

Approving intensive livestock operations: conflict in the countryside in southwestern Manitoba

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Abstract: Confinement agriculture is fast becoming the dominant livestock raising system in North American agriculture. In southwestern Manitoba, this transition is partially led by the recent construction of a large-scale Maple Leaf Pork Processing Plant in Brandon, Manitoba. The current production capacity of the Brandon operation is 2.5 million hogs per year. This capacity will rise to 5 million hogs per year when the plant adds a second shift in 2003. One of the more alarming results of this production facility has been the contentious nature of locating intensive livestock operations (ILOs)¹ in the rural municipalities adjacent to, and beyond the boundaries of Brandon. These local conflicts are reminiscent of the 'Not In My Back Yard Syndrome' (NIMBY) notion that became household language in the 1980s in, and adjacent to, larger cities in North America. This paper examines the existing decision-making process as well as recommendations of two studies of the industry, one independent of government and the other commissioned by the Government of Manitoba. The issues of locating ILOs are further described through content analysis of local media coverage of municipal decision-making. This is followed by an analysis of governance issues that have arisen with respect to hog production and processing in Manitoba. The findings are discussed based upon a force-impact-response model. The paper concludes with recommendations for further research.

Key words: intensive livestock operations, governance, land-use conflicts, agricultural restructuring

Introduction

In recent years there has been a shift in the meat packing industry from locations in urban centres to rural communities. Corresponding with this shift is a movement toward large-scale producer operations, referred to in the literature as confinement agriculture. Most often cited examples include hog production in North Carolina (Furuseth 1997) and the meat

packing industries in Iowa (Leistritz 1997) and Alberta (Broadway 1998, 1999, 2000, 2001). More recently, the subject of both hog production and processing has been criticized in Alberta and elsewhere (Epp and Whitson 2001). Furuseth (1997) describes the concentration of hog production on fewer operations and the contraction of these operations into a smaller number of confinement agriculture friendly counties. The work of Broadway (1998, 1999, 2000) and Leistritz (1997) examines the socioeconomic impacts of large meat packing plants in rural communities. Work such as this provides a framework for examining the changes currently taking place in southwestern Manitoba.

The province of Manitoba is experiencing intensification in the hog sector. Since 1995, hog production has increased faster than at any other time (Figure 1). In addition to a proposal from Schneider's in Winnipeg to add a second shift, the 1999 opening of the Maple Leaf hog processing plant in Brandon, Manitoba has created a demand for hogs to be produced locally. As a result, the construction of ILOs has both proliferated across southern Manitoba² and become a contentious issue within municipalities where ILO proposals are being brought forward. The provincial government recognizes both the economic importance of the hog sector to agricultural communities in financial crisis and the potential negative impacts of such operations on the environment, the health of citizens and the communities in the vicinity of hog barns.

The purpose of this paper is to analyze the impacts of restructuring the hog industry in Manitoba on farms and in communities, and the responses of farmers and communities to these impacts. First, a conceptual framework, based on political economy, is presented for the analysis. Second, the context of the hog-raising and processing sectors is outlined

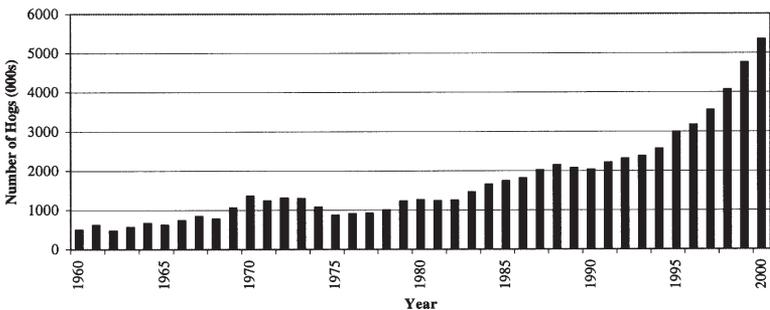


Figure 1: Hog production in Manitoba, 1960-2000 (Source: Manitoba Agriculture and Food 2001a).

beginning with a description of the Maple Leaf operation in Brandon. This leads to the main focus of the paper, namely assessing the impacts of, and responses to, ILOs in southern Manitoba. Four sources of information are examined for this assessment, namely: two reports on public hearings; content analysis of local media coverage on the issue; and, the recent provincial convention debate on resolutions put forward regarding the hog industry in Manitoba. The implementation of large-scale, confined modes of hog production and processing and the restructuring of the hog sale system were the domain of a Conservative government in Manitoba, particularly between 1988 and 1999. However, a change in government to the New Democratic Party (NDP) in 1999 left the party with difficult questions about the raising, selling, and processing of hogs in Manitoba, particularly given the uncertainties facing farmers in the post-Crow Rate era (Ramsey and Everitt 2001).

