

The Development of a Modern Agricultural Enterprise: Beef
Cattle Farming in Ontario, 1870-1924.

By

Margaret Elsinor Derry

A thesis submitted in conformity with the requirements
for the degree of Doctor of Philosophy
Graduate Department of History
University of Toronto

© Copyright by Margaret Elsinor Derry, 1997.



National Library
of Canada

Acquisitions and
Bibliographic Services

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque nationale
du Canada

Acquisitions et
services bibliographiques

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file *Votre référence*

Our file *Notre référence*

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-27909-X

Canada

Dissertation Abstract

"The Development of a Modern Agricultural Enterprise: Beef Cattle Farming in Ontario, 1870-1924", by Margaret Elsinor Derry, Ph.D. Thesis, Graduate Department of History, University of Toronto, 1997.

Agriculture dominated Canadian life in late Victorian times, yet we know little about its dynamics. This dissertation describes one aspect of agriculture, beef cattle raising in Ontario, from a broad perspective in order to illustrate how farming enterprises functioned. The work does so by addressing three basic questions. What type of livestock did farmers think was suitable for the production of cattle commodities in relation to economic reality? What was that economic reality? And what shaped that economic reality?

Chapter One gives the background to the situation in 1870, and assesses general concerns between 1850 and 1920. Chapter Two describes the purebred cattle industry. Chapter Three looks at the production of the ordinary farmer within the framework of breeder/feeder production systems, animal improvement, and specialization of livestock for beef and dairy purposes. Chapter Four outlines policy regulations by reviewing international quarantine problems, attitudes to bovine tuberculosis, and the development of other regulatory concerns. Chapter Five places Ontario's industry within the nation, the continent, and the international market. Chapter Six explains how the cattle industry related to the meat

industry through consumption. Chapter Seven reassesses patterns that emerge in earlier chapters and then outlines some international developments in the industry from 1924 to 1996.

As early as 1865 beef cattle raising in Ontario was part of an international industry, which had developed by 1875 into a transatlantic system in which Canada and the United States functioned together. Regulation of the modern Canadian beef cattle industry was laid down in response to this pattern. While Canadian beef cattle raising remained centered in Ontario, not in the west, cattle bred on Ontario farms after 1890 reflected the needs of the province's dairying enterprise, not its beef cattle industry. As a result, the quality of beef cattle declined in Ontario. Because of production linkages, the Ontario situation affected how the western arm of the national industry functioned. The rise of Ontario's dairy industry, therefore, was intimately related to the decline of beef cattle everywhere in the nation. Farming for beef in Ontario from 1870 to 1924 was a complex operation with national implications, and international linkages.

Margaret Elsinor Derry

Born: May 18th, 1945. Ottawa, Canada.

Education:

B.A., University of Western Ontario, 1964-1967.

M.A., (Degree granted in 1970) University of Toronto, 1967-1969.

Special Student: University of Toronto, 1991-1992.

Ph.D., University of Toronto, 1992-1997.

Major Field: Canadian. Supervisor: R. C. Brown.
Second Reader: C. Berger.

Minor Fields: 1] Modern Britain. Supervisor: A. Robson.
2] Historical Geography. Supervisor: J. Lemon.

Comprehensive Examination: March, 1994.

Teaching Appointments: All at Erindale College.

* Teaching Assistant - History 313Y (Canadian Labour) - 1993-94.

* Teaching Assistant - History 262Y (Introductory Canadian) - 1994-95.

* Teaching Assistant - History 262Y (Introductory Canadian) - 1995-96.

Publication:

"Contemporary Attempts to Understand the Cattle Plague of 1865", **Victorian Studies Association**, Ontario Newsletter, 1994.

Acknowledgments

This work was a labour of love. As an artist who has produced many paintings involving cows and as a purebred breeder of cattle, I am interested in the present-day livestock industry. It has been, therefore, especially fascinating for me to study the historical nature of this farming enterprise.

My greatest debt in this endeavour is to Craig Brown, Chair of the History Department at the University of Toronto. Although I had been away from academic life for twenty years, he was willing to supervise me as a doctoral candidate. He has been generous with his time, and a source of valuable advice ever since. His scholarly command of Canadian history is impressive, and his ability to place information within a broad context literally guided how the research for this thesis was done. Without him, I simply would not have been in the program, nor have been able to absorb the changes in historical scholarly work that had evolved in the 20 years since I completed my M.A.

It was through J. M. S. Careless's course in my Special Student year, and with his help, that I was able to focus on the topic of this dissertation. His kindness, support, and advice in this difficult year I will never forget.

The research for this study, and development of it, was ably helped by my other supervisors and by members of the thesis committee. Anne Robson, supervisor for the modern British area, fired my excitement over material on British agriculture; and Jim Lemon, supervisor for historical geography, guided me through many past aspects of American agriculture. My second Canadian reader and a member of the thesis committee, Carl Berger, always offered good, general advise. Michael Bliss, the other member of the thesis committee, was also very helpful.

The support and faith of my husband, Douglas, and of our two children, Alison and David, who were both university students at the same time I was in the doctoral program, gave me the confidence that I needed to complete the task.

My heartfelt thanks to all of the above people.

The Development of a Modern Agricultural Enterprise: Beef Cattle Farming in Ontario, 1870-1924.

Table of Contents

1. Introduction.	P1-13.
2. Chapter One: Beef Cattle Farming in Ontario - Origins and General Characteristics Between 1850 and 1920.	P14-40.
3. Chapter Two: The Ontario Purebred Cattle Industry.	P41-89.
4. Chapter Three: Commercial Beef Cattle Farming in Ontario.	P90-148.
5. Chapter Four: Regulation and Beef Cattle Farming.	P149-199.
6. Chapter Five: Economic Linkage Patterns in Ontario Beef Cattle Production.	P200-253.
7. Chapter Six: The Beef Cattle Industry and the Meat Industry.	P254-299.
8. Chapter Seven: The Subsequent Development of Beef Cattle Farming in Ontario and Conclusions.	P300-323.
9. Appendix A: Population of Ontario in 000's, 1871-1921.	P324.
10. Appendix B: The Cattle Situation in Ontario in 1882.	P325-331.
11. Appendix C: A Comparison of the Cattle Situation in Ontario Between 1923 and 1924.	P332-337.
12. Appendix D: Development of the Ontario Department of Agriculture.	P338-339.
13. Appendix E: Development of the Dominion Department of Agriculture.	P340-342.

- | | |
|--|-----------|
| 14. Appendix F: Data Relating to Cattle Marketed in Alberta. | P343-344. |
| 15. Appendix G: The Canadian Beef Cattle Market in 1885, from "The Canadian Breeder and Agricultural Review." | P345-347. |
| 16. Appendix H: Canadian Exports of Live Cattle, 1868-1924. | P348-349. |
| 17. Appendix I: Contemporary Attempts to Document the Internal Movement of Cattle. | P350-351. |
| 18. Appendix J: Canadian Regional Contribution of Commercial Beef Cattle to the Export Trade with the United States. | P352-353. |
| 19. Appendix K: Beef Cattle Production in Quebec. | P354-356. |
| 20. Appendix L: Per Capita Consumption of Meat (in lbs.) in Britain, Canada and the United States. | P357-360. |
| 21. Appendix M: Discussion in 1902 About the Characteristics of a Good Carcass. | P361-364. |
| 22. Bibliography. | P365-386. |

Introduction

"Agriculture is the most healthful, most useful, and most noble employment of man," wrote George Washington, first President of the United States.¹ Between 1870 and 1920 many farmers in Ontario would generally have agreed with this statement. Their attitudes are particularly important because at that time Ontario was a farming country. In fact the working, social, and cultural life of most Canadians in this period was based on an existence which revolved around a farm. Knowing the contemporary dynamics of that "noble employment" in any region of the nation, then, is basic to our understanding of Canadian life and the history of Canada late in the 19th and early 20th centuries.

This work is designed to illuminate something of the dynamics of Canadian agriculture, by concentrating on Ontario's beef cattle farming from 1870 to 1924.² The study will focus on three questions. What type of stock did farmers think was

¹ This statement was the motto of the farm journal, **American Agriculturalist**. See P. C. Johnson, **Farm Animals in the Making of America** (Des Moines: Wallace Homestead Book Company, 1975) 58.

² In 1901 Ontario had 45% of the nation's cattle, in 1911 it had 38% and in 1921, 31%. In contrast to these figures, Quebec had the next highest number with 24.5% of the nation's cattle in 1901, 22% in 1911 and 19% in 1921. By 1921, Saskatchewan had 15.4% and Alberta had 14.4%. Canada, Dominion Bureau of Statistics, **Census of 1921** (henceforth referred to as **Census of 1921**), volume V: xci.

suitable for the production of cattle commodities in relation to economic reality? What was that economic reality? And what shaped that economic reality? While answers to the questions will show us many patterns, they will also make clear that the average farmer in Ontario, who raised one or two animals a year for market, functioned within a highly structured and surprisingly modernized world which was created by the interaction of problems unique to livestock raising and idiosyncratic of an international industry.

The first chapter introduces the story of beef cattle farming in Ontario by giving background information on agriculture in the province at the end of the wheat era, and the reasons for a rise in beef farming. Conditions on the farm between 1850 and 1920 which helped promote cattle farming, such as the mechanization of agriculture through better farm implements and the relationship of that development to labour requirements, are dealt with also. Shifts in land use, crop husbandry, and feeding techniques for cattle are discussed as well.

