 2104a; 2015b). The remainder of contracts see Ontario Pork negotiating with processors on behalf of producers, while never taking ownership or possession of any hogs (Izra; Thompson 2000; Brisson 2014). Some producers felt the role of Ontario Pork in contract negotiations was not worthwhile, and were happy to deal directly with processors when establishing their contracts. However, one must question the power dynamic (Broadway 2006; Boyens 2001; Qualman 2001) between individual
producers and processing plants – when there are only two federally-licensed plants in the province, and an over-production of hogs.

The next chapter will turn to investigation of pork retailing in Ontario. Far from the barns and processing plants, marketing and advertising schemes, as well as the incredible influence of Canada’s major food retailers, will be outlined.
7. “Retailers are getting bigger and processors need to market the whole animal in a very sophisticated way”: Pork Retailing in Southwestern Ontario and beyond

“I know there is always a push for food to be cheap, which is stupid, the one thing you need to survive is water, the second thing is food, you don’t need a cottage to survive, and you don’t need a big boat either, you don’t need three cars to survive either, you need food and water, water and food…” (Paul)

“…you want that big honking piece of meat and you want it as cheap as hell – fine-get that shoe leather and stomp the hell out of it and be happy” (Paul)

This chapter will begin with an overview of value-added processing in meat retailing, along with the prominence and success of branded goods. From here, I will analyze branding campaigns such as those mounted by Maple Leaf Foods, Sofina Foods, du Breton, and the Ontario Pork Producers’ Marketing Board (OPPMB or Ontario Pork). This chapter will then conclude with an overview of the tightly consolidated retailing sector, as well as comment on the problematic trend of retailers emerging as health authorities while simultaneously shaping purchasing habits via points-reward programs.

Further Processing/Value-Added Processing:

A trip to the grocery store’s meat aisle offers a wide array of fresh retail cuts (pork chops, loins), amongst a wide selection of further processed items (many iterations of bacon, hams, pulled pork, ready-to-eat ribs, deli meats, sausage, etc.). However, despite this selection, further analysis shows that there are two main categories of pork products available: 1) those that have come from a packing plant for direct sale, often fresh, in unbranded cryovac packages or unbranded Styrofoam trays after being cut by in-store butchers, and 2) those items that tend to be branded, with a growing presence of value-added, further processed pork cuts, such as natural, low-sodium, gluten-free, pre-cooked, pre-sliced, along with a number of others.

Despite the lack of primary processors in Ontario (Sofina Foods and Conestoga Meat Packers), which do produce some branded goods, there are also a number of further processors selling branded items in retail outlets. One example of a further processor is Mississauga-based Brandt Meat Packers Ltd., which
specializes in European-inspired deli meats (Brandt Meat Packers Ltd. 2012). After noticing many pork-based items in a number of national retail outlets, I contacted the company headquarters to enquire as to where their raw material pork was sourced from. The first person who answered replied, “I’m pretty sure we’re not allowed to tell you that, but I’ll transfer you.” After being transferred to the procurement department and again asking where their raw material was sourced, I was told, “…across Canada, the US, anywhere – we’re not specific about where we get it.” While the previous chapters have highlighted the vital role of primary processing, or kill plants, it is important to also discuss the influential role of further processors. In Ontario, while there are only two federally-licensed kill plants, there are a number of provincially-licensed kill abattoirs (Haines 2004). All meat that will cross provincial borders, or be shipped abroad for export, must be inspected at a federally-licensed plant with a licensed CFIA meat inspector present (Canadian Food Inspection Agency 2013; Haines 2004). The CFIA is therefore, also responsible for the enforcement of the Meat Inspection Act (R.S.C. 1985, c. 25 (1st Supp.)) and Meat Inspection Regulations, 1990 (SOR/90-288), in-plant (Haines 2004). The CFIA reports that 95% of all animals slaughtered, and a majority of all meat processed in Canada, come from federally-licensed facilities (Canadian Food Inspection Agency 2013). In contrast, facilities can be licensed at the provincial level. However, all meat from provincially-licensed facilities can only be shipped intra-province, and the provincial government – in this case, the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) – is responsible for enforcement of the Food Safety and Quality Act, 2001 (S.O. 2001, c. 20), the Meat Inspection Act (R.S.C. 1985, c. 25 (1st Supp.)) and Meat Inspection Regulations, 1990 (SOR/90-288) (Haines 2004)
Figure 29 A provincially-licensed pork product. The stamp on the right-hand side of the label bears the provincial coat of arms, as well as the plant number the product was processed at – here PLT 120. This number corresponds to a list of provincially-licensed, or free-standing meat plants (FSMPs) – as PLT 120 is. FSMPs do not conduct animal slaughter, but rather just further-processing. Photo by author.

There are three types of plants: Free-standing meat processing (FSMP) plants, abattoirs conducting further processing, and abattoirs. Abattoirs perform animal slaughter. Abattoirs conducting further processing also perform animal slaughter. FSMPs do not perform animal slaughter, and can be further categorized into 2 categories: Category 1 Activities which include deboning, packing, cooking a ready-to-serve meat product, and Category 2 Activities which include canning, curing, mechanical separation, receiving carcasses (Food Safety and Quality Act, 2001). Data from OMAFRA states that there are 131 abattoirs/abattoirs conducting further processing in Ontario, with 82 of these plants capable of hog processing (Ontario Ministry of Agriculture, Food, and Rural Affairs 2015). There are also 378 free-standing meat processing plants in operation in Ontario (Ontario Ministry of Agriculture, Food, and Rural Affairs 2015). It is worth mentioning again that there are only two federally-licensed hog plants operating in Ontario.

Specifically, while FSMP plants do not perform animal slaughter, they are still subject to a number of regulatory requirements to ensure food safety, particularly on ready-to-eat (RTE) meat products where no cooking/heating prior to consumption is needed (Haines 2004). Of notable importance here is microbial testing. Following a listeriosis outbreak at a Toronto-based Maple Leaf Foods packaging plant in 2008,
which resulted in 21 deaths (Ontario Ministry of Health and Long-Term Care 2012), further microbial monitoring and testing legislation was introduced in January 2009, beneath the *Food Safety and Quality Act, 2001* (S.O. 2001, c. 20). Microbial monitoring of RTE meat products specifies that meat inspectors in further-processing plants collect samples of RTE products, and swabs of preparation surfaces, utensils, and plant equipment (Ontario Ministry of Agriculture, Food, and Rural Affairs 2013; Haines 2004). These samples are then sent to a University of Guelph laboratory, and are tested for major sources of bacteria that are harmful to human health such as: listeria, salmonella, two strains of staphylococcus, and E.coli, along with less harmful bacteria that are more indicative of poor sanitary practices (Ontario Ministry of Agriculture, Food, and Rural Affairs 2013). If test results indicate a high level of bacteria, plant personnel may be required to submit an action plan to remedy results; if harmful bacteria are found, OMAFRA, as the testing body, will contact the Canadian Food Inspection Agency (CFIA) for further action (Ontario Ministry of Agriculture, Food, and Rural Affairs 2013). While the profit potential and consumer base for RTE meat products is indeed an alluring component of further processing, increasing regulation, particularly related to food safety has become a topical issue, and area of concern for the broader meat industry.

**Margins and Profitability:**

In his book on the restructuring of the Canadian beef industry, MacLachlan stated that modern packing plants must operate on a massive scale in order to remain profitable, due to tight profit margins, and that “you either sell it or smell it” (2001:5). As meat is highly perishable; it is a race to sell products before decay of both the meat and profits occurs. Similarly, for many commodity-producers, the commercial pork industry operates on a high-volume, low-margin model. Producers must constantly increase their “hog-crop” (Phoenix) in order to maintain their cost of production. From a retailing perspective, value-added further processing has permitted the wide-spread distribution of otherwise highly-perishable meat. Similarly, such processing has allowed for product differentiation.

Before the establishment of many of the modern governmental departments, much of the legislation governing food was based on anti-adulteration laws to protect consumers from economic fraud (Ostry 2006; Winson 2013). Canada’s *Adulteration Act of 1874* was applied nationally by 1919 and was modeled after Britain’s *Adulteration of Food and Drugs Act of 1872* following a sanitary revolution centred on food supply contamination (Ostry 2006; Winson 2013). A similar trend toward anti-adulteration legislation occurred in the US with the 1906 drafting of *The Pure Food Law* following public outrage from Upton Sinclair’s book *The Jungle* that outlined the grotesque conditions of beef slaughterhouses (Ostry 2006; Winson 2013). Winson contends that this form of anti-adulteration regulation set the groundwork for
processors to engage in branding their own products, and promoting product differentiation (Winson 2013). Ostry also notes this shift to standardized production with the 1907 Meat and Canned Food Act that established a regulatory system for the content, weight, and name of the producing company for canned meat goods (Ostry 2006) alongside the expansion of processing industries and retail chains.

The responsibility of overseeing national nutrition shifted to the Department of Health following the implementation of the Food and Drug Act in 1920. Of notable importance here is that this Act distinguished between adulterations and misbranding, following the discovery of micronutrients and the resultant vitamin mania (Ostry 2006). This definitional distinction is emblematic of the shift toward advertising, marketing and health-based claims tied to food products, as well as quality control and the grading of products (Ostry 2006). Even in the infant stages of such change toward regulatory standardization alongside product differentiation, adding value to one’s products served as a profitable way to shape the food environment. Much like the shift to regulatory standardization of the 1920s, the current food environment has been further embedded in processes of standardization. As branding and differentiation were key historical moments within food retailing, I will briefly overview the role of branded goods.

**Branded Goods:**

In Canada, a lack of competition has resulted in increasingly-consolidated corporate food empires that have become historically entrenched within the Canadian foodscape (Winson 1993). One such company includes the George Weston Company, whose then-president, W. Garfield Weston, took controlling interest of Loblaw Company Ltd. in the early 1950s, following a large purchase of Loblaw stock from co-founder J. Milton Cork (Loblaw Company Ltd. 2011). Such oligopolistic expansion was largely facilitated by the emergence of branded goods and the appearance of a higher proportion of processed foods in grocery stores (Winson 1990; 1993; 2013). In terms of the corporate concentration of the Canadian retailing scene, there are a few notable developments that need to be outlined; these include the rise of supermarket power, the boom of private label own-brands (Winson 1993; Burch & Lawrence 2007; Kopytek 2014; Royal Commission on Price Spreads 1935), and economies of scale for food manufacturing inputs.

In regards to supermarkets as key powers within the modern food system, there is much literature on the proposed shift within the agro-food commodity supply chain from one that is a producer-driven commodity chain (PDCC) to one that is a buyer-driven commodity chain (BDCC) (Gereffi, Korzeniewicz and Korzeniewicz 1994). Here, a producer-driven chain is one in which transnational manufacturers are the
primary actors within the supply chain, whereas retailers are the primary actors within a buyer-driven chain (Konefal, Mascarenhas & Hatanaka 2005; Gereffi, Korzeniewicz and Korzeniewicz 1994). Konefal et al. (2005) have noted the shift from producer-driven global commodity chains with transnational manufacturers as the primary actors, to retailers within buyer-driven commodity chains through further consolidation and concentration resulting in global oligopolies (Winson 1993; Konefal, Mascarenhas & Hatanaka 2005). Baines (2013) adds that in buyer-driven commodity chains production capabilities are outsourced to a number of smaller independent suppliers, following the specifications demanded by food chain stores.

Oligopolistic supermarkets and the wildly successful corporate brands they control have reconfigured the supply chain as transnational supermarket chains (TSCs) (Konefal et al. 2005) through the multitude of markedly differentiated and innovative products, often produced at a high quality standard (Burch & Lawrence 2007), while reducing transaction costs. The successful implementation of value-added processing within producer-driven commodity chains as purported by big brands has served as a model for retailers to implement their own versions of branded goods, but within a new food environment. Through circumventing ‘retail price management’ which historically allowed food manufacturers to set the prices at which goods were sold (Burch & Lawrence 2007), supermarkets engaged in horizontal coordination and integration (as in the expansion into clothing, pharmacy, garden retail), as a way to mitigate risk through product diversification, as well as maximize on consumer spending. This has been facilitated by excess production and economies of scale in production, but also mass consumption (Konefal et al. 2005). Noting the consumer success of brand establishment, as well as emphasis on price (Smithers, Lamarche & Joseph 2008) regardless of the actual cost of food (Belasco, 2009; Walther-Toews & Lang, 2000) supermarkets have capitalized on the model initially established through producer-driven commodity chains.

House-Brands:

While the massive reach of Canada’s three largest retailers will be outlined below, this section is an appropriate transition for the discussion of the success of supermarket chains’ private label house-brand or own-brand goods. Unlike their branded counterparts, which require extensive advertising to develop consumer brand-awareness, house-brands offer a similar product as offered by a big brand, but often at a markedly lower price. Similarly, house-brands tend to offer high-quality and often innovative products, as they are not bound by the same long-term consumer targeting as branded goods. Loblaw Company Ltd. was one of the first to introduce home-brand items. For example, following the launch of their President’s Choice (PC) line in 1984 (Loblaw Company Limited 2011), Loblaw spearheaded nutritional labelling for all PC products in 1994 – 10 years prior to the legislative requirement for all packaged food products to carry nutritional information labels in 2004 (Loblaw Company Limited 2011).
Own-brands also carry exclusivity (Koytek 2014). Unlike branded goods, which can be retailed in a number of places, and which is the aim of branding, own-brands are tied exclusively to the purveying retailer (Fitzell 1992; Kopytek 2014). PC is only sold in Loblaw Company Ltd. banner stores. Interestingly, own-brands have been so successful they have essentially developed their own form of branding. The generic, simplistic appearance of a bright yellow No Name product has very much developed into a form of recognizable branding (Fitzell 1992).

However, while house brands within food retailing are relatively new, the notion of providing exclusive access to high-quality brands can be traced to the 1900s under another famous Canadian store – Eaton’s (Kopytek 2014). Eaton’s Toronto-based factories sought to revamp the idea of factory work as toilsome and unsanitary, as workers were provided access to a breadth of on-site services from hospital care, to high quality drinking water (Kopytek 2014). Such amenities were funded from the savings that Eaton’s reaped from producing goods for their stores in their own factories (Kopytek 2014). Such goods were sold exclusively within Eaton’s stores. These house brands included a range of product lines from women’s wear to housewares under the TECO and Eatonia brands (Kopytek 2014). Much like the premium grocery brands, such as Loblaws’ PC brand, found today, Eaton’s brands provided valuable savings while earning “renown for their quality and innovation” (Kopytek 2014:57).
du Breton’s Antibiotic-Free Guarantee:

Another emergent trend in further processed and RTE meat products is the use of antibiotics in animal-based agriculture. Unlike ractopamine, which is also added during the production phase in-barn, antibiotic-free production has become a successful marketing and retailing opportunity, and will be discussed in this chapter. There has been recent media coverage on large fast-food chains committing to phase in antibiotic-free meats in their products. Canadian fast food chain, A&W, has already actively switched to providing antibiotic-free chicken, and hormone-free, steroid-free beef (A&W 2015). Similarly, McDonald’s has more specifically committed to “stop using antibiotics important to human medicine in chicken production for McDonald’s USA by March 2017” (McDonald’s 2015 [emphasis added]). The US-based Tyson Foods has also committed to providing poultry raised without human antibiotics by 2017 (Tyson Foods Inc. 2015). Most recently, the wave for fast food outlets to follow the widely successful US Chipotle-model of sourcing more natural food spurred a larger discussion following Subway’s announcement to phase out antibiotic usage by their meat suppliers. Following this statement, an American cattle-rancher-turned-blogger wrote a post outlining how inhumane such sweeping statements can have on
meat animals. She noted that, as a beef rancher, when an animal becomes sick, she has few options: to treat
the animal, often with antibiotics; to do nothing and allow the animal’s health to improve, or worsen, on its
own; and if health does worsen, to allow the animal to slowly die from infection, or to shoot it. The blog
post’s title: “Subway announces that a bullet is their treatment of choice for sick animals” (FeedYard Foodie
2015a) quickly added bravado to an already trendy topic. Noting that there are already legally enforced
slaughter-withdrawal periods for antibiotic use in the U.S. (in Canada as well), FeedYard Foodie claims
that such sweeping commitments result in a tremendous amount of waste (FeedYard Foodie 2015a). While
she also briefly notes that antibiotic-resistance in humans is indeed an important issue, she does not feel
that zero antibiotics in animal-based agriculture is beneficial (FeedYard Foodie 2015a). Following
heightened media attention of this blog post, Subway reissued another statement, acknowledging the
acceptable use of appropriate antibiotic regimens when animals are in need of treatment, but holding to
their vision for an antibiotic-free pork and beef supply by 2025 (FeedYard Foodie 2015b).

While there is a preference to underscore antibiotic usage in poultry and beef, as illustrated above,
there is movement towards antibiotic-free pork production as well. In Canada, Quebec-based du Breton has
been a leading presence in the antibiotic-free, humanely-raised pork supply chain, as is reflected on their
retail-level branding campaign (Figure 31).
Figure 31 A package of du Breton pre-sliced, antibiotic-free, humanely-raised, organic ham, found in a Wellington County Zehrs Market store. This ham would have been processed in du Breton’s Rivière-du-Loup, QC processing plant, and shipped back to Ontario for sale. The pigs may have been sourced from an Ontario or Quebec farm. This particular package also retailed for $5.49 for 125 grams. Photo by author.
A similar campaign stemming from the Ohio Pork Board cleverly highlights that antibiotics, when used, are no longer present by time of consumption, and have issued the above tweet (Figure 32 A tweet issued from the Ohio Pork Board, following the heightened media discussion of antibiotic usage in meat animals. Figure source: @porkNetwork - October 23 2015.) to inform consumers. A similar legislation is in place for Ontario-produced pork. Depending on the form of antibiotic used, producers are required to ensure that a withdrawal period is met before sending hogs to slaughter. While du Breton’s sweeping no-antibiotics policy left many producers with whom I spoke feeling that this was inhumane, what needs to be highlighted here is the competitive, branded, advantage that du Breton has fashioned in retail outlets.
Maple Leaf Foods:

With the closure of Maple Leaf’s Burlington plant, as outlined previously, came the demise of Maple Leaf Foods’ primary processing sector in Ontario. However, branded Maple Leaf Foods still have an increasingly dominant presence in retail outlets. One key industry interviewee stated that the plant’s closure came following a re-evaluation of the company’s priorities – one of which included a focus on further processing. Under this model, Maple Leaf Foods may not necessarily be slaughtering the animals used in their branded goods. Rather, raw material or pork is procured from a primary processor, and then further processed and branded. Innis stated,

our strategy is to primarily use our own raw materials into our finished goods; so hot dogs, bacon, ham and so forth, but we don’t supply - we’re unable to produce everything we need so there’s a part of my team that goes and sources raw materials in the open market from competitors, if you will, from a pork standpoint but also beef. So, we don’t have any beef operations so we are one hundred percent reliant upon third parties to supply our raw material requirements on, on the beef side (Innis).