Conceptual Framework

Troughton and Leckie (2000) have explored the nature and impacts of confinement agriculture, and in doing so, offered it as subject matter ripe for study in contemporary agricultural geography. Among the seven concluding points Troughton and Leckie made about confinement agriculture was the suggestion that models of political economy need to be adopted in a more central way if modern agriculture is to be described and explained in any substantive way. One potential model, not uncommon in agricultural geography, is the force-impact-response model (Ramsey and Smit 2002; Bradshaw and Smit 1997; Smit *et al.* 1996)

The model applied in this study (Figure 2) has been modified from past force-impact-response models. It adopts the force-impact framework put forth by Ramsey and Smit (2002) by recognizing a range of external forces (economic conditions, policies, and three environments—production, biophysical, and social), as well as impacts on both farmers (individual and family condition) and communities (economic functions, institutional and informal structures, conditions). The model also includes responses in a similar fashion to that developed by Ramsey *et al.* (2002). That is, faced with changes and the impacts brought on by these changes, farmers can respond by continuing as is, modifying existing operations, re-specializing to another agricultural product, diversifying into other agricultural products, or exiting agriculture altogether. Likewise, a community's response is a matter of degree as it is driven by the impact

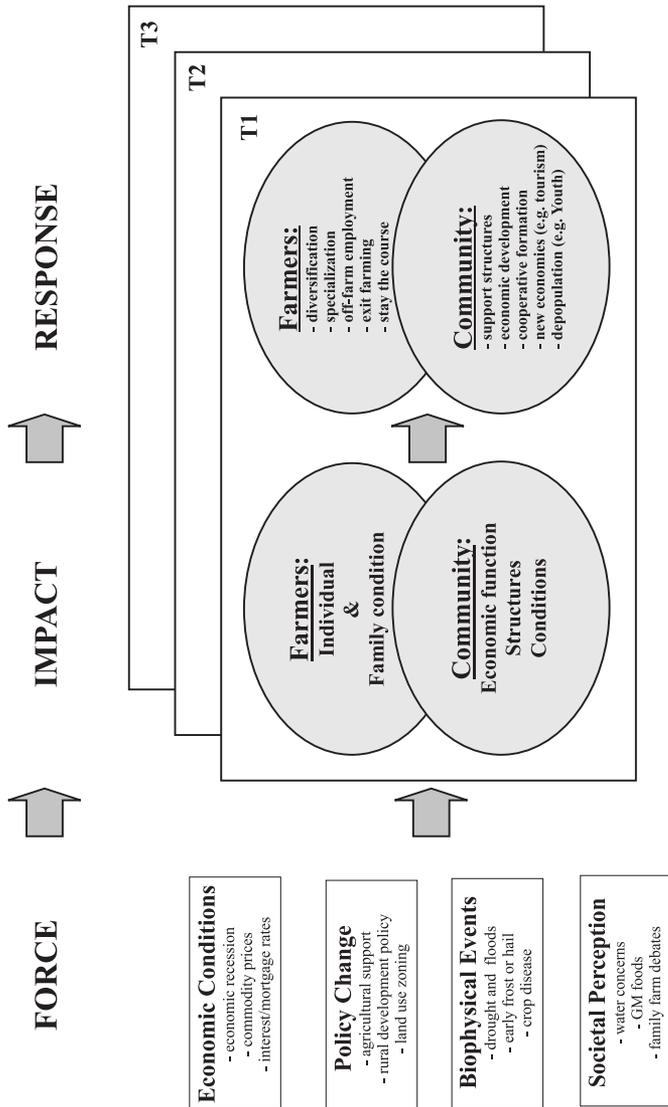


Figure 2: Force-impact-response model for hog production in Manitoba.

the forces have on the community. This paper adopts this force-impact-response approach to theorize about confinement hog production.

Analysis of the Hog Industry in Manitoba

Background:

Manitoba is the latest Canadian province to develop its hog industry. Its contribution to the national hog production is growing rapidly. While accounting for only about 3 percent of the total human population in 2000, Manitoba accounted for 22.7% of the total hog production in Canada making it the third largest producer behind Québec (28.8%) and Ontario (24.0%) (Manitoba Agriculture and Food 2001b). In 1990, total hog production in Manitoba was 2 million—a decade later that figure was 5.35 million. Over the same period the number of hog farms declined by 55% from 3,150 to 1,430. Whereas hog production was once the domain of the family farm, the decade of the 1990s saw hog production accelerate along with the number of large-scale operations and in particular, confinement raising systems. The average number of hogs per farm has more than tripled over 1990 levels.

Prior to mid-1999, hog processing in Manitoba took place in Schneider's plants in Winnipeg and the Springhill plant in Neepawa. In July 1999, the first shift at the Maple Leaf hog processing plant began. Soon after, an average of 45,000 hogs were being processed each week. This is similar to the processing rates at Schneider's hog processing plant (Springhill processed 20,000 hogs per week under contract from Maple Leaf Foods). Both plants are proposing a doubling with additions of second shifts.³ Maple Leaf is expecting to introduce its second shift in either 2002 or 2003 with an expected production average of 90,000 hogs processed at the Brandon plant each week.

The demand created by the Maple Leaf processing plant also created opportunities for local producers to increase their hog production. The developing relationship between processor and local producers notwithstanding, Table 1 lists additional reasons why hog production and processing is on the rise in Manitoba (Fallding 2001).⁴

While many of these conditions have existed long before the recent spike in hog production, it could be that the unique combination of these factors at this point in the history of the hog industry has produced the spike. Furthermore, a case could be made that some of the reasons are not reasons but rather the *consequences* of the growth in hog production.

