

Challenges for Ontario's Meat and Poultry Processing Sector

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This report is authored by Amit Summan. Amit has an MA in Economics from the University of Guelph, where he is currently completing his PhD. He has conducted research on a wide array of topics through his academic pursuits, internships, and work positions.

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Executive Summary

The Ontario meat processing sector is a significant contributor to the Ontario economy. According to Statistics Canada's Annual Survey of Manufacturers and Logging (ASML), in 2011 the sector contributed over \$8 billion to the food manufacturing sector and employed over 647,000 people. There has been a great decline in the number of provincially licensed plants in the past eight years. There were 183 provincially licensed slaughter plants in 2005, and they had decreased to 142 slaughter plants by 2012¹. The Ontario Independent Meat Processors (OIMP) commissioned the University of Guelph to identify the challenges abattoirs and processors are currently facing and the factors that have influenced abattoir closures in the past.

There is a lack of knowledge on Ontario's meat and poultry processing sector, specifically on abattoirs. This report adds to existing research in this area by identifying the challenges facing Ontario's abattoirs. Research was conducted by extracting data primarily from five sources: peer reviewed and grey literature, data from Statistics Canada and OMAFRA, news media² reports, industry organization interviews, and abattoir and processor interviews.

There were a number of challenges encountered in the completion of this project. There was difficulty obtaining interviews with owners of abattoirs that had closed. A second challenge had been the lack of data on provincially licensed plants, as the data collected by agencies such as Statistics Canada aggregates federally and provincially licensed plant data. There had also been an issue in the misclassification of plants' by NAICS. Finally, as mentioned above, the lack of existing research was a challenge.

There were 11 semi-structure interviews conducted with meat plant³ owners in Elgin, Middlesex, Oxford, and Perth counties (defined by OIMP as 'Region 2,' henceforth called Region 2) in April and May 2013. In the same period, five interviews were conducted with industry organization representatives. The information extracted from each source is complemented or corroborated to a large degree by other sources, which provides confidence in the results.

The findings of this report reveal that small meat plants represent a disproportionately large proportion of the provincially licensed abattoirs that have closed. This can be partly attributed to requirements to invest in facility infrastructure and equipment to meet regulatory requirements and to the high levels of paperwork required to satisfy inspection demands. Many small plants had owners that were older and did not want to re-invest in their businesses because they would not have been able to recoup their investment before retiring; therefore, they choose to retire early instead. Also, these smaller plants, with their limited workforce, had greater difficulty with the paperwork burden. There were also other

¹ Analysis of OMAFRA provided data. See Section 4.

² The news media may not have the same quality of research as organization reports or peer reviewed articles. However, they are included because they depict the perceptions of the public and different segments of the industry. Moreover, the lack of research on the industry increases the importance of all existing sources.

³ Firms engaged in either processing or slaughtering.

economic factors at play. Regions that had a high concentration of meat plants witnessed a decrease in abattoirs while those with a smaller number of plants saw an increase in the number of plants, which may indicate that market saturation was an issue. This may explain why plants had closed in the past, but plants currently in operation said demand has actually increased given the closures of neighboring plants and because of favourable trends in consumer preferences. Plants that were involved only in slaughter rather than both slaughter and processing were also more likely to close, indicating that lack of diversification in operations may have also been an issue.

Challenges for businesses currently in operation are related to regulatory burden, high overhead costs, and shortage of skilled labour. The amount of time required for paperwork and the time required to satisfy information demands of meat inspectors during the (on-site) inspection process further exacerbate the skilled labour shortage challenge. The inspection process occasionally leads to requirements to make capital investments, which require large capital outlays. The inconsistency in interpretation of regulations makes the anticipation of such demands difficult and leads to an inability to plan. These factors contribute to high interest expenses and high wage costs which contribute to overhead costs. Along with increasing energy costs these expenses were found to be a significant challenge for plants. These challenges are being mitigated by consumer preferences towards local food.

OMAFRA has recently expressed a strong interest in modifying the Ontario Meat Regulation 31/05⁴, and has been requesting the input of members of industry in regards to their proposed amendments. This is an important step, and something that should have been done a long time ago. A second step in the right direction is the introduction of formal training programs for meat cutters such as the "Process Operator - Food Manufacturing" apprenticeship at Conestoga College. Programs such as these may help alleviate the skilled labour challenge.

However, there are additional steps that need to be taken. There needs to be greater collaboration around the value chain to ensure these businesses succeed. A greater representation of abattoirs/processors through industry organizations, such as OIMP, is also required. To truly understand the challenges these abattoirs and processors are facing, there must be increased industry engagement, not only by industry organizations and government, but by meat plant owners as well.

1.0 Introduction

The Ontario meat processing sector is a significant contributor to the Ontario economy. According to Statistics Canada's ASML, in 2011 the sector contributed over \$8 billion to the food manufacturing sector and employed over 647,000 people. There has been a great decline in the number of provincially licensed plants in the past eight years. There were 183 provincially licensed slaughter plants in 2005, and they had decreased to 142 slaughter plants by 2012⁵. The OIMP commissioned the University of Guelph

⁴ <http://www.omafra.gov.on.ca/english/policy/legislation/meatreginfo.pdf>

⁵ Analysis of OMAFRA provided data. See Section 4.

to identify the challenges abattoirs and processors are currently facing and the factors that have influenced abattoir closures in the past.

1.1. Contribution

There is a lack of comprehensive research on Ontario's meat processing sector, specifically on abattoirs. The existing research is limited in scope, as will be discussed in Section 2. This report contributes to the knowledge of abattoirs in Ontario and provides a foundation for further research.

1.2. Challenges for the Project

There were a number of challenges encountered in the completion of this project. There was difficulty in obtaining interviews with owners of abattoirs/processors that had closed. However, a satisfactory number of current plant owners participated. A second challenge was the lack of data on provincially licensed plants, as the data collected by agencies such as Statistics Canada aggregated federally and provincially licensed plant data. There has also been an issue in the misclassification of plants' by NAICS, distorting the accuracy of the data. Finally, the lack of comprehensive research was another challenge. There are few formal reports available, and they are limited in scope.

2.0. Literature Review

The literature on the challenges facing provincially licensed Ontario meat plants is limited. Most of the current research has only discussed meat plants in relation to their effect on meat producers and the local food movement. There have been a few reports that have focused primarily on the challenges facing meat plants, but they have been limited on scope in different aspects. This literature will be reviewed in this section.

2.1. Research on Ontario's Meat and Poultry Processing Sector

A report⁶ by Mallot Creek Strategies Inc. looked at the Ontario meat industry's processing capacity. Relative to the needs based on the estimated culling cycle, a gap in the provincial slaughter of cow (both steer and heifer), hog and turkey was identified. On the other hand, it was found that there was an adequate amount of lamb slaughter to meet slaughter requirements. The gaps showed great regional variation, with the largest gaps being in OIMP defined regions 1 (Essex, Chatham-Kent, and Lambton), 2 (Elgin, Middlesex, Oxford and Perth), and 5 (Bruce, Grey Huron,). Although, a decline in number of abattoirs was observed from 2002 to 2007, the capacity of existing abattoirs increased.

⁶ Mallot Creek Strategies Inc. (2008, October). *Profiling Ontario's Meat Industry*. Retrieved 5 22, 2013, from OIMP: <http://www.oimp.ca/file/2008%20profiling%20ontario's%20meat%20industry.pdf>

A 2013 report ⁷ (only a draft version has been published at time of writing this report) identified the challenges faced by Perth county's livestock processing and slaughter sector. Thirty-seven interviews were conducted, 19 with producers, four with processors, and eight with associations. The challenges identified included: cost of compliance to regulations;; inconsistency in interpretation of regulations;; low profits margins;; and inconsistent demand from customers. Although this report has been the most thorough report looking at the challenges facing abattoirs in this region, it suffered from its lack of interviews with meat plant owners. It relied more heavily on the information received from interviews done with producers.

A report⁸ by a consulting firm, Jayeff, in 2008, explored the labour challenges the meat and poultry processing sectors were facing. Immigrant workers were reported as being an important source of labour because of their strong work ethic. The findings indicated that there was high turnover among employees and a lack of skilled labour. New workers typically lacked food industry knowledge and did not have the required skills. This report is thorough in its analysis of the labour force for meat plants, but does not profile all of the challenges this sector is facing.

In 2010⁹, the Ontario Federation of Agriculture surveyed licensed abattoirs and freestanding meat plants in Ontario regarding their perceptions of regulations. Although this survey had some interesting results, it had limitations due to it being a closed form survey, with only "Yes" or "No" answer categories. Also, it only focused on regulatory challenges faced by abattoirs, rather than all factors influencing the success of abattoirs. Although there is no accompanying report, the results of the survey will be discussed here as they are relevant. The majority of the respondents felt that regulations were creating challenges for their business. Some interesting results of the survey included: 93% of respondents answered "Yes" to the question, "Do you feel overburdened with the amount of meat inspection paperwork that is required on a daily and weekly basis?"; 91% respondents answered "Yes" to "Do you feel that some regulations require you to put money into cosmetic solutions,"; and 56% answered "No" to "Do you feel that you can speak out about your concerns without retaliation or intimidation from food safety inspectors?".

Another short report¹⁰ was done on the effects of regulations on abattoirs. The research methodology involved calling abattoir owners to conduct a phone interview. Descriptions of the sample were not available. This report found that many abattoirs had complained about being overburdened with paperwork, unnecessary regulations, and inconsistency in the interpretation of regulation.

⁷ Abutalib, F., Latifova, E., Pinkney, D., & Robson, D. (2013, 04 12). : Draft Report. Retrieved 05 23, 2013, from Perth County: Reports: <http://goo.gl/HYFXWy>

⁸ Jayeff Partners. (2009, November). *Training Needs and Barriers of the Ontario Meat and Poultry Processing Sector*. Retrieved May 20, 2013, from OIMP: <http://www.oimp.ca/uploads/userfiles/files/oimp%20training%20needs%20and%20barriers%20study%20findings.pdf>

⁹ Ontario Federation of Agriculture. (n.d.). *Results from the State of the Meat Processing Industry Survey*. Retrieved 5 26, 2013, from Sustain Ontario: <http://sustainontario.com/wp2011/wp-content/uploads/2011/05/Abattoir-Survey-Results-CVO-Presentation.pdf>

¹⁰ Mallett, W. (2012, December 11). The Abattoir's Dilemma. *maisonneuve*

2.2. Other Related Research

The Canadian Institute for Environmental Law and Policy identified the challenges for abattoirs in contributing to the local food movement in their report, *Bringing Local Food Home*¹¹. The report was based on a literature scan and interviews with producers and organizations representing stakeholders in Ontario agriculture. The recommendations of the report included: continued provincial funding to help provincial abattoirs meet their lamb and slaughter capacity needs; an evaluation of the impacts of the Ontario Meat Regulation 31/05; and research on funding needs for abattoirs to meet regulatory requirements.

There have also been a number of important business retention and expansion (BR+E) projects conducted in Ontario communities. These projects have been partially funded by the OMAFRA's BR+E program. According to OMAFRA¹², the BR+E are designed to "help rural communities identify actions that will help local businesses keep existing jobs and create new ones." The BR+Es conducted in Grey Highlands, Bluewater, and Perth have findings related to meat plants, and they are discussed below.

Access to local abattoirs has been identified as a challenge for livestock producers in all three BR+E studies mentioned above and also a number of other studies^{13,14,15}. All three studies cited access to "processing facilities" as an issue because it limited their overall business potential. The Bluewater¹⁶ and Grey Highlands¹⁷ studies made no distinction made between meat processors and processors of other commodities such as produce while the Perth study made this distinction. The difficulties were most pronounced in the Perth BR+E study in which over 70% of the 97 agricultural related businesses surveyed cited access to an abattoir as a "very important priority." This may be because Perth County is the most heavily invested in the agricultural industry¹⁸. The study also concluded that the increased closure of abattoirs was due to the high cost of regulatory compliance and inadequate supply of labour.

¹¹ Carter-Whitney, M. (2008, December). *Bringing Local Food Home. Friends of the Greenbelt Foundation Occasional Paper Series*

¹² OMAFRA. (2011, 04 08). Ontario's plan for growing and maintaining rural businesses. Retrieved from OMAFRA: http://blogs1.conestogac.on.ca/news/2010/07/food_processing_institute_to_o.php

¹³ Carter-Whitney, M. (2008, December). *Bringing Local Food Home. Friends of the Greenbelt Foundation Occasional Paper Series*

¹⁴ Landman, K., Blay-Palmer, A., Korneisen, S., Bundock, J., Nelson, E., Davis, M., et al. (2009). *Local Food: From the Ground Up*.

¹⁵ Ferguson, M., Lang, C., & Turnbull, R. (2013). *Perth County Regional Food Hub Feasibility Study*. Perth: Perth County

¹⁶ Municipality of Bluewater. (2013). *Value-added Agriculture Business Retention & Expansion*. Bluewater: Municipality of Bluewater

¹⁷ Maloney, M. (2010). *Grey Highlands: Agricultural Business Retention & Expansion*. Markdale: Markdale Chamber of Commerce.

¹⁸ 93% of land was being actively farmed in Perth in 2001 (see http://www.perthcounty.ca/fileBin/library/economic_development/pdfs/FoodHubStudy-2013.pdf)

In another report¹⁹ studying Northern Ontario beef agriculture, two abattoir owners, producers, agricultural co-operatives, and technical experts were interviewed. The study found that abattoirs have difficulty attracting skilled labour, have poor accessibility to government grants due to a lack of computer skills, face high costs due to regulations and the need to find capital to make investments, and face high levels of competition from outside of the province. The report recommended that abattoirs and producers work together to exploit direct marketing activities and open up new markets.

3.0. Project Methodology

In December 2012, a review of the relevant literature was completed (see Section 2). Then secondary quantitative data was collected and analyzed in January 2013 (see Section 4). Based on the literature review and secondary data analysis a questionnaire was compiled for industry associations and meat plants (see Appendix A). The initial questionnaire was tested on two abattoirs and one industry association in April 2013 and slightly modified based on the feedback from those interviews.

The sample area that was chosen for this study was Region 2, as defined by OIMP. This region is comprised of Elgin, Middlesex, Oxford, and Perth counties. The area was recommended by OIMP because it had seen the greatest decrease in the number of operating abattoirs, but still had a relatively large number of active abattoirs. The researcher, after agreeing to use this as a sample area, was provided with a list of industry associations from OIMP. The researcher added two additional contacts to the potential industry associations sample as they were relevant to the analysis.

Region 2 had 29 active provincially licensed abattoirs and three free standing meat plants²⁰ (FSMP) that were formerly abattoirs. This group was contacted, and 10 plants participated in the study representing a response rate of 31%. Given the amount of time required to conduct such an interview, 45 minutes on average, this response rate was satisfactory. It should be noted that many plants in the potential sample expressed interest in participating but were unable to accommodate us due to their busy schedules.

Owners of closed abattoirs were also contacted for this study. Seven plants had closed in the last six years. Due to difficulty in contacting the owners of closed plants the understandable lack of interest in the sector having moved on to other endeavours, only one previous owner participated in the study. So the total number of plant owners for this study was 11. There were a total of ten groups identified in the industry association's potential sample. Of these ten only five choose to participate.