Innis went on to outline how this company-level shift included the creation of value for both Maple Leaf Foods and consumers in response to shifting consumer Wants. He stated,

the new age millennial consumer doesn’t know what to do with five pounds of meat, like, you can move lots of tonnage that way, but then, you know, we’re not doing anything to create value in the category and that’s what we’re trying to do, now in our case, finding different marketing to make, to margin up both for ourselves and for the producers that are raising the pigs for us, and create more value for the chain and bring up the image of pork (Innis).
Figure 33 An excellent example of a value-added, further processed pork product, offered by Maple Leaf Foods. This bacon is not only pre-cooked, pre-crumbled, gluten-free, and made with no preservatives, but also comes in a resealable pouch – an extremely convenient pork product. However, note the US inspection stamp to the right of the Maple Leaf logo. This indicates that the pork, as a raw ingredient, was sourced and likely processed in the US, and then branded by Maple Leaf Foods. Photo by author.
Sofina Foods:

While the previous chapter outlined a number of banner brands that Sofina Foods operates, this chapter will showcase some of the retail-level products that Sofina Foods offers. As noted previously, I have been unsuccessful in securing an interview with Sofina Foods. Despite their voice not being represented in this dissertation, Sofina Foods has tremendous showing at retail outlets under a number of different brands including Mastro, Lillydale, San Daniele, Janes, Cuddy, Vienna, Fletcher’s, Fearman’s, and Quality Meats (Sofina Foods 2015b).

Figure 34 Quality Meats’ cured pork cottage roll by Sofina Foods. Photo by author.
Figure 35 Another of Sofina’s food brands - Mastro deli ham slices. The Mastro ham is also more value-added than the pork roll above as it is pre-cooked, pre-sliced, gluten-free and without preservatives. Photo by author.

Having outlined a few in-store branding and retailing strategies, I will now analyze the role of marketing boards, and surrounding legislation, in the marketing of meat and pork products in Ontario.

**Ontario Pork Producers' Marketing Board (OPPMB):**

The Ontario Pork Producers' Marketing Board (OPPMB), otherwise referred to as Ontario Pork throughout this dissertation, is the marketing board for all Ontario pork producers, and is headquartered in Guelph, Ontario. The OPPMB was formed in 1946, following a 1945 producer-led vote in favour of producer-controlled organization within the Ontario hog sector (Ontario Pork 2014a). The development of the OPPMB also resulted in single-desk marketing of all Ontario pigs. However, OPPMB is no longer the sole marketer of Ontario pigs. As of December 4th, 2010, individual producers are able to negotiate and market their hogs directly to processors (Ontario Pork 2014a; Izra; Broadway 2006; Novek 2003; Thompson 2000). This change was also echoed by a structural change at Ontario Pork. With the removal
of single-desk selling, Ontario Pork now provides the option for producers to seek and pay for additional marketing services through their Ontario Pork Marketing Division. The remainder of the organization, now termed Ontario Pork Universal Services, provides services seen to benefit both the individual producer and broader industry (Ontario Pork 2014a). Ontario Pork Universal Services also provides consumer educational resources such as recipe cards, an online recipe blog, and governmental and retail representation (Ontario Pork 2014a). Ontario Pork also serves as a disseminator of information to all Ontario hog producers (Ontario Pork 2014a). When I first began my recruitment calls for pork producers, I was asked on multiple occasions if I had any association with animal rights’ groups. Many producers had noted that if protestors or activists clash with the pork industry, Ontario Pork will issue warnings and announcements for producers to be leery of people near their farms, and of those asking too many questions. A similar sentiment of industry cohesion was also apparent when I asked both producers and key industry informants what their thoughts were on trade agreements, such as the TPP, and the US-led mCOOL. There tended to be uniformity of responses, which would align with Ontario Pork’s vision to be the “preferred conduit of knowledge for producers” (Ontario Pork 2014a). Ontario Pork is also a provincial member on two national hog organizations: The Canadian Pork Council (CPC) and Canada Pork International (CPI). Both of these organizations will be briefly outlined following an overview of the Farm Products Marketing Act, and before moving onto discussion regarding pork-specific marketing strategies and branding used towards pork retailing.

Farm Products Marketing Act (FPMA):

The Farm Products Marketing Act (FPMA), alongside the Milk Act, is Ontario legislation that governs all marketing boards in the province. Therefore, the OPPMB or Ontario Pork falls beneath FPMA governance. The FPMA operates in conjunction with OMAFRA; its main function is “to provide for the control and regulation in any or all aspects of the producing and marketing within Ontario of farm products including the prohibition of such producing or marketing in whole or in part” (FPMA s.2, R.S.O. 1990, Chapter F.9). While there are also regional representative groups, such as the Perth County Pork Producers’ Association, such groups are not seen as regulative authorities, and are not within the same category of representation as the FPMA. The FPMA covers a number of farm products from meat, to honey and wool, and of course, pork.

Canadian Pork Council (CPC):

Both CPC and CPI are headquartered in Ottawa, Ontario, and share a joint office. I had the opportunity to speak with a director at CPI during a recent trip to the nation’s capital. The CPC is particularly well-situated in Ottawa, as they serve as the national lobbying group for the pork industry
(Canada Pork Council 2013a). The CPC’s lobbying efforts are funded through fees collected via provincial marketing boards; in this case, the Ontario Pork Producers' Marketing Board (OPPMB) (Canada Pork Council 2013b). Formed in 1966 as the Canadian Swine Council for the development of an improved grading system, the group was renamed the Canadian Pork Council following a pivot in interests toward policy advocacy and lobbying (Canada Pork Council 2013b).

Canada Pork International (CPI):

The CPI, while linked to the CPC, and thus Ontario Pork, focuses mainly on export marketing and promotion. While there is a domestic marketing branch, called Canada Pork, both interviewees at CPI and Canada Pork had mentioned that marketing for domestic consumption has largely taken a back seat to Canada’s strong international pork marketing initiatives (Ivan; Irving; Grier 2007; Brisson 2014). Established in 1991, CPI, along with CPC and the Canadian Meat Council, aims to further promote Canadian pork to international markets while working with governmental and trading partners (Canada Pork International 2015a).

Having outlined the major organizations that are responsible for marketing, regulating, and lobbying on behalf of the Canadian pork industry more broadly, I will now outline the prominent marketing and labelling initiatives that aim to better capture consumers at the retail-level. Here, there are two provincial and one national initiative that pertain to Ontario pork production.

Provincial/National Marketing Initiatives:

**Ontario Pork Label:**

The Ontario Pork label is an initiative by The Ontario Pork Producers' Marketing Board (OPPMB), and is funded by the mandatory per hog, producer-paid fee via Ontario Pork Universal Services. Many of the producers who I interviewed were underwhelmed by Ontario Pork’s branding attempt. While two different producers had mentioned the visual similarities between the Ontario pork label and OMAFRA’s successful Foodland Ontario label (Parker; Porter), others felt that the label was overly simplistic. Paul, on the other hand, was perplexed at how Ontario Pork can brand any products, as Ontario Pork does not own the product. Packard also felt that the label fell short. He stated that the label is insufficient without a story with which to associate the product.
Homegrown Ontario Label:

Another industry group that focuses on provincial branding is the Ontario Independent Meat Processors (OIMP). Developed in 1980 as a board-led, member-based, meat organization, OIMP aims to promote quality Ontario-sourced meat products (Ontario Independent Meat Processors 2015). Ontario Pork is an affiliate OIMP member and, as a result, Ontario pork producers can affix the Ontario Pork label. However, as of 2006, OIMP members also have exclusive access to the Homegrown Ontario label (Ontario Independent Meat Processors 2013).

This label assures consumers that these products have been both raised and processed in Ontario (Ontario Independent Meat Processors 2013). I have reached out to OIMP’s head office regarding an interview, but have had no success in securing further information on the success of this labelling program. While the consumer-impact of the Homegrown Ontario logo is unclear, such campaigns seeking to market a product’s provenance is emblematic of an extended short food supply chain (Renting, Marsden & Banks 2003). Here, SFSCs attempt to shorten the chain from production to consumption, and assurance that meat has been both raised and slaughtered in Ontario, offers consumers seeking more localized items an option.
Canada Pork:

As noted above, CPI also has a domestic marketing branch, though CPI’s main efforts lay in exports. In an attempt to boost domestic consumption of pork products, CPI and their Canada Pork branch have developed the Verified Canadian Pork (VCP) program. Under the VCP label, consumers are assured that their pork products have been verified under the following guidelines: that producers are CQA certified, producers are in compliance with the Code of Practice, and that all pigs are tagged under the national PigTrace program (Canada Pork International 2015d). VCP also assures that pigs are raised without added hormones and minimally processed, and that the pork is a source of “protein power” (Canada Pork International 2015b). However, as noted in Chapter 4, all advertised assurance points are already legally in-place for all Canadian producers. It appears that such branding campaigns are an attempt to bridge emergent consumer interests, like traceability, to current production and processing practices via branding.

![Figure 37 Latest iteration of VCP label by Canada Pork and Pork Marketing Canada sourced from Canada Pork International (2015c).](image)

Canada Pork’s VCP labelling campaign is quite new, having just surpassed 6-months in-operation on March 31st, 2015 (Canada Pork International 2015d). Therefore, its success as a branding campaign and its familiarity with consumers is unknown. Future research into consumer brand loyalty, and the trajectory of provincial versus national branding strategies is needed to assess the relative success of such initiatives (Schneider & Francis 2005).

Having outlined a few of the labelling used specifically with pork products, the retailing environment, where branding strategies and consumers meet, must be outlined to truly understand how concentrated and thus powerful Canadian national retail chains are in shaping food environments.
The Big Three: Current National Retailers in Canada:

Loblaw Company Limited:

The Loblaw Company Ltd. is a national company that operates under a number of store banners and brands. In Ontario specifically, Loblaw has stores under the following names: No Frills, Real Canadian Superstore, Wholesale Club, Shoppers Drug Mart, T&T Supermarket, Fortinos, Valu-Mart, Independent, Zehrs Markets, and Loblaws outlets (Loblaw Company Limited 2015). The banners Provigo, Atlantic Superstore, SaveEasy, and Maxi are found outside Ontario (Loblaw Company Limited 2015). At these outlets, a number of private-label brands can be found, which include: President’s Choice (PC), No Name, Life Brand, and, in those stores that have included diversified retailing, Joe Fresh clothing and makeup, and President’s Choice (PC) Financial (Loblaw Company Limited 2015). The largely successful PC home-brand also has a number of spin-offs for a wide range of consumers: PC Organics, PC Blue Menu (reduced fat/sodium), PC Black Label (gourmet and artisanal goods), PC Green (environmentally-responsible cleaning and household goods), PC Free From (meat free from additives), to name a few.

Sobeys Inc.:

Sobeys Inc. subsidiary stores, while smaller in scale, nationally, than Loblaw, is still a major national food retailer in Canada. Sobeys Inc. is owned by Empire Company Limited – a Nova Scotia-based corporation whose main businesses are food retail and a real estate investment trust (Empire Company Limited 2014). Similarly to Loblaw, Sobeys Inc. is a national company that carries a number of banner stores and store-specific brands. Sobeys Inc. operates under: IGA, IGA Extra, Safeway, Thrifty Foods, Foodland Co-op, FreshCo., Price Chopper, Lawton’s Drugs, and Sobeys stores (Sobeys 2015a). A number of private-label brands are operationalized at Sobeys Inc. banner-stores, which include: Compliments and S!gnal. Like the Loblaw PC brand, there are a number of Compliments streams: Compliments Balance (dietician-verified foods), Compliments Gluten-Free; Compliments Organic, Compliments Greencare (environmentally-friendly household products), and Sensations by Compliments (premium foods) (Sobeys 2015b). S!gnal is akin to the Loblaw No Name brand, where a low price and simplistic, value-centred branding is underscored.

Metro Richelieu Inc.:

The third major Canadian retailer is Metro Inc. Like Loblaw, Metro Richelieu offers both food retailing and pharmaceutical banners. These banners include: Metro, Metro Plus, Super C, Marché Extra, Marché AMI, Les 5 Saisons, Marché Richelieu, and Food Basics for food, and Brunet, Clini Plus, Pharmacy, and Drug Basics for pharmaceutical needs (Metro Richelieu Inc. 2015a). Brands include
Irresistibles and Selection (Metro Richelieu Inc. 2015a). Similarly, each of these brands is streamed to specific niches: Irresistibles Gluten-Free, Irresistibles Organic, Irresistibles LifeSmart, and Selection Eco (Metro Richelieu Inc. 2015b). Metro Inc. is represented in Ontario and Quebec, where the majority of banner stores are located.

**Overwaitea Food Group:**

While certainly not a main contender within the Ontario retailing scene, Western Canada also has the Overwaitea Food Group (OFG) as central food retailer. The current manifestation of OFG began in 1915 in New Westminster, British Columbia (MacLachlan 2001; The Jim Pattison Group 2016).

OFG is a subsidiary of the Jim Pattison Group, and operates under the following banners: Save-On-Foods, Overwaitea Foods, PriceSmart Foods, Cooper’s Foods, Urban Fare and Buckley Valley Wholesale (Overwaitea Food Group 2016). The Jim Pattison Group is a holding company, based in Vancouver, British Columbia, with reported annual sales of $8.4 billion (The Jim Pattison Group 2016). With over 39,000 employees, The Group is the second largest private company in Canada (The Jim Pattison Group 2016). The Jim Pattison Group took ownership of OFG in 1968, and have since added a range of other food-related companies, such as the fishing company Canfisco, and Ocean’s seafood products (The Jim Pattison Group 2016). The Group also owns complementary companies related to food production such as Peterbilt transport haulers, and agricultural farm equipment, including John Deere sales (The Jim Pattison Group 2016). Future research into whether the Overwaitea Foods Group’s plans to future penetrate eastern Canada’s food retailing scene is warranted given the massive capital reach of this retailer.

Another intriguing consideration in the tightly-consolidated retail race is the inclusion of point-based reward programs as an added incentive for shoppers to choose one retailing location over another. However, the potential for rewards programs to encourage the consumption of particular items over others is problematic as Nestle (2007) notes that any encouragement to *eat more* in a compromised food environment can impact diet. This situation is further complicated with many retailers offering health-based dietary advice and rewards programs, each of which will be outlined next.
Points programs:

Loblaw Company Limited rolled out their PC Plus customer reward program in 2013, which “is a smart rewards program that adapts to you over time, giving you the opportunity to receive personalized offers, dinner suggestions, a meal planner and even an intuitive shopping list manager” (PC Plus 2015). Shoppers can earn points based on in-store purchases, and have the opportunity to earn even more points by purchasing featured products that offer bonus points. As data is collected on individual shoppers, the PC Plus program will begin to adapt to individual purchasing habits, and offer promotional material on similarly categorized items as one would normally buy. PC Plus is also linked to PC Financial Services, and MasterCard credit card. Here, shoppers have “the power to earn more PC point in more places” (PC Financial 2015a). PC Financial is, in turn, provided financial services by the Canadian Imperial Bank of Commerce (CIBC) (PC Financial 2015b).

Sobeys Inc.’s points program is also linked to a financial institution. Offering a point-based credit card in conjunction with the Bank of Montreal (BMO), MasterCard, and Air Miles, shoppers can earn Air Miles points on Sobeys’ store purchases to use towards Sobeys gift cards or other Air Miles products. The partnership with Air Miles comes following the closure of the Club Sobeys Point Program in 2014 (Elliot 2014). In addition to earning more points at Sobeys’ locations, items may be featured in-store and be eligible for bonus Air Miles if purchased. Currently, Metro Inc. does not offer any type of points-based purchasing program for in-store food purchases.

Before moving to the issues surrounding points-based programs within food retail outlets, it is worth commenting on the financialization of food. Here, there are two of three national retailers, offering credit products with two of the “Five Big” (Alexander 2014) banks in Canada. The banks are: Royal Bank of Canada (RBC), Toronto-Dominion Bank (TD), Canadian Imperial Bank of Commerce (CIBC), Bank of Montreal (BMO), and Bank of Nova Scotia (Scotiabank), which account for 85% of all banking activity in Canada. There is a concentrated banking sector offering credit products and financial services to an even further concentrated retailing sector. The notion that such point collection services are being offered to consumers for anything other than further penetration into consumers’ lives via their purchases must be questioned, as the only reward being offered here is shrouded as the dissolution of true choice. While the activity of both the Big Five banks and retailers are monitored for unfair lending by the federal Financial Consumer Agency of Canada (FCAC) (Financial Consumer Agency of Canada 2014), this issue is linked to a much more nuanced, hegemonic discourse on competition and choice.

While these points-based programs may offer rewards on items regularly purchased, the deeper issue of such programs arises from the nuanced corporate-collection of Big Data. While there may be nothing specifically identifying about one’s weekly purchasing routine, the lines between collecting data
for improved customer service and data-mining to better sculpt purchasing habits become blurred. This is particularly problematic. As outlined above, there are only three major, national retailers in Canada making, the retailing sector is particularly concentrated. As retailers seek new ways to capture market share, or customers, such reward-based programs may offer a competitive advantage against those not offering similar rewards. Thirdly, and this is perhaps the most problematic, is that retailers are emerging as food and health authorities. When consumers’ purchasing habits can be influenced by in-store offers to buy more of a particular product, alongside the skewed perception of retailers offering health-based claims and dietetic services, there is a glaring conflict of interest. This trend for health-based retailers will be outlined next.