Table 1: *Reasons for the increase in hog production and processing in Manitoba.*

Factor	Reasoning
Availability of feed grains	<ul style="list-style-type: none"> • Southern Manitoba is primarily agricultural land used to grow grains for market. • The feed grain market provides the opportunity for farmers to diversify. • Local markets also mean reduced transportation costs for farmers.
Diversification of risk	<ul style="list-style-type: none"> • Commodity prices have been fluctuating at or below current levels limiting farm net income. • By diversifying activities farmers can, in theory, reduce the fluctuations in their net income by being less reliant on one commodity.
Increasing world demand for agricultural products	<ul style="list-style-type: none"> • An agricultural economy is in a prime position to meet this growing world demand and in particular pork products.
Crow Benefit	<ul style="list-style-type: none"> • The Crow Rate for grain was eliminated in 1996. • As a result farmers need to seek new economic opportunities.
Technology	<ul style="list-style-type: none"> • Improvements in environmental controls, management systems, computerized feeding, climate control, animal husbandry and genetics have improved efficiency and productivity regardless of location.
Investment and profit potential	<ul style="list-style-type: none"> • Input costs are low and the return on investment is between 10 and 15 percent. Rural areas are a source of cheaper labour than urban centres. • As it takes few people to run a high tech ILO, concerns of farm labourers organizing is reduced.
Synergy	<ul style="list-style-type: none"> • Large-scale hog processing provides economies of scale, corporate ownership, and control over inputs throughout the production chain (vertical integration). • Production and processing grow in concert.
Government policy	<ul style="list-style-type: none"> • The Government of Manitoba and the City of Brandon provided huge incentives to Maple Leaf in exchange for them locating in Manitoba and in particular, Brandon. • For example, incentives included relaxing environmental laws - Clean Environment Commission hearings were never held despite public requests for hearings - and a promise to Maple Leaf not to return to single-desk selling.

Source: Fallding 2001

Finally, with the exception of the availability of feed grains and the willingness of the provincial government to make concessions, these factors are not unique to Manitoba, yet it is Manitoba's hog industry that is growing; or perhaps circumstances in other jurisdictions play a role in the Manitoba situation. All of these points are outside the scope of this paper and would best be addressed by further research.

One last background factor needs to be mentioned, namely the manner in which decisions regarding the location of ILOs are made. In Manitoba the decision-making process can proceed along one of two paths, depending

upon whether or not the proposed site of the ILO is in an area where a land-use plan exists. If a land-use plan does not exist then the local government has no direct involvement in the decision-making process. Their role is restricted to making presentations to senior government. It is the province that makes the decisions at each step. Alternatively, with a land-use plan in place the project proponent consults with staff from the Rural Municipality (RM) office, Manitoba departments of Agriculture and Food, Intergovernmental Affairs, and Conservation. Application for a development permit is made to the RM/Planning District which then consults a provincial Technical Review committee. Where livestock production is a permitted use (subject to zoning by-laws) a development permit is issued. At this point the provincial government (Manitoba Conservation) grants permits for manure storage and water rights. The RM/Planning District works alongside the government throughout the project. It is worth noting that despite the decision-making powers of the province's Planning Districts, the province retains the right, under the Planning Act, to approve or disapprove of land use.

Citizens' hearing on hog production and the environment:

Once the announcement was made that Brandon was being considered as a site for a large-scale hog processing plant concerned citizens began talking about the potential negative impact it would have on the environmental, economic, social, and public health aspects of the region. When Maple Leaf Meats (MLM) was granted the appropriate permits and licences without holding Clean Environment Commission hearings, these local citizens held their own hearing (Canadian Centre for Policy Alternatives-Manitoba 2000). In addition, the hearing commissioners examined articles describing large-scale meatpacking operations in other jurisdictions. The subsequent report is organized around the five major categories that emerged from the hearings—public health, general demographic aspects, social aspects, economic aspects, and environmental aspects. Table 1 identifies the scope of each category and highlights the conclusions drawn by the commissioners. No single category was identified as being more important than the others. On the contrary, the categories are described as mutually interdependent. This characteristic is evident in Table 1.

The Government of Manitoba endorses the concept of 'population health' the foundations of which are nine determinants of health (Manitoba Health 1997). The information received during the hearings was relevant to three of these determinants—income and social status, employment

Table 2: Summary of potential impacts identified at the public hearing in Brandon.

Category	Scope	Highlights/Conclusions
Public health	Applicable determinants of health: income and social status; employment and working conditions; safe and clean physical environments.	"Human health, as defined by the World Health Organization and the governments of Canada and Manitoba, is also clearly compromised..." (Canadian Centre for Policy Alternatives-Manitoba 2000, 13).
General demographic aspects	Hog production; processing plants.	A decrease in the number of stable family units and an increase in transient, single workers resulting in a change in age composition, family structure and ethnic composition.
Social aspects	Large-scale hog production; large-scale meat processing.	<ul style="list-style-type: none"> • Associated problems include: homelessness, crime, domestic violence, child abuse, employee turnover, reduced wages, lack of adequate low-cost housing, health problems (associated with high-speed worker lines), and stress on the education, social services and communication infrastructure. • Corporation becomes more powerful than local government
Economic aspects	Private benefit and public cost; public good; sustaining individual producers and rural communities; economics of regulation; future of agriculture; future costs: who should pay? Who will pay?	<ul style="list-style-type: none"> • Unclear who is liable for the costs of future remedial work and liability - fear is that the public will bear the costs. • Vertical integration forces individual producers out of business and contributes to a decrease in rural population.
Environmental aspects	<i>Production</i> - emissions, waste and waste disposal, water consumption. <i>Processing</i> - water demand, odour, liquid waste, solid waste, downstream concerns.	<ul style="list-style-type: none"> • Reduced volume of water available for other uses. • Health problems related to emissions. • Odour a problem for people living downwind. • Contamination and pollution of ground and water.