The questionnaire format was semi-structured. The first part of the questionnaire for meat plants consisted of descriptive questions that were designed to profile the plant. Many of the questions

¹⁹ Thompson, D. (2012, April). *Expanding Locally Sourced Beef in Northern Ontario through the Co-operative Model*. Retrieved 05 24, 2013, from Nordik Institute: http://www.nordikinstitute.com/wp-content/uploads/2012/05/thompsond.final_.pdf

²⁰ A free standing meat plant is a premises, other than a slaughter plant, where one or more Category 1 or Category 2 (see Appendix C) activities are carried on as a business (exceptions may apply).

required responses of a few words, or respondents were required to choose from a number of options. The second part of the questionnaire had open-ended questions in which respondents were able to provide answers in detail. The questionnaire for the industry associations consisted only of open-ended questions.

All individuals in the potential samples were contacted in March and April 2013. The interviews were conducted in April and May 2013. They were done both in person and over the phone depending on the respondent's availability. If the respondent could not commit to a time, as happened often, they were given the option of calling the researcher when they were available and completing the interview at that point. The interview results will be discussed in Section 5.

4.0. Analysis of Secondary Quantitative Data

This section presents the analysis of data from Statistics Canada and OMAFRA. OMAFRA based data are presented in this section and the main findings from the Statistics Canada data are provided. A thorough analysis of the Statistics Canada data is presented in Appendix B.

4.1. OMAFRA Data

The following statistics are based on the data provided by OMAFRA. The data is for provincially licensed plants, which were licenced between January 2005 to April 2012. There were 230 plants active during this period. Figure 1, on the following page, shows the number of plants that became inactive²¹ relative to total active plants between 2005 and 2012 by the type of animal they slaughtered²². Inactive plants are those that are not provincially licensed slaughter plants, so they may have closed their business entirely, changed to an FSMP, or become federally licensed. Figure 2, on the following page, only has single slaughter categories; it assigns a plant to more than one category if they slaughter more than one animal. For example, a plant slaughtering bovine and porcine will fall into categories "bovine" and "porcine" in Figure 2, and "bovine and porcine" in Figure 1. Therefore, it double counts the plants that slaughter more than one type of animal and the total number of plants will be greater than 230. The results from Figure 2 will be discussed here for simplicity.

According to Figure 2, there were a total of 137 plants slaughtering bovine in this period. The red bars indicate the total number of plants that were in operation during this period. The blue bars measure the

²¹ Inactive plants are those that had positive slaughter numbers in at least one year between 2005 and 2012, and either did not renew their license in subsequent years in that period and officially closed or had no production in subsequent years.

²² Different livestock are slaughtered in different quantities due to livestock size; for example, a poultry plant may slaughter in the tens of thousands while a beef plant may slaughter in the hundreds. Therefore, the slaughter statistics were adjusted to be made comparable across categories. All of the values were adjusted so that the average number of animal slaughtered for all plants was the same across animals. The livestock the plant slaughtered is the livestock which accounts for at least 35% of total slaughter. This means that a plant may have slaughtered other livestock, but the majority of its production was in the livestock category the firm falls into.

Figure 1 : Ontario Provincially Licensed Plant Closures by Livestock Slaughtered from 2005-2012

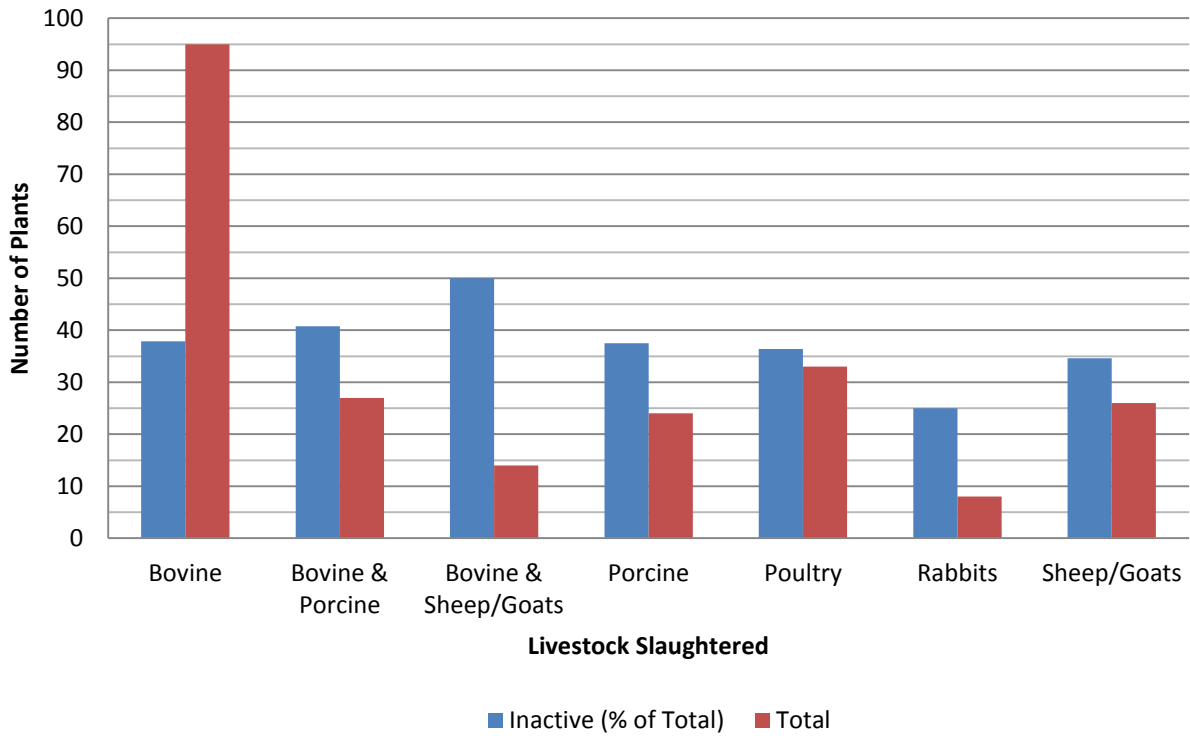
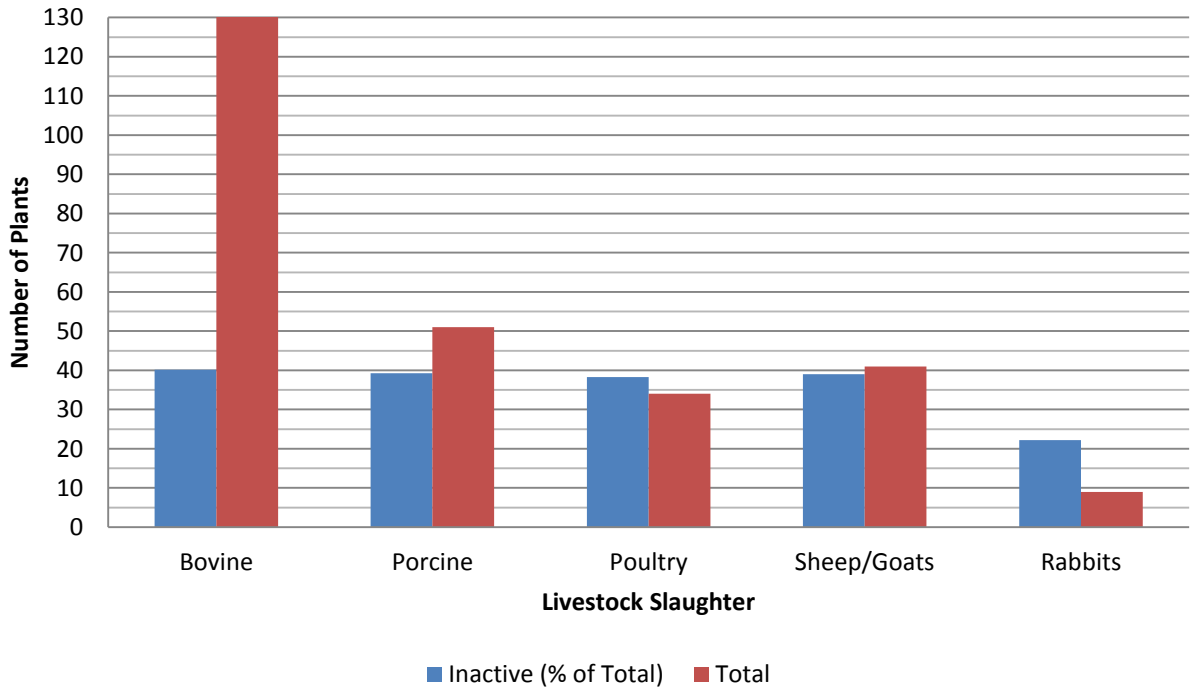


Figure 2 : Ontario Provincially Licensed Plant Closures by Livestock Slaughtered from 2005-2012 (Single Categories)



percentage of these plants that closed from 2005 to 2012. Porcine, bovine, poultry, and sheep/goat slaughtering plants saw their numbers decrease by 38% to 40%. Rabbit slaughterers on the other hand only had a 22% decrease in their nine active plants. From these numbers it becomes apparent that the type of livestock slaughtered did not present any specific challenges for the plants that shutdown in this period although the plants that slaughtered rabbits had a significantly lower decline. This may be due to the small number of total plants, nine, that were involved in the slaughter of rabbits during the period.

Figure 3, on the following page, shows the number of plants that became inactive between 2005 and 2012 by size²³. There were 58 small (sized) plants, 106 medium plants, and 66 large plants that were active during 2005 and 2012. The graph shows that the number of small²⁴ plants had the greatest decline: 57% of these plants closed down. On the other hand, 34% and 30% of the medium-sized plants and large plants, respectively, became inactive.

Figure 4 on the following page shows the number of plants that became inactive between 2005 and 2012 by their lowest audit rating²⁵ in that same period. There is no discernible relationship between the lowest audit rating of a plant and its likelihood of closing.

Figure 5 on page 14 shows plants that became inactive between 2005 and 2012 by region. It also shows the distance of the closest neighbouring region. The factors that would lead to a plant shutting down will be a function of many variables, but location may be a major determinant of competition with other plants and access to livestock.

The majority of the regions witnessed closure rates of 20% to 45%; however, there were some outliers. Most notably, in Thunder Bay none of its five plants closed. This can be attributed to the small number of total abattoirs present in the region and its distance from other neighbouring regions, 1078 km, where abattoirs are present. On the other hand, Erie and Pickering saw all 16 and 38 plants, respectively, close between 2005 and 2012. In Pickering, three small plants and one medium sized plant shutdown; likewise, in Erie three small and one medium sized plants shutdown. Both areas were located close to neighbouring regions.

²³ Size is measured by the number of times a meat inspector was present at the facility while a slaughter was taking place. According to the Ontario Meat Regulation 31/05, a meat inspector must always be present when a slaughter occurs. Therefore, this measure should be an indicator of plant size. Slaughter statistics, on the other hand would be an inaccurate indicator of size as different types of livestock are slaughtered in different quantities. For example, poultry is slaughtered in the tens of thousands while bovine is slaughtered in the hundreds.

²⁴ Small plants are defined as those plants where the meat inspector is present less than 40 days. Medium plants are plants in which the inspector was present 40 to 99 days and large plants are where the inspector was present more than 99 days.

²⁵ Audit ratings from the old system, prior to 2010, were changed in the following manner: A, AA, AAA, and B were changed to Pass; C was changed to conditional pass; and F was changed to Fail. More information about these can be found here: http://www.omafra.gov.on.ca/english/food/inspection/meatinsp/abattoir_audit.htm, and here: http://www.attorneygeneral.jus.gov.on.ca/english/about/pubs/meatinspectionreport/chapter_6.pdf.

Figure 3: Ontario Provincially Licensed Plant Closures by Size from 2005-2012

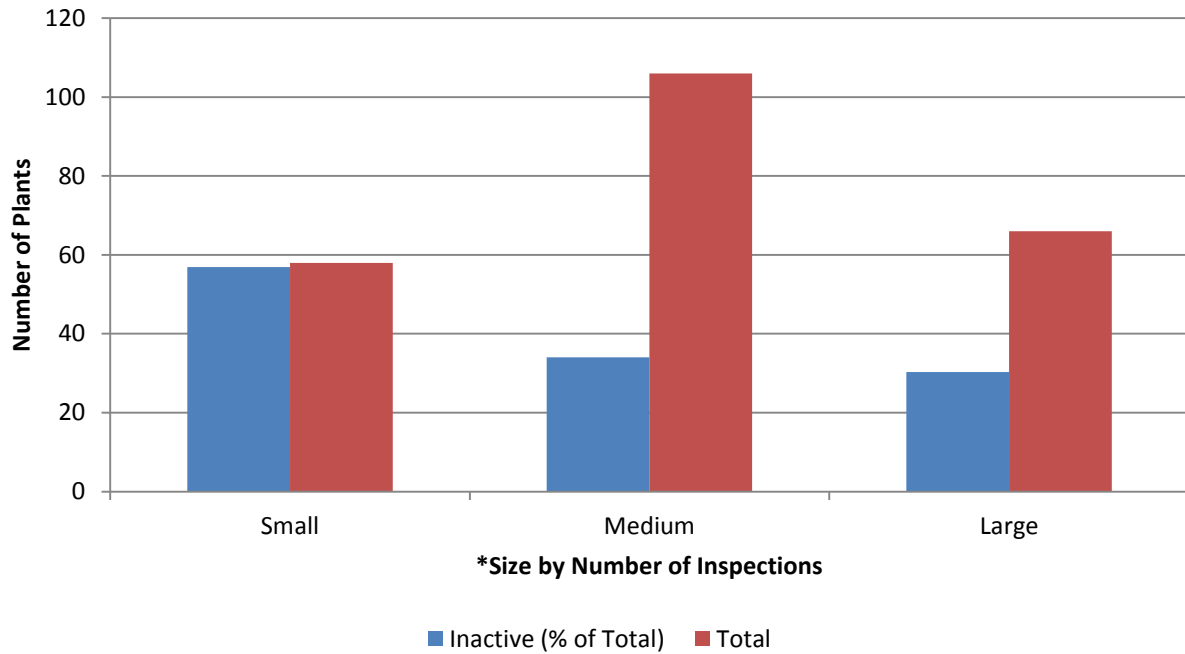


Figure 4: Ontario Provincially Licensed Plants Closures by Lowest Audit Rating from 2005-2012