Chapter Two concentrates on aspects of the purebred cattle industry - geographic location of breeders, growth of the purebred industry measured in numbers of animals between 1870 and 1920, and the ratio of beef to dairy cattle. The social characteristics of Shorthorn breeders are also looked at

briefly. Perceptions about purebred cattle, which represented the ideas of breeders on three issues (the breeding technology of 18th century British agriculturalists, the dairy/beef division of purebred cattle, and the moulding of 18th century technology to suit American purebred breeders), emerge.

Chapter Three looks at the commercial production of ordinary beef cattle of Ontario farmers by assessing the functioning of cattle-raising systems which existed in Ontario, but which were also indigenous to all western agriculture. The chapter then estimates farmer acceptance or rejection of purebred genetics, and of beef or dairy characteristics in the stock. Chapters Two and Chapter Three lay the technological background, or set the animal husbandry intellectual climate, for general beef stock production. This background does much to explain the dynamics of beef cattle farming by making it clear that problems relating to the creation of livestock had to be worked out with the regulatory and economic concerns which also affected the economic viability of the industry.

Regulation and political policy are dealt with in Chapter Four. Nation building aspects in governmental attitudes to beef cattle farming emerge in the description of policies which were designed to promote the economic well-being of the industry. An assessment of the establishment and development of the quarantine system, attitudes to bovine tuberculosis, and general

cattle regulatory concerns are discussed here as illustrations of that pattern. Issues relating to the comprehension of disease, problems of certification and qualification, and governmental authority over these problems are described also. All these subjects were intimately related to the world situation, and were designed to influence an international economy in order to promote Canadian national interests.

Chapter Five outlines the economic linkages of Ontario's industry by assessing local, national, continental, and global economic pressures. The ability to react to these pressures is analyzed against the reality of livestock production issues on the farm, which resulted from the problems discussed in Chapters Two and Three (the history of animal husbandry attitudes to cattle production), and against the regulatory policy outlined in Chapter Four (quarantine, efforts to control bovine tuberculosis, the certification and qualification of purebred stock, and general promotion of the nation's beef cattle farming). Ontario's significance in, and influence on, the nation's beef cattle industry emerges from that story generally.

Chapter Six relates the meat industry to the cattle industry through consumption. The interrelationship of the cattle industry, from a farmer's point of view, with the meat industry is pointed out here by an assessment of fat stock shows (which attempted to assess the living animal in terms of carcass

value), the economy of cattle producing cycles, and the shifting marketing techniques for cattle at the end of the 19th century and the beginning of the 20th century in Ontario.

Chapter Seven first summarizes information arising out of the research. These patterns are then assessed against certain developments in cattle farming after the 1920's. It is then possible to suggest some broad implications which are provided in a short conclusions section. Basically this study, both in the detailed analysis and later 20th century overview, will suggest that the agricultural, political, and economic structure of the world's modern beef cattle farming was laid down between 1870 and 1924.

While the work provides detailed information on a variety of subjects which are not well known, it also introduces the larger theme that agricultural history in Canada is both relatively unexplored and also that it is of considerable significance. It is surprising how little we know about the dynamics of agriculture given that it was ubiquitous in this time period. Our lack of knowledge makes us inclined to think of farming activities in simplistic terms. There is little appreciation, for example, of the fact that farming techniques, even in the 19th century, were complicated, required extensive knowledge, and were influenced by external pressures many of which were international in nature. A look at the historiography

of Canadian agriculture clearly confirms the poverty of our knowledge of Canadian agriculture from a farming point of view, and consequently explains how this work contributes to the development of Canadian historiography.

Not much research has been done on agricultural technology itself at any time or in any place. (One very notable exception is Dêchene's study of 17th century Montreal.³) Even less work has been done on historical intellectual approaches to farming problems. The result is that most Canadian agricultural history tends to have the artificial sense that farming is being looked at from the outside. Any existing discussion of agricultural techniques, such as dry farming methods, crop rotations in central Canadian wheat agriculture, or the effects of mechanization through implements tell us little about the thinking of farmers or why they made the decisions they did about running their farms.

The first studies of agriculture were concerned with its linkage to the national economy. As Lawr pointed out, early historians were inclined to see the economic development of Canada as being one based on a wheat economy in the west and an industrial economy in the east.⁴ The historiography of Canadian

³ L. Dêchene, **Habitants and Merchants in Seventeenth Century Montreal** (Montreal and Kingston: McGill-Queen's University Press) 1992.

⁴ D. Lawr, "The Development of Ontario Farming, 1870-1914:

agriculture has tended to stay within the framework set up by that approach ever since. It has generally concentrated on the west as the nation's agricultural centre, on the production of wheat, and on the economic aspects of farming.⁵ The emphasis on the west as the agricultural centre of the nation, on wheat as the main production of farming, and on economics as the only avenue of understanding the nature of agriculture all have only recently started to be re-evaluated.

Some historiographic reorientation towards the topic over the last 20 years has resulted from this research, and that reorientation is characterized by the following patterns. Geographic areas other than the west have been looked at, but studies of this nature tend to focus on one time period only: pre-Confederation. Agriculture in central Canada before Confederation, for example, has been studied and has sparked active debates about the economic implications of wheat production in Upper and Lower Canada. The work of McCallum, McCalla, McInnis, Déchene, and Greer provide but a few examples of interest in this field.⁶ Historiographic reorientation has

Patterns of Growth and Change", *Ontario History*, 64 (1972): 239.

⁵ There are, of course, exceptions to this trend. One notable one is R. L. Jones, *History of Agriculture in Ontario, 1613-1880* (Toronto: The Ryerson Press, 1946).

⁶ See J. McCallum, *Unequal Beginnings: Agriculture and Economic Development in Quebec and Ontario until 1870* (Toronto: University of Toronto, 1980); D. McCalla, *Planting the Province, The Economic History of Ontario: 1784-1879* (Toronto: University of Toronto Press, 1993); and M. McInnis, "Perspectives on Ontario Agriculture, 1867-1930", *Canadian Papers in Rural*

also resulted in the analysis of commodities other than wheat. Various studies on the dairy industry and pork packing in central Canada, and on ranching in the west have revealed how significant animal products everywhere were to the Canadian agricultural economy. The work of Drummond, Bliss, and Breen is particularly significant here.⁷ Farming has also been studied outside of an economic framework. Social implications have been explored in a variety of ways in both central Canada and the west. Work done by Cohen, Gagan, Little, and Voisey are especially significant in this area.⁸

Because eastern farming's contributions to agriculture outside pre-Confederation wheat is not well understood, and

History, 8 (1992); L. Déchene, **Habitants and Merchants in Seventeenth Century Montreal** (Montreal and Kingston: McGill-Queen's University Press, 1992); A. Greer, **Peasant, Lord and Merchant** (Toronto: University of Toronto Press, 1985).

⁷ See I. Drummond, **Progress Without Planning, The Economic History of Ontario from Confederation to the Second World War** (Toronto: University of Toronto, 1987); M. Bliss, **A Canadian Millionaire, The Life and Times of Sir Joseph Flavelle, Bart., 1858-1939** (Toronto: University of Toronto Press, 1978); D. Breen, **Canadian Ranching Frontier, 1874-1924** (Toronto: University of Toronto Press, 1983).

⁸ See M. G. Cohen, **Women's Work, Markets, and Economic Development in Nineteenth Century Ontario** (Toronto: University of Toronto Press, 1987); D. Gagan, **Hopeful Travellers: Families, Land, and Social Change in Mid-Victorian Peel County, Canada West** (Toronto: University of Toronto Press, 1981); J. Little, **Crofters and Habitants, Settler Society, Economy, and Culture in a Quebec Township, 1848-1881** (Montreal and Kingston: McGill-Queen's University Press, 1991); P. Voisey, **Vulcan: The Making of a Prairie Community** (Toronto: University of Toronto Press, 1987).

because research about agriculture remains predominately concerned with either economic or social implications rather than agricultural ones, work on beef cattle production in central Canada between 1870 and 1924 from a farming point of view offers an introduction to a variety of new horizons for Canadian agricultural history. It sheds new light on eastern agriculture, outside wheat and after Confederation, which clearly indicates how significant Ontario's agriculture was to the nation in that period. Such an inquiry also shows how studying farming can be richly rewarding when agricultural implications are looked at in relation to economic factors and the issues that influenced economic performance.

Within this Canadian historiographic framework, then, the present study is revisionist with respect to geographic location, time frame, agricultural commodity under analysis, and fundamental approach. Within the framework of historical research done in other countries, the study is less revisionist. The internal processes of livestock agriculture especially, in both Britain and the United States for example, have received considerable scholarly attention. Excellent work has been done on the meaning of various farming practices in both countries from an intellectual and technological point of view.³ Studies on who bred certain types of livestock and why these individuals

³ There are so many examples of this material that perhaps it is best to simply suggest that the reader refer to the bibliography of this work.

did so also exist. Research has been done on various aspects of the meat industry in these nations, on characteristics of dairying, on the relationship of the foreign trade to general production, and to some degree on bovine tuberculosis.

The present work, therefore, attempts to contribute as much to the general field of international agricultural history as it does to Canadian agricultural history. It offers new information to that larger field. No research has been done, for example, even in the United States or Britain, on attitudes to the division between dairy and beef characteristics in cattle and to the interrelationship of these characteristics with stock improvement. This examination of that complex problem in Ontario is the first study on it which has been done in Canada, the United States, or Britain.