Source: Canadian Centre for Policy Alternatives-Manitoba 2000

and working conditions, and safe and clean physical environments. While it was recognized that new jobs would be created by the growth in the hog industry, wages are known to be consistently lower than average per capita income and there is a high rate of employee turnover (averages 100% annually). Under these income and social conditions the health of the population is compromised with increases in homelessness, crime, domestic violence and demands for social assistance. There is a high rate of injuries and illness, especially chronic respiratory illnesses such as asthma and bronchitis resulting from an unsafe and dirty working environment.

The rural landscape changes as family operations are forced out in favour of corporate owned, industrial production. High turnover rates

and a depleted local labour force changes the age-composition, family structure and ethnic composition of communities. Small communities are particularly affected.

Overlapping the shift in demographics is a series of additional social changes identified at the hearings. These include a loss of local control over decisions affecting the community resulting in local strife among residents and a decrease in public confidence as large corporations negotiate incentives with senior governments. Large-scale corporations tend to integrate all functions of the hog industry forcing smaller suppliers, usually locally owned, out of business in favour of cheaper inputs. Loss of local business results in a decrease in a community's population. Furthermore the increased demand on the health, social, and justice systems requires a shift in the corresponding infrastructure.

The report recognizes the fact that the industry brings the promise of new jobs, increases in population, increases in the tax base, and the establishment of new businesses; however, the report also points out there are significant public costs, too. In addition to having a social impact, there would be an economic impact. First, the social infrastructure would need to be increased. Second, money that would normally multiply by staying in a community would now leave the community and go to corporate headquarters. Finally, concern was raised about who would end up paying the future costs of upgrading the water treatment facility, liability for downstream damage, decommissioning and clean-up costs and monitoring costs for compliance with licence and secondary environmental impacts. The general fear was that because of gaps in federal and provincial legislation it would become a public cost.

Concern over the environmental impact included air quality, contamination and pollution of surface and ground water as well as the ground itself, and the increased demand for water. All of these aspects were feared to affect human health and the surrounding ecosystems. Again, government legislation was seen as being inadequate.

The report made eleven recommendations with four themes emerging. Four recommendations targeted legislative changes at both the federal and provincial levels including provisions to help governments resist the temptation to provide large subsidies for corporations to locate in certain areas. The recommendations point out the need for greater public participation and access to documents. Finally, the role of government in areas such as cooperating with municipalities and reviewing and supporting research into the impact if ILOs on water and human health is described in four of the recommendations.

Livestock stewardship panel:

Four months after the Citizens' Hearing on Hog Production and the Environment the Government of Manitoba formally announced its Livestock Stewardship Initiative with the aim of "ensuring the sustainable development of Manitoba's livestock industry" (Tyrchniewicz *et al.* 2000, 1). The public hearing process began with the release of a discussion paper in June 2000, followed one month later by ten days of hearings before the Stewardship Panel in six southern communities—two urban (Winnipeg and Brandon) and four rural (Morden, Arborg, Dauphin and Steinbach). To clarify points raised in the submissions the Panel also met with key industry, government, and public interest stakeholders.

Table 3 indicates that environmental monitoring and evaluating proposals were the topics most often raised at the hearings. The other popular issues were property values and property taxes and the overall economic impact. These four items represent 82% of the total. Further analysis of the topics reveals that presentations were predominantly in favour of expanding the hog industry and were more inclined to make suggestions for improvements rather than condemning the initiative. For example, most presentations indicated that current regulations (i.e., assessment and environmental) were acceptable; however, monitoring and enforcement of these regulations was inadequate.

Lack of enforcement of environmental regulations was raised at each hearing. Presentations on the topic of the environment repeatedly identified concerns about air and water quality and manure management. Performance bonds and educating producers were often cited as being necessary. Common themes within the evaluating proposal topic included

Table 3: Summary of topics livestock stewardship public meetings.

Topic	Morden	Arborg	Brandon	Dauphin	Winnipeg	Steinbach	Total
Environmental monitoring	8	16	12	3	14	8	61
Evaluating proposals	5	7	9	3	9	6	39
Property values and property taxes	3	2	4	1	4	5	19
Overall economic impact		3	4	2	3	3	15
Other issues	3	2			3	2	10
Labour			2	1	2	2	7
Farm ownership		2	1	1	1		5
Public health			1		2	2	5
Animal welfare					2	1	3
Totals	19	32	33	11	40	29	164

Source: Tyrchniewicz *et al.* 2000, 14-21

(in no particular order): (1) encouraging public input; (2) decisions based on science; (3) providing written reasons for rejection; (4) the AU (animal units) limit; and, (5) making available an appeal process.

Presentations were more likely to cite the tax base advantages than any disadvantages. However, to put it into context there were just as many voices recommending further studies of the impact of ILOs on property values. Urbanization of farmland and zoning by-laws were frequently mentioned as areas of concern with respect to property. A positive outlook about the overall economic impact was ubiquitous. Only in Brandon was concern raised about large barns creating few jobs and the fact that they do not buy locally. The concept of new generation cooperatives⁵ versus vertically integrated operations was mentioned a number of times under the topic of farm ownership. Overall, research was mentioned as necessary in order to better evaluate proposals and monitor environmental impacts. Research was also recommended to better understand the effects of the location of ILOs on property values and to compare the illness and injury rate in the hog industry to other industries.