Retailers as (Poor) Health Authorities:

**Loblaw Company Limited – Guiding Stars:**

In Loblaw banner food stores, the Guiding Stars program provides a visual rating system for foods to allow for healthful and easy food choices. The Guiding Stars system is based on Health Canada’s Canada Food Guide dietary information, in conjunction with the CFIA (Guiding Stars 2012). The system ranks foods from one-star to three-stars based on one of the following four algorithms: general food and beverage, meats/poultry/seafood/nuts, infant/toddler foods, and fats/oils (Guiding Stars 2012). More simply, Guiding Stars is based on a credit/debit system. A product is credited if it contains vitamins/minerals, dietary fibre, whole grains, omega-3 fatty acids; and a product is debited if it contains saturated or trans fats, or added sodium and added sugar (Guiding Stars 2015). Therefore, an item with three-stars would have more credits. An item can also receive no stars if the product is new and has not yet been assessed, or if the product has 5 or fewer calories (Guiding Stars 2015). Products may also receive no stars if it does not meet nutritional standards, with the reminder that “Of course, you can still enjoy these foods. Nobody is expected to eat star worthy foods all the time” (Guiding Stars 2015). Provided the profitability of many value-added items, it is not surprising that, despite the push to appear healthful, retailers are also promoting the notion of indulgence.

**Metro Richelieu Inc. – My Healthy Plate:**

In a similar vein to Loblaw Company Ltd.’s Guiding Stars Program is the My Healthy Plate Program. Here, rather than stars, food items are rated using a smiley-face icon. The bigger the smile, the better and more healthful, the item is deemed to be. A “great choice” has “more” protein, fibre, vitamins/minerals, whole grains, and fruits and vegetables, and “less” fat, saturated fats, sodium, sugar (Metro Richelieu Inc. 2015c). Similar again to the Guiding Stars program is the vagueness of the program’s
criteria, alongside the reconfiguration of portion sizes. Under this program, products like ice cream (provided there is less than 10g of fat or less), and frozen French fries (provided a serving has 4g of fat or less) are a “good choice” (Metro Richelieu Inc. 2015c). There is no poor choice face in the program, but there are items that will not have any face, either because it is a new product that has not been verified yet or it does not meet the program’s standards (Metro Richelieu Inc. 2015c). The lack of a smiley-face on a tag provides space for consumer confusion, as it is unclear whether the product is new or received an understated poor rating. To tie this program to this dissertation more specifically – deli meats are seen as a “good choice” for a 55 gram serving, with no added nitrates, shortening, or hydrogenated oil, and is 5 grams of fat or less and 360 milligrams of sodium or less (Metro Richelieu Inc. 2015c).

Sobeys Inc.: Interestingly, Sobeys Inc. has taken a decidedly different route to the marketing of healthful foods. Rather than offering an in-store rating system, Sobeys has paired with celebrity chef Jamie Oliver in support of their social media-based #BetterFoodforAll campaign. The campaign name aligns itself with Sobeys Inc.’s slogan of Better Food for All, (Better Food For All 2015) and encourages shoppers to eat healthier by offering recipe suggestions, in-store testing and education, and to share their ##BetterFoodforAll stories via Twitter, Facebook, and the Better Food Blog (Better Food For All 2015).

Small Butcher Shops and Farm Gate Sales:

A Waterloo Region butcher shop, Bauer Butcher, operated on a much different mode to reach out to consumers than the larger, national retailers. I specifically sought Bauer Butcher for more information on their business model, as one producer I had interviewed sold his pork there (Patrick). After visiting his niche-hog farm, I decided to follow this chain to see how Patrick’s hogs were retailed. Unlike the rather impersonal shopping experience that permeated the self-serve deli counters where many of the branded, pre-packaged items pictured above reside, the staff at Bauer Butcher, most of whom have some form of professional culinary training, depend deeply on consumer interaction and education. Isiah stated that consumer education was “a huge part of what we do here; I need to command a higher price premium, so that we can pay the farmers for their costs, and this sometimes takes some education.”
Figure 38 Peameal bacon offered at Waterloo Region’s Bauer Butcher shop. Items are sold by the pound, rather than pre-packaged, and the shop’s offerings will change based on availability. The shop also emphasizes whole animal cuts, and will offer offal and specialty cuts, such as headcheese, not often found in larger retail chains. Also note the much higher price point for pork products. Photo by author.

Isiah went on to outline how Bauer Butcher aims to utilize the whole animal (they also offer beef, lamb, poultry) and that, through education, consumers are beginning to realize that there are a finite number of cuts per animal, and that some pre-planning is needed to ensure that consumers can get the cuts they want. Isiah went on to describe how the impersonal model utilized by national retailers is problematic for the sustainability of production scale, and for reaching consumers. He stated that, as consumers become more educated and begin to ask questions about their food, large retailers will need a large overhaul to keep up. Isiah stated that deli counter workers often do not know what they are selling, stating “I can’t imagine buying a car from someone who doesn’t know anything about cars – same goes for meat” (Isiah).

In addition to this small butcher shop, five of my interviewees also engaged in direct pork sales, or farm gate sales. The reasoning for choosing to sell directly to consumers varied, as did their profits. Two
producers had dedicated the entirety of their production to direct sales. One niche producer, with a rather exceptional self-marketing scheme was able to produce directly for restaurants and butcher shops. He sold no pork products to individual consumers. Another producer, raising conventional hogs, had taken a decidedly different approach to direct sales, often travelling extensively throughout Southwestern Ontario farmer’s markets, fairs, and rib fest-style festivals, and dedicating a substantial effort towards increasing her presence on social media and community organizations.

Of the remaining three producers who engaged in direct sales, one niche producer needed to seek full-time off-farm employment. One producer mentioned that his wife does direct sales from their home and at their local farmers’ market, but that it is very casual, and serves as more of a hobby for her than as a viable source of income. Another producer also sold pork products at her local farmers’ market. However, pork was just one of an array of meat products/animals this producer offered and even with diversified sales, she struggled to make direct sales a consistently viable source of income. While there is potential for direct sales to offer producers an opportunity to exercise control over their pricing and thus profit received, this was not reflected in the interview data.

Now that pork has been produced, processed, and retailed, the last section of this chapter will outline the consumption of pork products. While pork consumers were not sought nor interviewed for this dissertation, many producers, and key industry informants had their own perceptions of pork consumers. Similarly, the World Health Organization’s (WHO) recent announcement of the probable carcinogenicity of red and processed meats will undoubtedly impact consumers’ perceptions of pork products. A brief discussion on pork consumption will be outlined next.

Consumers of Pork: The Perception of Consumers’ Perceptions:

As noted, consumers were not sought for an interview for this dissertation. However, many of my interviewees, both producers and key industry informants, either specified that they too buy pork from the grocery store, or had thoughts on how their products were perceived by consumers.

Consumer-blaming:

Many of the producers with whom I spoke also tended to blame consumers for not knowing how to properly prepare pork products, and thus leading to the need for export (Packard). One producer noted that, historically, trichinosis$^{30}$ (called trick by producers), a parasitic larval infection that passes onto

$^{30}$ Trichinosis is caused by the consumption of meat infected from rodents or hogs. Therefore, for domestic hogs to become infected, they need to have eaten rodents or raw pork, resultant from cannibalism, the use of hog by-products in hog feed, or infestation issues with rodents within hog barns (Centres for Disease Control and Prevention 2013). Trichinosis is then passed to humans when they consume the meat of an infected hog that has been undercooked (Centre for Disease Control and Prevention 2013).
humans via undercooked pork (Government of Canada 2015), led to the recommendation to cook all raw pork products to an internal temperature of 180 degrees Fahrenheit (Pedro). However, since trichinosis has largely been eradicated within commercial pork production, Pedro noted that consumers need to be re-educated to cook their pork products to a lower temperature of 160 degrees to avoid an overly dry piece of meat (Government of Canada 2015). Pedro stated, “if you over-cook a pork chop, it’s a pretty dry thing. And that’s another thing, people were told to take meat, you know, pork to one hundred and eighty degrees… that’s what your mother was told, you know” (Pedro). This consumer-blaming was contradictory in many cases, as I was often told earlier in the conversation regarding the historical leaning of hog carcasses. Such consumer-blaming was further insinuated by Porter, claiming that most people want quick and easy meals – often frozen, pre-cooked, or prepared upon purchase, and that education on how to cook raw pork and how to incorporate it within the household was needed.

World Health Organization’s (WHO) International Agency for Research on Cancer (IARC):
Carcinogenicity of red and processed meats:

Amidst attention on humane agricultural practices, antibiotic usage, and retailers emerging as authorities on health, the WHO’s cancer research arm, the International Agency for Research on Cancer (IARC), released a statement in October 2015 listing red and processed meats as a human carcinogen. Red meats, which IARC researchers refer to as any mammal-based muscle including beef, pork, veal, lamb mutton, horse, and goat (Bouvard, Loomis, Guyton, Grosse, El Ghissassi, Benbrahim-Tallaa, Guha, Mattock & Straif 2015), have been listed as Group 2A: Probably carcinogenic to humans (Bouvard et al. 2015). Processed meats refer to meats that have been smoked, cured, salted, canned, dried, but also those that have had their flavour improved, like hot dogs and sausages, and have been listed as Group 1: Carcinogenic to humans, based on sufficient evidence to increased cases of colorectal cancer (Bouvard et al. 2015). Links to prostate and pancreatic cancer have also been noted (Bouvard et al. 2015); however, a causal link has not yet been established (International Agency for Research on Cancer 2015). IARC researchers report that a daily 50 gram serving of processed meats (akin to 2-3 slices of bacon), increases risk of colorectal cancer by 18% (Bouvard et al. 2015). The chair of Manitoba’s pork marketing board released the following statement regarding the IARC’s findings:

In my opinion, bacon, sausages and the like enhance our lives. Likewise for chocolate, alcohol and the vast array of sugary foods that are readily available. Consumed occasionally and moderately they bring us pleasure and enrich our existence. Consumed regularly and excessively they may cause disease and decrease our wellbeing…The occasional slice of bacon will always be good for the soul (Manitoba Pork 2015).

While it seems that the industry has successfully responded to issues of spoilage and changing consumer
tastes more broadly, reports of possible carcinogenicity of red and processed meats may serve as a race-to-the-bottom for the CAFO-style of meat production. Continuous production of a product that is increasingly unwanted by consumers eating with animal ethics, the environment, rural development, and health in mind is serving to slowly dismantle the CAFO-style empire, much like the drastic restructuring of the Canadian beef industry, largely due to a shift in consumers’ preferences for leaner meats following reports of increased cardiovascular disease (MacLachlan 2001). It is unclear how the intensive Canadian hog industry will remain a viable entity. As pork industry leaders are releasing statements that hint at the need for reduced consumption of red and processed meats, we begin to see the convergence of factors that point to shortened permanence of this model. Overproduction, export-dependence, disenfranchised producers with zero control over prices, animal welfare and environmental issues, and, now, a probable link to an increase in colon cancer hint at the need for a decline of pork productivism as a cheap input for value-added commodities. Perhaps the true cost of cheap pork has finally become too great to bear.

The preceding chapters have provided insight into the contemporary practices involved in hog/pork production, processing, marketing and retailing within Ontario, with some commentary on pork consumption as well. I have attempted to trace the value-chain of Ontario-based pork production to better understand the complex organizational structure of the broader pork industry. The following chapter will illustrate a deeper analysis of my interview data to answer my research questions:

1. **What economic and political challenges are affecting/impacting pork producers in Southwestern Ontario? How are these challenges perceived by producers?**

2. **How are these challenges currently structured, and how have they become implemented over time?**

The next chapter will link my findings derived from producers and industry key interviewee data to broader sociological theories and thereby contribute to the literature on the sociology of food and agriculture, as well as the GVC literature.
8. Analysis and Discussion

“The market had been downturned for probably 4 or 5 years, it was ridiculous, when, like, the turkey farm is getting more for their turkey than we did for our pig, it was disastrous, and then in the store, you didn’t see the price of pork change, right, and uh, it was pretty disappointing and it just seemed like factors that were totally out of our hands, like the dollar, or disease, or trade, or rumours...” (Patricia).

The data collection for this project spanned between June 2015 and November 2015, and took place during an interesting time of much change and turmoil in the Ontario hog industry. At the provincial level, 2014 saw the closure of Quality Meat Packers in Toronto that left many producers scrambling to find shackle space for their market hogs. PEDv, an oral-fecal transmittable disease that causes extreme dehydration and eventual death in piglets, was found on a number of Canadian and American farms. This was followed by an “awesome year” (Poppy) of “once in a lifetime” (Philip) pricing for weaner pigs, after devastating US weaner losses due to PEDv. In 2015, the Ontario Pork Producers’ Marketing Board (OPPMB) joined with Ontario-based Loblaw’s retail outlets to intensify their Ontario Pork brand that has been in development in conjunction with OMAFRA over the past few years. Nationally, July 2015 saw the introduction of the National Farm Animal Care Council’s (NFACC) updated Code of Practice, which included regulation phasing out the use of dry sow gestation stalls in all new barn-builds, with their complete abolishment from hog barns housing sows by 2024. Internationally, the World Trade Organization had issued its fourth warning against the US for their attempt to implement what has been alleged as a largely protectionist labelling scheme called mandatory country of origin labelling (mCOOL). During writing, mCOOL was amended, and this labelling is no longer required. On December 21st, 2015, the World Trade Organization (WTO) permitted Canada to impose $1.054 billion annually in retaliatory fees on US imports to Canada (Agriculture and Agri-Food Canada 2015). Another pivotal international trade-related issue was also signed during data collection. The Trans-Pacific Partnership (TPP), an enormous trade agreement that spans a number of sectors from agriculture to technology, and copyright to consumer rights, concluded negotiations on October 5th, 2015. At time of writing, the TPP has yet to be ratified by Canada. Unanimously, all commodity-hog producers and industry informants supported the passage of the TPP and are hopeful of Canada’s participation in TPP negotiations, particularly to increase international market share for pork products.
While the preceding three chapters provided both a historical and a contemporary overview of pork production, processing, and marketing/retailing respectively, this chapter and this dissertation is centred on two main research questions:

1. What economic and political challenges are affecting/impacting pork producers in Southwestern Ontario? How are these challenges perceived by producers?

2. How are these challenges currently structured, and how have they become implemented over time?

This chapter will unfold as follows: The first section will outline the implicit and explicit challenges that hog producers in Southwestern Ontario experience. To repeat, a word web was propagated from coded explicit terms and phrases that were repeatedly used by multiple interviewees, and a structured coding framework was developed; these codes became the main themes of analysis for this dissertation. The explicit coded themes identified within this research were:

- A lack of kill or shackle space in Ontario,
- No control over pricing, and
- Animal rights groups and their “vegan agenda” (Iris, Ibrahim, Pamela, Perseus)

A similar process was followed to uncover coded implicit themes within the data set. Here, the implicit coded themes identified within this research were:

- Overproduction and export-dependence,
- Contradictory stance on the value of agricultural subsidies versus agricultural safety-nets, and
- Conflict among producers themselves.

From here, this chapter will outline the structural shifts throughout the hog industry that have resulted in a low-margin, high-volume production of lean hogs (Ufkes 1995;1998) to make an argument for how these phenomena have reshaped the entire Canadian hog value-chain, and how these changes can be attributed to many of the implicit and explicit challenges experienced by producers.
Explicit Political and Economic Challenges:

Lack of Federal Intra-Provincial Kill/Shackle Space:

“In terms of vibrancy of the industry or infrastructure, we have a problem with processing capacity in Ontario, and that’s a pretty significant problem... I mean primary processing, so slaughter capacity, shackle space, whatever you wanna call it. That is our primary concern” (Irene).

“’Cause let’s face it, right now at this particular time in the industry... they’re the ones in charge of this whole industry right now. ’Cause we have too many pigs for the amount of plants we have and it’s tough” (Ian).

As noted above, 2014 saw the closure of Quality Meat Packers, along with their two hog processing facilities: a downtown Toronto plant and a Mitchell, Ontario, plant. While Sofina Foods eventually purchased the Mitchell plant and converted it to a turkey processing facility, the Toronto plant has made way for more gentrified developments as the downtown core “grew up around the plant, [and] squeezed it out” (Immanuel). With the closure of these plants, producers, especially those producing for export and requiring federally-licenced meat inspection, have been left to choose from just two Ontario plants: Sofina Foods’ Burlington plant, and Conestoga Meat Packers’ plant in Breslau. Membership is required for the Conestoga plant because it is a farmer-owned cooperative. However, the cost for members can be prohibitive as the cost of entry can be substantial (Grey 2000). One interviewee stated, “our members actually put serious money into the business, serious share capital, so we’re not a $100 co-op membership, they actually had to put share capital in... primary difference between us and a private business is the ability to pay patronage dividends, so, it is a unique model” (Ibrahim). In addition to the share capital buy-in, producers must also pay-per-hook for each hog they seek to have processed at Conestoga Meat Packers. While I was unable to secure figures on what “serious share capital” entailed, such extra costs, plus the very limited membership of just 170 producers, indicates rather exclusive access to shackle space. With Sofina’s Burlington plant operating near or at capacity, many producer interviewees needed to find processing space outside the province, with many hogs being funnelled into Quebec-based Olymel plants. While a number of producers indicated the need for a large processor to set up in Ontario, and others were hopeful for future plant builds just south of the border, two very problematic trends emerge from the lack of processing space: the switch to further processing from primary processing, and that more value can be extracted from the hog commodity chain, when primary processors become more integrated.

More Processed, More Profit:

“’Cause killing is a commodity. They just want to buy, just want to buy a barrel full of hams so you source me a barrel full of hams, you deal with the rest of the stuff” (Paddy).