Material used for this project can be briefly indicated. - - - - -

Most quantitative data was disappointing because it did not shed light on the questions addressed by this work and because it was inconsistent. Perhaps that is one reason why no one, as McInnis pointed out recently, has yet given an exhaustive economic study of the functioning of either Ontario's, or the nation's, beef cattle trade.¹⁰ Because the numerical data is so extensive yet so

¹⁰ M. McInnis, "The Structure of Canadian Agriculture, 1867-1897, *Journal of Economic History*, 42 (1982): 197. The article was reprinted in "Perspectives on Ontario Agriculture, 1867-1930", *Canadian Papers in Rural History*, 8 (1992).

unsatisfactory for research of this nature, some attention will be given, at various points in the work, to reviewing aspects of it. Narrative information, including government documents, tended to be more useful. While such material did not allow quantification, that fact does not mean that it could not be used to shed light on many problems, even economic ones.

Government reports and bulletins, from various departments and from both the provincial and Dominion levels, provided a vast amount of descriptive information on the functioning of the industry. In the early years they also offered the quality of material that is normally linked to correspondence and manuscripts, because the reports recorded what was said by individuals at the meetings of many of the agricultural associations. Farm journals were full of information on livestock farming and its relationship to the industry. Reading them did require some understanding of basic agricultural concepts. Most were not difficult to grasp and the rewards for doing so were immense.

Monographs on the historical development of various breeds offered another perspective: it was possible to trace the excitement that farmers must have felt over developments in their world. Poring over herd books and registration lists was less interesting but the activity did teach the reader that the stock could be related to various people, in a way that it would

be impossible to understand otherwise. Bulletins of the Ontario Agricultural College were also valuable because, by virtue of the fact that they were designed to explain to contemporary farmers what some of the issues were about, the reader was also informed. The letters of Arthur Johnston, Ontario Shorthorn breeder, were invaluable. Information on markets, breeding, the structure of breed associations, relationships with other breeders, international implications, and difficulties with quarantine all emerged in the letters. Reading them also revealed the history of some individual animals, a fact which added colour to the research process.

Secondary sources were of great importance to the study because the industry was so international in scope. No real understanding of how it functioned, or why farmers did what they did on farms, can develop without knowing what went on in beef farming outside the nation. It is virtually impossible to separate what happened on Ontario farms from what had happened in the United States and Britain, or what was happening in either of those countries. Secondary sources also helped the reader understand what primary sources suggested was going on in the rest of Canada. It was important to know conditions in the nation outside the province, because Ontario's situation was linked to that of the rest of Canada.

While this study explains the dynamics of beef cattle farming, the work also raises a number of questions relating to the topic, which require more extensive research. Some examples of important issues which were introduced here and deserve more in-depth analysis are as follows: the battle against the related problems of bovine and human tuberculosis, the story of the beef packing industry (which was totally separate from the pork packing industry) and its relationship to central stockyards, the regulation of the meat industry, the relationship of foreign trade to agricultural production for domestic markets, the study of breeding technology used in livestock raising and its impact on work done on Canadian farms, the concurrent development of dairying in relation to livestock used for that industry, and the association of beef and dairy cattle with gendered technology and labour.

Even if these topics are not dealt with in depth here, they emerge clearly enough to reinforce the impression that the world of the Ontario farmer was indeed complex. People raising livestock late in the 19th and early in the 20th centuries were not simply peasants who toiled mindlessly in fields and barnyards. Technical knowledge, judgment, and planning clearly played a large part in the agricultural practices of these farmers, who functioned within an industry that had modernized between 1870 and 1924.

Chapter One: Beef Cattle Farming in Ontario: Origins and General Characteristics Between 1850 and 1920.

"Old Bossy is easily the most important of all lower animals upon the green-carpeted footstool of the Great Creator," stated A. C. Wood, a popular early 20th century writer who had been raised on an Ontario farm.¹ "There is more attention of [sic] the cow in books than any other animal, bar none. ... Artists are forever putting her into their pictures, too, and all her comings and goings are pleasurable to behold," he added.²

The study of the development of beef cattle farming in Ontario could be introduced by pointing out that between 1870 and 1900 the number of cattle on the province's farms doubled.³ But Wood's comments more convincingly show that these animals were important to Ontario farmers late in the 19th century.

By 1870 the animals bestowed financial benefits on farm families through their dual production of dairy and beef commodities. They had not always done so. Widespread cattle farming actually reflected an important shift in the agricultural orientation of the colony which began about 1850.

¹ A. C. Wood, **Old Days on the Farm** (Toronto: McClelland and Goodchild, 1918) 38.

² **Ibid.**

³ H. J. Boam, compiled by, **Twentieth Century Impressions of Canada** (Montreal: Sells Ltd., 1914) 247.

That change took place in less than a generation: between 1850 and 1870. This chapter will outline the major aspects of farming in Canada West before 1850, review the shift to livestock agriculture between 1850 and 1870 by explaining some of the changes that accompanied the move to cattle farming, and examine how these shifts and other contemporary changes in agriculture interacted with cattle production over the longer period of 1850 to 1920.

Cattle had not played a critical part in Canada West's agriculture early in the colony's history because there had been a limited market for their products. This situation had not been true for wheat. Canada West farmers, as a result, concentrated on wheat cultivation. They did so to such a degree that by 1850 three quarters of their cash income was derived from that crop.⁴ This intense monoculture, however, had also resulted in declining returns from the fields. The simple crop rotation method used by colonial farmers for wheat production, wheat-fallow-wheat, known as "naked fallowing", had caused this phenomenon. Naked fallowing had quickly reduced soil fertility because it failed to return nutrients to the land. Early in the 19th century, yields had been as high as 30 to 40 bushels an acre on recently cleared fields.⁵ Years of naked fallowing on

⁴ J. McCallum, **Unequal Beginnings, Agriculture and Economic Development in Quebec and Ontario until 1870** (Toronto: University of Toronto Press, 1980) 4.

⁵ **Ibid.** 9. See K. Kelly, "The Impact of Nineteenth Century

those fields reduced their ability to produce. In 1851 about 90% of fall wheat was followed by naked fallow and resulted in a crop averaging 16 bushels an acre in Canada West, with only 3 of 42 counties producing more than 20 bushels an acre.⁶

Farm journals bemoaned the practice of naked fallowing. They preached the values of an entirely different agricultural system which they believed would correct the evil of soil exhaustion caused by that rotation practice. This system was known as "mixed farming", or "scientific farming", and was founded on the principle that wheat cultivation should go hand in hand with livestock production. The symbiotic relationship between wheat and animal husbandry was based on the theory that better wheat yields would result from fertilization of the soil by animal manure. However, because there was no real market for livestock in Canada West before 1850, the only farmers who could afford to raise animals, as well as crop wheat, were those with income from off the farm.⁷ The widespread practice of mixed

Agricultural Settlement on the Land", **Perspectives on the Landscape and Settlement in Nineteenth Century Ontario**, edited by J. D. Wood (Toronto: McClelland and Stewart, 1973) for more information on how farming techniques in Ontario affected the land.

⁶ K. Kelly, "Wheat Farming in Simcoe County in the Mid-Nineteenth Century", **Canadian Geographer**, 15 (1971): 97; and J. McCallum, **Unequal Beginnings, Agriculture and Economic Development in Quebec and Ontario until 1870** (Toronto: University of Toronto Press, 1980) 20.

⁷ See K. Kelly, "Notes on a Type of Mixed Farming Practiced in Ontario during the First Half of the Nineteenth Century", **Ontario History**, 17 (1973).

farming could not begin until there was a market for livestock products, as well as for wheat.

World markets for agricultural commodities from Canada West began to change character in the late 1840's. The shift was initiated when preference for colonial wheat ended with the Repeal of the Corn Laws in 1846 and the Navigation Acts in 1849. The long-standing protected market in Britain, upon which Canadian farmers had depended, was gone. The abolition of the Imperial mercantile trading system disrupted the wheat trade chiefly because it had a deleterious effect on millers and wheat handlers in the colony.² That situation redirected where Canada West wheat would be marketed. In spite of tariff impediments, by the late 1840's the colony's farmers were selling their wheat in the United States.³ With the Reciprocity Treaty in 1854, market potential for Canada West wheat sales in the United States increased.

As a result, dependency on wheat monoculture continued through the 1850's in Canada West. Then, when the United States disintegrated into Civil War in 1861, important new market opportunities developed for Canada West farmers. They were not in wheat. The north eastern states were able not only to meet

² J. McCallum, **Unequal Beginnings, Agriculture and Economic Development in Quebec and Ontario until 1870** (Toronto: University of Toronto Press, 1980) 16.

³ *Ibid.* 18.

their own needs but also to export millions of bushels of wheat to Britain during the war.¹¹ These states, however, were not able to supply their own need for beef. The war cut off the connection between western cattle producing areas and the eastern urban consuming centres.¹² The result was a weak market for Canada West wheat, but a good market for beef cattle in the northeastern part of the United States.

Farmers in the colony responded to this situation by large scale raising of beef cattle.¹² The American market for Canada West cattle products continued after the war, and even survived the abrogation of Reciprocity in 1866. In 1870 Canada exported to that country over 100,000 head of cattle, most of which had come from Ontario.¹³ Beef cattle production in the province suggests that a swing to mixed farming techniques had occurred by 1870.

¹¹ F. Landon, "Some Effects of the American Civil War on Canadian Agriculture, **Agricultural History**, 7 (1933): 164-5.

¹² R. L. Jones, **Agriculture in Ohio to 1880** (Kent: Kent State University Press, 1983) 116. F. Shannon, **The Farmer's Last Stand, Agriculture 1860-1897** (New York: Holt, Rinhart & Winston, 1961) 199-200.

¹² F. Landon, "Some Effects of the American Civil War on Canadian Agriculture", **Agricultural History**, 7 (1933): 164.