The Panel concluded that a number of key issues required further analysis. Four research roundtables were convened to further explore issues of water quality, air quality, manure management, and monitoring and information systems. Scientists and practitioners knowledgeable in these matters were invited. The final report, released in December 2000, included 40 or so recommendations in four key areas. First, the role of the provincial government in sustainable livestock development was the focus of about two-thirds of the recommendations. The overarching recommendation called for a commitment of human and financial resources to: (a) examine the hog industry in the overall context of agriculture in Manitoba; and, (b) provide a regulatory framework and a monitoring and enforcement effort. The second recommendation called for reliable information to be made available to the concerned public. The role of ILOs in sustainable rural development was the focus of the third recommendation. Intensive livestock operations were viewed as only an option. Farmers not wishing to go the ILO route should be assisted. The final recommendation supported provincial and municipal participation in the decision process for siting ILOs, with the province responsible for the environmental impact before construction begins. As of September 2001 the province has yet to respond to these recommendations.

Media coverage:

The rate at which the media covers an issue can be considered an indication of its public interest, at least in the mind of the media—the

greater the public interest the greater the coverage. A total of 40 articles on the hog industry appeared in the six newspapers surveyed.⁶ It should be noted that the high number of articles found in the *Brandon Sun* may be explained in part because of its regional coverage, that is, articles would be written about other communities as well as the Brandon situation. The Panel included two public meetings in Winnipeg as part of the consultation process. In spite of this fact, the urban media - *Winnipeg Sun* and *Winnipeg Free Press* - reported little on the issues.

Most of the articles relating to the hog sector focused on the debate in and around municipal council meetings over the location of ILOs, and the effects such debates have had on families and communities. For example, Arbor Mayor Bert Kindzierski told the Panel "previous mega-livestock projects have created internal family conflicts as well as made enemies out of neighbours" (Spring 2000, 1). However, collectively, the issues that were raised were not mutually exclusive. For example, the debate over the cost of ILOs as a form of economic development was discussed in terms of air quality, water quality (especially drinking water), and manure management to name a few.

Governance:

The Sustainable Livestock in Manitoba report and the NDP government's continued support for both the hog processing and industrial hog production sectors warrants a discussion of 'party' versus 'government' policy. The provincial party has longstanding policies that support the family farm, single-desk selling and labour rights. However, the agricultural resolutions debated at the provincial convention in Winnipeg in February 2001 raise questions about whether implementing such policies will take place. Only three of the nine hog-related resolutions submitted to convention were debated (Manitoba New Democratic Party 2001). The first motion, which was distributed to Convention delegates as an emergency resolution, called on the federal government to recognize the farm crisis (Turtle Mountain NDP Riding Association 2001). The delegates gave unanimous consent to this resolution. The provincial government followed up this consent with a motion in the legislature calling upon Ottawa to recognize the scale of the agricultural crisis in Manitoba, and to provide \$500 million in immediate emergency assistance. Following unanimous consent in the Legislature, an all-party standing committee on agriculture conducted public meetings across the province to hear the voices of concerned citizens. The results of these meetings and the unanimous resolution have been presented to the federal government. As of September

2001 the Federal Government had not responded. However, it should be noted that in the fall of 2001, a Liberal Caucus Committee held a number of meetings across Canada allowing citizens to voice their concerns about the future of farming in Canada. These meetings included two Manitoba stops, in Winnipeg.

A second motion called for a return to single-desk selling⁷ of hogs and was also distributed to Convention delegates as an emergency resolution (Interlake NDP Riding Association 2001). The Conservative Government eliminated single-desk selling in 1996. While not receiving unanimous support, this motion was also supported by a large majority. This motion, however, sparked the longest debate of the convention (Fallding 2001) including a shouting match that resulted in one delegate being called upon to apologize to another. While the amended motion passed, it appears it is moot for two reasons. First, Rosann Wowchuk, Minister of Agriculture, supports the motion only if the farmers want it, although it remains to be seen whether those hog farmers displaced by the elimination of single-desk selling and the move toward confinement production systems will be included in such a discussion. Second, media reports have quoted the Premier as promising Maple Leaf Meats that there will be no return to single-desk selling. In a media interview following the debated motion, the Premier stated, “the majority of producers don’t want to return to [single-desk selling]” (Fallding 2001, A1). A key informant interview conducted with an individual within the agricultural ministry stated that the comments by the agricultural ministry and the Premier could be based on discussions with both agricultural representatives and discussions with farmers that took place during a series of ‘rural tours’. It appears that this outreach is an attempt of a largely urban and northern based governing party to better understand the issues facing Manitoba farmers.