As noted in Chapters 6 and 7, there has been a shift away from slaughtering or primary processing, towards further processing. Historically, primary processing was a tightly-consolidated industry from its inception in Canada (MacLachlan 2001). Kill plants have become quite costly to operate, requiring labour,
specialized equipment for each component of the carcass breakdown, and inputs such as the water needed for frequent cleaning and refrigeration units. Where labour costs have been rationalized, expensive automation has emerged. The substantial cost of operating a kill plant and increasing regulatory hurdles such as phytosanitary regulation, residue testing, CFIA inspection, and third-party welfare audits also contribute to the speed of operation. If all measures for sanitary, welfare, and food safety concerns must be met, then plants must operate at capacity to ensure maximum efficiency of operation and thus maximum return on investment. More value can be extracted from the hog commodity chain when products are distanced from kill plants. The closer a product is, such as hot dogs or sausages, to the retail level, the more potential for profits.

More Integrated, More Profit:

“I believe back in the early 70s we used to have more than 100,000 producers, and now we have, less than 7000, so, but that’s not necessarily a bad thing, it just means that our operations are becoming more specialized, they’re becoming more vertically integrated, but, and, by that specialization our farmers, our companies, are being more efficient, right?” (Ivan).

As further processing cannot take place without the initial conversion of pig to pork via primary processing, large processors have also sought integration as an additional method of hedging risk and increasing profit. In Quebec, both Olymel and du Breton are exemplary integrated processors, where the processing facility, production barns, animal feed, veterinary services, and the animals are owned by the processors (Novek 2003; Qualman 2001; Boyens 2001; Thompson 2001; Broadway 2006). Large corporations like Olymel own the production facilities, the hogs, and the feed, resulting in complete control over production. From here, Olymel-produced hogs enter Olymel-owned processing plants to become Olymel-branded goods. While there seems to be less processor-led integration in Ontario, Conestoga Meat Packers is also integrated; however, here it is a producer-led integration (Grey 2000). What is important to capture here is how increased value and profit are established through integration. This diversification through unification was wonderfully captured by Innis, who stated,

…To get more value … because in the past, our cycle of earnings were almost opposite, so when a producer’s losing lots of money, the packer, ’cause typically pork prices were cheap, the packer is making lots of money and the opposite would occur when hog prices are really high, the pork packer was not making very much money …So if you own, if you’re a part of that - own parts of that chain at least … becomes leveler then if you just start owning pigs or just processing pigs and so forth. And so, and I think there’s more value to extract when you have that full-on integrated story to tell, right? (Innis).

Owning all components of the pork value chain from production through to branding has allowed large processors to hedge financial risk. Much like vertical and horizontal integration in any other industry, spreading one’s risk across a number of similar or complementary sectors serves to mitigate some financial risk. Whether in vertical integration, where a single entity or corporation will own each subsequent stage
of a commodity’s production (feed, barn, veterinary services, trucking), or in horizontal integration, where a single entry will spread to acquire a number of different, yet connected, industries (e.g., Loblaw’s buying out potential competitors), integration not only provides some financial security, but also provides numerous sources of income. This is also the case for hog production and processing. It is more financially advantageous to focus on further processing, so that inputs can be purchased, without the worry of the high operating costs of a kill plant. Many producers with whom I spoke identified the lack of kill space as a massive challenge to their operational success. Looking at where value is derived within the hog industry points to governance from the top-down, led by powerful processors in conjunction with national retailers to focus on value-creation through further processed goods.

Bourdieu’s work on economy is insightful here. While his analysis focused on the state-led housing policy in the 1960s to sell the public the “semi-detached dream” (Bourdieu 2005:186), his work on “effective agents” (Bourdieu 2005:99) is fitting here. Effective agents are those individuals with sufficient influence to guide and orient policy. Through experience and seniority, such agents are able to retain information and monopolize what is also termed “informational capital” (Bourdieu 2005:117). A parallel can be drawn between processors who have historically consolidated and thus oriented the pork value chain towards serving their own needs. A parallel can be drawn between Bourdieu’s notion of an effective agent and pork processors. As large processors hold sufficient influence and economic information pertinent to the broader pork industry, they are able to act accordingly and exploit their positions in the hog chain. Choosing to rationalize priorities, many processors have taken note of the low-margins historically embedded within the primary processing sector and reoriented their operations.
No Control Over Pricing:

“The sad part is, though, at the end of the day we’re still such price takers. We, we don’t dictate price at all, we just have to take whatever” (Pearce).

“We’re at the mercy of everything else and if price, you know, if the middle man gets more, decides he wants more then we lose out in the end. Ya, so it’s pricing...And we have no control over those costs. We can’t say “oh, fuel’s more you know, we need ten more cents a kilogram.” We can’t, we can’t demand that. We can’t demand, we can only accept what we get. That’s, that’s the big problem in my eyes anyways” (Paige).

As noted in Chapter 6, there are a number of highly complex and highly volatile inputs that are factored to develop the pricing schemes for weaner pigs, feeder pigs, and market hogs. The most obvious of these uncontrollable inputs is the dollar exchange rate – both in American and Canadian dollars (Grier 2007). Set on stock exchange markets, the discrepancies that lie between the perception and realized value of a dollar warrant an entire study of its own (Grier 2007). The lack of control over the numerous inputs that comprise producer’s cost of production has contributed to the extreme volatility that has become standard practice in hog production (Grier 2007).

Table 8 Pricing volatility as illustrated by net return values, in Canadian dollars, per market hog on a farrow-to-finish production operation. 2008-2009 was a disastrous time for producers, as they were losing $40 per hog. Table source: Ontario Ministry of Agriculture, Food and Rural Affairs’ Swine Team (2015).
Producers are reliant on the whims of an open market (Grier 2007), and the notion of a free market is deeply problematic. Within the current hegemonic discourse, a free market is posited as a way to regulate capitalist overproduction and is thus seen as something natural. However there is nothing natural about the current neoliberal market system. The free hand of the market is rather a reiteration of power, and is the means through which corporate control is expressed (Baines 2013). Though food has long been a commodity for trade, it is under the current reign of neoliberalism that the food supply system has become inundated with innovative foods that are tirelessly promoted via mass advertising (Winson 2013). It is this same corporate control that now has a significant hand in food governance (Clapp 2008), which has shifted the role of the nation-state into a “handmaiden to global capital and business” (Winson & Leach 2008:23).

It is the now reified notion of the freedom of the market and capitalist gain that run central to the current neoliberal agenda. The market is seen as something that exists beyond our control, and thus we feel that we are impervious to change it, or our situation within it. To tie this illusory model back to hog producers, the absolute lack of control over both the pricing received for hogs and the cost of needed inputs dismantles any option to factor one’s cost of production with any degree of certainty. The open market is not a free-market despite rhetoric claiming otherwise.
Animal Rights’ Activists and the “Vegan Agenda” (Iris, Ibrahim, Pamela, Perseus):

“It’s not science-based, it’s their personal opinion that they’re trying to push it on everyone else” (Perseus).

“Their agenda is, they want no animal agriculture in the world ...It’s just one thing after another, after another, after another. There’s really - they just don’t want any farmers around ’cause they don’t want animals to be farmed” (Iris).

As noted numerous times throughout this dissertation, animal rights’ activists stand as a persistent and bothersome challenge to many of the producers and industry informants interviewed. Interestingly, many of the producers presented surprisingly similar statements surrounding the efficacy of the “vocal 2%” (Parker; Poppy; Ibrahim) whose voices blocked their ability “to tell our story” (Parker; Perseus). One industry interviewee noted that due to heightened disease risk, Ontario Pork and other farm organizations like Farm and Food Care have published videos showing what happens inside hog barns to combat the opinions of animal rights’ activists in lieu of opening up barns to the public. Izra went on to state that “Hogs are one of the most bio-secure, but this comes with the stigma of what goes on behind walls – we’re trying to tell our story” (Izra). Such attempts to shed light into barns that needed to remain closed was also something that the producers are more than aware. One producer noted that it can be hard to stand proudly in front of a product coming from an industry that is blocked from the public’s view. While Pearce acknowledged that, particularly following the disaster of PEDv in 2014, the importance of high on-farm biosecurity, he also stated “what kind of impression does that leave to the consumer?” (Pearce).

Another prominent issue that emerged from the discussion surrounding animal rights’ activists was the role of the consumer, and the tendency for many producers to blame consumers for seeing value in alternative production styles. Once again, this tended to be centralized on the issues of transitioning from dry sow stalls to loose housing. While it is understandable that changing public interests could be frustrating in production, it is completely disadvantageous to belittle and dismiss the concerns of potential consumers. One producer, PJ, described this conflict, choosing to embrace the new housing regulation rather than pointing blame to uneducated consumers and sensationalist activists, whom many producers felt were instrumental in moving this change forward.

Me: What are your thoughts on the changes to sow housing that’s coming in?

PJ: Interesting you ask that, because we’ve already been in that, because of the building code, we just built a new sow barn, last year in July was the cut-off date, so we actually don’t have dry stalls, so what do I think about it? It’s going to work, farmers are going to make it work, there’s enough technology in Europe that is flowing into Canada now because of it, and currently we have a loose housing, so we have a stalled area for breeding, and loose housing for gestation, just after 40 days until 112 days, before they go into farrowing, so, and there’s proven benefits to it, so it’s ok. Like, there’s down things to it as well, but it does work, I guess I’m ok with it.
Me: It's so interesting to hear the differences in answers – some people are fine with it, some hate it...

PJ: Yea and those are the uneducated, like if they think that, not to smack any other farmers or anything, but they obviously haven’t been exposed to it. There’s always two sides to the fence, so they haven’t been exposed to the good side of it right? Cause the health and the strength of the sows is better because they can run around, and with the proper system, you have full control over what they eat, it’s actually fairly advanced if you set it up properly. You can go the cheap route, and that’s not so good, and you may see more fighting. To set up – do it right when you have to do it.

The greater implications of telling one’s story through a particular light, as the hog industry has attempted through release of videos, recipes, and blog posts, is indicative of a greater, yet intentional separation of the processes that go into making cheap protein en masse. In his participant-observation of an industrial US beef slaughterhouse, Pachirat weaves the notion of “the politics of sight” (2011:233) throughout his analysis. A politics of sight is “the transformational potential inherent in making the hidden visible” and as result, “pity and its related emotions carry the burden of transformation” (Pachirat 2011:248). Pachirat notes that, particularly in industrial slaughter, there are intentional “zones of concealment” (2011:246) that work to distance us spatially and ethereally from the true sights and sounds of industrial slaughter, a necessary component of corporate agriculture and productivist food systems. While Pachirat’s (2011) analytic focus is on the divisions between the seen and the unseen in slaughterhouses, a similar sentiment can be extended to production practices as well. Despite industry attempts to “tell our story” (Parker; Perseus), animal activists are bringing the realm of the unseen to light, and are focusing efforts to ensure that this story is also told, whether by undercover video, placing photos of dirty sows within sow stalls on social media, or picketing agricultural events.

To tie this argument full circle, animal rights’ activists do indeed appeal to consumers’ emotions, instilling emotional burden on pork eaters by illustrating that their $1.99 per pound of pork loin was produced via a lifetime of immobility in gestation crates. While this was criticized as sensationalist by many interviewees, it is effective. One producer stated, “when you get in to hot topics like castration, sow housing, and all that stuff, these people – their emotional side comes out because all they can relate to is the family dog or the cat or the goldfish. They look at a sow in a dry sow stall as inhumane” (Parker). To further integrate this notion, Habermas’ work on communicative action can be applied here. Habermas notes the importance of language used within communication and, more particularly, the importance of exercising dominance in both communication and narrative (1981). As language as a medium is used to induce all action, the method and effectiveness of the form of language used to coordinate action is vital to said action. While sow housing was a passionate topic for producers and industry alike throughout the data collection, it will be imperative to pay close attention to how both the livestock industry and the protestors will continue to tell their stories, and how consumers will react.
Implicit Political and Economic Challenges:

Overproduction:

“People keep telling me ‘oh this factory farming’ I says ‘hold it, you guys have caused these so called factory farms’ the farmer didn’t call it a factory farm, it’s a non-farmer that came up with that one, cause the building looked about the size of the building that he works in when he’s on the line at whatever factory, I says ‘you guys done that, cause a farmer couldn’t make any money, like he was making $10 a pig, and he was shipping a 1000 pigs, so he had an income of $10,000, and then it dropped to $5, well he better ship 2000, to keep that same income, it went down and down until it was a dollar – how the hell is farmer going to make a living?” (Paul)

Overproduction emerged as an implicit theme from the interview data. Discussion regarding production standards often emerged in relation to discussion about supply management. As noted previously in Chapter 4 on Production, the Canadian hog industry is not supply managed like the dairy, egg, and poultry industries (Broadway 2006; Grier 2007). Consequently, hog farmers are not required to adhere to production quotas, and may, if they own sufficient capital, expand unbridled (Brisson 2014; Grier 2007). A number of interviewees had noted the cyclical nature of the hog industry that was characterized by a pattern of low prices, followed by a pattern of high prices. Iris noted that such volatility can be linked to prolificacy of hogs stating,

Partly why the hog business is so volatile…they’re very productive animals so you can get in and out of that business quite quickly as compared to some other, like the beef industry, beef prices are so high because beef supply is short and it takes years for cattle to grow. Hogs are done within like, six to eight months and so it’s much easier for that inventory of hogs to kind of grow and like move more. So when they’re making good money a lot of them [producers] will try and keep more, they’ll keep more sows, they’ll try and get more hogs on the ground kinda thing, and then when they’re losing money you can see barns coming out of production quite quickly… it’s hard enough now especially as the operations get bigger and there’s loads of capital investment, but it’s because of the cycle of the pig that they can move in and out of the business a little bit faster…’cause the prices have been good, everyone will be trying to keep more and more sows and have more and more pigs on the ground and eventually we’ll get into over-supply again and that whole cycle will happen again (Iris).

The work of Weis (2013) can also be drawn upon here. Weis (2013) notes that there is a myth surrounding the notion of industrial efficiency. Rather than the promised increases in both yield and labour productivity, many in-barn applications have become mechanized, causing a loss of employment as well as squeezing out smaller famers who are unable to compete (Weis 2013). Specifically commenting on pricing, Weis states that, as “capital investment grows amid low unit values, the pressure to keep expanding persists” (Weis 2013:97-98). Similarly, many of the key industry interviewees noted the vital role of market access for pigs “to find homes” (Paddy). With estimates of up to 80% of hog production for export markets, a loss of market access would flood the domestic market with more pork than our populations could even begin to consume.
Many producers engage in overproduction in relation to disease preparedness, and as a method of establishing some form of control over their cost of production. For this reason, disease is discussed here as a component of overproduction; it serves as an excellent transitory model into the following discussion on acceptable losses, which has become a standard practice within the hog industry.

Disease:

“maybe because it’s a large scale and kind of a, we’ve probably had more disease pressure than we’ve had in the past because, because we’re doing it on a large scale, a lot of animals in one place” (Pearce).

As noted in Chapter 4 on Production and above, the emergence of PEDv in 2014 was a devastating blow to the already-battered hog industry. While many Canadian producers saw improved prices due to greater American PEDv hog losses, the fragility of weaners and the sharp rise in profitability led some producers to further expand their operations in hopes of sustained high pricing. However, many interviewees noted the precarious nature of foreign animal diseases. Amongst commodity-hog producers and industry interviewees, there was continuous mention of the need for facilities to be germ-free and for vigilant surveillance of facilities and transportation to ensure “pig zero” (Isaac) could be located in the event of an outbreak of disease. The exception here was the niche-hog producers with whom I spoke. These were also the producers who welcomed me to come and meet their hogs on their farms. When asked about biosecurity on her farm Phoebe stated,

Biosecurity! Biosecurity! You gotta shower and put on your gown and hair net, they will not let you! ...So ridiculous! Well they keep you away, and the thing is, some of the barns are so sterile that if you even coughed, they would be afraid the pigs would get it. You should see my pigs, they eat dirt, imagine! Their faces are covered in mud, disgusting little guys. Oh my goodness – they are going to die tomorrow! Biosecurity is just a big front (Phoebe).

Despite the rhetoric of the need for biosecurity, when I enquired as to why exactly hogs were so biosecure compared to other livestock, many producers did not know, but were acting on strong suggestions from county organizations and Ontario Pork to maintain strict biosecurity. One producer said, “our pigs are too healthy, I have no idea, ‘cause Holland has the same amount of pigs but it’s a way higher density and I can walk, I can go to any guys farms and say, “I was in your barn a couple days ago”, “oh, don’t worry about it.” “How about showering in?” “Oh don’t worry about it, you guys have to shower in in Canada? That’s funny, hahaha” So I don’t know why” (Paddy). While the threat of disease is a real challenge to hog producers, as indicated by the prevalence of PRRS and PEDv, the real threat of disease may lie in the massive scale of uniform production. Hand-in-hand with disease is the industry notion of acceptable losses, which is outlined next.
Acceptable Losses:

Weis also notes the skewed balance of inputs and externalities that tend to go awash within industrial livestock production. Despite positive gains such as improved feed conversion for individual animals, Weis argues that we must garner a wider gauge to calculate the true costs of such production. He states, “Calculations of feed conversion rates also depend upon whether measurements account for the populations of breeding animals, the animals that die in production and transport, and those that are condemned post-mortem owing to damage or disease” (Weis 2013:114). The normalcy of acceptable losses was also identified as a serious issue within the hog industry by one veteran herdsman with whom I spoke. Preston noted that throughout his 30-year career in hogs, he has noticed a trend of what he termed the “business-mind” taking over farms. Preston went on to state,

See this dent on my forehead? It’s from banging my head on the wall, you’re talking to a business-mind, their mind now is at the point of acceptable losses, if I was to ever say anything that would impact the hog industry to the benefit of the pigs, it would be that we have to get away from this thing that there are such things as acceptable losses of these animals…I just think that if we were more responsible for the things we’re supposed to be responsible for… acceptable losses, and that’s what business has done, and I’m just one little voice in an industry where the pig is no longer heard… At one time they measured the minimal losses, how can we keep our losses down? Now they do acceptable losses. What happened? What shifted? … so I always say pigs are the bottom line, they are the bottom, there’s no such thing as an acceptable loss, I was never trained that way, people aren’t either, business people do acceptable losses, society is going that way - it’s all about business (Preston).