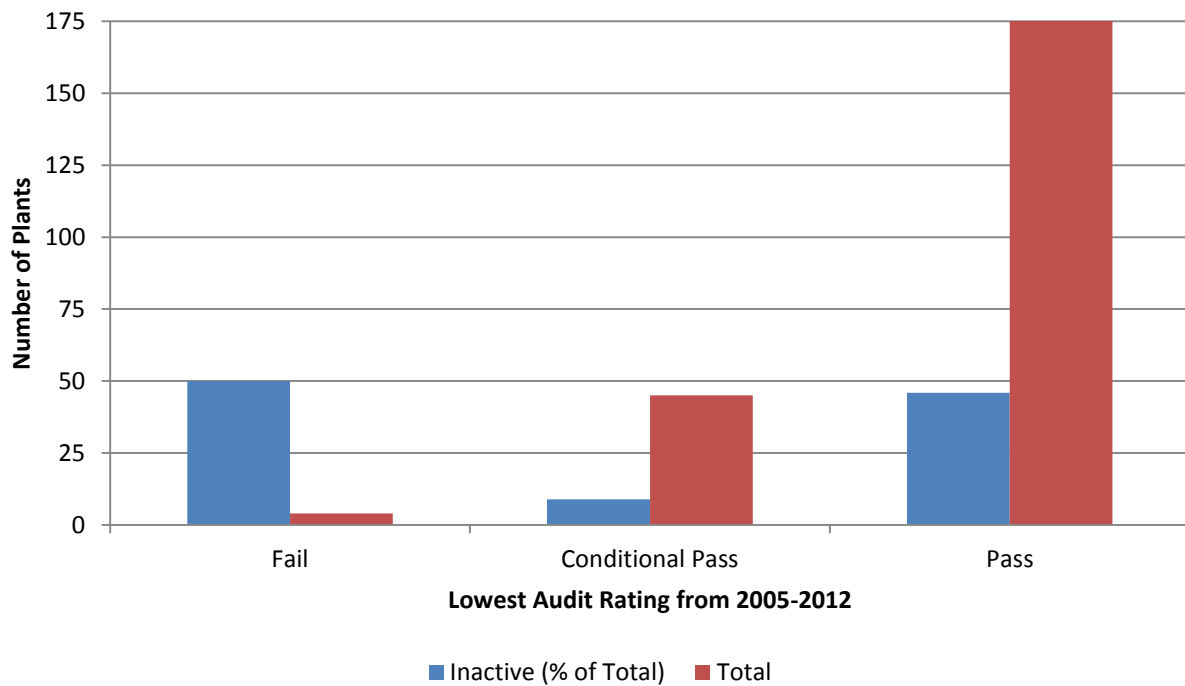


Figure 5: Ontario Provincially Licensed Plant Closures by Area from 2005-2012

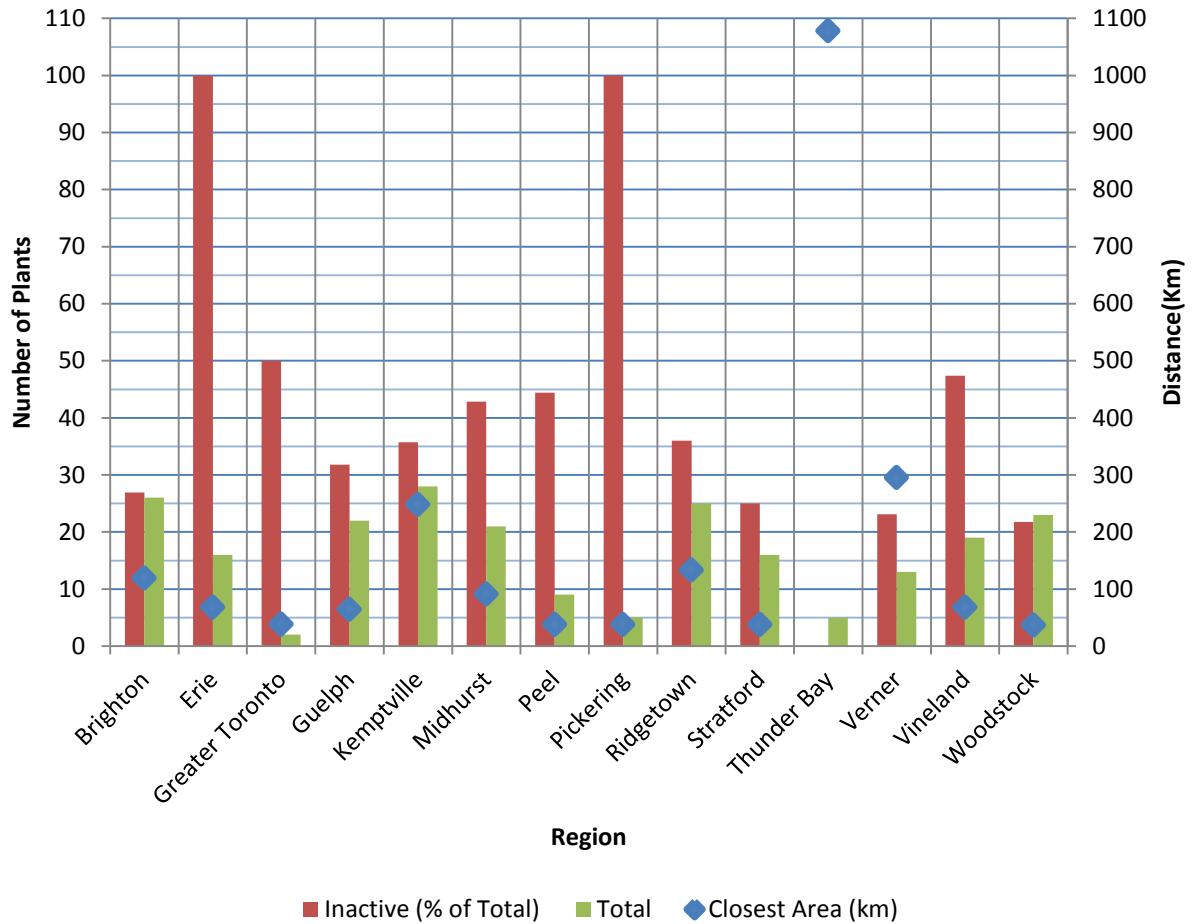


Figure 6 : Ontario Provincially Licensed Plant Closures by Plant Type

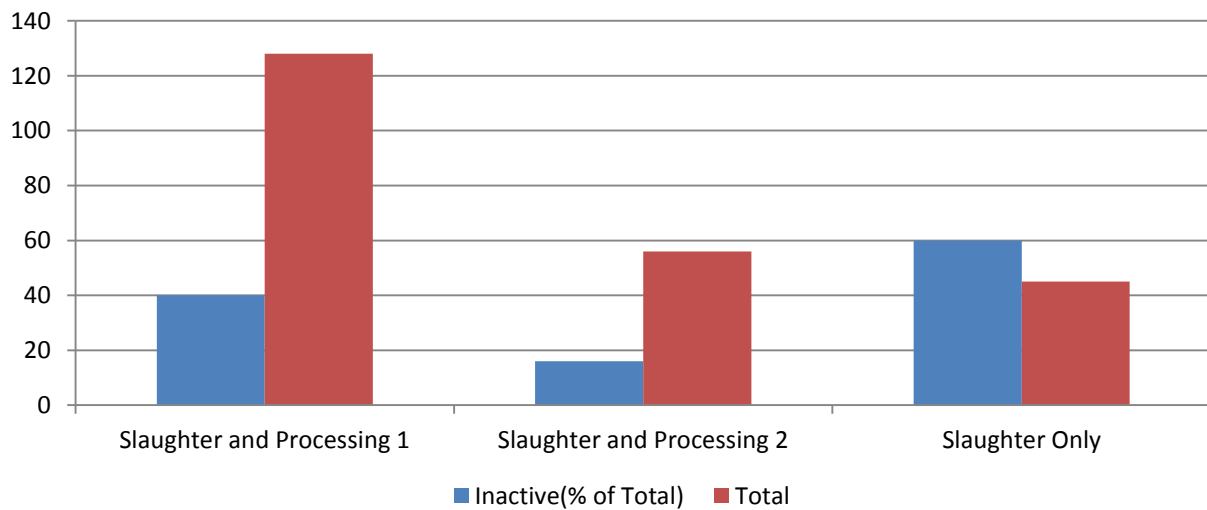


Figure 6, on page 14, shows plant shutdowns by plant type. The plant types are "Slaughter and Processing 1," "Slaughter and Processing 2," and "Slaughter Only," as defined by OMAFRA. The definitions for these plant types are provided in Appendix D. The plants that only slaughter saw almost 60% of their plants close, while those that also processed saw a significantly lower decrease, 40% in Category 1 and 16% in Category 2. This may indicate that having a diversified operation may decrease business risks and lead to success. Alternatively, lack of diversification may signify that the plant is small (by number of employees), as smaller plants will have fewer resources and are more likely to only perform one core operation. Then this statistic would represent more size related changes than operation related challenges.

Analysis of the OMAFRA provided data shows that smaller plants and plants engaged only in slaughter were more likely to close between 2005 and 2012 than larger plants with more diversified operations. Plants slaughtering rabbits were less likely to close, however plants slaughtering any other animal had an equal likelihood of closing. This may be because there were very few plants slaughtering rabbit. The data also indicated that location may be an important factor in determining plant closure probability. For example, Thunder Bay was furthest from its neighboring regions and none of its plants closed. Finally, lack of diversification was also seen to increase likelihood of a plant closing.

4.2. Statistics Canada Data Analysis

An analysis of the Statistics Canada data is provided in this section, and supplementary data analysis is done in Appendix B. This data comes from two sources: the ASML data from 2004 to 2010²⁶ and Canadian Business Patterns (CBP) data from 2006 to 2012. The limitations of this data include: mis-categorization of plants under the NAICS or double counting of plants engaged in more than one activity (across NAICS), lack of recent data for the ASML, and aggregation of both federal and provincial level data. There are limitations to this data, but many of the conclusions drawn from the data are consistent with what is found in the OMAFRA provided data and the interviews, providing confidence in the results.

4.2.1. Canadian Business Patterns

The statistics from this section are based on Statistics Canada's CBP database. The data has been collected for June 2006, June 2009, and June 2012. The data for NAICS 3116, Animal Slaughtering & Processing, is presented here. NAICS 3116 is comprised of three sub-industries: Animal (Except Poultry) Slaughtering (311611), Rendering and Meat Processing from Carcasses (311614), and Poultry Processing (311615). The industries will be referred to by their NAICS number henceforth.

Figure 7 on page 16 shows the number of plants by number of employees for 3116. There is an Unknown category, where the number of employees in the plant has not been recorded. This category is believed to be comprised of mostly smaller abattoirs, with less than 20 employees, as large plants have a greater likelihood of having more advanced recordkeeping requirements and systems. Plants with

²⁶ This was the most current data available at the time this report was written.

More than 100 employees are all federal plants, as provincial plants do not have those such a large number of employees²⁷.

The total number of plants in 3116 decreased from 417 in 2006 to 338 in 2012. Most of these decreases came from the "Unknown" category and in plants with under five employees. The steepest decline was in the "1-4" category, from 91 in 2006 to 53 in 2012. The only other category to show a decrease in plants was "50-99", from 36 in 2006 to 22 in 2009, followed by no change from 2009 to 2012. Plants in the other employee size categories actually show an increase in the number of plants or no change. These are plants that have more than four employees, with the exception of plants with 50 to 99 employees, as mentioned above. This data is consistent with the OMAFRA data, as it shows the smallest plants faced the greatest challenges.

Figure 8, on the following pages, shows the number of plants by region in Ontario in June 2006, 2009, and 2012 for 3116. Regions with a greater number of plants, such as Toronto Perimeter, South-Eastern, and Toronto, witnessed a steep decrease in the number of plants. On the other hand, regions with relatively lower number of plants, such as Niagara and South Western, actually saw a slight increase in the six year period. The data indicates that factors such as market saturation were important in determining if a plant would close. The subsectors of 3116 do not show many surprises and are consistent with what is observed for 3116; they are presented in the Appendix B. Figure 8 is similar to Figure 5, which analyzed the plant closures by area as defined by OMAFRA. The OMAFRA defined regions may be defined too narrowly to see the same relationships as in the CPB data. There are 14 regions defined by OMAFRA, while there are only nine regions according to CPB data.

4.2.2. Annual Survey of Loggers and Manufacturers Data

The statistics for this section are from Statistics Canada's ASML. Unfortunately, like the CBP data, the ASML data aggregates federal and provincially licensed plant data. The statistics are for the period 2004 to 2010. The differences between the CPB data and ASML data in the changes in the number of establishments can be attributed to the different time frames. On page 18, Table 1 shows changes in key production variables from 2004 to 2010. From this table it becomes apparent that the performance of the subsectors of 3116 has been varied. A discussion of the changes in individual sectors follows.

NAICS 311611 saw an increase in expenses of 8.1%, revenues remained constant, and there was a decrease in value added of 31%. The number of non-manufacturing workers employed decreased 30%, while the number of production workers employed increased by 28%. Overall these changes indicate the meat slaughter sector has not performed well. Although the number of production workers employed increased, the value added decreased significantly. This may indicate that the new workers hired are of lower skill. Alternatively, it may be that plants do not have the necessary equipment or facilities to conduct the value added activities. Another explanation is that, plants may also require production workers to engage in other activities that do not provide a direct benefit to the final product, such as

²⁷ Discussion with OIMP senior staff.

Figure 7: Change in Plants by Number of Employees in Ontario for NACIS 3116

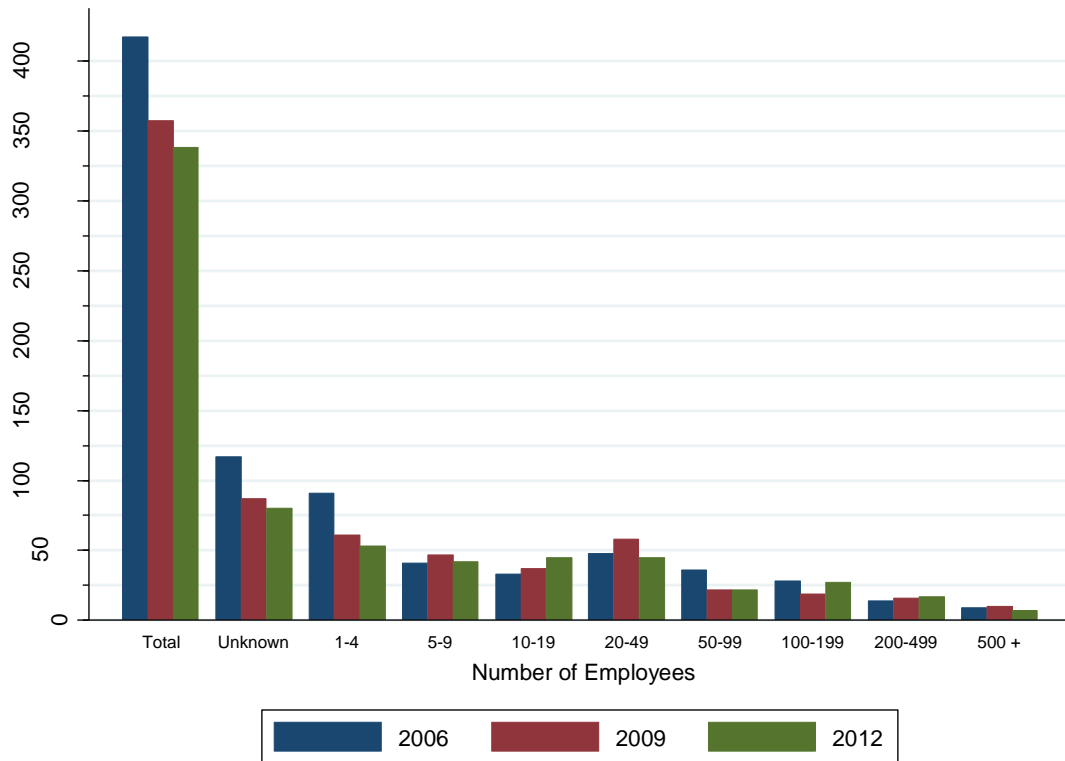
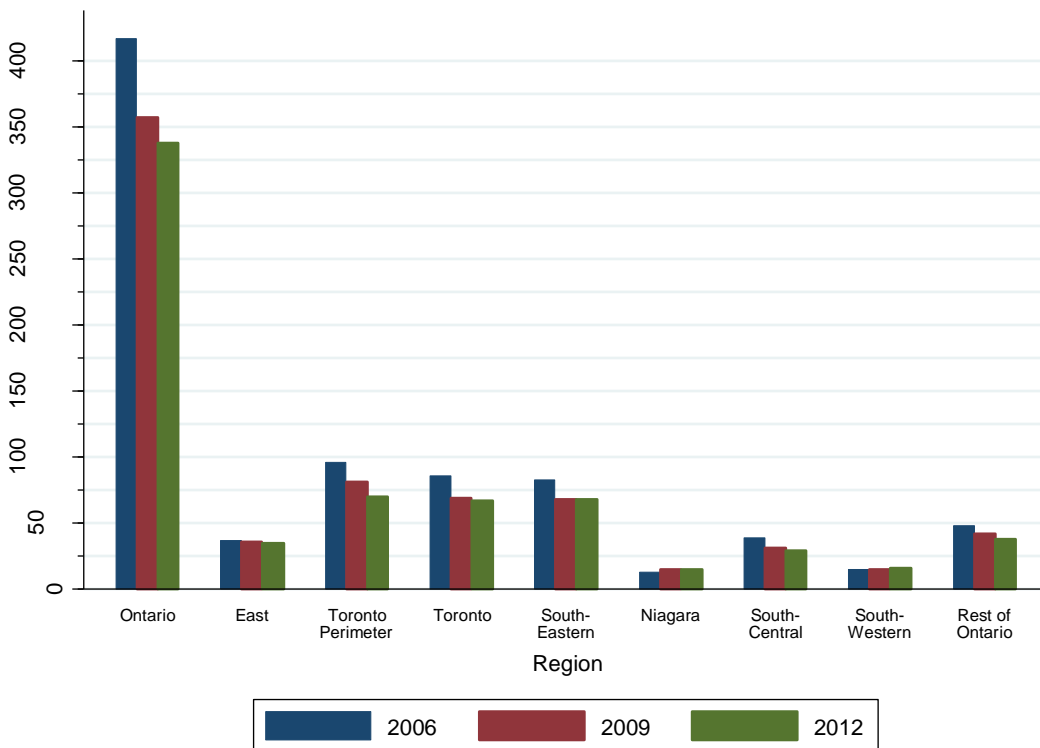