The third motion called for an immediate moratorium on further construction of ILOs until the issue could be assessed. The debate included contributions by two cabinet ministers, including the agricultural minister, expressing concerns that such a moratorium would have negative impacts on farmers and hog industry. A vote was called by the moderator, while delegates were still lined up at both the ‘pro’ and ‘con’ microphones. The motion was defeated. Based on participant observation it was clear that those voting for the motion represented primarily the two Brandon riding associations and southern agro-Manitoba riding associations. While this may not reflect a formal ‘split’ in the party between the northern and urban centres (less Brandon) and agro-Manitoba, there did appear to be a lack of understanding of the impacts ILOs could have on the rural landscape and

in rural communities. The complexities of the issues regarding ILOs in rural Manitoba have been illustrated in the media prior to and following the NDP convention. Examples include a fire chief in Lowe Farm, Manitoba resigning over concerns related to ILOs not having to follow the same building code requirements (e.g., sprinkler systems) as other commercial operations (Friesen 2001), and more recently resident concerns about water quality issues (Dalla-Vicenza 2002).

Discussion

Force:

Forces affecting, or causing the movement towards confinement hog production are complex and interrelated. Economic conditions include the demand for hogs established by the location of the Maple Leaf hog processing plant in Brandon. This has followed with the proliferation of corporate interests (e.g., Elite Swine, a subsidiary of Maple Leaf) who are aggressively seeking out locations and interested individuals willing to enter into an ILO contract. Also, the crisis in the grain sector has resulted in farmers seeking alternative farming ventures in which to engage. The policy environment affects the hog sector in two ways. First, the provincial government is supportive of the hog industry as it is perceived to provide skilled labour both in processing and hog raising and thereby scores political points in addressing the farm crisis in southern Manitoba. In fact, Assiniboine Community College in Brandon recently began offering programs designed to provide skills to ILO workers. Second, while municipal governments facing declining populations are often concerned with negative impacts, they equally welcome the economic development ILOs provide through increasing the tax base and maintaining the population base.

While the growth in the hog industry may be viewed as an economic blessing for rural and small towns, there are also environmental, public health and social issues related to the production and processing of hogs that impact farmers and communities. Restructuring of hog production and processing are relatively new to Manitoba, but their reputations precede them (Broadway 1998; Qualman 2001). In other jurisdictions there have been serious environmental, public health and social impacts wherever ILOs or large-scale processing plants have located.

Impact:

The impact on Brandon could be seen shortly after it was announced that Brandon was to be the site of a new and modern hog processing plant.

Supported by the experiences of other jurisdictions in a similar situation, area residents began expressing concerns about the environmental, public health and social impacts of the Maple Leaf operation. Concerned citizens demanded their government hold Clean Environment Commission hearings, but the government refused. Under a cloud of suspicion, Maple Leaf Meats was eventually granted the necessary development permits by the Brandon and Area Planning District and the provincial government. Opening of the business then set the stage for a series of debates in municipal chambers in southern Manitoba regarding ILO location and development.

The less than open communication surrounding the granting of the development permits to MLM fueled speculation concerning the secrecy. Why, for example, would the government not hold public hearings on the issue when the public clearly sought such hearings? It is possible that the government firmly believed that there was no basis for concern, that is, the public was overreacting and therefore there was no need to waste taxpayers' dollars on Clean Environment Commission hearings.

If this were the case then why would the provincial government be so reluctant to make public the government-MLM agreement? Refusing to hold public hearings combined with secrecy around the agreement with MLM leads one to come to at least three possible conclusions. First, making information public either through public hearings or documents, would, in the eyes of the government, jeopardize MLM settling in Manitoba. After all, Manitoba was only one of many players vying for MLM's business. Without disclosing the terms of the agreement the public will never know how much MLM was offered in incentives to choose Manitoba for their operation

The second possible conclusion feeds off of this last point. With different jurisdictions bidding for their business, MLM is in a clear position of power. They are certainly more powerful than local governments, and some would argue even more powerful than the provincial government (Qualman 2001). The lack of clear federal and provincial government responsibilities leaves the public, not the industry, vulnerable for future costs associated with everything from monitoring the environmental impact to cleaning up if MLM decides to leave. In fact, following this argument a step further, MLM, or any other industry that pits one jurisdiction against another, is committed to their present location only to the extent that the current location begins to turn a profit and a better incentive package comes their way.⁸ While these conclusions are speculative, they are consistent with the recommendations of the government's own Livestock

Stewardship Panel (LSP) which calls for greater public access to information and participation in the decision-making process in the future.

A third conclusion could have to do with nothing more than political timing. The Progressive Conservative Government was in power in Manitoba from 1988 to 1999. With a stronghold in southern, agro-Manitoba, this government eliminated single-desk selling in the hog sector and constructed the deal to develop the Maple Leaf plant in Brandon. As the plant opened the political landscape changed. Not only did the NDP return to power, they did so by electing Members of the Legislative Assembly (MLAs) in two agricultural ridings and in both Brandon ridings. Given the agricultural crisis and the perception that the Manitoba NDP is urban and northern based, the new government faced a great deal of pressure to not only honour existing agreements but also to endorse and further develop the hog sector.

Both the Citizens' Hearings on Hog Production and the Environment and the Livestock Stewardship Panel agreed that the growth in the hog industry poses serious environmental, public health and social risks to Manitobans with the effects on the quality of air, water and land being the areas of most concern. The fact that changes in the hog industry in Manitoba can stimulate both government and non-government debate and attract the media coverage that it did is testament to the impact this issue has had on the citizens of Manitoba for whatever reason. Perhaps it is the shock of the sheer magnitude and swiftness of the changes, or the reputation of the industry that people are reacting to. It is an issue worthy of further research as the government considers the Panel's recommendations. This point is discussed below under 'Response'.