¹³ Canada, Parliament, Sessional Paper no. 10, 1913: 548. (Sessional Papers of the Canadian parliament will be referred to henceforth as SP, Canada.) Canada's exports in live cattle would not match that number again until 1885. See **Ibid.**

Production of wheat had declined and that of cattle had at least started to rise. By 1870 wheat represented half the ratio that it had in 1851 to the whole gross value of agricultural production in the province.¹⁴ Increased beef cattle raising developed simultaneously with decreased wheat production. The actual number of cattle on Canada West farms began to rise at the same time that stock numbers also showed a shift away from milch cows towards beef animals.¹⁵

The shift to less wheat farming and more livestock farming between 1850 and 1870 on individual farms did not indicate that the cultivation of wheat was on its way out. The switch in the period from 1850 to 1870 was one to both wheat and cattle. Mixed farming continued after 1870 to represent the raising of both wheat and livestock. In 1880, for example, 25% of Ontario fields were planted in wheat.¹⁶ Because yields of wheat per acre rose from 1880 to 1920, with the increased nutrients in the soil from

¹⁴ J. McCallum, *Unequal Beginnings, Agriculture and Economic Development in Quebec and Ontario until 1870* (Toronto: University of Toronto Press, 1980) calculated from Table S.4: 127.

¹⁵ Cattle rose from an average of 7.5 head per farm in 1851 to 8.1 head per farm in 1871. Calculated by the author from Union of the Canadas, Board of Registration and Statistics, the **Census** of 1851 (henceforth referred to as **Census** of 1851), volume 2: 60-65; **Census** of 1861 (henceforth referred to as **Census** of 1861), volume: 90-95; and from Canada, Department of Agriculture, the **Census** of 1871 (henceforth referred to as **Census** of 1871), volume 5: 114.

¹⁶ R. Ankli, "Ontario's Dairy Industry, 1880-1920", *Canadian Papers in Rural History*, 8 (1992): 263.

manure, even if acreage planted dropped, actual production could still be significant.¹⁷ Production levels of wheat, however, were related to production levels of cattle. For example, while there would be small wheat booms between 1870 and 1882, these actually reflected falling cattle prices.¹⁸ Cattle production might be important to the mixed farmer but clearly wheat was as well.¹⁹

It is hard to say which sector of this established mixed farming system was perceived to be the most significant by farmers. By eliminating monoculture wheat production cattle farming destroyed the economic hegemony of wheat, but it is very unclear whether farmers saw animal agriculture as intrinsically desirable or whether they saw it as a method to perpetuate better wheat farming. The rationale of mixed farming, today understood as a balance of animal and wheat production as complements of each other, seemed in contemporary literature to represent a new method of wheat production. Examples abound on the use of animal husbandry as supportive of wheat farming, or as a part of wheat farming. The old wheat dream apparently did

¹⁷ Ibid.

¹⁸ I. Drummond, **Progress Without Planning, The Economic history of Ontario from Confederation to the Second World War** (Toronto: University of Toronto Press, 1987) 32-3. D. Lawr, "The Development of Ontario Farming, 1870-1914: Patterns of Growth and Change", **Ontario History**, 64 (1972): 239-51.

¹⁹ R. Ankli, in "Ontario's Dairy Industry, 1880-1920", **Canadian Papers in Rural History**, 8 (1992): 273, argued that the profitability of wheat remained viable long after the rise of cattle farming.

not die easily. Professor William Brown of the Ontario Agricultural College noted in 1886 that he had "often said that the fattening of cattle with Ontario conditions [was] **primarily** [Brown's emphasis], to manufacture crops [with the use of] manure, and **secondarily** to produce food".²⁰

In the present age of intense specialized farming it is worth emphasizing the point that until the end of the period under study, cattle farmers continued to be men who produced wheat as well as livestock. By 1921, of approximately 177,000 farmers in Ontario, only 300 had truly specialized as dairy farmers, and only about 600 had specialized as livestock farmers devoted to the raising of sheep, cattle, or horses.²¹ That means that a great deal of beef cattle production in 1921 resulted from the husbandry of Ontario's mixed farmers who made up 99% of the province's agricultural producers.²² Farming in Ontario from 1870 to the 1920's, therefore, consistently reflected that symbiotic relationship between wheat and livestock that was essential to the system of mixed farming.

Between 1850 and 1870 agriculture in Canada West experienced another important change which resulted in increased

²⁰ Ontario, Legislature, Sessional Paper no. 13, 1886: 152. (Sessional Papers of the Legislature of Ontario will be referred to henceforth SP, Ontario.)

²¹ Calculated from the **Census** of 1921, volume 4: 215-6.

²² **Ibid.**

cattle production. More farmland in total came under production. This situation resulted from the increased ratio of improved land to wilderness on existing farms and from the opening of new farms. In 1851, of farmland acreage, 38% was cultivated or improved. The remaining 62% was described as "wood and wild land".²³ By 1861 there had been a shift in the wilderness component of land on farms, when only 54% of farmland was wilderness.²⁴ In this ten-year period the number of farms also increased by 75%. Therefore, more actual land came under production as a result of both the better use of land on farms and the opening of new farms.

How did Canada West farmers manage to increase livestock raising and greater farmland acreage cultivated between 1850 and 1870? Better capacity for production must indicate either greater potential manpower or more sophisticated mechanization or a combination of both. These developments in agriculture cannot be explained in any other way. How can the potential labour supply per acre, mechanization, or the interrelationship between the two be related to the move to livestock farming and greater acreage under cultivation? In order to answer this vital question we must establish the fluctuations existing between

²³ Calculated from the **Census** of 1851, volume 2: 2-3. This improved land was planted in 1851 as follows: 798,275 acres in wheat, 1,361,346 in pasture, and 72,047 in corn.

²⁴ Calculated from the **Census** of 1861, volume 2: 90-1.

1850 and 1870 in the potential labour force per farm, and what patterns of mechanization evolved.

Was greater cattle production and more land under cultivation a result of a larger population of people per acre, and males in particular, on the land by 1870? Because livestock farming was more labour intensive than wheat farming, and because we know that there was more livestock farming per farm after 1850 than before, it would be natural to expect that the ratio of working age males in the colony to acreage under cultivation increased between 1850 and 1870. Census data, however, does not indicate that males became more numerous per acre. D. McCalla's tables show that in 1851 the per capita ratio of people to improved farm acreage was one person for every 3.9 acres.²⁵ In 1861 the ratio was one person to 4.3 acres, and in 1871 the ratio was one person to 5.4 acres.²⁶ Not only were there fewer people per acre, but the ratio of adult males to the general population was declining while that of children was rising over the period. In 1851, for every 100 people, 53 were male and 24 were children (about 1 child in every 4 people). In 1871, for every 100 people, while 51 were male, 44 were children (close to 1 child in every 2 people). Thus over the twenty year period the population not only shifted to fewer people per acre

²⁵ D. McCalla, **Planting the Province, the Economic History of Ontario: 1784-1870** (Toronto: University of Toronto Press, 1993) Table 12.3: 322

²⁶ **Ibid.**

but also to proportionally fewer males and more children, a situation which did not offer agriculture greater manpower.²⁷ The implication of these figures, combined with data which shows more cattle on farms and an increased acreage of useable farmland, is that mechanization must have been particularly significant between 1850 and 1870.

Labour shortages for the cultivation of wheat, not for livestock raising, in fact drove the initial mechanization of agriculture.²⁸ Technically speaking, farming for wheat could be economically viable without mechanization. Countries with large labour supplies could produce wheat on an enormous scale with few implements. For example, in 1900 Russia produced six times the amount of wheat that Canada did, but the former country did so with little mechanization and on small farms.²⁹ The move to livestock farming, which required even more labour than wheat cultivation, was supported after 1860 by the adoption of better

²⁷ *Ibid.* This information was calculated from Table 12.1: 319.

²⁸ This was the conclusion of both McCallum in ***Unequal Beginnings, Agriculture and Economic Development in Quebec and Ontario until 1870*** (Toronto: University of Toronto Press, 1980) and G. Winder, "Following America into Corporate Capitalism: Technology and Organization of the Ontario Agricultural Implement Industry to 1930", Ph.D. Thesis, University of Toronto, 1991.

²⁹ G. Winder, "Following America into Corporate Capitalism: Technology and Organization of the Ontario Agricultural Implement Industry to 1930", Ph.D. Thesis, University of Toronto, 1991: 17-18.

wheat cropping implements for the cultivation of fodder crops, as well as for wheat.³⁰

By 1870 the province had become highly mechanized for both wheat and livestock farming.³¹ Most farms had a least one improved implement. In 1871, of the 172,258 farms in Ontario, 13,805 reported having threshers, 120,732 had fanning mills, 46,246 had hay rakes, and 36,874 had reapers or mowers. There were on these farms combined 289,362 plows, harrows, and cultivators.³² Another indication that mechanization was advanced by 1871 was the falling numbers of oxen, or castrated adult male cattle used for draft purpose on farms, because these animals did not work well with better farm implements. While the number of farms grew between 1851 and 1871, the absolute number of draft cattle had fallen by 1871 to approximately one quarter what it had been in 1851, at the same time that the number of horses on farms came close to doubling.³³

³⁰ **Ibid.** 17-18, 212.

³¹ **Ibid.** 17-18.

³² I. Drummond, **Progress without Planning, the Economic History of Ontario from Confederation to the Second World War** (Toronto: University of Toronto, 1987) Table 3.9.

³³ It was the category of "bulls, oxen and steers" that declined. Most "bulls, oxen and steers" were working draft cattle. From the **Census** of 1851; volume 2: 65; **Census** of 1861, volume 2: 94; **Census** of 1871, volume 5: 118 was clear that the category refers to oxen primarily, not bulls or steers. It is also clear here that horses had increased.