Overproduction is closely tied to the following implicit theme on export dependence, as the level of production in Ontario alone far exceeds what our domestic market (provincially or even nationally) could consume.
Export Dependence:

“[Producers] have high volatility in this business, you’ve got to plan for success but finance for failure” (Ibrahim).

Innes’ (1956) staples theory has been a pivotal guiding thread to many extractive commodity analyses, particularly within the Canadian context. Hog farming is incredibly extractive, and true to staples theory, the Canadian hog industry has been developed for export. Much like the export-based lumber and fur trade that Innes wrote about in the 1950s, and the resultant staples bust ushered in by an inability to diversify, there are troubling parallels to the Canadian hog sector. Pigs during their six-month growth period are incredible consumers of water. In addition, the amount of fossil fuels needed to grow mono-cropped soy and corn for feed, truck in feed from feed mills, truck out pigs to processing facilities, and further distribute raw and processed pork via truck, plane, or boat, is staggering. Extremely tight biosecurity requiring frequent and thorough disinfecting washes of transport trucks and barns acts as a further drain on water. These many extractive and externalized inputs are further compounded by risk of market access loss. While many producers did note that absolute faith in international markets was risky, especially when such a large percentage of production was for export, many also saw this as emblematic of a job well done. As the opening quotations to Chapter 4 on production noted, many interviewees stated there was a global need for cheap protein – something that Canadian hog farmers could do well. One industry interviewee stated he felt that despite the high risk associated with export dependence, the fact that Canadian pork is sourced in over 100 nations globally is indicative of Canadian agricultural success:

Me: What are your thoughts on Canada’s pork industry being primarily for export?

Ibrahim: Uh, well I think it’s a success story – we’re good at agriculture, we’ve got a great foundation, so why wouldn’t we export, and I think, you know, we’re savvy exporters too, we do a good job of it. We send product to the four corners of the Earth, and we get it there wholesome, it’s in demand, um, so um, I think it’s a real success story for Canada, so we want to continue to nurture and grow that (Ibrahim).

A similar sentiment was also echoed by Porter, who claimed that the cheapness of pork was indicative of a job well done. Porter stated that,

The market is never wrong – my issue is how bad is our product when beef is $15 a pound, ours is $3 a pound and we can barely keep up? Because we have an open border, the US will dump 15 tonnes into Costco, and that’s why we focus on export markets…maybe that’s our place. With good production, our cost of production is better than beef. If I can make a margin, and make good value on the shelf, that’s my job. If it takes $15 to make beef – they won’t be in business too long and we’ll sell more!” (Porter).

To again draw on the notion of a staples bust in relation to hog production, dependence on international market access at a time of global financial uncertainty may indeed undermine the Canadian hog market. The closure of major markets such as China, US, and Japan, would be disastrous for hog producers, as there would be an enormous amount of pork reliant upon domestic market consumption (Grier 2007).
Subsidies and Safety Nets:

“Sometimes you would just like the government to totally stay out and you could get your funding from the marketplace, it would be so much easier” (Patricia).

As noted above, many producers felt the inability to regulate the prices that they received for their pigs is a central economic challenge to farming in the hog industry. However, in a number of interviews, producers would draw comparisons between open-market production that is central to pork and beef production, and supply-managed production, as seen in the dairy and feather industries. A number of retirement-aged producers had mentioned that hog producers had discussed becoming supply-managed decades earlier but, due to the now deep reliance on international trade and because supply management is now often seen as a borderline subsidy by many trade agreements, this could no longer be an option for hogs (Phoenix; Pedro; Pierre). While some producers noted that price volatility was inherent to the hog business, stating “It’s a risky business and there’s no need to cushion it, if you can’t ride out the lows, you probably shouldn’t be producing” (Poppy), many hog farmers also noted the need for more payments or safety nets to protect themselves during periods of low pricing (Perry; Pavel; Paula). Here there are two notable forms of assistance: AgriStability and Ontario Pork’s Pool and Pool Plus paid pricing programs.

AgriCorp: AgriStability Risk Management Programs:

In 1996, the AgriCorp Act (1996 S.O. 1996, c.17 Sched. A) established the Crown agency AgriCorp, in conjunction with OMAFRA and the Minister of Finance, to provide risk management for a variety of agri-food sectors. In December 2007, the Government of Ontario committed $150 million to increase competitiveness at a time of lower market prices and increasing input costs (Iggy). This initiative was called the Ontario Cattle, Hog, and Horticulture Payment and was issued via Agricorp (Iggy). While AgriCorp provides a number of protection products, from production insurance to risk management solutions, what is of central importance to Ontario hog farmers is the AgriStability program (Agricorp 2013). AgriStability is deemed a need-driven payment. AgriStability’s payment reference margin is based on an Olympic average\(^\text{31}\) of the producers’ five most recent production margins (Iggy; Agricorp 2013). In its original form, if a hog producer’s production margin dipped below 85% of its calculated value, a payment could be triggered. However, due to increasing concerns that such payments could be seen as a subsidy rather than as a relief fund, production margins were scaled back to 70% of their calculated value before triggering payment (Iggy). Considered to be WTO Amber Box compliant, and thus not in infringement of any agricultural trade negotiations, AgriStability differs from production insurance as it considers the entire farm operation, rather than the individual hog, or commodity (Iggy). Interestingly, but not surprisingly, the number-one customers of the AgriStability plan are Ontario hog farmers (Iggy). One

\(^{31}\) An Olympic average is the calculated average where the highest and lowest values are removed (Iggy).
interviewee also informed me that, following 2014’s weaner losses due to PEDv, an insurance product for hog mortality is currently under development. AgriCorp has also implemented bee mortality insurance following high colony losses in 2015. However, aside from this bee insurance, the availability of hog mortality insurance, projected to be available in the spring of 2016, would mark the only live animal insurance product available to farmers (Iggy).

One of the main critiques of supply management by interviewees is that consumers are essentially paying more, via subsidy, for the products being supply managed. In the case of Canada, it has been argued that our liquid milk, egg, and poultry products are more expensive relative to other nations’ domestic markets as these items have been produced via supply management. However, this seems to be a terminological difference only, in that AgriStability, while not a subsidy or insurance, as a safety net is financed via governmental fees, which are extracted via tax dollars as a relief fund. Many commodity-hog producers mentioned frustration over the inability to control prices (Grier 2007), while simultaneously disparaging supply management and aspiring for increased production insurance. Another interesting, producer-paid product is the Ontario Pork’s Pool and Pool Plus payment programs, which aim to provide better and more consistent pricing schemes.

Ontario Pork’s Pool and Pool Plus Paid Pricing Programs:

As noted in Chapter 4 on Production, the Ontario Pork Producers' Marketing Board (OPPMB) disbanded its single-desk selling of hog contracts in December of 2010, leaving individual hog farmers directly responsible for negotiating their own contracts with processing facilities. This change was also echoed by a change in structure at Ontario Pork, with the establishment of two separate divisions: Ontario Pork Universal Service, which is financed by a mandatory 95 cent per hog fee, and Ontario Pork Marketing Division, which provides for-payment marketing services. Ontario Pork Marketing Division provides two separate payment schemes to hog producers: Pool and Pool Plus (Ontario Pork 2015b).

The Pool pricing scheme allows producers to participate in contract-free sales of their hogs. Here, hogs are sold on the spot, and Ontario Pork may then pool the aggregated hogs to a processor. Similarly the Pool Plus pricing scheme is established with processors via block contacts where producers agree to produce an agreed number of hogs at a specific time. In both schemes, a premium is provided to producers able to provide ractopamine-free hogs. Block contracts allow the Ontario Pork Marketing Division to negotiate greater price averages, often hitting 103% of the 100% Formula price (Ontario Pork 2015b). However, it is intriguing that collective bargaining for improved contract prices had already been in place before the disbandment of Ontario Pork’s single-desk selling. Now, producers must negotiate their own contracts directly with processors, or pay an additional fee for the option of block contracting with the hopes
Another implicit theme that emerged from the interview data in relation to pricing is the increasingly high amount of capital needed to float commercial hog operations. With increasing land costs and increasingly sophisticated barn technology emerging in Southwestern Ontario, many commodity-hog producers noted the difficulty of having a large percentage of their equity essentially tied-up in the barn and the land. Speaking more broadly, there seems to be a glaring contradiction in how hog farmers perceive subsidies versus safety nets. Supply management and the internal regulation of both manageable herd sizes and stable pricing were often dismissed as unsustainable for Canadian agriculture. However, it was these same two conditions that were sought by many of the hog producers with whom I spoke. As the need for increased production capacity to keep ahead of highly volatile pricing schedules was seen as a major challenge within the broader hog industry, it is interesting, yet troubling, that supply management was so often dismissed as protectionist subsidization with such absoluteness by many hog producers. While dated, Fairbairn notes that within the discussion about whether to supply manage or not, one must consider that, “if a large number of Canadian farmers were driven out of business by a few years of low-priced imports, governments would face significant social assistance and relocation costs for those farmers and for workers in related businesses” (1989:39). While the above analysis may seem futile in light of many hog producers’ comments that the opportunity for hog production under a supply managed framework has long passed, it is imperative to view the greater contradictory tensions that exist between notions of subsidization versus safety nets. It again seems that the argument for a free-market is illusory.

Here is the perfect transition into the next implicit theme that emerged from the interview data: the discrepancy and conflict that emerged among hog producers.
Divided and Conquered: Intra-Producer Conflict:

Many producers with whom I spoke mentioned the difficulty of getting things done at county-level producer meetings or of ineffective communication among hog farmers. Commenting on the inability for other hog farmers to come together and work toward improving industry-wide issues, Perseus stated, "farmers are their own worst enemies, and instead of having a single voice, when the prices are down, you should hear them at the meetings we have...". A similar sentiment was echoed by Paul, who noted that he has grown to dislike interacting with other farmers throughout his time in the hog industry. Paul stated, "I don’t like working with farmers because they’re the toughest bunch to work with, they’re never satisfied, there is always something wrong, either a pig looks crossed-eyed or whatever,” to describe the difficulty of working co-operatively with other hog producers.

With the dissolution of Ontario’s single-desk selling in 2010 (Ontario Pork 2014a), and critique surrounding the attempts by other commodity producers to service growing niche markets, many producer interviewees made reference to the internal competition and conflict among hog producers (Novek 2003). Looking at the dissolution of single-desk selling, producers, as individuals, are now completely responsible for negotiating their own contracts directly with processors (Ontario Pork 2014a). Qualman states that “single-desk selling ensures that all sellers have equitable access to the market and that they receive fair and equitable prices. It also gives small- and medium-sized family-farm producers market power when dealing with huge, vertically integrated packers” (2001:27). This removal of single-desk selling is problematic, particularly in light of a rapidly declining producer population. Rather than unifying efforts in an attempt to improve issues and concerns specific to hog producers, there is strife, competitiveness, and divisiveness. Novek notes a similar tendency for producer disagreement to result in “the fracturing of social solidarity in many rural communities” (2003:568), in his work on the polarizing effects of where ILOs are located. Similarly, a number of producers scoffed at the attempts of other hog producers to supply product for niche markets, such as the PC Free From line. This line provides products from hogs that have never had antibiotics applied throughout their growth. However, one producer claimed “Loblaw’s had their Free From program – it’s not good for industry. It pits us against each other. It’s all free from antibiotics and hormones and it’s tested at plants for residues anyway” (Packard).

While recognizing the breadth of challenges within the hog industry, there was mention by interviewees that any sort of collective action towards industry-wide improvements were not possible because producers were already too busy. Burdened with changing governmental regulations while attempting to educate the distanced domestic consumer on how to use pork in their meal preparations has left producers with little time to do much else. One producer noted that the push for regulatory change, particularly on the usage of dry sow stalls, stemmed from people with more time on their hands than farmers. Poppy stated that because
there are “so few producers that we don’t have time to lobby, tree huggers have the time to lobby” (Poppy) and are thus are better positioned to have their voices heard. Similarly, Perry stated, 

up until the last 100 years or so, you know, for the first, 199,000 years of human existence, the most pressing concern on almost every human being’s mind, was ‘what am I going to eat tomorrow’, all the sudden people aren’t asking themselves that question, so they have the luxury of thinking about other things, and uh, one of those things is questioning the very system that gives them the stability to question it, which I think is a little bit ironic (Perry).

However, such intra-producer conflicts and the distancing from non-agricultural groups serve to alienate an already declining population of farmers. An unfortunate response was also provided by Pedro when asked whether education could play a role in further connecting consumers to on-farm practices, following his experience of hosting urbanites at his farm.

Pedro: Toronto people… they didn’t have a clue. And I get that, I mean why would they have a clue?... They’re, they’re a long ways from farms. Can we educate them? Nah, I don’t think so.

Me: No?

Pedro: I don’t think so.

Rather than attempting to bridge connections, and unify efforts for the betterment of the broader industry and themselves, hog producers have truly become divided. With independent hog producers now divided amongst themselves, and the public they are attempting to market to, processors and large corporate-led agribusiness have easily conquered the mainstays of the hog industry. This presents a scenario where producers are not just subjugated to agribusiness, but have become completely enveloped by it. Such juxtaposition between producers/consumers, and rural/urban is indicative of Marxian false consciousness. Here, the processes of capitalist production have forced a wedge between the otherwise dialectical exchange of production and consumption. Continuous production, far beyond what could reasonably be consumed domestically, for the accumulation of capital to the benefit of processors and retailers has placed commodity-hog producers in a precarious position where they are too indebted to ever-more production and too mystified by their subjection to critically analyze their subjugation to broader capitalist forces.

Segregated not only from consumers but also other hog producers, many commodity-producers lay blame on many externalities, rather than the very system they are operating within. As the next section will outline, many of the economic and political challenges experienced by Southwestern Ontario hog farmers can be linked to the historical processor-led rationalization of the hog industry, particularly related to hog leaning (Ufkes 1995; 1998).
The Battle for Less Backfat: The Processor-led Rationalization of the Ontario Pork Value Chain:

“That’s the way the industry steered us into, kinda. Without even realizing it our industry’s turned into this streamline of the same pigs, right. So, I appreciate somebody who tried something different, but you kinda do what the packer tells you they want, and there’s more than just the end product, it’s the sow’s productivity, the sow’s temperament all comes into play so it seemed like the best mix...Now, it’s not really an option anymore... a pig’s a pig” (Pearce).

Unlike many of the challenges that producers explicitly identified during their interviews, a vital yet implicit theme also emerged through analysis of the interview data. Many producers, particularly those who had been in pork production for the majority of their lives, noted the gradual leaning of hog carcasses. The structural shifts throughout the industry have resulted in a low-margin, high-volume production of lean hogs (Ufkes 1995; 1998).

While some producers felt proud of their farming lifestyles and that they are able to meet the many challenges of commodity-hog production, commodity-hog producers are largely not in control of the types of hogs they grow (Novek 2003; Stull & Broadway 2004; Broadway 2006). I use the term *grow* here, as it is much more indicative of the production process than the term *raise* encapsulates. Especially in the case of barn-for-hire contracting, which is dominated by hog finishers, the building that the hogs are raised in is the only part of production that is farmer-owned (Thompson 2001, Boyens 2001, Qualman 2001; Broadway 2006). All other inputs such as feed, veterinary services, and transportation services are provided by integrators or other, larger, hog producers who need more space than their buildings allow. When considering pork production, the seemingly most important and central input to the entire chain production is the pigs. However, aside from the three niche-hog producers interviewed who selectively researched preferred hog breeds, there is little wiggle room for commodity-hog producers.

During the interviews, I did ask producers about what type or breed of pig they raised. While many producers did outline the genetics company they preferred (DanBred, PIC, Genesus) and the lines that they felt were most fitting for their operations (Yorkshire/Landrace female bred to a Duroc male), there was very little variation of breed. Breeding for uniformity, in both animals and crops, has become a defining feature of large-scale, corporate food production, and has led to the usage of the term *monoculture* (Weis 2013). However, with hogs, like the disturbing boom in broiler chickens bred for heavier and more valuable breast meat, there are a number of desirable traits that genetics companies have honed in on (Stull & Broadway 2004; Ufkes 1995; 1998). As noted in Chapter 4, the most desirable traits include improved feed conversion rates, sturdy feet and legs for growth over concrete slats, prolific litter sizes, and leanness. Hog leanness, or more specifically the amount of hog backfat, has become a central tension that spans the entire hog value chain (Ufkes 1995; 1998). As advancements and improvements in hog breeding, feed rations, and feed components did produce less backfat, intramuscular fat, which gives cooked meats both flavour and natural
juices, was also bred out.

I will make an argument below for how many of the challenges fleshed out above can be connected to the historical preference for processor-mandated lean hogs, and how gradual but systematic carcass leaning has given shape to an industry run on high-volume, low-margin, cheap hog inputs for value-added profiteering. As a GVC approach highlights both where value is derived within a commodity chain and how such a chain is governed, I propose that national retailers and large integrators, like Maple Leaf Foods who have shifted focus away from pig killing toward pork processing, exercise tremendous power over both production and consumption and stand as a model towards destructive production processes.

Too Fat to Whom? Biological Limits, Wastage, and Disconnect:

“We’re talking thirty years ago where you know, the powers of government came out and said ‘too much fat in our diet, we’re all dying, it’s bad for this and that’ and so the consumers of course listened to that... and they start selecting meats with less fat and then packers started trimming meat fat off and throwing it away ’cause they need to get this thing looking like what a consumer wants to buy, so then we start moving it off the carcass” (Pedro).

In order to understand how lean hogs became a dominant input for value-added goods, the historical context of leaning hogs must be outlined. One interviewee, Percy, a now-retired hog farmer, had, to my surprise, kept a of number newsprints dating from as early as the 1890s rich with columns insistent that hog producers stock their hog herds thoughtfully with improved breeds. Within a November 1891 issue of *The Farmer’s Advocate* that Percy had saved was an article written by William H. Davies. As noted in Chapter 5 on Processing, Davies was instrumental to the development of Canada’s modern meat packing industry; in 1927, Canada Packing Co. Limited was acquired by Harris Abattoir, and merged with William Davies Co. in 1929 to create Canada Packers Limited. Davies’ article entitled “The Hog Required by Pork Packers” states:

The Chester White, the Poland-China, the Essex, the Suffolk and the Berkshires are squarely built, with a natural tendency to lay on fat, which every year is held in greater abhorrence…there is an increasing and persistent demand for lean ham and bacon, for which they are ready to pay a higher price; in fact, with the majority of consumers fat meat is unsaleable. It is a great matter of satisfaction to our firm and other packers with whom we have conversed that the number of Improved Large Yorkshire boars that have circulated through the country within the last two years has very largely and favorably worked in the direction indicated, and among the hogs that we now take in at our packing house from one-third to one-half are white, and without doubt, are half-bred Yorkshires, and we can affirm that this cross has produced the beau ideal of a bacon hog (Davies 1891).