While the two public hearings agreed on many issues there was one clear difference. Public opinion in the Panel hearings tended to view the growth in the hog industry as supplying new jobs, reversing the decreasing population trend in small towns thereby increasing the local tax base, and attracting new businesses. That is, the Panel viewed properly managed ILOs as having a positive economic impact. This could be construed as a ray of light in an otherwise dark and gloomy picture (i.e., environmental damage, lack of public participation, threats to the family farm and threats to public health). However, while job creation is a given, there was no mention of the *quality* of the jobs created.

Industrialization of the hog industry has been around since the mid-nineteenth century, but recent restructuring has meant even more specialized assembly line operations and subsequently a greater division of labour. The work is repetitive, requires little skill, and is boring for the

workers. This is evident in high turnover rates at non-unionized plants where wages have been reduced (Broadway 1999; Novek 1992). While more jobs are created, there was no mention in either of the reports of other jobs that would be threatened or even lost as a result of this restructuring. For example, meat cutters at one time were a highly regarded and valued trade because of their skill in cutting the whole animal. Today, modern meat processing facilities have reduced the demand for this trade and replaced it with value-added processing and a series of single tasks requiring less overall skill.⁹ Furthermore, the vertical integration of the industry means the industry controls the majority of the inputs. By virtue of economies of scale, large corporations purchase their inputs more centrally thus putting local suppliers out of business.

This raises the further question of how much of the corporate profits stay in the community and how much leaves? For example, owners of family farms residing in the area would normally buy locally. In contrast, the corporate owners of MLM do not live in Brandon and are likely to spend very little in the city. As hog production also goes the way of the corporation it is safe to assume their owners do not live and spend money in the community where the ILO is located. Presently, one can only speculate on the overall economic impact. Some shift in the local economy is definite. The question is, when the 'new' economy stabilizes will there be more, or less, money in the community? It is a complex question that can only be answered with further research.

Before leaving this last point there is one more detail brought out in the analysis worth discussing in this context. The sudden and massive increase in demand for hog production appears to have put added pressure on the family farm and the families themselves. The trend amongst hog farmers is not unlike the trend in agriculture in general towards fewer, but larger farms. When the demand is for over 5 million hogs per year farmers with small operations are faced with questions that are not easily resolved, for example: do I join the trend and diversify into livestock? and, can I afford to grow that much, that fast? Economies of scale favour the largest operators while smaller ones may succumb to working under contract for larger operations, or be squeezed out of farming altogether. This situation is likely to result in fewer family owned farms and more corporate owned farms. Stories reported in the news cite how this decision is dividing families (Spring 2000).

After two years of operating with one shift, a number of socio-economic issues have surfaced: absenteeism (particularly the day after payday), alcoholism, and high turnover rates. Brandon faces housing

shortages that will be exacerbated by the addition of the second shift and the expansion of the Shilo military base just west of the city. Based on a survey of first shift employees at MLM, Rounds (2000) predicted the impact of MLM on transportation, housing, daycare, education, and employment in Brandon. Rounds predicted that each of these areas would impact the city in the future irrespective of a second shift being added.

A number of environmental mishaps have occurred with respect to effluent from the plant. Of particular concern were two occasions in the summer of 2000 when breakdowns in the ultraviolet system for disinfecting waste water occurred and resulted in a breach of the agreement Maple Leaf has with the City of Brandon. On the subject of water, the City and Province provided the \$12 million for the plant that is exclusively used by Maple Leaf Meats, thus all results relate directly to the operation. City engineers operate the water treatment plant and the City plans to convert its chlorine system to the ultraviolet system in question (Nickel 2000).

While it is the purpose of this paper to examine the impacts and responses of large-scale meat packing and ILOs on rural life, it is worth stepping back, if only for a moment, and look at the bigger picture. Decisions to locate ILOs have been controversial mainly because of the negative impacts they could have on the quality of life in communities and on the pristine countryside (even urban dwellers, wishing to escape the stress and pollution of the city, will retreat to the countryside from time to time). In the larger context there seems to be a growing trend for rural communities to be faced with decisions that threaten their quality of life. In addition to decisions about locating ILOs, rural municipalities have recently been faced with big decisions regarding the intake of solid or hazardous waste from urban centres whose landfill sites have reached capacity or are unsuitable. Historically, rural residents did not have to face such 'unpleasant' decisions.

Response:

Data suggest that farmers are responding by getting out of hog farming (i.e., the decrease in the number of hog farms from 3,150 to 1,430) or trying to compete by diversifying their farm operation to include ILOs (i.e., increase in the average size of hog farms). This conclusion is based on secondary data. A more accurate picture would come from interviewing farmers to see how much effect the change in the hog industry had on their decisions, especially those that chose to leave hog farming or even farming altogether. Furthermore, as the force-impact-response model indicates it would be necessary to examine farmers' responses over time. The amount

of time would depend on how long it would take the hog industry to 'normalize' in the province and thereby give farmers adequate time to respond.