Since it is apparent from developments between 1850 and 1870 that the fortunes of livestock farming were intimately related to mechanization, it is worth assessing how mechanization and the labour supply interacted with agricultural production from 1870 to 1924. A comparison of general output to other aspects of farming - investments by farmers, level of the labour pool, characteristics of the agricultural work force, and mechanization - from census material over two different periods, 1870 to 1900 and 1900 to 1920, can show how mechanization and labour related to agricultural production.

Although it is difficult to establish the level and type of farm labour before 1891, because the census did not look at the agricultural work force, M. McInnis was able to calculate agricultural output in relation to per capita labour on the farm between 1871 and 1921. He concluded that the overall rise in agricultural output per worker was more rapid in the late 19th century than in the early 20th.³⁴ By contrast the growth of agriculture in the early 20th century was growth in inputs: intensive growth in yield was less impressive.³⁵ By comparing this change in output performance with shifts in other trends between the two periods, it can be shown that declining levels

³⁴ M. McInnis, "Perspectives on Ontario Agriculture, 1867-1930", *Canadian Papers in Rural History*, 8 (1992): 109.

³⁵ *Ibid.* 110.

of manpower could not always be compensated for by increased mechanization.

Investment levels in mechanization were lower in the 1870 to 1900 period than in the 1900 to 1920 period.³⁶ The combination of high per capita labour output levels and lower mechanization investment patterns before 1901 suggests reductions in implement cost, more efficient use of mechanization, and an effective replacement by machines of manpower. Lower per capita yields combined with rising implement investments patterns after 1900 implies either increasing implement cost and/or less efficient labour use because of a diminishing supply pool. In other words, it appeared from a comparison of these trends that it was more difficult to run a farm after 1900 than before, as a result of combined implement/labour issues.

The relationship between the level of hired help and implement investment over the two periods implies that agricultural labour was declining by 1900, and that manpower potential and mechanization levels were connected. While the year 1871 did show the highest dependence on hired help, that pattern would change little over the 1880's.³⁷ Since the number of people employed as hired help, in relation to all

³⁶ *Ibid.*, Table 7: 111.

³⁷ See I. Drummond, *Progress Without Planning, the Economic History of Ontario From Confederation to the Second World War* (Toronto: University of Toronto, 1987) Table 3.14: 379-80.

agricultural labour, did not decline or rise, it would seem that new farm labourers came in as others went out, and/or that mechanization was able to maintain agricultural viability with the aid of that existing labour capacity.³⁸

Shifts in labour reliance by farmers away from hired help and onto themselves came in the 20th century, at the same time that per capita output dropped and farm investments in mechanization began to rise.³⁹ Did the decline in hired help reflect the inability of farmers to pay for agricultural labour as a result of their greater investment in implements, or reflect their inability to find labourers? The latter seems to be the more influential factor because census material on population levels in the countryside indicates that the potential for labour shortage was building at this point in time.

The rural population had been growing before 1891, even if it was not growing as fast as the urban one. After 1891 absolute numbers were falling. Between 1901 and 1911 rural population

³⁸ SP 8, Canada, 1876: 99; SP 10, Canada, 1880: 128, 134. Immigration agents attempted to induce British farm labourers to come and work on Ontario farms by handing out "Ontario Cattle Pamphlets". They were eagerly sought after by British farm workers. 158; SP 14, Canada, 1884: 162; SP 13, Ontario, 1885: 147.

³⁹ M. McInnis, "Perspectives on Ontario Agriculture, 1867-1930", *Canadian Papers in Rural History*, 8 (1992): 105-108.

decline was accompanied by increased rates of urbanization.⁴¹ The effects of rural depopulation had therefore accelerated.⁴¹ Because the real decline in people living in the countryside started at about the time that larger investments in implements were made, it would appear that a lower manpower reservoir explained greater levels of mechanization investment.⁴²

The situation on farms began to reflect, however, what would become an acute labour shortage which ever more mechanization could not compensate for it by providing good economic viability per farm. Labour requirements and livestock farming generally remained imperfectly matched in spite of mechanization until the 1920's.⁴³ Important implications for the characteristics of cattle on farms resulted from this problem, as this study will reveal later.

⁴¹ See Appendix A.

⁴¹ See D. Gagan, "Families and Land: The Mid-Century Crisis", **A History of Ontario, Selected Readings**, edited by M Piva (Mississauga: Copp Clark, Pitman Ltd., 1988) 6, 24; and also D. Gagan, **Hopeful Travellers: Families, Land, and Social Change in Mid-Victorian Peel County, Canada West** (Toronto: University of Toronto Press, 1981) for information on some of the factors which influenced the move to rural depopulation earlier in the century.

⁴² I. Drummond, **Progress without Planning, the Economic History of Ontario from Confederation to the Second World War** (Toronto: University of Toronto, 1987) Table 2.3: 364.

⁴³ See "The Farm Labour Problem", by A. Leitch, **O.A.C. Review**, November, 1906: 47-51. See also Canada, Parliament, **Proceedings of the Special Committee on Cost of Living**, 1919: 181, 186, 191.

It has been shown that the drying of the labour reservoir after 1870 increased the demand for mechanization. Cattle farming, and livestock agriculture generally, also created a need for more implements with greater variation. Good farm implements for the cultivation of fodder crops were particularly important in Ontario because it was impossible to harvest the amount of winter feed required to support a viable livestock industry in such a cold climate with older techniques. The result was a spectacular growth after 1870 in the Ontario implement industry which had been triggered initially by wheat cultivation requirements of the 1850's.

The industry would come to reflect the diversification of implements which mixed farming required.⁴⁴ By the end of the 19th century a great array of horse-powered equipment had been invented.⁴⁵ Farm implements also became increasingly affordable and therefore available between 1880 and 1900. For example, a self-binder sold in 1881 for \$300 and cost only half that in 1890.⁴⁶ From 1875 to the late 1890's, mower costs dropped from

⁴⁴ G. Winder, "Following America into Corporate Capitalism: Technology and Organization of the Ontario Agricultural Implement Industry to 1930", Ph.D. Thesis, University of Toronto, 1991: 212.

⁴⁵ D. Lawr, "The Development of Ontario Agriculture, 1870-1914: Patterns of Growth and Change", *Ontario History*, 64 (1972): 141.

⁴⁶ *Ibid.* 240-2.

\$85 to \$43, and hay rakes were reduced by half.⁴⁷ By the 1880's such machinery was common on Ontario farms.⁴⁸

A great deal has been written about the implement industry from many points of view.⁴⁹ Rarely in recent times do sources discuss implements by explaining what they were designed to do.⁵⁰ It is worth describing how they worked, rather than their technological development or actual diffusion of use, because such an approach shows why the implement industry was diverse, and reveals at the same time the mechanics of farming. Implements which were used for the animal husbandry arm of mixed farming can be divided by function into two groups: crop cultivation and labour saving devices for chores.

⁴⁷ W. H. Graham, **Greenbank: Country Matters in Nineteenth Century Ontario** (Peterborough: Broadview Press, 1988) 273.

⁴⁸ The comments that were made in a general way by county on the presence of good implements in the report of the Ontario Agricultural Commission in 1880, confirmed this opinion.

⁴⁹ See, for example, A. Skeoch, "Development of Plowing Technology in Nineteenth Century Ontario", **Canadian Papers in Rural History**, 3 (1982); G. Winder, "Following America into Corporate Capitalism: Technology and Organization of the Ontario Implement Industry to 1930", Ph.D. Thesis, University of Toronto, 1991; R. Pomfret, "The Mechanization of Reaping in Nineteenth Century Ontario: A Case Study of the Pace and Causes of the Diffusion of Embodied Technological Change", **Journal of Economic History**, 36 (1976); W. G. Phillips, **The Agricultural Implement Industry of Canada** (Toronto: University of Toronto Press) 1956.

⁵⁰ See P. W. Bidwell and J. L. Falconer, **History of Agriculture in the Northern United States, 1620-1860** (Washington: Carnegie Institute, 1925); and H. Danhof, **Change in Agriculture, The Northern United States, 1820-1870** (Cambridge: Harvard University Press, 1969) for the best sources on the

The cultivation and harvesting of fodder crops with late 19th century implements proceeded as follows.⁵¹ The soil was broken up with a plow. Plows varied in size and design, from a single blade mouldboard plow with a cutting edge known as a "share", to a "ride on" plow called a sulky plow which was known as a gang sulky plow when it had many blades. The deep ridges left by any plow were flattened by an instrument called a harrow. Harrows varied enormously in type and were useful for other functions such as weeding the growing crop. Seed drills were employed to plant the crop, and if a harrow was not used to weed, a cultivator was. All crops were cut with a reaper when they were ready for harvest. The product was then either collected by hand and bound in sheaves, or else was bound by a combined reaper binder.⁵² Sheaves were gathered together to form a cone-like structure called a shock and then left to sun dry, or cure, for a number of days. The shocks were collected and taken to the barn. If the crop was grain the seeds were separated from the straw, either in the barn or in the field, with a thresher. Machinery that could reap, bind, and thresh

development of implements by function.

⁵¹ The assessment given here is based on *Ibid.*, and an appraisal of modern brochures of farm implements available today.