Figure 8: Change in Plants by Region in Ontario for NACIS 3116



Challenges for Ontario's Meat and Poultry Processing Sector

Table 1: % Change Between 2004 & 2010 for the Ontario Meat Manufacturing Industry's Key Production Variables

Key Production Variables	NAIC Code											
	3116			311611			311614			311615		
	Meat Product Manufacturing			Animal (Except Poultry) Slaughtering			Rendering & Meat Processing (Carcasses)			Poultry Processing		
	2004	2010	% Change 2004 to 2010	2004	2010	% Change 2005 to 2010	2004	2010	% Change 2005 to 2010	2004	2010	% Change 2005 to 2010
Total Employees	24,054	24,986	3.9	5,720	6,755	18.1	8,274	8,815	6.5	10,060	9,416	-6.4
Production Workers	20,002	20,052	0.2	4,717	6,050	28.3	6,912	6,550	-5.2	8,373	7,452	-11.0
Non-Manufacturing Employees	4,052	4,934	21.8	1,003	705	-29.7	1,362	2,265	66.3	1,687	1,964	16.4
Number of Establishments	383	349	-8.9	77	94	22.1	227	171	-24.7	79	84	6.3
Total Expenses (x \$1000)	6,486,663	7,722,982	19.1	1,957,402	2,115,316	8.1	2,186,460	2,920,649	33.6	2,342,801	2,687,017	14.7
Wages & Salaries (X \$1,000)	820,495	939,808	14.5	210,962	209,498	-0.7	271,136	369,321	36.2	338,397	360,989	6.7
Materials & Supplies (X \$1,000)	4,583,143	5,609,857	22.4	1,495,361	1,682,772	12.5	1,505,984	2,084,580	38.4	1,581,798	1,842,505	16.5
Revenues (X \$1,000)	7,055,458	8,399,192	19.0	2,224,602	2,208,372	-0.7	2,348,587	3,276,899	39.5	2,482,269	2,913,921	17.4
Value Added (X \$1,000)	2,028,495	2,414,751	19.0	673,408	466,117	-30.8	624,301	1,007,460	61.4	730,786	941,174	28.8

paperwork. It may be a combination of these factors that contribute to this trend.

On the other hand, 311614 was more successful. There was an increase of 39.5% in revenue, in line with the 61% increase in value added. Total expenses rose 33.6%, which is in line with the increase in revenue. Materials and supplies expenses rose 38.4%, which most likely represents the variable costs of the greater livestock purchased. Wages and salaries costs rose 36 %. Wages and salaries followed an increase in total employees of 6.5%. Non-manufacturing employees were contributing to this increase, which were up 66.1%.

Finally, 311615, the poultry processing sector, although not as successful as 311614 during this period, fared significantly better than 311611. This industry saw an increase in revenue of 17.4%, in line with an increase in value added of 28.8%. Total expenses increased with revenues by 14.7%. Wages and salaries saw an increase of 6.7%, while materials and supplies expenses rose 16.5%. In 2010, materials and supplies expenses accounted for 68% of total expenses, and wages and salaries accounted for 13%. Total employees decreased by 6.4%. This decrease was driven by a negative change in production workers, of 11%, while non-manufacturing employees saw an increase of 16.4%. This shows that non-manufacturing employees have a significantly higher expenditure per worker relative to production workers in 311615.

Of the three sectors, the meat slaughter industry was the least successful. The processing industry did relatively better, while the poultry processing industry was even more successful. Unfortunately, more recent data is not available, but this data provides insights about the performance of the industry from 2004 to 2010.

5. Questionnaire Results

5.1 Abattoir/FSMP Profiles

A profile of the abattoirs/FSMPs derived from the first part of the questionnaire will be discussed in this section. Characteristics of the plants are presented graphically in Tables 2 and 3 and Figure 10 on the following pages. Table 2 shows the operations the respondents are involved in. It should be noted that those who are only processing were formerly slaughtering.

As can be seen from this table, the sample is very diverse in terms of the operations performed. Table 3 shows the type of animals the plant slaughters or had previously slaughtered according to OMAFRA. These characteristics are fairly representative of the broader industry, with plants slaughtering bovine the most, followed by porcine, sheep/goats, and poultry (See Section 4.1).

Finally, Figure 10 on page 21 presents the answers of the plants to the first part of the questionnaire, the descriptive questions, graphically. These statistics provide some further insights on the profile of the sample and some general challenges that may be faced by these plants. About half of the plants have increased their full time employees and/or their part time employees in the past five years, while half of

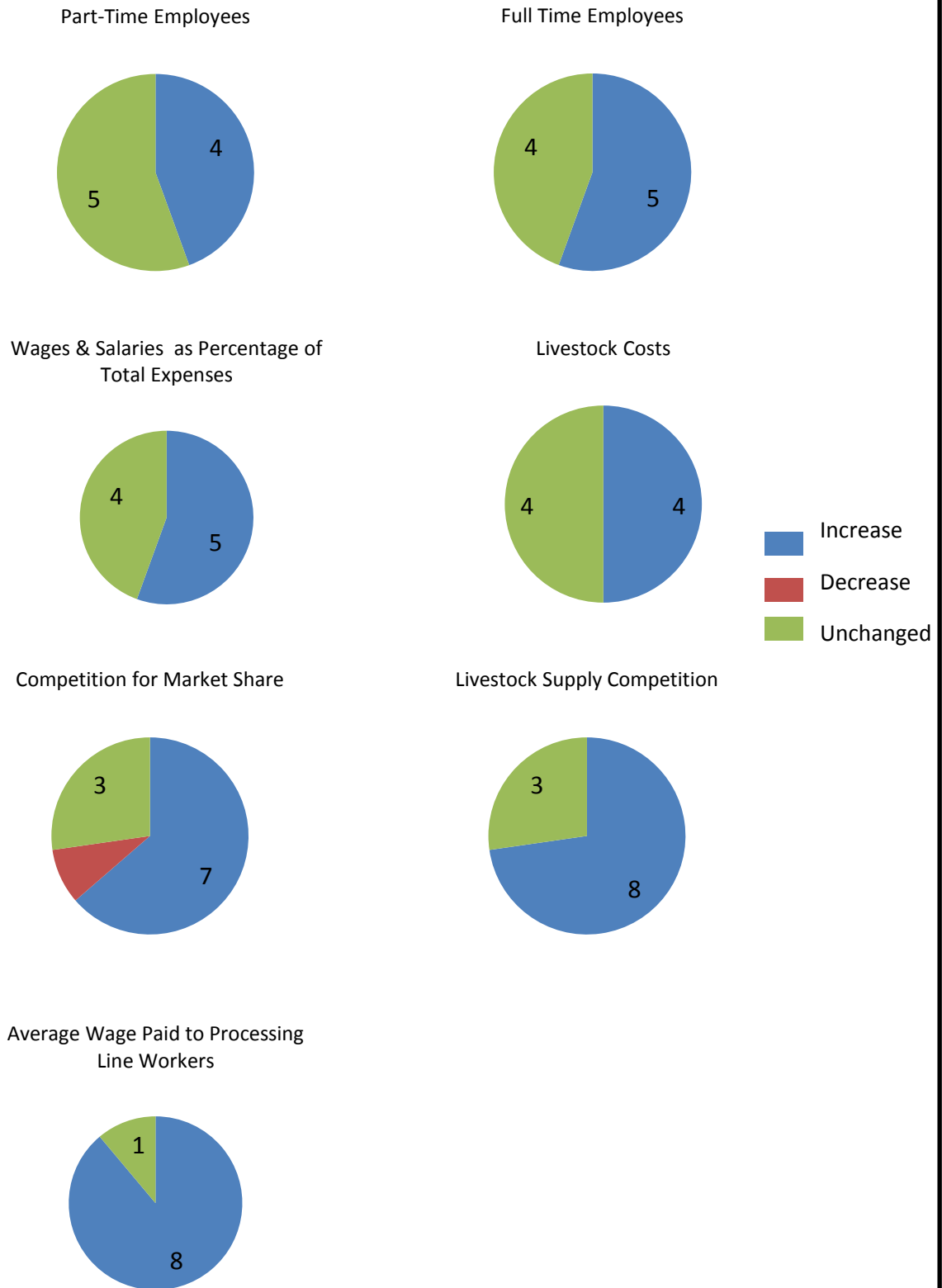
Table 2: Sample Plants by Operations

Plant Number	Operation					
	Slaughter	Further Processing	Wholesale Distribution	Retail Counter Sales	Food Service	Production
1	x	x	x	x		
2	x	x	x	x	x	
3	x	x	x	x		
4	x	x	x			
5	x	x				
6	x	x		x		x
7	x		x	x		
8		x	x	x		
9		x		x		
10	x					
11		x	x	x		

Table 3: Sample Plants by Animal Slaughtered

Plant Number	Livestock			
	Bovine	Porcine	Sheep/Goat	Poultry
1	x	x	x	
2	x	x	x	
3	x	x	x	
4	x	x		x
5	x		x	
6				x
7	x	x		
8	x	x		
9	x	x		
10	x	x		
11	x			

Figure 8: Questionnaire Descriptive Section Answers: Trends in past five years



the plants have the same number of employees. The average number of full time employees falls in the 5 to 19 category, and part time employees fall in to the 1 to 4 category for the plants interviewed. All plants except one have increased their wages in the last five years. Wages as a percentage of total expenses have increased for six plants, and remained stagnant for the other half. The same is true for the cost of animals. Eight plants believe the competition for livestock has increased while three of them believe it is unchanged. Finally, seven plants believe the competition for market share has increased, three believe it has remained unchanged, and one plant believes it has actually decreased.

Therefore, more than half of the plants interviewed have increased in size as measured by the number of employees while the remaining have remained unchanged in size. These answers show that the plants have responded similarly to the different macro and micro factors. These factors include: difficulty in sourcing of livestock, poor labour supply, and market competition.

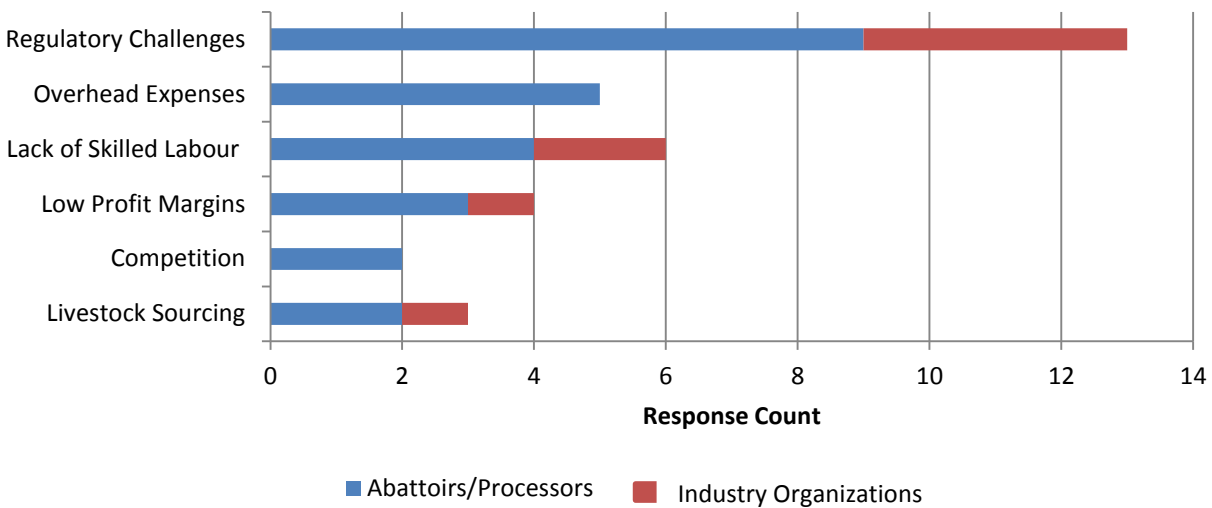
5.2. Challenges Facing Abattoirs

Figure 10 on the next page shows the responses to Question 9, "What are the top three challenges your company is facing?" on the survey given to the meat plants, and for question 2a, "What do you believe are the top three challenges facing meat plants in Ontario?" of the questionnaire given to industry organizations. It should be noted that some plants provided less than three answers, and some of the industry associations provided more than three answers. Challenges that were identified only once were not shown on the graph and include: poor management by plant owners, poor media image of industry, overburden caused by environmental laws, poor cash flow, inadequate government support, industry consolidation, succession issues, a generally poor business environment (e.g. competition, low demand, BSE issues), and lack of access to the marketplace.

The greatest challenge stated by meat plants are regulatory challenges, with nine of the eleven plants identifying this as a top three challenge. Four of the five industry organizations interviewed also stated this as a challenge. 'Regulatory challenges' is very vague, but there were some specific comments made in regards to regulatory challenges including "paperwork" and "inspection issues." These will be discussed more in the next section. The second challenge identified by five owners was high overhead expenses which included energy, interest payments, and wages. A lack of skilled labour was identified as a major challenge by four of the business owners and two associations. Related to high overhead expenses, low profit margins were identified as a challenge by three owners, and high levels of competition by two owners. Two owners identified livestock as a major challenge. This was mostly in regards to cattle sourcing. The association that had identified this as a top three challenge was the Ontario Cattlemen's Association.

The organizations appear to be aware of the challenges faced by the industry, as reported by plant owners. However, the businesses were more likely to identify day to day costs related to running a business, overhead expenses for example, as more pressing challenges, whereas an organization was more likely to focus on more systematic industry issues.

Figure 10: Questionnaire Responses - Challenges Faced by Meat Plants



5.3. Interview Results & Discussion

This section will discuss the interview responses of both abattoirs and industry associations. The interview results are organized into the following themes: regulatory challenges, skilled labour force, capital investments, consumer preferences, livestock specific challenges, and competition.