Historically, there were two varieties of hogs raised for human consumption: bacon hogs and lard/butcher hogs (Canada Packers Limited 1943). The former yielded a more muscled carcass, the latter a fattier, lard-rich carcass (Canada Packers Limited 1943). The 1930s saw the continued call for hog improvement from packing houses and, in 1938, the Whyte Packing Co. developed an “on the rail” grading system (Meat
Packers Council of Canada 1969:58). By 1940, rail grading of individual hogs was the standard method of carcass grading (Meat Packers Council of Canada 1969). On December 30th, 1968, a new rail grading system arose from the joint efforts of the Canadian Swine Council, the Meat Packers Council of Canada and Agriculture and Agri-Food Canada (AAFC), and was implemented after a “definite relationship was proven between the total backfat and the yield of lean meat in the hog carcass… to determine grade” (Meat Packers Council of Canada 1969:64). In addition, Canada Packers Limited noted that the grading of hogs was performed to “stimulate the production of hog of the type that will make high quality Wiltshire sides for shipment to Britain” (Canada Packers Limited 1943: 95). With an export market based on lean bacon hogs established early in the Canadian hog industry’s history, the conditions were in place for expansion with the onslaught of advancements in machinery and agricultural technology. In particular, the modern commercial livestock industry is argued to have developed in tandem with the boom in cheaply produced vegetable oils such as soy and canola, alongside the industrial mono-cropping of feed grains like wheat and soybeans, what Weis terms the *industrial grain-oilseed-livestock complex* (2013). Weis claims that specialized industrial livestock production sites, housing thousands of animals within a concentrated area, could only be possible through the plethora of grains produced for use as animal feed. Only through the mass production of cheap oils and grain could the mass production of animal protein occur.

If leaner hogs are sought and commodity-producers must grow hogs in large numbers due to low-margins, there is little choice about what breed of pig is housed in the barn (Ufkes 1995; 1998). Because these same lean hogs are individually graded, the entire machine that is the commercial pork industry is fed by a continuous influx of uniformly-sized, rapid-growing, high-littered, and genetically-crafted hogs. Such specificity of breed and the genetic-tinkering has enabled hog genetics companies to create *the* benchmark meat hog. However, Weis notes that despite the rapid rationalization of inputs to “produce flesh, eggs, and milk” (2013:111), there are “inescapable biophysical limits” (2013:115) in commercial livestock production. This is again where the controversial discussion on the feed-additive ractopamine can be introduced. Ractopamine is increasingly being added to commercial hog feed during the final stages of growth to even further enhance feed conversion, and promote increased carcass leaning. However, this additive, while seemingly improving upon feed costs, and possibly permitting better processor grading grid targets, comes at a high price for the hog: an increase in lameness. A second, more detrimental cost, especially within this corporate agriculture, is the loss of international market share, as an increasing number of nations have banned the use of ractopamine, closing their borders to Canadian pork imports. While there are four strains of ractopamine (Pay-Lean) currently approved for use in Canada, the increase in leaneness is met with an increase of hog downer syndrome. Compromised pigs, unable to move under their own weight, are not permitted on trailers for transport, and will be euthanized if they become lame and immobile (Canadian Food Inspection Agency 2013; PAACO 2015c). There are indeed biological limits
to how a hog can be developed, and here, this limit is manifested as lameness, which essentially results in wasted feed, wasted resources, and a wasted life for a pig that will never see outdoors and will never reach a dinner table. Similarly, such genetic innovations tend to focus on “blaming the nature of the pigs rather than the nature of production” (Weis 2013:122). When the genetics of a perfectly sculpted hog meet innovative pharmaceuticals intended to result in perfect, rational efficiency, both the provenance of that animal and the larger system it is a part of has become severed from the consumer.
Figure 39 An advertisement page from the 1891 November issue of The Farmer's Advocate magazine, with a number of advertisements for improved hog stock, many of which are for improved Yorkshire hogs. A female Yorkshire/Landrace cross is still the dominant breed used in commodity hog production today. Photo by author. Magazine provided by interviewee.
Processor-Mandated Leaness:

“So we’re paid based on fat, too much fat you get less money... Plus, fat takes more energy to put on compared to meat so it's costing more money to feed it. So ya, costs more, paid less, so that’s why we’re chasing our pennies” (Pierre).

As I sought to understand Ontario pork production via a global value chain analysis, I aim to understand the impact of governance and economics on producers. As such, one of my interview questions was: Can you explain to me how the prices for your weaners/hogs are established/dictated? While there was variation in the extent of knowledge that commodity-producers had about CME hog futures, and external pricing schemes, I was also informed that there are processor-mandated targets, called a grading grid that resulted in better pricing. Indiana contextualized this grid, stating,

Traditionally, starting way back, in order to help packers guide producers in producing the sort of carcasses they want of a certain weight, less backfat, things like that, they created a grading grid … packers were wanting producers to produce their hogs at, in terms of carcass-weight, and estimated lean-yield, that was to encourage them to reduce the amount of backfat and ship them at the right weight, packers wanted for their proposes to meet their needs in terms of product (Indiana).

Many grading grids are considered proprietary information in an attempt to maintain competitiveness between processing plants. Grey (2000) also claims that, within the Iowa hog market, plants are not obligated to make their prices public. Because different processing plants service different markets, there is slight variation in the type of carcass demanded of producers. However, the grading grid considers the overall weight of a dressed carcass, and the lean percentage yield. There is also an increasing demand from processors for heavier hogs, at times exceeding 280-300 pounds - a weight that would have been considered too heavy, and penalized, just 15 years previously. Indiana noted that, to the processor, it makes more financial sense to have a heavier hog, as there is “more profit to disassemble per unit” (Indiana). This was also echoed by one Quebec-based processor who noted his company’s preference for heavier hogs, stating, “once [a] piglet is paid, the more weight you can put on, the more money you get for it” (Imran). Currently, there are trends for packers to demand hogs weighing over 100kg and under 114kg (Imran), at times reaching over 136kg/300lbs (Ian; Irwin; Indiana). However, the increasing weight demanded by processors creates compounding problems beyond the processing plant. Ian stated, “now we have pigs up as high as three hundred pounds. Like, more meat, more money… You don’t change the genetics of the pig to be able to go that heavy. I think it’s harder on the pigs, it’s harder on the trucks, it’s harder for everybody. It’s just a mess” (Ian).

Despite acknowledgment that producers are being guided by processors to produce leaner hogs, there was disagreement as to where exactly the preference for leaness was stemming from. Many producers noted that consumers are afraid of fat, and that processors, in an attempt to satisfy consumers, are demanding lean hogs. While many interviewees were quick to place power in the hands of consumers
for demanding leaner goods in the grocery store, and thus a leaner hog in the meat aisle, broader consideration of market trends must be considered. When asked why she felt there were processor-mandated grids to grow lean hogs, Paige stated, “Because that’s what consumers want. They don’t want fat, they want lean, they want muscle. A lot of what we do is dictated by what consumers want” (Paige). However, this does not appear to be the case. Many of the challenges outlined above can in fact be linked to the processor-led leaness, which embraces uniformity and economies of scale (Ufkes 1995; 1998). While based upon US industrial hog production, a similar sentiment was echoed by Iowa hog farmers claiming that “we are being told that consumers are constantly demanding high quality pork that is consistently lean. Unfortunately, the pork being produced by the industrial units meets the packing plants’ qualifications for lean pork, but does not meet the consumers’ desire for high quality meat… consumer demand is not driving the hog industry today” (Braun & Braun 1998:53). The Brauns’ go on to claim that producers are being penalized for higher quality, fattier hogs, and that “the poorer quality meat being produced by the industrial producers exacts a premium price at the packing plant, but then is sold at discounts or is made into sausages because much of it is of such low quality” (Braun & Braun 1998:54). The mass production of cheaper grade pork has also served as a key input for value-added goods, and has allowed further processors the ability to thrive, quite profitably as a result. Ufkes also claims that processors do indeed see “fat profits in lean meat” (1998:241).
Lean Hogs: Cheap Input for Value-Added Processing:

“these animals, that we have, have been bred for consumer-use, they’re not pets, not ones that have been grown wild, these have been cultured for that food – an A to B solution to their cycle” (Perseus)

Another topic of contention, and seemingly contradictory, arose from marbling within the meat. There is a processor-driven demand for lean hogs, despite acknowledgement from numerous producers and industry persons that a fattier hog is a tastier hog (Braun & Braun 1998). One industry interviewee, Izra, noted that despite producers’ feelings on hog leanness “until the model changes, producers will produce lean” (Izra).

If further processing and value-added pork products are seeking the cheaper carcasses for branded and easy meals, it would seem that much of the structure of the industry is based on production to supply processors like Maple Leaf Foods and Olymel with a consistent source of cheap animal protein for their wares. Having been informed by producers that their ability to produce cheap protein to feed a hungry world was indicative of a job well done, this does not appear to be the case. Rather, commodity hogs as they are aptly referred to by producers are just that – a commodity, an input. As niche producers capture trendy and emergent markets that are more-than-willing to pay more money for less volume and better taste, commodity producers are demoted to produce a product that may be added to hundreds of cheaply produced value-added items. Furthermore, even in the fresh meat cooler, the perpetual cheapening of pork that very often retails below $1.99 per pound, far below what producers could actually produce a hog for, serves to further enforce the notion that pork is indeed just cheap protein. In terms of quality, given the types of market these two production styles service, it is a bit like comparing edamame with textured vegetable protein. While both, at their base, are soybeans – the former is sought after within a niche market, the latter is an input.

Here there are a four processes to consider: 1) Fat is more expensive to add onto hogs due to the need for more feed and longer grow times, thus requiring more days to market for finishing hogs. 2) When lean, tough, or otherwise unpalatable cuts of meat are used in further-processing, meat can be fat-corrected during processing. One primary processor stated,

I think by and large for the processing industry… they can fat-correct, as they say, as they’re making batches of product, so some people would say we’ve gone too lean. You know I think there’s certain markets that want certain hogs, and if you can channel them in the appropriate direction, you know, you can kinda have a win-win situation.

As well, 3) further-processed goods such as hot dogs, sausages, and deli meats, all of which contain pork, have circumvented perishability due to longer shelf life. Finally, 4) such value-added items also serve to turn handsome profits, particularly as they are comprised of cheapened lean hogs, sourced from producers that have decreasing control over the type, size, and quantity of hogs raised (Ufkes 1995; 1998).
Impacts In-Barn:

While there are a number of broader factors that have led to the leaning of hog carcasses, producers must adapt to the changes, or be penalized. Failure to produce a hog per the processor’s grading grid can result in heavy price deductions. If a producer produces a hog deemed too small, too large, or too fat, at times, producers can be paid just 10% of the 100% Formula Price. In comparison, a hog that hits the “sweet spot on the grid” (Indiana) can receive upward of 114% of the 100% Formula Price – a 14% bonus. Indiana had also noted that while the term precision agriculture is often associated with crop farming, it was indeed also the case in hog production. As hogs’ genetics are constantly being tweaked to produce more piglets per sow, more carcass meat, and in less time, advanced technological systems are also emerging in-barn. With the phasing in of loose sow housing, where sows are housed in communal pens, electronic sow feeding (ESF) has a sophisticated in-barn application (Prairie Swine Centre 2016b). When housed in groups, if sows are freely fed, there is potential for aggression as stronger sows will dominate weaker sows during feeding (Prairie Swine Centre 2016b). To ensure that each sow receives tailored nutrition, and thus a maximized return on feed, ESF systems are being implemented (Prairie Swine Centre 2016b). ESF systems operate in conjunction with personalized ear tags that signal to the ESF feeder the individual nutritional requirements of any given sow based on her weight, duration of pregnancy, lactation needs, and even past feeding history (Prairie Swine Centre 2016b). ESF systems allows for skinnier sows to receive more feed, and heavier sows to receive less feed, when their ear tag signals the feeder to distribute the feed (PJ; Prairie Swine Centre 2016b). What is even more impressive about ESF systems is that they will segregate the feeding sow when signalled so that she may eat without interruption from her pen-mates. What is problematic here is the increasing level of sophisticated and undoubtedly expensive equipment being applied at the barn level. While loose housing can indeed work without ESF systems, I mention its usage here as even slight gains in feed efficiency at the production level are increasingly becoming a competitive advantage as producers attempt to capture more efficient meat growth on less feed. Those unable to keep up with the advancements in technologically-precise growth methods end up having greater feed costs relative to volatile returns.

Such sophisticated equipment and systems are becoming necessary to compete in this industry. ESF systems are just one example of what Buckland terms the “technological treadmill” (2004:152). Seeing greater gains in efficiency or productivity, producers adapt cutting-edge technologies with hopes of improved returns on larger farms with less labour. Buckland notes that “as more farmers join the treadmill, commodity prices decline and farmers are forced to boost farm size once again, with either more land or capital or both. The treadmill establishes its own momentum” (2004:153). Larger production sites, particularly those that are vertically integrated, also have a greater ability to float the capital needed for such investments. Much like the advancements of threshers and tractors which favoured much larger parcels of land to make their operational cost worthwhile, ESF systems and the like favour sizable production sites.
and may push out smaller production sites that are not able to compete at the new pace of efficiency. While these changes are indicative of neoliberal and capitalist agriculture, producers tend to associate the increasing consolidation of the hog industry as reflective of poor individual production decisions. One interviewee stated that, throughout his time hog farming, “We made a ton of money, we lost a ton of money, we made a ton of money, but it’s, it’s the game I know, right? …Yes, there was casualties along the way…we lost some good producers, you know the first casualties are always the bad producers so some of that’s not the end of the world” (Pedro). However, the role of individual independent producer is decreasing.

Interestingly, this preference for leanness in hogs is mirrored by the insatiable demand for the ultimately decadent, greasy, salty, pork cut – bacon. As noted above, the reduced palatability of increasingly lean hogs has streamed pork into two main groups: fresh and processed. Fresh pork, which is not marbled, has become a place of consumer-blaming, in that consumers must be taught how to cook this ultra-lean cut to maintain palatability. On the other hand, processed pork, which can be used in a variety of commodity meats like hot dogs, deli meats, and sausages, serves as essentially cheap meat filler that can be corrected via processing for increased palatability. Sugar, fat, seasonings, cheaper added-oils, and flavour enhancers like smoke, maple, and hickory can all be included during further processing (Winson 2013).

The Bacon Boom while Growing Lean:

Of the producers with whom I spoke five interviewees also sold their pork at farm-gate. These five producers did have their own brand and logos, and many often visited farmers’ markets to sell their pork products. However, an interesting point of discussion also emerged: Bacon, and their consumers’ insatiable demand for it.

One commodity-hog producer who also sold some product at farm-gate, stated “it can be a big discrepancy between something that’s really on sale, pork chops or whatever it may be, and bacon. Bacon’s usually high, high on the retail end… It’s too bad they couldn’t make a whole pig bacon” (Pearce). Similarly, another commodity-hog producer stated “more vegans lose their virginity to bacon than other meats” (Porter). A similar sentiment was also felt by niche-hog producers. One niche producer stated that she often needs to provide pig anatomy lessons to her consumers who are seeking bacon in large quantities. Phoebe stated,

I have to send them information. Saying this is the pig, so you get 7-9 packages, PACKAGES, of bacon on this side, and 7-9 packages on this side – that’s all the bacon. So there’s ground pork, pork roast, there’s everything else, and that all has to be gone before another pig goes in [to be processed], so now what do they do? “Ok then, I’ll buy 12 packages of nitrate-free bacon,” so they take the whole half a pig. Oh yea (Phoebe, [emphasis hers]).

Patrick also noted that it made more economic sense to sell highly-sought-after bacon, choosing to restrict
his family’s consumption, stating “we don’t eat a lot of bacon because its more valuable for me to sell, you know, we eat a lot of cheeks, we eat a lot of stuff like that” (Patrick). A journalistic expose by Bloomberg Business entitled “The Bacon Boom was Not an Accident” traces the sharp increase in consumer demand for bacon to lobbying efforts by the Illinois Pork Producers’ Association in the 1990s to combat slumping pork belly prices amidst the infamous “Pork: the other white meat” campaign (Sax 2014; National Pork Board 2015). The article claims that “because the belly was the largest single cut on the pig, the corresponding prices of hogs slumped, and farmers tried to salvage what they could from leaner loins and chops by breeding thinner, more muscular pigs” (Sax 2014). The US National Pork Board launched the “Pork: the other white meat” campaign in the late 1980s in an attempt to appeal to the increasingly fat-conscious consumer that pork could be as lean as the original white meat: chicken. In an attempt to overcome the belly slump, the Pork Board approached fast food restaurateurs who had also begun offering leaner options, to encourage the addition of bacon to sandwiches for added flavour. The article states, “adding a single slice of bacon to those sandwiches not only improved taste and mouthfeel by multiples, but bacon’s low cost meant that they could be sold at a premium, tacking a healthy profit margin” (Sax 2014).

![The Other White Meat](image)

Figure 40 US National Pork Board launched the “Pork: the other white meat” logo, pictured above. Figure source: National Pork Board (2015).