Similarly, it is too early to get a full picture of how communities are responding. The immediate impact appears to have divided communities, but it is too soon to examine how communities will change as a result. The work of Rounds (2000) suggests that many of the formal structures in Brandon will have to adjust in order to accommodate the impact of the first shift of MLM workers (i.e., transportation, housing, education and daycare). Informal conversations indicate that MLM has forced lower-end wages upward. This would be logical since the Brandon and area labour market has been exhausted and MLM is beginning to import labour from other parts of Canada. Recently, they returned from a recruiting mission to eastern Canada where they reported recruited 100 new employees (Nickel 2001a). More recently, MLM has recruited workers from Mexico (Nickel 2001b; Bird 2001).

A logical time to do primary research on the impacts and responses of the hog industry on southern Manitoba, and in particular Brandon, would be just before MLM introduces their second shift, currently projected to be 2002. This would establish a benchmark to compare the responses and impacts of the second shift.

Finally a broader analysis of the newspapers could enhance understanding of the impacts and responses of the hog industry by providing more data to draw from. This paper analyzed only newspapers within the same timeframe as the hearings and within the readership of the local papers. A wider, longer timeframe of analysis would yield more data because in reality such impacts and responses reach beyond a one-month time period and the six communities. In addition, newspaper coverage of the hog issue could be compared to other issues (e.g., Minnesota's water diversion project and its implications for Manitoba) for frequency, amount and scope of coverage as indicators of the public's concerns. This would put the hog issue into perspective relative to other major issues facing Manitobans.

Conclusion

With the support of the provincial government, both Progressive Conservative and New Democrat, Manitoba has become a major producer of hogs in Canada. From 1990 to 2000 the number of hogs produced in

Manitoba increased from 2 million to more than 5 million and that number could increase still further if local production can match demand when the Maple Leaf hog processing plant adds a second shift in 2002.

This paper analyzed secondary data within the context of a force-impact-response model to ascertain the impact of large-scale corporate owned hog processing in Manitoba on farmers and communities and their subsequent responses. The impact was felt immediately after it became known that Brandon would be the site of a new, state-of-the-art hog processing plant owned by Maple Leaf Meats. After being denied Clean Environment Commission hearings local citizens organized their own hearings. Subsequent to those hearings, but after Maple Leaf Meats was granted a development permit, the provincial government initiated a Livestock Stewardship Panel. These two documents formed the basis of the analysis in the paper. Local newspaper coverage and pertinent resolutions at the NDP convention rounded out the data for analysis.

It would appear that the province limited public access to information as well as public involvement in the initial decision. The direct impact of this unilateral decision has forced local municipalities to make decisions about the location of ILOs when ILOs are neither clearly desirable, nor undesirable. The ensuing debates have divided community members and communities, pitting proponents of economic development against proponents of protecting the environment and their quality of life as expressed in property values, labour issues, farm ownership and public health. Thus far it appears that proponents of economic development are prevailing.

Documented responses are few at this point. Discussion with community members and continued monitoring of the hog sector, both production and processing, is needed to establish a full picture of how farmers will react and communities change. There are implications for the smaller farm operations and community infrastructure such as transportation, schools, daycare, and social network. Early indications suggest that hog farming is mirroring the agriculture industry in general insofar as it is exhibiting a trend towards fewer but larger farms.

The topic of restructuring of the hog industry is not new but continues to be a controversial one (Hart and Mayda 1997). As the hog industry continues to grow rapidly in Manitoba it is important to continue researching the impacts on farmers and communities and their responses.

Notes

- ¹ Intensive Livestock Operations, or ILOs is a term used in Manitoba and Saskatchewan. In Alberta they are referred to as Confined Feeding Operations, or CFOs. Both terms refer to an indoor, confined mode of production as compared to the age-old method of raising hogs outdoors where the animals can roam freely.
- ² “Between 1990 and 2000...the average number of hogs per farm has more than tripled—increasing from 388 head to 1,290 head” (Manitoba Agriculture and Food 2000, 7). Coinciding with ILOs is fewer hog farms with more capital investment per farm. This point is discussed below under ‘Analysis of the Hog Industry in Manitoba’.
- ³ Since completing the research for this paper Maple Leaf Foods purchased Schneider’s. The future expansion of the Winnipeg plant is in doubt.
- ⁴ The full extent of the incentives has never been established. Repeated efforts to have access to the agreement with Maple Leaf Meats by interested parties was denied; and, when information was forthcoming, it was edited with large sections blacked out casting further suspicion as to whether they acted within the boundaries of their own legislation.
- ⁵ In a New Generation Cooperative, or NGC, selected or closed membership gives the holder the right to vote and the right to purchase equity shares, which are attached to delivery rights. NGCs are organized to add value to an agricultural commodity. In the traditional cooperative membership is open and members receive patronage payments that are unconditional.
- ⁶ Because the inventory was conducted long after the hearings were completed surveying electronic media would be difficult and not as accurate as newspaper.
- ⁷ A single agency markets the hogs on behalf of all producers assuring equitable payment for comparable hogs. Without single-desk selling, companies such as Maple Leaf Meats dictate the price producers receive for their hogs.
- ⁸ Two examples are worthy of note. First, the Carnation plant threatened to leave Carberry, Manitoba when the parent company did not like the workers’ demands and threat of strike. A second example would be MLM closing their aging Edmonton plant prior to opening the Brandon plant using a labour dispute as a reason. The latter warrants further discussion in analyzing future linkages between the hog raising and processing industries in Manitoba, particularly the role of MLM in both sectors.
- ⁹ Additional support for this point is the fact that Safeway has recently eliminated its meat cutters in favour of buying their meats already packaged.

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