5.3.1 Regulatory challenges

The current inspection process was identified as a major ongoing issue by both plants and industry organizations. There were many issues identified with inspection. The process of inspection was reported as sometimes having little relevance to food safety issues. A high level of inconsistency between inspectors in the interpretation of regulations, and retaliation from inspectors if a grievance about the inspection process was voiced were also identified as a challenge for some plants.

Plants concerned about the inconsistency in the interpretation of regulations were most concerned about being required to make major upgrades or changes to their facility and/or equipment. This was a particularly important concern for these plants, as all plants interviewed had already made significant investments into their businesses previously, due to changes in regulatory requirements. This issue is briefly discussed further in Section 4.3. The following quote from a plant owner discusses some of these challenges:

The difficulty is in understanding definition of the regulations. We have our interpretation of what the regulations say, and enforcement staffs have their own interpretation of what the regulations say. So we find the inconsistencies in what we think they say and what they think

they say is difficult to reconcile. And there is no one single source for us to go to get a clear definition because the enforcement staffs are really... regionalized, or they have dedicated areas. So there is no one person that we can find that is contributing to consistency.

The issue of effectiveness of regulations was also important. Many owners questioned if the rules and regulations always translated into improved safety, and questioned the effectiveness of the overall regulatory regime. Regulatory challenges were clearly not the only issue but they remained an important challenge for the owners, as they claimed that they hindered business. This is true of all of the respondents, although some said that they do recognize the importance of some regulations and are not against all types of regulations as long as the system is practical, efficient, and effective. One plant owner states:

Our biggest challenge is with the meat inspection itself where there's just too many people, too many layers of meat inspection. Everybody is trying to stay busy; in order for all those people to stay busy everybody is to creating new situations and new examples for this should be changed or that should be changed. And we never have a say in anything. A lot of times we'll have two or three inspectors, then we have another spot inspector that comes for no reason, who always has to find a problem and that is a waste of government money, and that's our biggest challenge. It takes a lot of time to deal with all these people.

Some plant owners felt that they were unable to voice their concerns without the possibility of retaliation from their inspectors. This was not a unanimous concern: two abattoirs explicitly said their inspectors had made attempts to help them whenever they could. However, all expressed discontent with the overall inspection system.

The interview responses suggest that the major issue in regards to inspection remained the paperwork burden. Some plants had responded to this demand by hiring someone to complete paperwork, usually part-time; however, this added to their wage expenses. Smaller plants, with one to four employees, were particularly challenged by the time required for paperwork; owners that were heavily involved in the kill floor or processing operations had to take a significant amount of time away from their core operations to complete paperwork.

The interview responses suggest that high level of paperwork may explain the high level of closures amongst smaller abattoirs that had fewer resources. Large plants may have already had the excess labour to divert to paperwork and/or they may have had the financial resources to hire additional workers to complete the paperwork. Below are two excerpts from conversations with owners regarding this issue.

By inspection overload, I mean paperwork. There is a lot more paperwork that we have to keep track of for them. Not necessarily to increase or benefit our business and it is just a waste of time. They're impeding on business growth.

It's the never-ending paperwork; when you spend an hour a day doing paperwork, just sending your temperature records, these records or those records. It is a never-ending job. It something you don't want to be doing every day, you would rather do something that makes you money.

Many owners expressed a desire to streamline the paperwork burden. One respondent suggested a software program that would help assist with the organization and completion of paperwork.

5.3.2. Skilled Labour Force Challenges

The lack of skilled labour was identified as a "major challenge" (question 9) for four plants, although all of the plants expressed concerns over their ability to attract a skilled labour force. Most of the workers hired by these businesses were unskilled and had to be trained. The nature of training for all plants was 'on-the-job-training'. Training was expensive, and workers often made mistakes which further added to costs.

The shrinking of the labour pool may have significant implications for rural abattoirs that already have a small labour pool to draw employees from. Many plant owners mentioned getting assistance from family members when they experienced labour shortages. Owners also mentioned having to go through a number of hires to get one employee, meaning that they would have to hire multiple people who would work for a small period of time (sometimes just one day), until they found a worker that would stay for a significant period.

The majority of the owners reported an increased hiring of immigrant workers due to a lack of interest from Canadians in working in the meat processing industry. Most of the abattoir owners interviewed that had hired immigrant workers had been happy with this arrangement. However, one industry organization discussed challenges some plants have faced in working with immigrant workers:

From what I hear, it seems to be a real issue for some plants, not all plants, some plants. Talking to some of the plant operators they are saying that they are spending more and more time managing people than they did in the past. And they are managing people who do not necessarily speak English, who haven't been in the country long, who may have come in on international work permit to work. So their cultures are different and their work ethic is different than they are used to.

There was also another abattoir that expressed concerns over the long term commitment of some of these workers as they generally held temporary international work permits, and consequently may have viewed their jobs as only temporary. On the other hand, two respondents that were working with a large number of workers from the immigrant population were very happy with the work ethic of immigrant and foreign employees. One of these plants said they were actually concerned about their ability to get foreign workers in the future:

We used to hire foreign workers constantly, and I got discouraged last year because we spent so much time going through all the LMOs, advertising, and the applications. We used to do it within

three to four weeks. The last one we applied to took over 6 months which just didn't work out for us.

The continuation of this trend may make it very challenging for some plants to operate as foreign workers have been an important source of skilled labour for them. The general trend towards a tighter labour market has been identified in other studies²⁸ as well. These challenges may be exacerbated in rural areas, as one plant owner discusses below.

The labour force is an ongoing problem for us in a rural area. We have a hard time finding people to begin with because there is no labour pool to draw from and what I find is a lot of young people migrate away from our region to more urban centres.

This issue is further intensified by consumer preferences towards very specific cuts of meat or very specific types of packaged products and because of the stringency of regulatory requirements. The comment below by an industry organization representative explains how this trend has affected the demand for labour:

The retailer says I only want this certain cut of meat or this part of the animal. What is the packer going to do with the rest of the animal? So he has to be really innovative with what he does with the rest of the animal. And he has to have staff that is skilled, to cut out the different muscle groups. He can make or break his money right there.

There has been some progress made with regards to the formal training of meat cutters, with initiatives such as the "Ontario Processor Operator – Food Manufacturing (Apprenticeship)" offered by the Institute of Food Processing Technology. Two respondents made references to this program. This program only began in 2011 and it will remain to be seen how effective it is in decreasing the industry's skilled labour shortage.

One way plants can attract this scarce skilled labor is by increasing wages. However, this may significantly add to overhead expenses; the challenge of overhead costs was discussed in Section 4.2. Also, two plants explicitly mentioned wages as one of their top three challenges.

5.3.3. Capital Investments

The respondents identified two motivations for investments: investments made to comply with regulatory requirements and those made to increase operational efficiency. They tended to categorize investments according to these motivations. The respondents were asked if the investments made to comply with regulations increased efficiency. Six of the respondents stated that upgrades due to

²⁸ Jayeff Partners. (2009, November). *Training Needs and Barriers of the Ontario Meat and Poultry Processing Sector*. Retrieved May 20, 2013, from OIMP: <http://www.oimp.ca/uploads/userfiles/files/oimp%20training%20needs%20and%20barriers%20study%20findings.pdf>

regulation did not increase the actual efficiency of their business. One abattoir said they did increase efficiency, while one said only some of the investments increased efficiency. Another respondent stated that safety may have increased because of the regulations. Finally two respondents stated that it is difficult to separate the upgrades made to comply with regulations from the upgrades made for efficiency.

The following quote from a meat plant owner is fairly representative of those who felt investments made to comply with regulations did not improve efficiency of their business:

No. I'm not the type of person who is totally against all regulations. A lot of these things are trivial things with a big price tag, whether that may be resurfacing the floor, increasing the lighting...a lot of the issues have been just big ticket items in an old facility which really have not given a positive return on. It was just needed to meet the requirement so that we can have our license reissued.

This second quote is from an abattoir owner who said it is difficult to say if regulations have improved efficiency:

Well it was a decision that if we were going to invest in our business, to meet regulatory requirements we needed to sort of find increased markets, we had to increase sales as well. So we started working on that plan together. If we were going to invest in regulatory requirements and do the same business, it was going to be very difficult with cash flow.

The other plant that could not distinguish one type of investment from the other had a similar response.

Due to the regulatory requirements many businesses had to invest in their facility. The most typical upgrades were made to floors, refrigeration, spice rooms, lunch rooms, lighting, and monitoring equipment. When making the upgrades, many businesses decided to increase their capacity to slaughter/process. These plants include those which said regulations had not increased efficiency. The owners that said their business was doing well due to high levels of demand stated the closure of neighbouring plants, because of an inability or lack of interest of the owners in complying with regulations, was a major contributing factor. If this is true then regulations may have indirectly contributed to the success of these businesses.

The investments made to comply with regulations many years ago are still affecting businesses through the debt servicing required on loans undertaken for the upgrades. As stated earlier, many businesses identified overhead costs as a major challenge and also highlighted low profit margins as an issue. Interest payments will factor into these overhead costs, but only two respondents specifically stated interest on debt as one of their major challenges. They said they are not adding to their debt (in most cases) but still paying off previously accumulated debt.

Another issue that many plants were concerned about was the requirement to make additional investments in the future to comply with regulations. They stated that it is very difficult to plan in an

uncertain environment. This may be due to the inconsistency in interpretation of regulations discussed below. An owner commented on this issue as follows:

Every year when you give an audit, essentially you're going to find if you are going to make money or not. Unfortunately, we haven't made money in a very long time simply because we don't know how much we have to pledge to them.

5.3.4. Consumer Preferences

According to the respondents there has been an increasing demand for local foods which has been a positive factor for them. This increase in demand for local food, or "local food movement" has been documented in the literature. For example, a report²⁹ conducted between September 2008 and January 2009 by the Canadian Co-operative Association identified at least 641 local food initiatives in Ontario. The driving forces behind these initiatives were restaurants, with 200 chef initiatives serving local/regional food. Other important contributors were farmers markets, retail stores, and food cooperatives. One respondent described this trend as follows:

People are more concerned about who handles their food and where it is coming from. So the whole local, go to the small guy who is more in control of things has really helped us. Our clientele want to know what is in our food, how it is made, where it is coming from, which farm, what are the animals being fed, how are the animals being treated...they want to know all these things. The consumer is more aware of what goes into their mouth now.

All plants, regardless of their niche, mentioned the greater demand for local food. Plants specializing in organic, halal, or RWA (raised without antibiotics) foods all mentioned that customers wanted to have a greater connection with their food. This has really served the smaller plants well, with people buying from them directly or preferring their foods at retail locations because they are within their communities. Other local food movement initiatives such as OMAFRA's "Foodland Ontario" may also be a contributing factor to this trend.

Other notable trends include a growing demand for ethnic products as immigrant populations in Ontario grow. This has served abattoirs well as they have been able to adapt to the preferences of this niche market. The large plants may not be interested in operating in these markets because of the lack of volume relative to traditional product markets. Finally, businesses involved in processing have seen a greater demand for ready to eat products, which have required businesses to become more innovative with their products; this is a demand many businesses have been able to meet.

5.3.5. Livestock Specific Challenges

Challenges exist that are specific to the type of animal slaughtered; the major challenge revolves around beef. The major issue with bovine is sourcing. One owner stated:

²⁹ Canadian Co-operative Association. (2009). *The Lay of the Land: Local Food Initiatives in Canada*. Ottawa: Canadian Co-operative Association

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There have been challenges with the drought in the United States and with the increased cost of feed which is making it harder and harder to feed cattle. So it becomes harder and harder to find cattle.

The Ontario Cattleman's Association (OCA) discussed another factor that is contributing to the increased price of feed:

High corn prices caused by government policy to support the ethanol industry really put a new floor under the corn price and it is North America wide, because it is both Canadian and US policy that is supporting ethanol.

The OCA had also stated sourcing of cattle as one of the top three challenges facing Ontario plants. However, the price of beef did not rise only due the 2012 drought in the US, but is part of a long term trend; beef prices increased 31% from 2006 to 2010 according to the Statistics Canada data, with all years seeing sustained positive increases (see Appendix D).

A secondary challenge has been dealing with BSE; SRM regulations make the slaughtering and processing of bovine more time intensive. Abattoirs have recognized the importance of these rules, but they argue that excessively strict rules make it difficult to compete. The OCA stated regulatory harmonization as one the major issues faced by plants:

Rules were put in place for managing this at all provincially and federally licensed plants. And there are different rules that the US is using to manage. And so the cost to process in the US is substantially lower to the point where it is cheaper to ship animals to the US and bring meat back.

The data on livestock and commodity prices in Appendix D also may help in explaining the trends towards a tighter market for cattle. There has been a correlation between the price for cattle for slaughter and corn, a primary component of cattle feed, of 92% from the period 2005 to 2012. The price of grain corn increased by 136% in this period, the number of cattle available on farms decreased by 12% in Ontario between 2006 and 2011, and the number of farms reporting cattle decreased by 18%. All of these factors may have contributed to the increase in the price of cattle: 31% from 2005 to 2012.

5.3.6. Competition

There was only one plant that identified branding as one of its major challenges. This abattoir was involved in a niche market where it was critical for it to differentiate their product. However, because all the provincial processors/abattoirs are involved in a niche market to some extent (at the very least they are involved in serving local food) they can all benefit from branding initiatives. However, branding would most benefit those involved in the retail market.

None of the plants identified a lack of a market for their product as a major challenge. However, some complained about access to large retail stores that source exclusively from federally inspected plants. Another related issue discussed was competition from places where relatively lax inspection standards

make it difficult to compete with importers on the price of the product. Regarding this issue, a plant owner said:

The main things as I said is we are under a lot of rules and regulations and it makes it harder to do business in Ontario and Canada in general. Our cost of doing business is much higher than other parts of the world, and it makes it very hard for us to compete.

6. Closure of Plants

According to the OMAFRA data there were 183 provincially licensed slaughter plants in 2005; this number decreased to 142 slaughter plants in 2012. This means there were a significant number of plants that did not renew their licenses and closed their slaughter operations. This does not necessarily imply they all ceased their operations entirely; they may have become a federally licensed slaughter plant or a processor. One methodological approach may be to survey owners of closed plants to understand why abattoirs have closed. As mentioned earlier, an attempt was made to contact owners of plants, but unfortunately only one owner responded. Therefore, information from other sources is analyzed to understand why abattoirs have been closing.

The one owner of a closed plant that was interviewed operated a plant that had shut down because of health violations. This reason for closure may not be representative of the broader industry. The operating plants and associations interviewed mentioned a number of reasons for non-renewal of licenses including: decision to retire early rather than invest in facilities due to regulatory requirements, failure to meet health-related regulatory requirements (for example, an organization had slaughtered when a meat inspector was not present³⁰), decision to become a federally licensed plant or processor, or voluntary retirement.

The data analyzed shows that it was the smaller plants engaged only in slaughter and those plants that were in areas with a higher number of plants that were more likely to close. The closure of plants that were only engaged in slaughter may suggest that a lack of diversification may have made businesses more vulnerable to external shocks. Alternatively, lack of diversification may signify that the plant is small (by number of employees), as smaller plants will have fewer resources and are more likely to only perform one core operation. Then this statistic would represent more size related challenges than operation related challenges. Small plants may have had a greater difficulty in raising financial capital for regulatory facility upgrades or may not have had enough revenues to justify such an investment. Smaller plants may also have had greatest difficulty in completing paperwork, as they would not be able to hire additional workers to complete paperwork and would not be able to divert workers from other core tasks. The saturation level of a market may also be a major factor influencing plant closures. According to the CPB data discussed in Section 4.2.1, regions with a large number of plants had the greatest decrease in the number of plants.