However, since the bacon boom, belly prices have changed dramatically. One producer, Patricia, sells her hogs to a provincially-licensed abattoir. From here, she will buy back primal cuts based on their current market valuation, and then have these cuts processed further into a variety of products (bacon, hams, pulled pork) for sale at farm-gate. Much like the whole hog value, outlined previously, which is largely established on futures markets, individual primal\(^{32}\) cuts can also be traded and speculated upon. Patricia stated that the ability to buy back certain cuts allows her to fill the inflated demand for bacon, which she now only sells in 10 pound boxes. Patricia went on to state “we’re able to order and buy back primals, and we’re dependant on the price of the market as well. So our bellies went from $5.65 last fall, to I think $3.65 last week, but when we were getting over $200 a pig, bellies were more expensive. Sometimes the markets don’t match up” (Patricia). Despite the fluctuation in price due to increased demand, what is more

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\(^{32}\) Primal cuts or primals are the four main sections of each half-hog: Belly, loin, shoulder, and leg.
interesting here is that the bellies and bacon have gone from essentially unwanted cuts to an in-demand and trendy product. Historically speaking, bellies were value-less. I mention this bacon boom within the analysis of hog leanness for two reasons. Firstly, the National Pork Board’s push to add bacon is indicative that an industry-led push to eat more of a particular item can have lasting and impactful changes to demand and diet. Secondly, the increased demand for improved mouthfeel and taste comes at a time when other pork cuts are increasingly being leaned. It is interesting to consider that amidst the sea of lean pork, bacon stands as a reminder of how higher quality pork used to taste. Another producer stated,

Like if you want something that tastes good, you gotta have fat in it. Like if you wanna have a pork sausage that tastes good you gotta have fat in it. And if you want a pork chop that tastes good, you gotta have some fat on the outside of it. And it’s actually been to the point now that, that a lot of these hogs, they’ve been… they actually have been bred to be too lean. And then all of a sudden you start getting tough pork chops or tough meat (Phoenix).

Despite the dominant commercial trend for lean hogs, there is a revitalized interest in fattier, slower-produced hogs, cures, and cuts, such as charcuterie that prizes fattiness and craftsmanship. On the other hand, a few of the niche market producers I met saw the constant leaning of pork as an opportunity to market and sell their products for a premium. Paul, a Dutch-Canadian hog producer, stated,

When I came here, I looked at the pigs that were, that everybody had on different farms, and looked at these pigs and I shook my head, says ‘what are you guys doing’? …they looked like deer to me, they were just, this tall, this skinny, just a bag of bones, and the reason for that was, people were getting paid for low backfat, so it didn’t matter whether it was meat on the carcass, as long as there was no fat, cause that’s what they were getting paid for, and I couldn’t understand that people would eat bones, in Europe you don’t eat bones – you eat meat… you’re just supposed to ship to a packing plant and be done with it, you’re a farmer, and then be quiet, go to the kitchen have a coffee and be quiet – well not me, I like to buck the trend, I love it. (Paul).

A number of ideas have been presented, so it is worthwhile to rehash how these fit together. Hog carcasses produced via processor-led monetary bonuses and penalties have shaped the type of hogs that producers raise in-barn. While domestic pork consumption is declining, up to 70% of all processed meats in Canada are made with pork (Agriculture and Agri-Food Canada 2014). Large processors are gradually shifting away from slaughter, a tight-margin industry, toward further-processing, where there is potential for increased profits. Similarly, further-processing can enhance, correct, and amplify flavours with a plethora of additives, to develop innovative value-added goods. Therefore, because hog leanness has been increasingly demanded from the wider pork industry, and not by consumers primarily, it can be said that the leaning of hogs serves to provide a cheap input for large further-processors and their massive variety of long shelf-life, innovative, and profitable pork products. The leaning of hogs has provided a pocket of capital protection for large integrator-processors from many of the issues that arise from fresh meat sales, such as perishability, and profitability - in production, processing, and retailing.
This analysis must also be tied back to the global value chain (GVC) literature, as this is the main framework of analysis in this thesis. To reiterate, the GVC literature is one of many forms of commodity analysis. A commodity chain refers to the networks of processes that result in a complete or finished commodity (Hopkins and Wallerstein 1986). Governance, by corporate power in particular, is a central facet of the GVC approach (Gereffi & Lee 2012). Gereffi, Humphrey, and Sturgeon (2005) outline five types of governance:

1) *market linkages*, which refers to governance by price. Transactions are simple, and there is little involvement with buyers;

2) *modular* governance linkages often occur when suppliers provide products based on customer specifications;

3) *relational linkages* which emphasize governance based on complex information, mutual trust and social ties;

4) *captive linkages* that highlight the dependency or ‘captivity’ of small suppliers on larger buyers; and

5) *hierarchical* linkages occur by intra-firm vertical integration, and are governed by managerial control (Gereffi, Humphrey and Sturgeon 2005:82-84; Sturgeon 2009:118; Gereffi 2011:41-44; Gereffi and Lee 2012:25).

Considering the entire value chain of the Ontario pork industry specifically, and the Canadian pork industry more broadly, governance is emblematic of a hierarchical linkage. As noted above, within the GVC approach a hierarchical linkage highlights the form of corporate power most applicable to the Ontario case. While the position of many producers as price-takers - unable to dictate what price is received for their hogs and thus governed by price - is more indicative of a market linkage, deeper investigation into the pork industry reveals that transactions are anything but simple, and that much of the pricing volatility and overproduction can be tied to the need for further-processors and retailers to source cheap protein. As noted in previous chapters, there are just two federally-licensed processing facilities in Ontario, and one of these plants operates on a co-operative basis requiring substantial share-capital buy-in. Tight, if any, profit margins for producers have resulted in high levels of overproduction, far beyond domestic need and resulting in export dependence, particularly to Pacific Rim nations (Grier 2007). As federal inspection is required for any sale outside the province, producers are forced to seek processing space at other federal plants including those in Quebec, New Brunswick, or the US. The notion of *market power* is applicable here. Market power, is deeply problematic as it centralizes all economic control into very few hands, tending to inflate costs beyond what would be present if competition was also present (Winson 1992). This again
points to an inherently flawed system of production and consumption based on free-market ideology, when only a limited number of players dictate market dynamics. Hog producers must produce a tightly-mandated carcass type, and if they wish to participate in a global marketplace, must also seek federal processing. With Sofina Foods’ plants operating at capacity, and Conestoga Meat Packers’ co-operative model being the only two federal hog plants in Ontario, the entire hog processing sector is essentially monopolized. The second pivotal node of a GVC analysis, value, is further fleshed out below.

Another reason for my usage of a GVC throughout this dissertation is the literature’s emphasis on value over commodity. Sturgeon notes that the emphasis on value parallels the notion of value-added within supply chains (2009:117). Value-added focuses on the increased capital returns and post-processing of commodities (Sturgeon 2009). My decision to frame this dissertation using a GVC approach is largely due to the entwined relationship between governance and value, particularly within food-based commodity chains. The form of value expressed in this thesis could not be possible without also analyzing the form of governance expressed. Much like the political economy frame, which emphasizes both the political and economic structures that are central to many implicit and explicit functions and facets of society, governance and value cannot be excluded from commodity analysis, particularly as related to the Ontario pork industry. If the notion of value is akin to value-added processing, value is indeed at its highest at the processing and retailing nodes of the pork chain. Here, the most value and thus profit is extracted from the chain via the presence of value-added pork goods. The rationalization of the pork value chain, which emphasizes over-production of lean hogs as an input for value-added processing, is one that has been strategically managed for maximum corporate value to be extracted.

This dissertation contributes to the body of literature on global value chains as it draws explicit connections between the form of governance and value extracted from the Ontario pork chain, from production through to retailing. In relation to Sturgeon’s statement that a GVC and the notion of value corresponds to value-added, this dissertation makes an explicit connection between the increased profitability of lean hog production for value-added pork products, like processed ready-to-eat convenience meats and meals, and the benefits for large processors, particularly further-processors such as Maple Leaf Foods who have undergone a period of organizational rationalization. Such further-processors are able to maximize on value-added processing while sourcing raw product from kill plants, dictating very specific carcass requirements to producers. With Ontario kill plants operating near or at capacity, and producers continuously expanding production to keep afloat from operating costs, perpetual oversupply, and pressure from a much larger US market. Processors, particularly further-processors, are also able to engineer innovative meat products using low-value scrap meat, and creatively market these novel products with claims of improved convenience and health. Processors benefit further due to a divided producer-
population. Producers are disjointed from one another and are largely powerless to demand more, as they are required to grow under strict yield guidelines and to take what is being offered in terms of price. This lack of intra-producer organization is akin to Winson’s notion of “degenerated commodity production” (1992:148), where producers experience a declining level of autonomy and thus control over economic conditions as they encounter processors with a great degree of market power.

Control is exercised throughout the entire value chain as powerful further-processors and retailers dictate production practices based on a meticulously-calculated pricing formulation that requires producer-adherence. The value chain for the Southwestern Ontario hog industry has become rationalized, and with increasing emphasis on economies of scale to increase profits, there is an increasing demand for “the business-minded farmer [who] isn’t a farmer anymore, he’s a businessman” (Preston). Engaging in a critical analysis of the Southwestern Ontario hog industry has permitted enquiry into underlying and seemingly-natural constructs and assumptions that have become perpetuated as the normalized cyclical volatility inherent to the production of hogs.
9: Conclusion

This doctoral thesis had provided new insight into the changing structure of the hog industry in Southwestern Ontario and Canada more broadly. Following Chapter 1: Introduction, which outlined the need and purpose of a sociological study on the Ontario hog industry, Chapter 2: Literature Review and Theoretical Framework provided analysis of the intensification of meat production in both the US and Canada, the development of integrated hog production, and commodity chain analysis, with particular attention to the global value chain (GVC) perspective.

In Chapter 3: Analytical Framework and Methods, the main research questions, along with the methods of participant recruitment, were provided. A total of 26 hog producers, from various counties in Southwestern Ontario, and 18 key industry informants within the broader hog industry were interviewed. In total, 44 in-depth, semi-structured interviews, which ranged between 35 minutes to well over 2 hours, were conducted, fully transcribed, and analyzed for themes.

Chapter 4: Pork Production in Southwestern Ontario introduced the prominent types of hog production, for both niche and commodity markets, in Ontario. Following the sequence of the commodity value chain, Chapter 5: Canadian Pork Processing provided an in-depth look at the prominent method of stunning found in provincial and federal slaughterhouses and meat processing plants. This chapter began with the historical context on the consolidation and concertation of early meat packing plants, and ended with discussion on the ethics of bleed-rail sensibility. As many plants, especially in Ontario, are operating at capacity, there is an increased chance for animal sensibility on the kill floor.

Chapter 6: Live Animal Marketing outlined a number of components supporting the transition and movement of pigs to pork. Analysis included the importance of traceability, pricing, and production contracting schemes, and context of two emergent international trade agreements: mCOOL and the TPP. Having outlined how a live hog is converted into pork within seconds, the following chapter focused on pork post-slaughter pork marketing and retailing.

Chapter 7: Pork Retailing in Southwestern Ontario and beyond outlined the powerful role of national retailers in Canada, who have increasingly emerged as health authorities, following a lengthy history of consolidation in Canada. Similarly, the role of the Ontario Pork Producers' Marketing Board (OPPMB) in marketing both pigs and pork was discussed. Finally, this chapter outlined the plethora of value-added, further-processed pork-based goods, which line the shelves of the three national retailers: Loblaw Company, Sobeys Inc. and Metro-Richelieu.
Chapter 8: Analysis and Discussion introduced the main themes that emerged from analysis of the interview transcripts. The main research questions were:

*What economic and political challenges are affecting/impacting pork producers in Southwestern Ontario? How are these challenges perceived by producers?*

*How are these challenges currently structured, and how have they become implemented over time?*

The themes pulled from interview data were integrated with relevant sociological theory to contextualize the political and economic challenges experienced by producers, and to make an argument for how processor-mandated leanness has resulted in a gradual but substantial shift in the rationalization of the hog value chain.

**Limitations of Research:**

There were two main limitations to this study. The position of the researcher as an *ag outsider* was a central limitation to this study. The complexity of my role was introduced in the methods section of this dissertation as it was imperative, due to increased sensitivity of CAFO-style meat production, that I be clear about my positionality in relation to interviewees.

Another minor limitation of the study stems from the novelty of the subject matter covered. As noted in the Methods chapter, there is an absence of sociological studies that capture producer and industry perspectives on the structure of the Southwestern Ontario hog industry. Consequently, much of the material was exploratory. Aside from MacLachlan’s (2001) book on the Canadian beef chain as a guide, there were few closely-related sources to draw on for this project. When I began this research, I was not sure what it would yield. Every interview was intriguing, and many left me eager to look-up additional terminology, policies, events, and pig breeds. I am more than pleased that this novel look into the Southwestern Ontario hog industry has provided a rich field for further sociological enquiry.

**Areas for Future Research:**

This doctoral thesis has provided an in-depth look into the broader Canadian hog industry, by investigating the challenges of hog producers in Southwestern Ontario, and key hog industry informants more broadly. However, there were a number of areas of future research that were not pursued here, but have emerged from the experience of writing this dissertation.

**Commodity Chain Analysis of Other Commoditized Food Products:**

By engaging in a commodity chain analysis of the Ontario hog industry, I have been able to immerse myself in a unique world. I was permitted an extensive look into the intricate workings of a deeply
complex industry; I believe that framing this thesis upon commodity chain analysis, particularly a global value chain frame, has permitted an extensive framework for this industry. As mentioned in a previous chapter, future research into the commercial turkey industry is needed. Interestingly, turkey is the only commercially-raised poultry that has not expanded into year-round availability. Perhaps the appearance of a whole turkey, stuffed with its gizzards, is too reminiscent of the animal it used to be; investigation into turkey as an input is warranted.

Long-Term Viability of the Ontario Hog Sector and Industrial Livestock More Broadly:

As noted, there are a number of implicit and explicit challenges experienced by hog producers above. The lack of intra-provincial primary processing, increasing integration, rising feed and hydro costs, decline of farmers, urban sprawl, and the incredible advancements in technology such as lab-grown meats all serve to place tremendous pressure on the hog industry. Therefore, further investigation into the long-term viability of industrial livestock and meat production in Ontario and beyond is needed.

Consumers’ Perceptions of Pork Products from a sociological standpoint is also needed, both domestically and internationally. Investigation into consumers’ diets and choices, particularly within retail outlets is needed to uncover how further processed items are perceived warrants additional analysis to compliment this dissertation.

Improved Animal Handling Methodologies have largely been addressed at the governmental level, particularly in the US with the addition of Dr. Temple Grandin’s ground-breaking, yet simple fixes and approaches to lessen food animals’ stress in the slaughterhouse. However, there is a need for improved handling methods in-barn as well. A number of interviewees had mentioned the need for good, reliable, hired help. Similarly, many producers had mentioned the importance of sound barn-management, particularly with the changes in sow housing. Investigation into how skills and knowledge, such as that needed for good herdsmanship, can be implemented into the agricultural sector to permit proper animal handling.

The Role of Feed Mills and the Evolution of Feed Rations:

As producers are squeezed to produce more output with less input, there is work on identifying cheaper methods of feeding hogs. Liquid feed diets and diets of dried distiller grains (DDGs), a by-product of the ethanol industry, are currently being investigated for application on an industry-basis as an alternative to traditional commodity pig feed. The resultant quality of meat being raised on spent ethanol grain is questionable. As hogs are such rapid feed-converters, it is disheartening to think that, again, a productivist mentality that increased input (of any form) will be equaled by an increased output without factoring quality in either side of this equation. This type of feeding regimen also ignore the natural omnivorous nature of
Finally, it is hoped that future research within the sociology of food and agriculture begin with introspection. In order to break the myth that all food, including the animals raised for food, must be subjected to the whims of a falsely-named free and open market, it is hoped that the daily actions of all eaters can begin with mindfulness. It is hoped that we may each eat to nourish our bodies and the earth from which it came, rather than eat to fatten the pocketbooks of transnational corporations seeking claim over all facets of life. It is hoped that pigs, and all food, that are raised for our consumption are respected for the nourishment that they provide, rather than subjugated to a market where indeed nothing is free.
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Appendix A: Original Participant Recruitment Poster

Are you currently, or have you ever been, a pork producer in Bruce, Huron, or Middlesex county?

What’s the study?
Over 18 years of age?
Farm in Huron, Bruce, or Middlesex county in Ontario?
You are invited to take part in a University of Guelph research project to study the experiences of pig producers (current and past), both within fully integrated operations (farrow - finish), and segmented operations.
The goal of this study is to capture producers’ experiences working within the pork industry, and to examine the factors and barriers that producers face in this industry. With this information I hope to understand and bring light to this changing and important industry within Ontario, from those most connected to pigs production

What will happen?
Let’s arrange a time and location to meet, or to speak over the telephone, or over Skype. In-depth interviews (30 - 60 minutes in length) will take place so that we can chat about what challenges you have experienced as a pork producer, and what policies you feel could be changed.

How will I benefit?
Participants will benefit from this research study by discussing their experiences of the pork industry in Ontario.
This study will allow producers’ own voices to shed light on the factors that either benefit or pose as barriers to pork producers.
This study will allow for context into what social, economic, and political conditions are shaping this industry.

How can I participate?
Please don’t hesitate to contact me if you have any questions or would like to take part in this study!

Katie MacDonald
Graduate Student
Department of Sociology and Anthropology
University of Guelph

Tel: 519 - 900 - 9343
Email: kmacdo08@uoguelph.ca
Twitter: @KatieMMacD

Please distribute widely!

This study has been reviewed and received ethics clearance through the University of Guelph’s Research Ethics Board.
If you have questions regarding your rights as a research participant, please contact Sandy Audl and quote the following REB# 15AP013
Telephone: (519) 824 - 4120, ext. 56606
PORK FARMERS WANTED

For University of Guelph Study!

Bruce, Huron, Perth, & Middlesex Farmers

Let me know what you think about the industry over a brief interview (20 mins+)

Let's set up a time to chat! I am willing to travel to you or meet at your convenience:

Katie MacDonald
phone: 519-900-9343
email: kmacdo08@uoguelph.ca
twitter: @KatieMMacD

Don't hesitate to get in touch if you have any questions!
Appendix C: Canadian Meat Business Magazine Advertisement

Pork Producers sought for University of Guelph Study

UNIVERSITY of GUELPH

Changing Lives Improving Life

May 27 - Over 18 years of age?
Farm pigs (now or in the past) in Huron, Bruce, or Middlesex county in Ontario?
Have your voice be heard!