⁵² This process was greatly eased by the use of binder twine, which became common in the 1880's. A Bogue, "Ontario Agriculture Between 1880 and 1890 with Special Reference to Southwestern Ontario", M.A. Thesis, University of Western Ontario, 1946: 104.

grain (known as combines) were available by late in the century but they were not common. If the crop was corn it was either sun-cured and returned to the barn in the same fashion as hay, or it was harvested in a completely different manner which will be explained shortly.⁵³

While labour-saving devices were not as essential as crop-harvesting implements for the initiation of a livestock industry, the mechanization of farm work generally allowed the size of livestock operations to increase, and helped them to continue to function viably in the face of increasingly acute shortage of agricultural labour. "In these days of scarcity of labourers the farming community is turning more and more towards the utilization of motor power of one kind or another in the performance of operations that in years gone by were done exclusively by man and his servant, the horse", noted the **O.A.C. Review**, journal of the Ontario Agricultural College, in 1908.⁵⁴

Mechanization which could reduce the need for farm workers resulted in the production of a myriad of tools. One major implement which reduced labour requirements of the farm was the manure spreader. While primitive spreaders were in existence in

⁵³ Steam traction was known by the late 19th century but gasoline tractors would not be common in Ontario until the 1940's.

⁵⁴ **O.A.C. Review**, June 1908: 473, "Electric Power and the Ontario Farmer".

Ontario by the 1880's the task of manuring fields, one of the basic principles of mixed farming, could be a backbreaking job until near the end of the period under study.⁵⁵ Manure was often hand shovelled onto the fields from horse-drawn wagons. It was not until about 1904 that the first horse-drawn manure spreaders, which had beaters and were capable of throwing manure, were available. The ability to spread more manure faster served to enlarge crop cultivation acreage, and thus allowed for the maintenance of more livestock. Another example of mechanization which allowed livestock operations to function with reduced manpower was the ability to water more animals easily in the winter. The introduction of windmills in the 1880's eliminated much of the ordinary task of hand watering the stock when it was housed in winter months by providing running water.⁵⁶ Windmills were also used to power the sawing of wood, cutting of fodder, and grinding of feed.⁵⁷ By 1910 farmers were looking forward to the future assistance that electrification, gasoline tractors, and the automobile would offer them.⁵⁸

⁵⁵ A. Bogue, "Ontario Agriculture Between 1880 and 1890 with Special Reference to Southwestern Ontario", M.A. Thesis, University of Western Ontario, 1946: 106.

⁵⁶ **Ibid.**

⁵⁷ **O.A.C. Review**, October, 1892: 3, "The Wind as a Source of Power", June 1908: 473 "Electric Power and the Ontario Farmer". "The Future Power of the Farm", **Ibid.** 483.

⁵⁸ See **Ibid.**

Other changes in agricultural practice, besides the increased use of mechanization, interacted with cattle production between 1870 and 1920. Shifts in crop husbandry were particularly important. The need for winter food for a substantial number of animals required more of a farmer than merely leaving fields, which had been used for wheat cropping, in permanent pasture for hay cropping. Good quality hay - pasture sun-cured grasses - could only be cultivated by better crop rotation and the use of new plants. As early as 1880 rotation systems in Ontario commonly covered a seven year period and called for the cropping of various plants. Peas were recognized by that time as being as effective in retarding the growth of weeds as naked fallow.⁵³ New species of plants were introduced as well to the province between 1870 and 1920 to improve hay.

~~-----~~ The first major new crop to be introduced for livestock was corn. By the 1880's the Ontario Experimental Farm at Guelph was deeply involved in testing the value of various feeds and found corn to be the best and the cheapest.⁵⁴ While the growing of various legumes (for example, different clovers) was also initiated early in the period, the most important of these, namely alfalfa, was the last to be recognized. "I believe

⁵³ Even a casual look at the **Report** of the Ontario Agricultural Commission of 1880 confirmed these two statements.

⁵⁴ SP 18, Ontario, 1898-9: 77-8; SP 3, Ontario, 1882-3: 193; SP 13, Ontario, 1885: 187; SP 16, Ontario, 1888: 136.

alfalfa, even if it may not have the value that scientific men lead us to believe, is to be one of the most important factors in future beef production, perhaps a more important one than any other forage plant we have", said Thomas McMillan, a well-known contemporary Ontario cattleman, to farmers in 1912.⁶¹ Alfalfa, valuable as it was, would not replace corn.

Shifts in land use and fodder crop husbandry after 1870 paralleled the expansion of livestock farming, as the table below indicates.

Ontario crops - acres planted in 000's

	ALL WHEAT	BARLEY	OATS	CORN	HAY AND CLOVER
1871	1,366				1,691
1881	1,930	849	1,375	207	2,529
1890	1,322	701	1,882	224	2,462
1900	1,446	578	2,399	511	2,527
1914	804	579	2,777	710	3,415
1921	692	413	2,761	563	3,456

Table from **The Agricultural Gazette**, 1916: 804, and from I. Drummond, **Progress Without Planning, The Economic History of Ontario from Confederation to the Second World War** (Toronto: University of Toronto Press, 1987) Table 3.1: 366, and from **Report** of the Bureau of Industries (SP 26, Ontario, 1901: 29, 26, 32, 25.)

Methods of feeding and preserving fodder crops also shifted over the period from 1870 to 1920. While animals were commonly pasture-fed in the summer and hay-fed in the winter throughout this period, other crop maintenance and feeding techniques were also used. Year round stall feeding and methods of feeding

⁶¹ SP 39, Ontario, 1912: 96.

fresh, green fodder gained some acceptance at the beginning of the period. In the 1870's it was suggested by agricultural experts that stall feeding animals year round rather than summer pasturing was cheaper and more efficient. The system was known as soiling. Green forage, or cut-up uncured plants rather than sun-cured feed, were fed to stock in the barn under the soiling system. Professor William Brown of the Ontario Agricultural College felt that soiling with green fodder plants was three times as efficient in land use as grazing, which meant that three times the number of animals could be supported on the same amount of land as grazier patterns would.⁶²

Part of the concept behind soiling was carried over in the 1880's to the problem of winter storage of feed. Ensilage of plants, meaning the preservation of them in a green state over winter, became increasingly popular in Ontario.⁶³ The preservation of ensilage fodder compelled the designing of new buildings to house it. The building of silos, structures designed to hold this type of feed, accompanied the use of ensilage fodder in Ontario.

⁶² SP 3, Ontario, 1881: 490.

⁶³ It was at that time a relatively new practice anywhere in the world. The system apparently had begun in France before 1880, and was brought to the United States in 1882 from where it was transported to Britain. It appeared to enter Ontario from the United States. SP 16, Ontario, 1888: 136.

While ensilage could be made from many plants, its greatest benefits were seen from the use of corn.⁵⁴ Effectively the ensilage of corn and its preservation in silos meant it was possible to soil in the winter. In some ways soiling and ensilage were the same thing: soiling represented summer feeding and ensilage represented winter feeding of green plant material rather than sun-cured feed.⁵⁵ While the use of soiling would wane, however, that of ensilage would remain. Ensilage would increasingly accompany winter hay feeding. The ultimate significance of soiling, apparently, was the fact that it introduced the idea that green feed, rather than simple sun cured feed, provided superior fodder.

Between 1892 and 1917, the acreage devoted to corn for silos in Ontario went from 91,403 acres to 511,329 acres, as can be seen in the table below.

Acres Planted in Silo Corn in Ontario

1892	91,403 acres
1897	209,005 acres
1902	209,859 acres
1912	377,982 acres
1917	511,329 acres

R. Ankli, in "Ontario's Dairy Industry, 1880-1920", **Canadian Papers in Rural History**, 8 (1992): 266, worked out silo corn acreage from the reports of the Bureau of Industries.

⁵⁴ See "Corn Ensilage for Making Beef", by Thomas Shaw, Bulletin XLIV, 1890, Ontario Agricultural College, Ontario Department of Agriculture.

⁵⁵ SP 8, Ontario, 1890: 39.

The rise of cattle farming between 1850 and 1870, then, reflected two major agricultural changes in Ontario over a very short period. One change was a move away from intensive wheat cultivation. But cattle farming was, first and foremost, part of mixed farming, not specialized agriculture, and as a result was always related to the cropping of wheat. The second change was the spread of agriculture over more acres in the province. The greater labour requirements for the expansion in farming seen in the rise of mixed farming and greater acreage under cultivation was not met by an increased labour pool per farm. Instead diversification of agricultural mechanization, which had been initiated by wheat cultivation, compensated. Mechanization spurred an impressive growth before 1900 and allowed, with increasing difficulty, the industry to maintain high levels of production in the face of declining levels of available manpower. Mechanization, therefore, was vital to Ontario cattle farming: to both its initiation between 1850 and 1870 and its expansion from 1870 to 1920. Livestock raising stimulated other changes in agricultural practice after 1870, such as new crop husbandry methods, the cultivation of new plants, and new livestock feeding methods.

Issues which reflect particular problems unique to raising cattle will be explored in the next two chapters. Because the attitudes of the purebred cattle breeders must be understood

before general cattle farming perspective can be understood, the Ontario purebred cattle industry will be explored next.

Chapter Two: The Ontario Purebred Cattle Industry

On a cold, clear night in February 1881, anticipation was high at Bow Park, the Shorthorn breeding centre of the late George Brown.¹ A valuable cow, the imported Kirklevington Duchess of Horton, was about to give birth to a calf from the service of Fourth Duke of Clarence who was a famous Shorthorn bull in Canada at the time. The birth aroused intense disappointment. The herdsman reported to the two managers of the farm, "with a very solemn face", that the cow "had just dropped a bull calf, and awful to think of, it was a white one." The men went out to see "this unwelcome arrival" and when they got "to the box he was born in, he was just getting up on his forelegs seeking for food. He was a lusty chap and white as the snow outside."²

Because of his colour, as we shall see, the calf, Clarence Kirklevington, became a show steer (a castrated male) and not a show bull (a breeding male). His career in the ring demonstrated his excellence in spite of his colour. In 1884 at Chicago, the

¹ In 1876 George Brown had established a company, which owned Bow Park, known as the Canada West Farm Stock Association with shares worth about \$400,000. Brown maintained the largest proportion of shares. When he died, the managers of the company, his brothers-in-law in Scotland, decided to continue to run the farm. Bow Park bred and raised important Shorthorns until the end of the 19th century.