³⁰ <http://www.omafra.gov.on.ca/english/food/inspection/meatinsp/abattoirhalaldecisionjan10.htm>

Finally, the internet was scanned for stories related to abattoir closures in Ontario. This source of information is not ideal, however, given the difficulty in securing interviews with owners of closed abattoirs, this was considered a useful substitute. There have been many articles^{31,32,33} that have mentioned government regulations contributing to the closure of plants. The news media reported answers similar to those found in the interviews conducted with plants owners and industry experts. The often repeated narrative is of plant owners who were close to retirement and chose not to invest in their facilities, because they would not have been able to recoup their investments. They were also reported as being unable to sell their business because potential new owners were reluctant to buy a plant which would require significant renovations. To a certain degree, one can be confident in the news media reports as some of the explanations provided by the news media have been given by the plant owners and industry experts interviewed as well, although the potential for a reporting bias in the media towards these types of stories is likely to be strong.

From this information, it can be concluded that the burden of paperwork and the requirement to invest in equipment and facility upgrades have been a major contributor to the closure of plants, particularly small plants, but other factors have been important as well, including competition and a lack of diversification in businesses. There may have also been some plants that closed simply because of the personal reasons of the owners, while some may have stopped slaughtering at the provincial level and became federally licensed plants while others became processors.

6. Conclusion

This study extracted information from five sources to determine the challenges facing Ontario's meat processing sector. These sources included: peer reviewed and grey literature, data from Statistics Canada and OMAFRA, news media, industry organization interviews, and abattoir and processor interviews. The sources mostly complemented or corroborated each other. The interview results were particularly insightful and are a source of information that was previously not available.

The literature review, news media, and interviews revealed that the major challenges facing abattoirs and processors are: regulatory challenges related to paperwork and inspection, high overhead costs, and a skilled labour force shortage. The amount of time required for paperwork and the inspection process add to the existing labour shortage burden. Inspections may result in requirements for further investments, which require large capital outlays. The inconsistency in the interpretation of regulations leads to an inability to plan. These factors lead to high interest expenses and high wage costs which contribute to overhead costs which, along with increasing energy costs, are a significant challenge for plants. These challenges have been mitigated by the greater demand for local food.

³¹ <http://www.brantfordexpositor.ca/2009/07/23/small-meat-shops-caught-by-stricter-government-rules>

³² <http://www.owensoundsuntimes.com/2010/06/10/regulations-blamed-for-loss-of-abattoirs>

³³ <http://life.nationalpost.com/2010/06/29/the-meat-lessons-are-small-abattoirs-in-peril-yes-but-there-are-exceptions/>

The data shows that the abattoirs that have been closing are mostly small plants. The challenges stated above, presently faced by operating plants, may have also been a challenge for plants in the past, particularly small plants. Many small plants had owners that were old and did not want to re-invest in their businesses because they may not have been able to recoup their investment before retiring and thus, choose to retire early. Also, these smaller plants may have had greater challenges completing paperwork with their small number of employees. Another important factor revealed by the data, but not observed in interviews, was market saturation. Regions with a high concentration of plants saw a decrease while those with a smaller number of plants saw an increase in the number of plants. On the other hand, currently operating plants have reported an increase in demand for their products as surrounding plants have shutdown. The data analyzed shows that it was the smaller plants engaged only in slaughter and those plants that were in areas with a high number of plants initially that were more likely to close. Therefore, the closure of plants that were engaged only in slaughter may indicate that a lack of diversification increased the vulnerability of their business to external shocks.

OMAFRA has expressed an interest in making changes to the Ontario Meat Regulation 31/05³⁴, and has been asking for the input of industry stakeholders in regards to their proposed amendments. This is an important step, and it is one that should have been taken a long time ago. A second step in the right direction is the introduction of formal training programs for meat cutters such as "Process Operator - Food Manufacturing" apprenticeship at Conestoga College. Programs such as these may help alleviate the skilled labour challenge.

However, there are additional steps that need to be taken. There needs to be a greater amount of collaboration around the value chain to ensure businesses succeed. A greater representation of abattoirs/processors through industry organizations, such as OIMP, is also required. To truly understand the challenges these abattoirs and processors are facing, there must be increased industry engagement, not only by industry organizations and government, but by meat plant owners as well. This report contributes to the research necessary for such an increased level of participation, and will hopefully stimulate more work in the field so evidence based decisions can be made.

³⁴ <http://www.omafra.gov.on.ca/english/policy/legislation/meatre.pdf>

Appendix A: Questionnaires



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Questionnaire

Section I: Descriptive Questions

1. Which of the following operations is your company directly involved in?

- ☐ Slaughter
- ☐ Further Processing
- ☐ Wholesale distribution
- ☐ Retail counter sales
- ☐ Other

If other, please specify:

1b. Was your company previously processing and is currently only slaughtering?
Was your company previously slaughtering and is currently only processing?

1c. Do you perform the following custom services:

- ☐ Slaughter ☐ Further processing

If yes, have your prices for these services increased over time?

2a. What are the average number of full time workers (35 hours or more) and part time workers (permanent workers that work less than 35 hours) employed by your company five years ago?

Full time: ☐ 1-4 ☐ 5-19 ☐ 20-49 ☐ 50-99 ☐ 100-199 ☐ over 200

Part time: ☐ 1-4 ☐ 5-19 ☐ 20-49 ☐ 50-99 ☐ 100-199 ☐ over 200

2b. What are the average number of full time workers (35 hours or more) and part time workers (permanent workers that work less than 35 hours) employed by your company?

Full time: ☐ 1-4 ☐ 5-19 ☐ 20-49 ☐ 50-99 ☐ 100-199 ☐ over 200

Part time: ☐ 1-4 ☐ 5-19 ☐ 20-49 ☐ 50-99 ☐ 100-199 ☐ over 200

If other, please specify:

3a. Do you have continuous training programs for your employees?

3b. If yes, how much of your annual payroll is spent on such programs?

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☐ More than 2% ☐ Between 1-2% ☐ Less than 1% ☐ No formal budget

4a. What is the hourly wage range paid to the majority of your processing line workers five years ago?

☐ \$10.25-\$12.00 ☐ \$12.01-\$14.00 ☐ \$14.01-\$16.00 ☐ \$16.01-\$18.00 ☐ Over \$18.00

4b. What is the hourly wage range paid to the majority of your processing line workers?

☐ \$10.25-\$12.00 ☐ \$12.01-\$14.00 ☐ \$14.01-\$16.00 ☐ \$16.01-\$18.00 ☐ Over \$18.00

5a. What percentage of your total expenses (including livestock expenses) was from wages and salaries five years ago?

☐ Under 6% ☐ Between 6-9% ☐ Between 9-12% ☐ Between 12-15% ☐ Greater than 15%

5b. What percentage of your total expenses (including livestock expenses) is from wages and salaries?

☐ Under 6% ☐ Between 6-9% ☐ Between 9-12% ☐ Between 12-15% ☐ Greater than 15%

6a. What percentage of your total expenses (including livestock expenses) was from livestock costs five years ago?

☐ Under 60% ☐ Between 60-65% ☐ Between 65-70% ☐ Between 70-75% ☐ Greater than 75%

6b. What percentage of your total expenses (including livestock expenses) is from livestock costs?

☐ Under 60% ☐ Between 60-65% ☐ Between 65-70% ☐ Between 70-75% ☐ Greater than 75%

7. How many recalls (voluntary) has your company had in the last:

5 years? ☐ Zero ☐ 1-3 ☐ 4-7 ☐ 7+

10 years? ☐ Zero ☐ 1-3 ☐ 4-7 ☐ 7+

8a. Has the difficulty in sourcing livestock:

☐ Increased ☐ Decreased ☐ Remained unchanged

8b. Do you believe competition for market share has:

☐ Increased ☐ Decreased ☐ Remained unchanged

Section II: Challenges Assessment

9. What are the top three challenges your company is facing?

10. Did you make any capital investments into your facility (upgrades, etc.) in the last seven years. If so, what was the motivation? How much did you invest?

11. What investments did you make to your facility to comply with regulatory requirements in the last seven years?

11b. Did investments made to comply with regulation increase efficiency?

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12. Have there been any changes in the preferences of your main customer base or its level of demand in the last seven years?

13. Do you feel that the livestock your company slaughters presents specific challenges or opportunities for your company? If yes, then how?

14. What is your marketing strategy? Have you faced any challenges in implementing this strategy or noticed changes in its effectiveness?

15. What challenges do you face with regards to compliance with regulations? How have you been able to mitigate these challenges? Please specify which regulatory body your answers pertain to (MOL, MOE, Provincial, Municipal, etc.).

16. What challenges do you face with regards to increasing livestock prices? How have you been able to mitigate these challenges?

17. What challenges do you face with regards to changing labour force demographics? How have you been able to mitigate these challenges?

18. What opportunities has your company had that have made your business successful? Have any particular strategies led to your success?



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Questionnaire for Industry Organization

1a. Who are your main stakeholders?

1b. What issue(s) has your organization's sector faced over the past 5 years or is facing today?

2a. What does your organization believe are the top three challenges facing slaughter/processing plants in Ontario?

- 1: _____
- 2: _____
- 3: _____

2b. Please elaborate on the challenges facing industry.

3. Are regulations a factor in the decline in provincially licensed slaughter plants? If so, how?

4. Are increasing livestock prices a factor in the decline in provincially licensed slaughter plants?

5. Is a skilled labour shortage a factor in the decline in provincially licensed slaughter plants?

6. Are changing consumer preferences a factor in the decline in provincially licensed slaughter plants?

7. What can abattoirs do to strengthen their operations?

8a. What role can the Ontario Independent Meat Processors play in helping abattoirs succeed?

8b. Should other organizations (OMAFRA, municipal government, NGOs, etc.) also be involved in these efforts? If so, how?

9. Would you like to add any additional information related to the challenges facing Ontario meat and poultry processing sectors?

Appendix B: Canadian Business Patterns

The Statistics Canada data comes from two sources: the ASML data from 2004 to 2010³⁵ and CBP data from 2006 to 2012. The statistics from this section are based on Statistics Canada's CBP database. The limitations of this data include: mis-categorization of plants under the NAICS, double counting of plants that are engaged in more than one activity, and aggregation of both licensed federal and provincial plant data. However, the data corroborates a lot of the information extracted from other resources, and is therefore presented here. The following analysis is supplemental to the main analysis in Section 4.2.

The data has been collected for June 2006, June 2009, and June 2012. It is categorized by NAICS Statistics by the code 3116, Animal Slaughtering & Processing, and its sub industries: Animal (Except Poultry) Slaughtering (311611), Rendering and Meat Processing from Carcasses (311614), and Poultry Processing (311615). The different industries will be referred to by their NAICS codes henceforth.

There is an Unknown category, where the number of employees in the plant have not been recorded. This category is believed to be comprised of mostly smaller abattoirs, with less than 20 employees, as large plants have a greater likelihood of having more sophisticated recordkeeping. The plants with greater than 100 employees are most likely federal plants, as provincial plants do not have those many employees.

Figures 11 to 13 on the following pages show the changes in number of plants by number of employees by NAICS in Ontario between 2006 and 2010. 311611 shows the steepest declines in the plants with a smaller number of workers. The total number of plants decreased from 105 in 2006 to 85 in 2012. In 2012, 311611 accounted for 25% of the plants in 3116. Plants with greater than four employees show a significantly lower percentage decline in number of plants, and some categories even show an increase in the number plants operating from 2006 to 2012. Figure 12 on page 39, shows that 311614 had a decrease from 217 plants in 2006 to 174 plants in 2012. In 2012, 311614 represented 51% of the total plants in 3116, making it the largest 3116 sub-sector by number of plants. Figure 13 on page 40, shows that 311615 had a decrease from 95 plants in 2006 to 74 plants in 2012. In 2012, 311615 represented 24% of total plants in 3116. This industry showed a slightly different trend relative to the other sub-sectors of 3116. Most categories by number of employees witnessed a decrease, with the exception of those plants with 10 to 19 employees. These plants had an increase in the number of plants, from two in 2006 to 12 plants in 2012. The number of plants in 311615 with 100 to 199 employees remained constant. Figures 11 to 13 indicate that it is the smaller plants (by employee size) which have been experiencing difficulties staying active in the past six years.

³⁵ This was the most current data available at the time this report was written.

Figure 11: Change in Plants by Number of Employees in Ontario for NACIS 311611

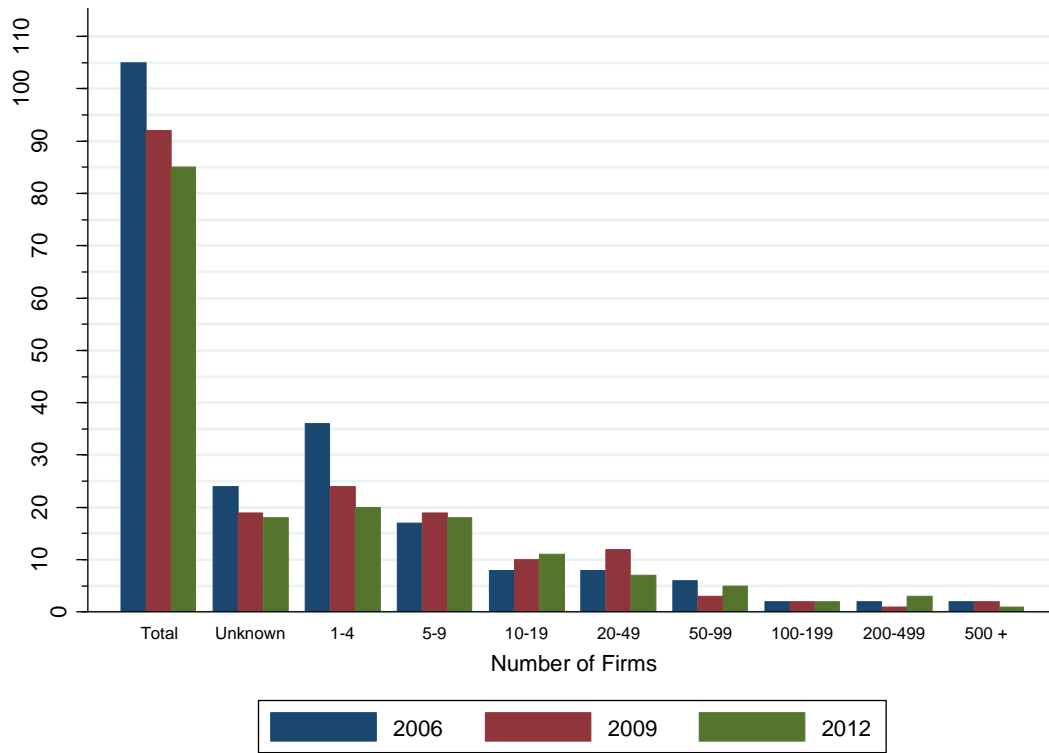
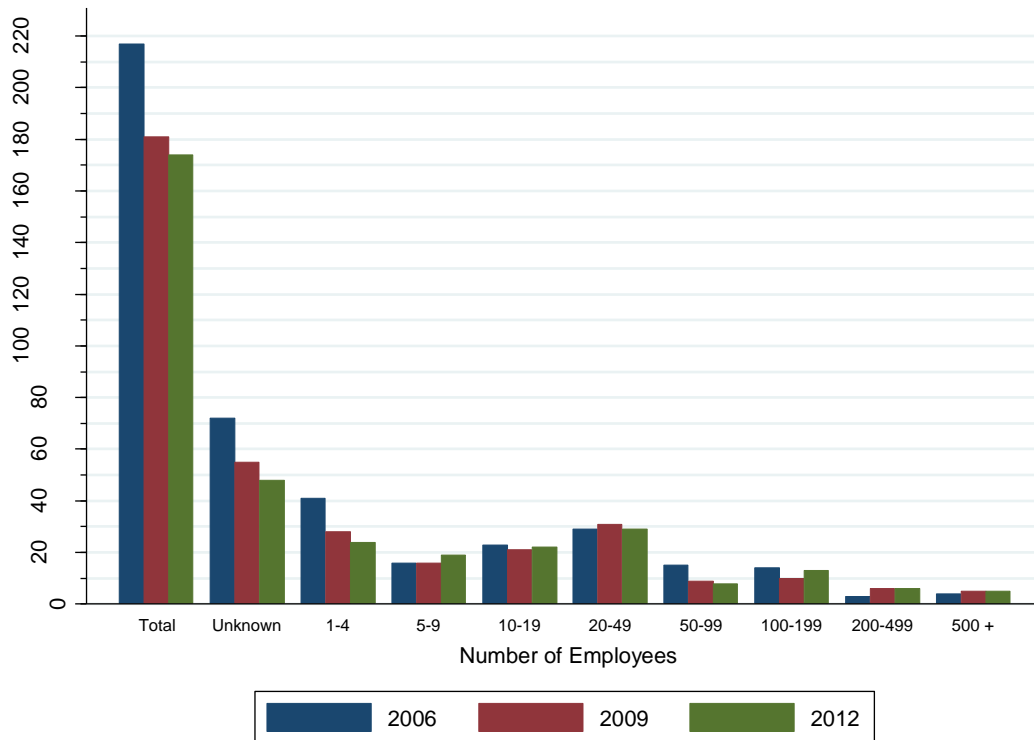