You are invited to take part in a University of Guelph research project to study the experiences of pig producers (current and past), both within fully integrated operations (farrow - finish), and segmented operations.

The goal of this study is to capture producers’ experiences working within the pork industry, and to examine the factors and barriers that producers face in this industry. With this information I hope to understand and bring light to this changing and important industry within Ontario, from those most connected to pig production.

Let’s arrange a time and location to meet, or to speak over the telephone, or over Skype. In-depth interviews (30 - 60 minutes in length) will take place so that we can chat about what challenges you have experienced as a pork producer, and what policies you feel could be changed.

This study will allow producers’ own voices to shed light on the factors that either benefit or pose as barriers to production. This study will allow for context into what social, economic, and political conditions are shaping this industry. With this information, an understanding of the issues at hand will allow future action to take place that may benefit pork producers.

Please don’t hesitate to contact me if you have any questions or would like to take part in this study!

Katie MacDonald
Graduate Student
Department of Sociology and Anthropology
University of Guelph
Tel: 519 - 900-9343
Email: kmacdo08@uoguelph.ca
Twitter: @KatieMMacD
Appendix D: Consent to Participate in Research Form and Participant Information Sheet

UNIVERSITY OF GUELPH

CONSENT TO PARTICIPATE IN RESEARCH

Ontario Pork Producer’s Experience of Political and Economic Barriers

You are invited to participate in a research study conducted by Dr. Tony Winson (Advisor), and Katie MacDonald (student investigator) from the Department of Sociology and Anthropology at the University of Guelph.

This study is being undertaken as partial fulfilment for the degree of PhD at the University of Guelph.

If you have any questions or concerns about the research, please feel free to contact:

Dr. Tony Winson
Professor
Department of Sociology and Anthropology
Tel: 519 824-4120 ext. 52193
twinson@uoguelph.ca

Katie MacDonald
PhD Candidate
Department of Sociology and Anthropology
Tel: 519 803-xxxx
kmacdo08@uoguelph.ca

PURPOSE OF THE STUDY

You are invited to take part in this research project to study the experiences of producers of pigs, both within fully integrated operations (farrow- finish), and segmented operations which specialize on different aspects of the pig lifecycle from Huron, Bruce, and Middlesex counties in Ontario. The goal of this study is to capture producers’ experiences working within the pork industry, and to examine the factors and barriers that producers face in this industry. With this information I hope to understand and bring light to the personal experiences of participants, within this changing and important industry within Ontario.

PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

1. Arrange a time and location to meet, speak over the telephone, or Skype online with Katie MacDonald that is of mutual convenience. If, for whatever reason, you are unable to attend at the arranged time, please contact Katie and she will gladly reschedule the meeting with you.

2. Review the information regarding the research project with Katie MacDonald before beginning interview. Please feel free to ask questions at any point during the interview. Interviews will range on average from 30 – 60 minutes in length.
3. Review the informed consent form and once reviewed, sign the consent form in order to confirm your consent in our research study.

4. Respond to a series of questions, which may be audio recorded with your consent to do so. Keep in mind that as a voluntary participant, you have the option of declining to answer questions or withdrawing from the interview at any time.

5. You will have the option to receive a plain language summary of Katie’s research findings upon completion of the project in the Fall of 2016 (projected) by email or post.

POTENTIAL RISKS AND DISCOMFORTS

There are no physical risks anticipated for the participants in this interview. While answering some of the questions you may feel embarrassed, worried or upset. If this happens please tell the interviewer and they will discuss these feelings with you. Remember that you are able to decline to answer questions at any time during the interview.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

Participants will benefit from this research study by discussing their experiences of the pork industry in Ontario, to better contextualize what social, economic, and political conditions are shaping this industry, and shed light on the contributing factors that either benefit or pose as a barrier to pork producers. This research will benefit society by raising an overall awareness of the state and condition of the Ontario pork industry, where there has been no previous data collected. With this information, an understanding of the issues at hand will allow future action to take place.

PAYMENT FOR PARTICIPATION

Unfortunately, no payment will be provided for your participation in this research study.

CONFIDENTIALITY

Every effort will be made to ensure confidentiality of any identifying information that is obtained in connection with this study.

Your identity and contact information will be kept confidential and not be recorded in the interview nor used in the publication of the findings. Due to the nature of communication, please note that confidentiality cannot be guaranteed for telephone or Skype interviews.

By agreeing to participate in this study you acknowledge that the information you provide may be used as research findings for the completion of the Doctor of Philosophy (PhD) degree, made public in a plain language summary, research report, poster presentation and/or publications. If permission is granted, interviews may be digitally recorded. All digital documents and digital audio recordings will be encrypted and only accessible by Katie MacDonald.

All digital recordings, and digital documents will be destroyed by shredding or deletion immediately following coded transcription. A master list and signed consent forms will kept for 12 months following the date of the interview. All signed consent forms and coded master lists will be shredded or deleted after 12 months following the interview date. I will use a laptop with Windows 8.1 Pro Edition, which comes installed with Microsoft BitLocker to encrypt the laptop. I will use this laptop to work on only, I will keep all information on an external hard drive encrypted at 256bit with BitLocker, the Windows 8 proprietary encryption service. Tony Winson, who is charged with stewardship of the data as the Principal Investigator, will also confirm that all digital data has been destroyed in a follow up meeting with Katie MacDonald, 12 months after the interviews have been completed.
PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time during the interview without consequences of any kind. Up to 1 month following this interview, you may exercise the option of removing your data from the study, after this time period, the data provided may already be analyzed, and included in the research findings. You may also refuse to answer any questions you don’t want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.

RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph’s Research Ethics Board. (REB# 15AP013) If you have questions regarding your rights as a research participant, please contact Sandy Auld and quote the following REB# 15AP013:

Sandy Auld  
Director, Research Ethics  
University of Guelph  
437 University Centre  
Guelph, ON N1G 2W1

Telephone: (519) 824-4120, ext. 56606  
E-mail: sauld@uoguelph.ca  
Fax: (519) 821-5236
SIGNATURE OF RESEARCH PARTICIPANT

I have read the information provided for the study as described herein. Please circle your response below.

I understand that I have been asked to participate in a research study?

Yes  No

I consent to this interview being digitally audio recorded?

Yes  No

I have read and received the information sheet for this study?

Yes  No

I understand the benefits and risks for taking part in this research?

Yes  No

I have had an opportunity to ask questions and discuss this study?

Yes  No

I understand that I can quit taking part in this study at any time?

Yes  No

Issues of confidentiality and anonymity have been explained to me?

Yes  No

I understand who will have access to the interview data?

Yes  No

I am aware that material from this interview will be used in presentations, publications, and/or publicly available reports?

Yes  No

I am aware that I may skip any questions that I do not wish to answer

Yes  No

Are you interested in obtaining a summary of the findings from this research project?

Yes  No
If yes, how would you like to receive the results? By e-mail ( ) By post ( )

This study was explained to me by: __________________________

_________________________ ____________________________ ____________________________
Signature of Research Participant    Date                Printed Name

Participant’s Contact Information:

Participant’s E-mail address: _____________________________ AND/OR

Participant’s Mailing address:

___________________________ ____________________________ ____________________________
(Address   City  Province      Postal Code)

Signature of Researcher Date Printed Name of Student Interviewer
Appendix E: Producer Interview Guide

Interview Guide for Producers

Interview Date: _________________ Participant Code/Code Name: _________________ County:-

Interview Location: ☐ Participant’s Home ☐ Public Location Telephone ☐

Time with Participant: ______minutes

Background Information

☐ Female ☐ Male Age Categories: ☐ 18-24 years ☐ 25-39 years ☐ 40-55 years ☐ 56+ years

Question in italics has been adapted from the Statistics Canada Livestock Questionnaire found at: http://www23.statcan.gc.ca/imdb-bmdi/instrument/3460_Q2_V13-eng.htm

Opening Questions:

1. How long you have been farming pigs in____ county?

2. Can you tell me what type of pork operation you run?

3. Why did you choose this particular part of the lifecycle/or fully integrated approach?

4. IF not integrated: Where do you get your piglets from? [Do you pay per head? Why do you source your piglets from this particular place?]

5. How many head do you produce per year?

6. Are you able to live off of just on-farm income generated from pork production?

7. Of those market pigs shipped to slaughter, what number or percent will be shipped to a facility in:
   i: the United States; ii: another province; iii: within province [Why?]  

8. What breed of pig do you raise? [Why did you choose this breed?]

9. Do you grow your own feed?

10. Do you enjoy producing pigs?

Body: Questions related to Theme 1: Political Barriers

11. What are your thoughts on mandatory COOL (country of origin labelling)? Do you think that this initiative makes pork safer?

12. What are your thought on the TPP (Trans-Pacific Partnership agreement)?

13. What are your thoughts on the changes to sow housing?

14. What do think the greatest challenges that you face, as a producer, in the current structure of the
pork industry?

**Body: Questions related to Theme 2: Economic Barriers**

15. Can you explain to me what happens to your pigs when they come to market size? [How are they transported? Do you choose the transportation company? Where are they brought to be slaughtered? Do you choose what slaughterhouse?]

16. What is your relationship like with the processing plant? [What is involved in setting up a contract?]

17. How is the price of your market hogs/piglets determined? [What are your thought on this process?]

18. What is your the most costly input? [Why?]

19. Do you sell any of your pork at farm gate? [Why/why not? Would this be something you would be interested in?]

20. Where do you foresee the industry in 5-10 years?

**Body: Questions related to Theme 3: Future of Industry/Food retailing**

21. Do you feel there are any consumer misconceptions about pork farming? [If so, what would these be? Why do you think these notions exists/do not exist?]

22. Do you feel that grocery stores could do anything different to benefit pork producers? [If so, what would this look like?]

23. What are your thoughts on the Ontario Pork logo? Do you feel that advertising initiatives like this will benefit producers such as yourself?
Appendix F: Industry Informant Interview Guide

Interview Guide for Industry Informants

Interview Date: _________________  Participant Code/Code Name: ___________________

Interview Location: ☐ Participant’s Home  ☐ Public Location  ☐ Telephone  ☐ Office

Time with Participant: ______minutes

Questions:

1. I was wondering if you could you tell me a bit about your role?
   [How long have you been here in this role? Why were you drawn to the pork industry?]

2. Can you outline your organization/business’s vision or mission statement for pork in Canada?

3. Can you run me through a typical day?

4. How do you feel Canada ranks in pork production? [How could this be improved?]

5. What are your thoughts on COOL?

6. What are your thoughts on the Trans-Pacific Partnership? [Why do you think that Canadian pork is so highly sought after in Asian markets? How do you see either this partnership or the overseas demand impacting Canadian farmers? Do you have any thoughts on what this change would look like?]

7. How do you feel about Canada’s pork market being a primarily export-dependent market? [Do you see this impacting producers at all?]

8. What do you feel the greatest challenge is with the current way the pork industry is structured?

9. Do you deal directly with producers? Directly with processing plants? Directly with grocery retailers?

10. What is your organization/business’s relationship with:
    a. Maple Leaf Foods?
    b. Sofina Foods?
    c. Conestoga Meat Packers?
    d. Ontario Pork Marketing Board?

11. Do you feel that there is a difference in the perception of pork by Canadian consumers vs. international consumers?

13. What are your thoughts on the current structure of the concentrated Canadian processor industry? How do you feel this impacts production/exports?

14. Where do you foresee the pork industry in Canada in the next 5-10 years?

15. What is the greatest challenge with the current consumer?

16. What are your thoughts on the concentrated grocery retailing sector in Canada?

17. What are your thoughts on the Ontario Pork logo? Do you feel that this would help further promote this brand to Ontario consumers? Is there anything grocery outlets could do to promote pork consumption?
Professional Animal Auditor Certification Organization, Inc.

MEAT PLANT WELFARE AUDITOR Education/Training/Certification COURSE

August 27-28, 2015
Guelph, Ontario, Canada

SPONSOR:

COOPERATORS:

Growing Forward 2
FARM & FOOD CARE
IMPACT
Ontario
Canada

COURSE GOAL:
To train potential meat (beef, pork and lamb) plant welfare auditors using the PAACO accredited and North American Meat Institute Foundation’s 2012 Recommended Animal Handling Guidelines and Audit Guide.

PAACO The standard of excellence in animal welfare auditing
PROCESS & INSTRUCTORS

AUDITOR CERTIFICATION PROCESS

#1
Participate in a 2-day education/instruction course including in-plant experience.

#2
Be tested at the end of the 2-day course and pass an examination. Successfully completing the course and test results in moving to a shadow phase of training.

#3
Conduct and complete no less than three swine, cattle or sheep plant audits under the supervision of a PAACO meat plant certified auditor of your choice.

#4
Upon the completion of satisfactory ratings by the certified auditors in Step 3, an official endorsement as a PAACO “Certified Meat Plant Animal Welfare Auditor” will be issued and your information included in a database of certified auditors.

VETERINARY CONTINUING EDUCATION

Course meets the requirements for 12 hours of continuing education credit in jurisdictions which recognize AAVSB’s RACE approval; however participants should be aware that some boards have limitations on the number of hours accepted in certain categories and/or restrictions on certain methods of delivery of continuing education.

COURSE INSTRUCTORS

Dr. Temple Grandin, PhD
President, Grandin Livestock Handling Systems
Dr. Grandin will instruct in the classroom and train in auditing areas/criteria in the plant.

Penny Lawlis, MS
Humane Standards Office, Ontario Ministry of Agriculture, Food and Rural Affairs
Ms. Lawlis will be a classroom instructor and train in the plant auditing areas and criteria.

Dr. Mike Siemens, PhD
Leader, Animal Welfare and Husbandry, Cargill
Dr. Siemens will be a classroom instructor and trainer for the yard and plant criteria.

Jennifer Woods, MS
J. Woods Livestock Services
Ms. Woods will present areas of the NAMI Guidelines and instruct in the on-site training areas of welfare evaluation.

For More Information Contact Course Coordinator:
Mike Simpson, PAACO
Phone: 402-403-0104 • E-mail: mike@animalauditor.org
OVERVIEW

This Meat Plant Welfare Auditor Course conducted by the Professional Animal Auditor Certification Organization (PAACO) is the initial certification course for cattle, swine and sheep plant auditors. PAACO is an organization of five animal professional organizations with extensive expertise on best management practices and current science in meat animal agriculture. The organization’s purpose is to promote the humane treatment of animals through education and certification of animal auditors and to promote the profession of animal auditors. The founding and current organizations are:

- The Federation of Animal Science Societies (FASS)
- The American Registry of Professional Animal Scientists (ARPAS)
- The American Association of Swine Veterinarians (AASV)
- The American Association of Bovine Practitioners (AABP)
- The American Association of Avian Pathologists (AAAP)

SCHEDULE

August 27, 2015
7:00 AM: Classroom Instruction (OMAFRA)
   General Information
   Canadian Rules and Regulations on Welfare
   NAMI Guidelines – All instructors
11:30 AM: Lunch
1:00 PM: Arrive at Conestoga plant
1:30 PM: Concurrent and Rotational Instruction
   A. Transportation
   B. Stunning
   C. Insensibility
   D. Receiving/Yards
   E. Documentation
4:00 PM: Return to OMAFRA Conf. Rm.
4:30 PM: Classroom Instruction
   A. Electric Stunning
   B. Auditor Protocols and Procedures
   C. Problem-Based Solutions
5:30 PM: Recess

August 28, 2015
8:00 AM: Arrive at Cargill plant
8:15 AM: Plant Orientation
8:30 AM: Concurrent and Rotational Instruction
   A. Stunning
   B. Insensibility
   C. Receiving/Yards
   D. Transportation
   E. Documentation
11:00 AM: Return to OMAFRA
11:30 AM: General Subjects
   Audit Scenarios
   Q&A and study for test
12:30 PM: Lunch
   Testing on course materials
   (on average, trainees have taken about
   1+ hour to complete the test)
2:00 PM: Adjourn
LOCATION:
The classroom instruction sessions will be held at the Ontario government building conference room at 1 Stone Road West, Guelph, Ontario. The plant instruction/training will be conducted at Conestoga Meats (swine) and Cargill Foods (cattle) located in the Guelph area. Toronto has major airline service and Guelph is approximately 1 hour west of the airport. In addition, Waterloo has airline service and is fifteen minutes West of Guelph.

PRE-COURSE MATERIALS:
Registrants should go to http://animalhandling.org/guidelinesauditing.htm and click on “download the guidelines”. This information should be thoroughly studied and brought with you to the course.

FEES:
$850 USD – fee supported through Growing Forward 2, a federal-provincial-territorial initiative. Full registration includes 2-day course, materials and two lunches.

LODGING:
Each attendee is responsible for their lodging. Room blocks are reserved (deadline 7/29/15).
Delta Hotel and Conference Centre:
50 Stone Road West
Guelph, Ontario N1G 0A9
1.866.599.6674
Group Code: FARMFOOD15
Rate $129 CND + taxes

TRANSPORTATION:
Group transportation will not be provided. Participants are encouraged to drive or rent cars for transportation needs.

PARTICIPANT QUALIFICATIONS:
PAACO reserves the right to limit class size to 25 qualified individuals. Basic individual requirements for qualification to attend the course are:

- Read, write and walk unassisted in a plant environment.
- High school diploma and livestock and/or packing plant experience must be evident/described in a personal resume/cv submitted at the time of registration; company/employer animal welfare responsibility also acceptable.

Your registration acceptance will be e-mailed to you by PAACO along with pre-course information. Individual plant confidentiality agreements must be signed prior to entering the plants.

Education & Experience:
(Note: The following are not requirements to take the course, but are required for individual certification.)

- B.S. or higher with relevant livestock experience of 3 years within the past 5 years
- Associate degree with relevant livestock experience of 5 years within the past 7 years
- High school diploma with relevant livestock experience of 10 years within the past 15 years

COURSE DEADLINES
AND CANCELLATION:
Registration deadline is July 29, 2015.
Complete payment, required materials and information are due by this time.
Refunds will be made (less $75) until July 29, 2015 unless class is full or participant does not qualify. No refunds after July 29, 2015.