² From G. MacEwan, **Highlights of Shorthorn History** (Winnipeg: Hignell Printing Limited, 1982) 78 and quoted from John Clay, manager of the company that owned Bow Park, **My Recollections of Ontario** (Chicago: Private Printing, 1918) 56.

centre of North America's beef cattle industry, Clarence won every class possible. He was champion Shorthorn steer of any age, the best animal of any breed, and ultimately the best carcass of any breed or age. "No entry could do better than that," commented Grant MacEwan in his history of Canadian Shorthorns.³

The story of Clarence's life makes a good introduction to beef cattle in Ontario in the period under study because he was an envoy of a special class of cattle. He was, first and foremost, a purebred animal. While purebred cattle represented only a tiny fraction of the cattle population in Ontario, they were the elite of the bovine farming world. They embodied the only technology known at the time for superior production of the living animal. They were significant, therefore, beyond their numbers. All cattle farmers in Ontario would be influenced by them and their breeders.

As a purebred animal Clarence was an emissary of Ontario breeders on the international scene, and representative of perceptions about cattle breeding technology in that province. This chapter will explore the world that created him: Ontario's purebred industry. An analysis of it will be done here by assessing geographic location of herds, the animals themselves, market characteristics, social structure of breeders, and the

³ *Ibid.* 79.

relative importance within the nation of Ontario stock and breeders.

Enduring centres of purebred cattle in Ontario were established in the mid 19th century. The oldest purebred herds functioning by 1870 had existed in the 1850's in what would remain at least part of the centre of beef cattle farming until the 1920's in Ontario: Wellington (by far the most important), Peel, Waterloo, and Brant counties.⁴ By 1882 purebred cattle were found most commonly in Wellington, Middlesex, Peel, Lambton, Oxford, Leeds and Grenville, and to a lesser degree Waterloo, and Brant.⁵ Counties with the fewest purebred cattle were the northern ones: Algoma, Muskoka, Parry Sound, and Haliburton.⁶ Many counties with numbers in between the two extremes, however, contained a fair number of these animals. Very heavy concentration of purebred stock in a few counties did not exist.

⁴ See **Report of William Brown on The Herds and Flocks of Ontario** (Toronto: Ontario Legislative Assembly, 1883) 7.

⁵ See SP 3, Ontario, 1883: 52. See also Ontario, Department of Agriculture, **Crop Bulletin**, number 3, August, 1882: 16, 18, 20, R.G. 49, Ontario Department of Agriculture, **Public Archives of Ontario**, Toronto (referred to henceforth as P.A.O.) SP 3, Ontario, 1882-3, Appendix B. See as well, **Report of William Brown on The Herds and Flocks of Ontario** (Toronto: Ontario Legislative Assembly, 1883) for a report based on that of the Bureau of Industries.

⁶ **Ibid.**

Contemporaries identified 350 purebred herds in the province by 1882.⁷ In comparison to other western countries, this figure indicates that purebred cattle were well established in Ontario. Britain had only about 500 herds.⁸ The situation within the United States suggested that purebred cattle were no more numerous there than in Ontario or Britain, relative to the total cattle population. The Bureau of Animal Industries, a division of the United States Department of Agriculture, did a detailed report on American purebred animals in 1887. While it did not give numbers of purebred herds, it did provide information on how many purebred cattle there were in the United States from 1877 to 1887. On the basis of these figures, the report stated that there was a very low number of purebred cattle in the nation - far too low for the general improvement of the general cattle herd.⁹

Herd size within Ontario suggested a concentration of purebred cattle in the hands of relatively few owners. In the 1880's a herd was defined by the Agricultural Societies as containing 1 male and 5 females.¹⁰ The average number of cows per

⁷ W. Brown, **Report on the Herds and Flocks of Ontario**, 1883: 4.

⁸ *Ibid.*

⁹ United States, Department of Agriculture, **Fourth and Fifth Report of the Bureau of Animal Industry**, 1887 and 1888: 340.

¹⁰ W. Brown, **Report on the Herds and Flocks of Ontario**, 1883: 4.

purebred herd was just over 10, and the average number of bulls per herd was 3.¹¹ A substantial number of herds were over 50 head.¹² The implication of these figures is that purebred stock was concentrated in few hands, if not in few geographic areas. By 1901 the situation had changed in Ontario, not so much with respect to actual numbers of purebred stock or distribution by county, but rather to distribution by owners.¹³ Herds were commonly smaller.¹⁴ As early as 1908, it was clear that the trend to a greater number of smaller herds had accelerated.¹⁵

By 1910 even significant breeders maintained relatively small herds, most not more than 20 head.¹⁶ Many breeders now clearly had only one cow and one bull - not even enough to qualify as a herd under the 1882 definition - and were probably

¹¹ *Ibid.*

¹² *Ibid.*

¹³ In 1901 Ontario had the same number of purebred cattle that it had had in 1882 - namely about 13,000. See **A Directory of the Breeders of Pure Bred Live Stock of the Dominion of Canada**, Dairy Branch, Live Stock Division, Department of Agriculture, 1901, no page given.

¹⁴ See *Ibid.* The Directory actually listed every breeder, with address and number of cattle owned. It is possible to see exactly how large all purebred herds were across Canada. It should be pointed out that there were still some very large herds of over 100 head in 1901.

¹⁵ *Ibid.*

¹⁶ See **A Directory of the Breeders of Pure Bred Live Stock of the Dominion of Canada**, Live Stock Branch, Department of Agriculture, 1910. All breeders across the country are listed by address and by number of head of cattle they own.

practicing diffusion of purebred genes into their commercial (or non-purebred herds) as well as raising purebred stock.¹⁷ While actual numbers of purebred cattle were rising by this time, centres of them in Ontario had not changed.¹⁸ The geographic pattern of the purebred industry which existed by 1882 would endure until the 1920's.¹⁹ It remained centred in Wellington, Middlesex, and relatively concentrated in the other West Midland, Georgian Bay, and Lake Huron counties. To sum up the purebred industry, with respect to location and herd size in Ontario between 1882 and 1920, it grew very slowly, became more dispersed among owners with smaller herds, and, while it remained centred in south and south western Ontario, there was a sprinkling of animals at all times throughout the province.

Knowing something about the actual animals purebred breeders in Ontario produced in this period is interesting for two reasons. First, the livestock itself provides information on how the beef cattle industry functioned, and second, it is not

¹⁷ Diffusion can be defined here as the infiltration of purebred genetics into ordinary herds, rather than the perpetuation of purebred cattle.

¹⁸ See **A Directory of the Breeders of Pure Bred Live Stock of the Dominion of Canada**, Live Stock Branch, Department of Agriculture, 1910.

¹⁹ Census taking for purebred cattle in Ontario did not locate the number of animals by county as accurately as the 1883 Report of the Bureau of Industries. Breeders' lists that gave addresses, and verbal reports in various reports of livestock journals over the period up to about 1920, suggested that the purebred industry had not shifted its geographic centres of significance.

possible to see what the relationship was between ordinary farmers and purebred breeders unless something is known about the actual animals which were created by the purebred cattle world. There were three issues which influenced what and how breeders bred, and were reflected in the animals themselves. They all need to be examined.

The breeding technology of purebred breeders in Ontario partially explained what type of cattle they produced. In fact the world of these people, and the cattle they raised, make no sense without information on the technology of their work. All purebred breeders in the western world inherited the work of 18th century British agriculturalists, whose technology would prevail until the 1920's.

The principles of animal breeding adopted by 18th century agriculturalists were based on the theory that domesticated farm stock could be moulded by breeding to meet certain standards which would better match human needs. Perpetuation of type, meaning the creation of animals which would carry uniform characteristics which were considered desirable, was the principle behind the creation of purebred animals. It was believed that that end could be achieved by breeding like-to-like.

Like-to-like breeding, however, could be done in more than one way.²⁰ Robert Bakewell, a breeder of sheep, horses, and cattle in 18th century England, has been credited with making the most controversial like-to-like system popular.²¹ He found that the easiest and fastest way to stamp consistent type on animals was to inbreed like-to-like, which meant that father and daughter or mother and son were bred to each other. Early important Shorthorn cattle breeders like the Colling brothers, Thomas Booth, and Thomas Bates, at the end of the 18th century and in the early 19th century, incorporated Bakewellian principles with another form of like-to-like breeding. They line-bred like-to-like, which means they bred closely related animals such as half-brother and half-sister to each other. A

²⁰ For more information on farm livestock breeding and the philosophy of purebred breeding see the following. M. Lerner and H. Donald, **Modern Developments in Animal Breeding** (London and New York: Academic press, 1966); A. Frazer, **Animal Husbandry Heresies** (London: Crosby Lockwood & Son, Lid, 1960); J. R. Walton, "The Diffusion of the Improved Shorthorn Breed of Cattle in Britain During the Eighteenth and Nineteenth Centuries", **Institute of British Geographers' Transactions**, New Series, 9 (1984); J. R. Walton, "Pedigree and the National Cattle Herd Circa 1750-1950", **Agricultural History Review**, 34 (1986); E. Whetham, "The Trade in Pedigree Livestock, 1850-1910", **Agricultural History Review**, 27 (1979); P. J. Perry, "The Shorthorn Comes of Age, 1822-1843", **Agricultural History**, 56 (1982); H. Ritvo, **The Animal Estate** (Cambridge: Harvard University Press, 1987).