Figure 12: Change in Plants by Number of Employees in Ontario for NACIS 311614



Source: Statistics Canada Canadian 2006-2012

Figure 13: Change in Plants by Number of Employees in Ontario for NACIS 311615

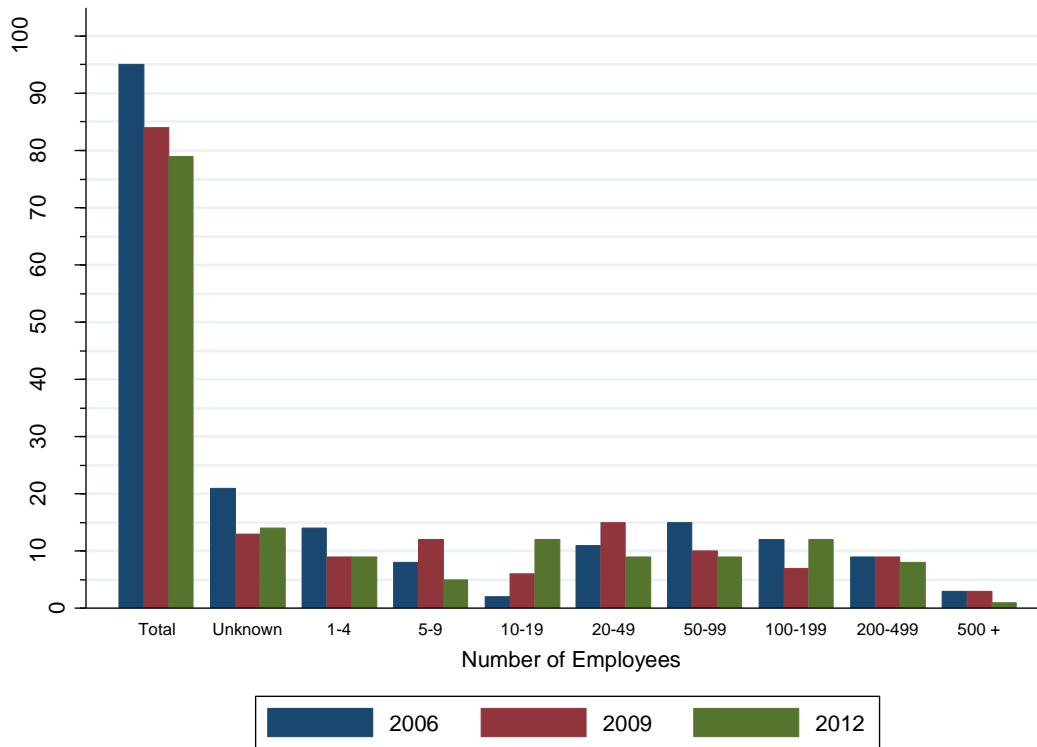


Figure 14 to 16 on the following pages show the number of plants by region in Ontario in June 2006, June 2009, and June 2012 by NAICS. Regions with a larger number of plants in 2006 saw a larger decrease in number of plants from 2006 to 2012. On the other hand, some regions with a smaller number of plants had an increase in the number of plants between 2006 and 2012. The one exception is East region for 311611, which had a relatively large number of plants active in 2006, and also had an increase in the number of plants. There were 15 in 2006 and 17 in 2012. A large number of plants may be indicative of oversupply of certain livestock or heightened competition, which would lead to plants located in such a region experiencing a higher likelihood of closing.

Figure 14: Change in Plants by Region in Ontario for NAICS

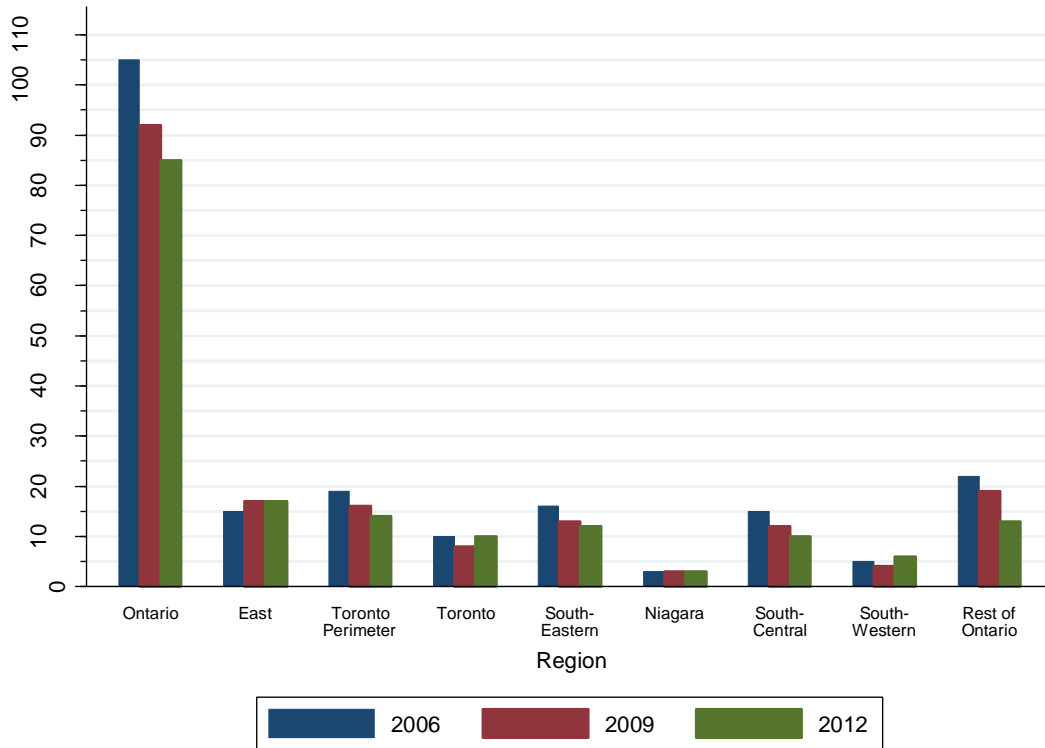


Figure 15: Change in Plants by Region in Ontario for NACIS 311614

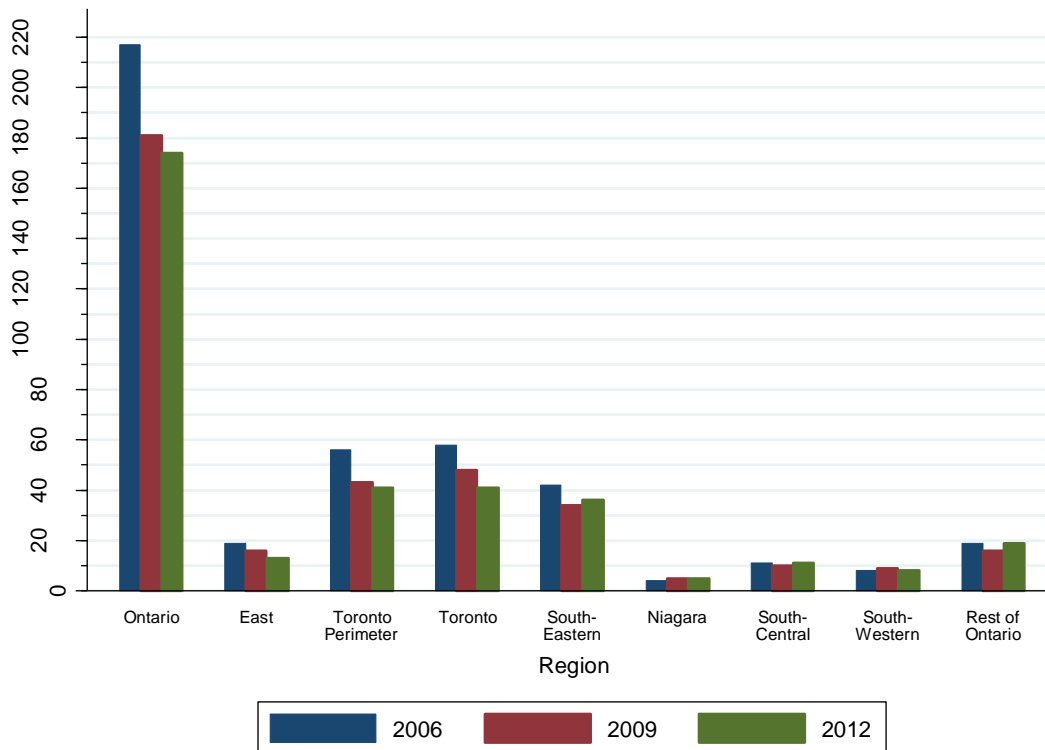
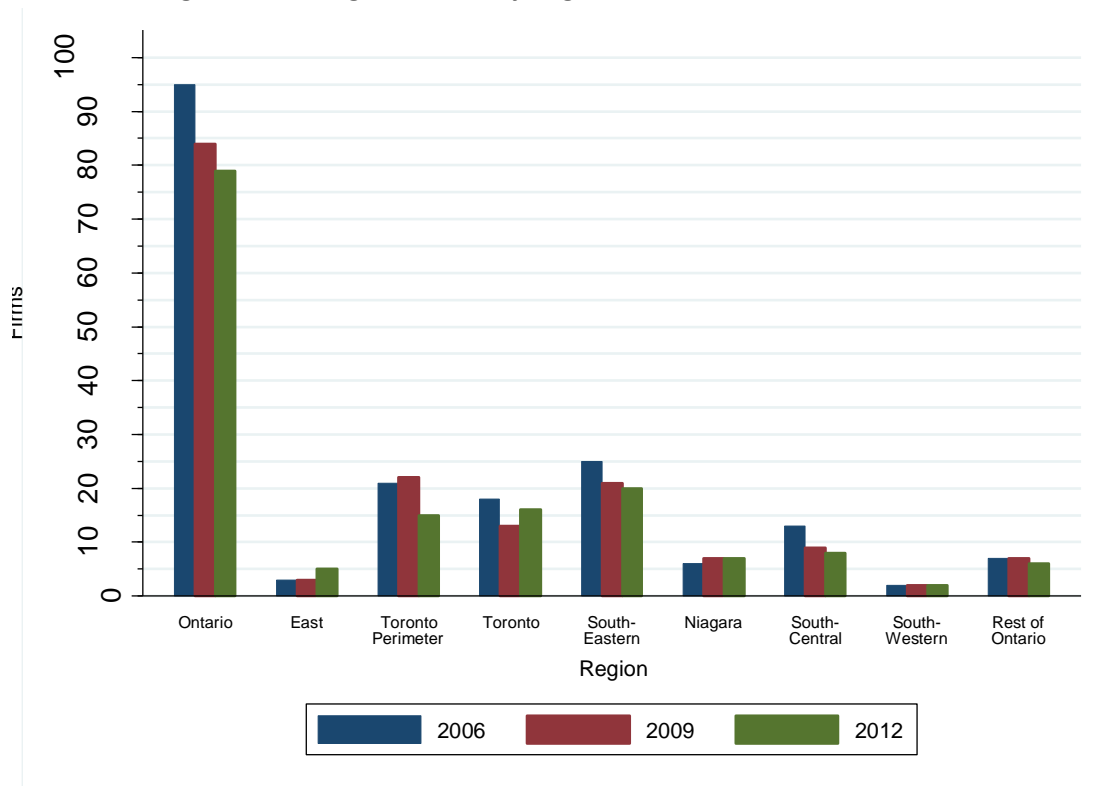


Figure 16: Change in Plants by Region in Ontario for NACIS 311615



Below, Figure 17 shows the change in number of plants by region in Ontario for 3116 for plants with less than 50 employees. Figure 18, on page 40, shows a similar graph for plants with 50 to 249 employees, and Figure 19 charts those plants with greater than 250 employees. These graphs conplant the findings mentioned above. It is regions with a larger number of smaller plants that have had more significant declines in the number of active plants from 2006 to 2012. The only significant decline in the number of plants operating with greater than 250 employees was seen in South-Central Ontario: from four in 2006 to one in 2012. The total number of plants with 250 employees or more actually increased from 23 in 2006 to 24 in 2012, whereas active plants in Ontario with less than 49 employees and with 50 to 249 employees saw a decrease. As mentioned earlier, the larger plants, especially those with greater than 250 employees are federally licenced plants.

Figure 17: Change in Number of Plants with 50-249 Employees by Region in Ontario for NAICS 3116

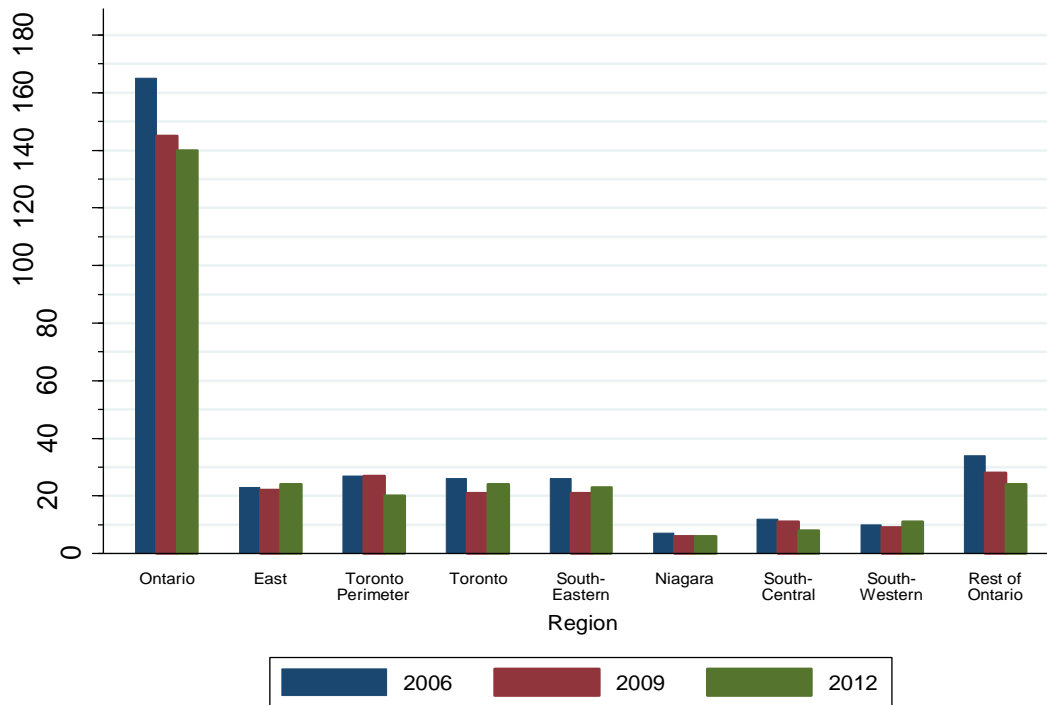


Figure 18: Change in Number of Plants with 50-249 Employees by Region in Ontario for NAICS 3116

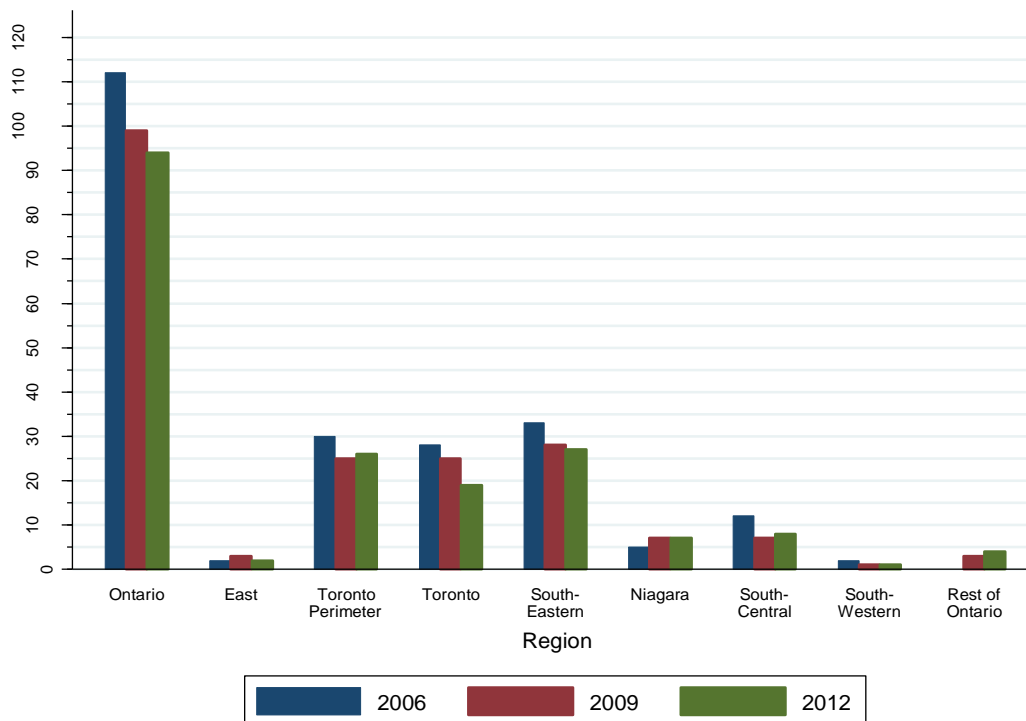
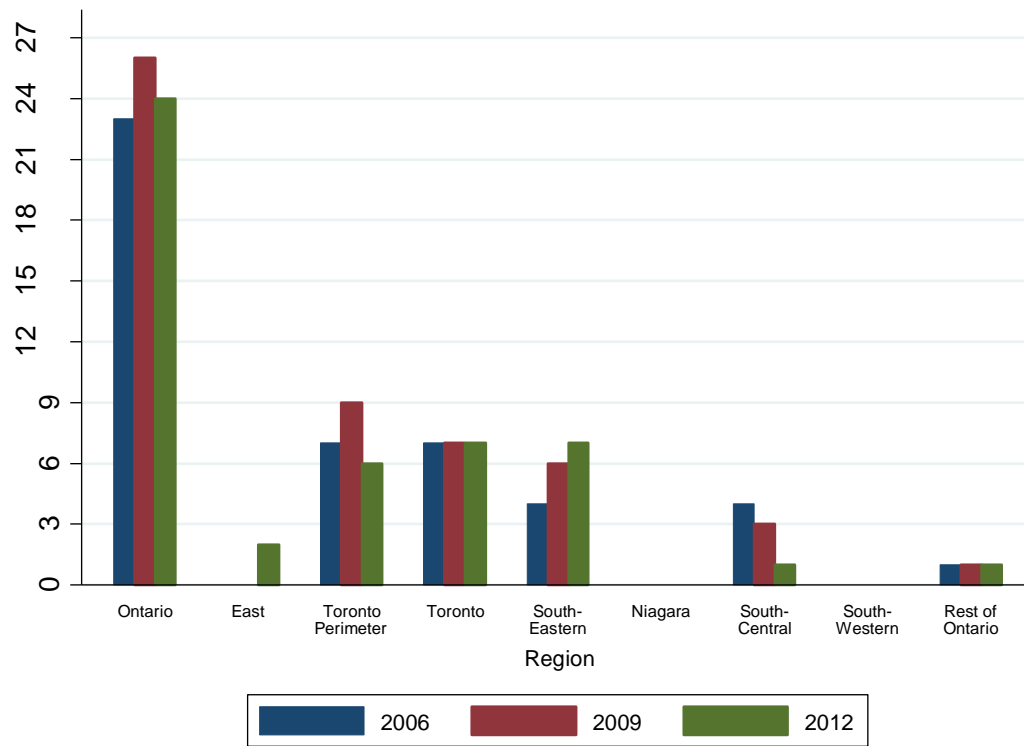


Figure 19: Change in Number of Plants with 250+ Employees by Region in Ontario for NAICS 3116



Appendix C: Abattoir Definitions

Table 4: Types of Abattoirs

Abattoir Type	Definition
Slaughter and Processing Category 1 Abattoirs	Aging or breaking a carcass or part of a carcass Aging, boning, comminuting, cutting, fabrication, marinating, slicing or tenderizing of a meat product Packaging of a meat product for wholesale or other sale or distribution to persons other than consumers (eg. restaurant, hotels, institutions, retailers) Pre-packaging of a meat product Cooking of ready-to-serve meat products for the purpose of immediate consumption Any other "low-risk" meat processing activity
Slaughter and Processing Category 2 Abattoirs	Canning, curing, dehydrating, emulsifying, fermenting or smoking of a meat product Manufacturing of a ready-to-eat meat product Processing specified items such as, burnt heads or feet of cattle or sheep, unfinished green tripe or casings, bile, blood products containing salt or other ingredients or reproductive organs from the carcass of food animals Preparing mechanically separated meat Any other processing activity performed in respect of a carcass, a part of a carcass or a meat product that in the opinion of a director presents a medium to high risk of adversely affecting the safety for human consumption of the carcass, the part of the carcass or the meat product Receiving farm slaughtered carcasses
Slaughter Only	Slaughter

Appendix D: Livestock Prices

This section shows how the prices of feed may be linked to prices of livestock available for slaughter. Feed prices later translate into materials and supplies expenses for plants. Materials and supplies represent roughly 70% of total expenses for these industries, as mentioned earlier. Table 5 below, shows the simple correlation between prices of selected livestock and selected commodities. Figures 20 to 22 on the following pages show the percentage change in selected livestock price juxtaposed with the percentage changes in the price of soybeans, barley, and grain corn. Soybeans, barley, and grain corn comprise a significant portion of the feed for these livestock.

Figure 20 below indicates that the price of cattle is far less volatile than the prices of other commodities. Overall, cattle prices increased 31% from 2005 to 2012 which is not as great as the increase seen in the other commodities. The largest increase is seen in 2010, of 19%. This graph, however, may fail to illustrate how well the price of cattle moves with the price of some of these commodities because of the greater volatility in the prices of the other commodities. Table 5, shows a correlations matrix which shows these relationships better. Table 5 shows that the price of cattle has high correlations with the commodities; the greatest correlation being with grain corn of .92. Figure 21, on page 48, shows that the percentage change in the price of chicken moves very well with the other commodity prices. This trend is reinforced in Table 5, with a correlation of .97 between both soybeans and grain corn prices and the price of chickens. Finally, Figure 22 shows the price of lamb does not follow the prices of the chosen commodities very well. Table 5 shows that the highest correlation between the prices of lamb is with grain corn, of .76, which although not negligible, is not as strong as the correlation with other commodities.

Table 5: Correlations between Selected Livestock and Commodity Prices

Commodity	Cattle	Lambs	Chickens
Barley	0.87	0.63	0.92
Soybeans	0.79	0.65	0.97
Grain corn	0.92	0.76	0.97

Figure 20: % Change in Prices of Cattle & Selected Commodities in Ontario



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Figure 21: % Change in Prices of Chickens & Selected Commodities in Ontario

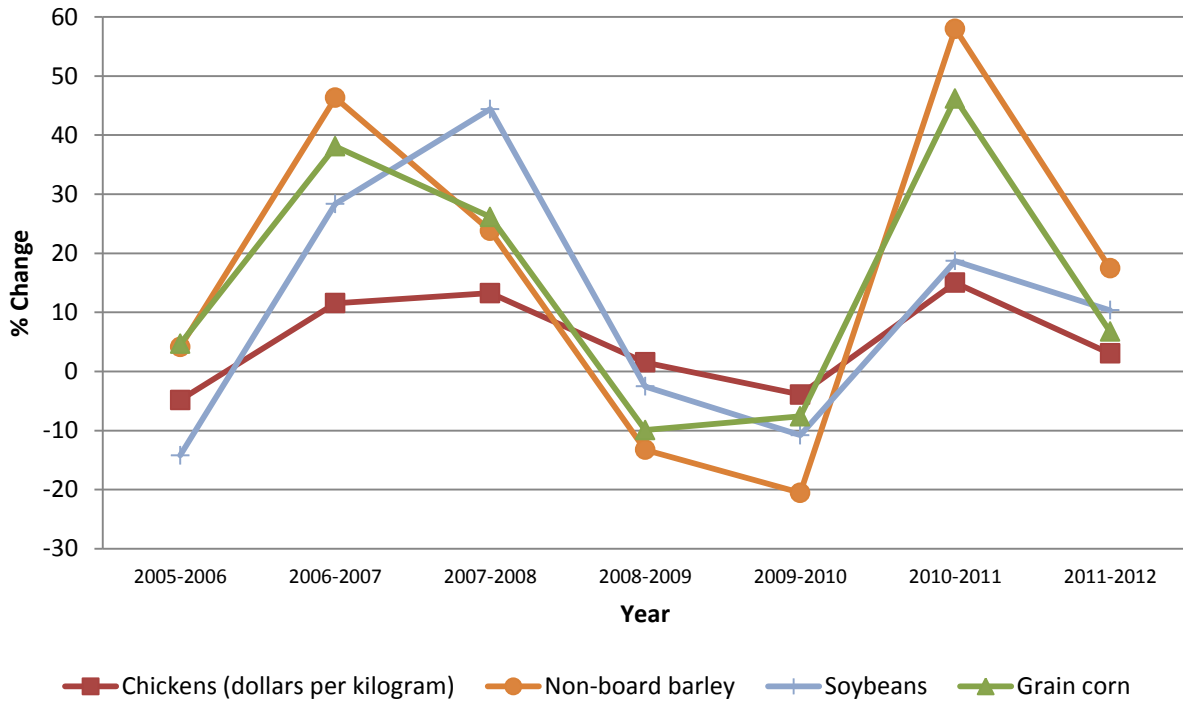


Figure 22: % Change in Prices of Lambs & Selected Commodities in Ontario

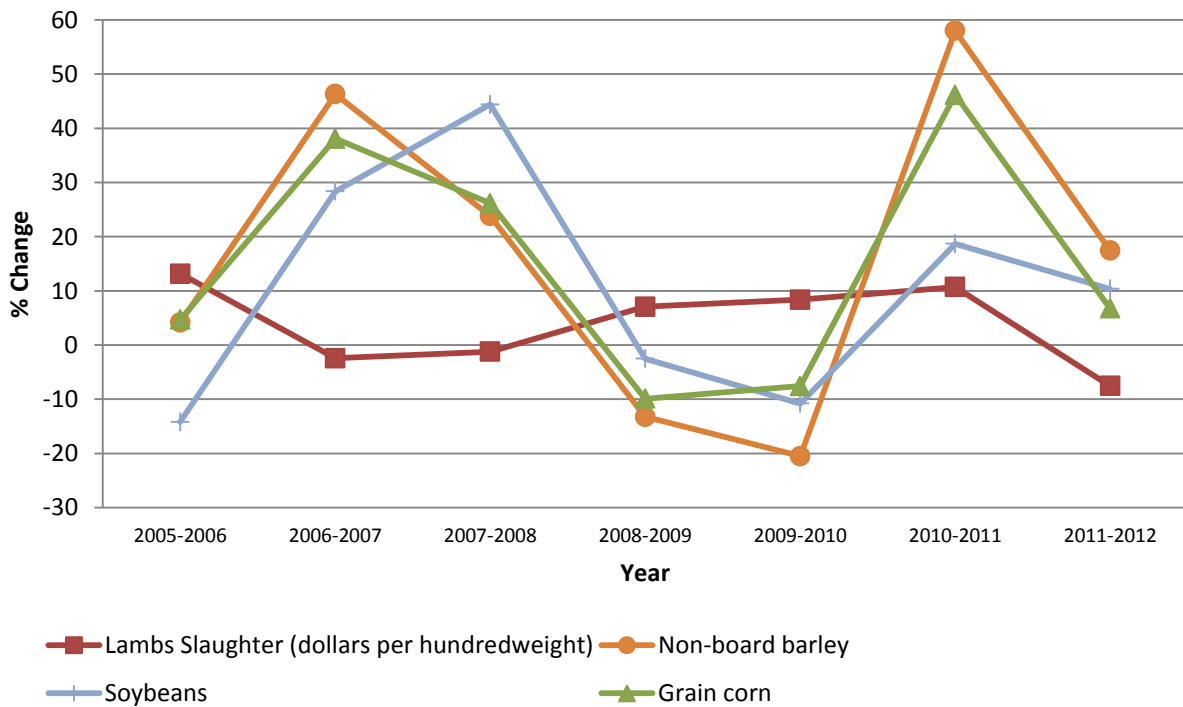


Figure 23 below shows the percentage change from 2006 to 2011 in the number of cattle, sheep and lambs, chickens, and pigs on farms in Ontario, and the change in the number of farms raising these animals. The number of cattle reported decreased by 12%, while the number of pigs decreased by 31%. On the other hand, the number of poultry increased 6% and sheep and lambs increased by 14%. The changes in the number of farms tending to these animals may explain the decreases in the number of animals. The number of farms reporting cattle decreased 18% and those producing pigs decreased 36%. Poultry farms only saw a decrease of 1%, while farms reporting sheep and lambs increased 5%.

These changes may also explain some of the price changes in livestock. Basic supply and demand theory dictates that as supply decreases, cost increases. The increase in the prices of commodities that are a part of the feed in these livestock may make it unprofitable for many farms to keep some of these livestock. They may not be able to pass on the increased expenses in tending these animals on to their customers and may therefore, experience a decrease in demand.

Figure 23: Change in Livestock and Farms in Ontario from 2006 to 2011