²¹ Research in British agricultural history has demonstrated that in fact Bakewell was not the first or the most successful to use this method. Information on this subject abounds. See, for example, J. V. Beckett, **The Agricultural Revolution** (Oxford, U.K., Cambridge, U.S.A.: B Blackwell, 1990) 4, 21-5. One of the best studies on British livestock breeding is R. Trow-Smith (**A History of British Livestock Husbandry, 1700-1900**, London: Routledge and Kegan Paul, 1959).

third system of like-to-like breeding, outcross breeding of like-to-like (which means the breeding of two similar animals which are not related) was not a popular practice among early purebred breeders because it was known not to stamp as accurately or as quickly consistency of type.

By 1870 aspiring purebred cattle breeders in Ontario as well as their counterparts in the United States considered Bakewell, the Colling brothers, Booth, and Bates as the masters of breeding technology.²² Animals which resulted from their breeding stock or their breeding methods were highly valued. New breeding technology was never discussed.²³ With no supportive information from genetics, the particular technique of like-to-like breeding became both the guide to excellence and the way to provide consistency of desired type.²⁴

²² See A. Sanders, **Short-horn Cattle, A Series of Historical Sketches, Memoirs and Records of the Breed and Its Development in the United States and Canada** (Chicago: Sanders Publishing Co., 1900); Thomas Shaw, **Animal Breeding** (Chicago: Orange Judd Company, 1901). SP 23, Ontario, 1903: 104-5. Address of Judge T C Jones, President of the American Shorthorn Breeders' Association, at Toronto, **Farmer's Advocate**, January 1876: 13; February 1876: 27; March 1876: 46. J. Dryden on the Origin of Shorthorns, **Farming World and Canadian Farm and Family**, January 1st, 1906: 161. See **Farmer's Advocate**, December 8th, 1910: 1927-8.

In the 1870's the examination on agriculture at the Ontario Agricultural College was one on the history of Shorthorns. See SP 13, Ontario, 1875-6: 31-2. SP 12, Ontario, 1877:48.

²³ See all above. **Farmer's Advocate**, March 11th, 1909: 380-1; June 30th, 1910: 1057; December 8th, 1910: 1927-8.

²⁴ See, for example, the following. SP 6, Ontario, 1887: 140-1; SP 11, Ontario, 1893: 46; **Farmer's Advocate**, January, 1876: 13; February, 1876: 27; March, 1876: 46-7; March, 1881: 65;

The purebred situation in the province should also be assessed with respect to dairy/beef specialization of the cattle. Ontario's purebred animals could be divided between those that belonged to the beef purebred breeds, and those that belonged to the dairy purebred breeds. What type of specialization, dairy or beef, dominated the purebred industry in Ontario can be seen by establishing which type of animal was the most numerous. Any change in the relative numbers of dairy and beef purebred stock over the period is significant because it expresses a shift in that emphasis. In 1882 there were six breeds of purebred cattle in Ontario, of which four were beef, one was triple purpose, and one was dairy.²⁵ It is possible to comment on purebred dairy/beef issues in 1882 by looking at the relationship of the two dominant breeds, Shorthorns and Ayrshires, to each other.

What becomes apparent first is that there were more beef purebreds than dairy purebreds, in absolute numbers of animals. Shorthorns, a beef breed, outnumbered all other breeds. Second in popularity were Ayrshires, a dairy breed, with only one third

April, 1886: 105-6.

²⁵ Triple purpose means cattle that were bred to perform three uses: draft power, beef and dairy production. See Ontario, Department of Agriculture, **Crop Bulletin** no 3, August 1882: 18, 20, 22, R.G. 49, Ontario Department of Agriculture, Statistics and Publications Branch, P.A.O.

the number of Shorthorns.²⁶ The fact that there were fewer purebred dairy cattle means that the purebred industry was dominated by beef breeders, and that purebred technology was largely beef genetics. What becomes apparent next is that the purebred industry seemed to be concentrated by dairy or beef in different counties. Counties which had many beef purebreds had fewer dairy purebreds. The county with the most purebred Ayrshires was Leeds and Grenville. The two counties with the most Shorthorns, in almost equal numbers, were Wellington and Middlesex.²⁷ The "dairy" counties also contained fewer purebreds than did the "beef" counties.

By 1920 the purebred dairy/beef ratio had changed. The dairy breeds were then represented not just by Ayrshires (a hardy and old Scottish breed which had good milk yields), but also by Jerseys (small cows that came from the Channel Islands and gave plenty of milk with a high fat content), Guernseys (average sized cows that were from the Channel Islands and gave good yields of milk), and Holstein Friesians (large cows that had a great capacity to yield large volumes of thin milk, had originated in Holland, but had not been introduced to Ontario

²⁶ **Ibid.**

²⁷ **Ibid.** Some reasons for why "dairy" concentrated in certain counties and "beef" in others will be given in chapter three. It appeared that marketing systems, not quality of soil or nearness to consuming centres, played the most important role in this development.

until the 1880's).²⁸ In 1920 the beef breeds were represented by the same ones which had been present in the 1880's: Herefords (an old British breed from Herefordshire and was known for its great ability to fatten on grass as well as its poor milking capacity), Angus (hardy, black cattle which originated in Scotland and which were known for their easy feeding, their very fine meat, and their average milking capacity), Devons (a breed that came to Ontario in earliest times and had served particularly well for draft but was now used as a beef breed), Galloways (another hardy Scottish breed that arrived in Ontario well before Angus cattle), and Durhams or Shorthorns (a breed that originated in England and was known as the first of the improved breeds of cattle).²⁹ In 1920 there were more dairy breeds than in the 1880's and more purebred dairy cattle. Beef breeding, on the other hand, appeared to have remained static, resting on the strength of the late 19th century eminence of the beef cattle industry. But the actual beef/dairy emphasis of the purebred industry was more complicated, made so by the Shorthorn situation.³⁰

²⁸ See **Census**, volume 5, 1921: 64 for an assessment of purebred cattle by province and breed in 1911 and 1921. More breeds existed in Ontario than the thesis has listed. However, the breeds given in this work represent the significant ones. See H. Purdy, **Breeds of Cattle** (New York: Chanticleer Press Inc., 1987) for a good review of the characteristics of different breeds of cattle.

²⁹ **Ibid.**

³⁰ **Census** of 1921, volume 5: 64 for actual numbers of purebred cattle by breed and province.

Shorthorns outnumbered all other purebred cattle combined until the 1920's and therefore dominated the purebred industry. They were a beef breed, but from the beginning Shorthorns also proved to be good milkers. With the rise of the Ontario dairy industry their breeding for both beef and dairy use became more important. Because the purebred industry in both Ontario and Canada was dominated by Shorthorns for most of the period under study, and because a great deal of the problems around the breeding of ordinary cattle for dairy and beef production in Ontario, which will be discussed in the next chapter in more detail, revolved around Shorthorn cattle, the history of this particular breed is important to this story.

Cattle of assorted types had existed in the north midlands and northern England in the 18th century and had been named for certain regions: Durham, Tesswater, and Holderness cattle are three examples.³² The animals, although variable in type, were generally known for their great size, good milking ability, and poor beefing qualities. About 1790 Robert and Charles Colling began to upgrade these cattle for beefing purposes, using Bakewellian principles of fixing type by inbreeding, and then

³² R. Trow-Smith, **A History of British Livestock Husbandry, 1700-1900** (London: Routledge and Kegan Paul, 1959) 235.

later breeding by line as well. They are credited with the founding of the modern Shorthorn as a beef breed.³²

Improvement of the breed and its ultimate direction, however, is attributed to two men in particular. Thomas Booth, shortly after the Collings began their work, enhanced further the beefing qualities of the Shorthorn but the improved Shorthorn which resulted lost a good deal of its milking capacity. Thomas Bates was the most important breeder to respond to this situation. Early in the 19th century he began to breed his Kirklevington herd for milking capacity without sacrificing beefing capacity. "Booth for the block and Bates for the pail" became a well known expression in cattle circles, and suggested a rough sense of dual specialization within one breed.

The Booth beefing line was gradually moderated to a type that matured earlier and was smaller and of equal - if not better-beefing ability - by the Scottish farmer, Amos Cruickshank. By 1890 all Shorthorns in both North America and Britain would demonstrate variations of these three types: Booth large beefing cattle which tended to coarse physical build, Bates tall and beautifully refined beef cattle which milked

³² The early history of Shorthorns fascinated North American cattlemen. A great deal of modern research has also been done on the development of the Shorthorn breed. The subject is complicated. One of the best general studies is *Ibid.* Information given here is only the simplest and most necessary for understanding the argument of this thesis.

well, and Cruickshank short easy beefing cattle. How the three types were used in Ontario is a large part of the history of beef farming in the province.

By mid-century Shorthorns in their improved state were beef cattle but they sometimes carried as well reasonable milking capacity. From this time on they showed their genetic ability to breed unevenly for either characteristic, and therein lay both the strength and weakness of the breed. Shorthorn cattle in Ontario from 1870 to 1924, therefore, represented animals that were capable of both beef and dairy production.³³ How well the cattle could combine the types was a question that was worked out in the late 19th and early 20th centuries, and the story of that working out will emerge in the next chapter. The way Shorthorns were both bred for use and were actually used in this period also explained why other breeds either failed to take over Shorthorn preeminence, or else capitalized on Shorthorn inability to serve the overall cattle commodities market.³⁴ The

³³ See SP 11, Ontario, 1893: 42-3; SP 21, Ontario, 1889: 134; SP 26, Ontario, 1897: 127; SP 39, Ontario, 1912: 91; SP 23, Ontario, 1906: 94; **Farmer's Advocate**, February, 1868: 20, June, 1879: 126.

³⁴ **The Canadian Live-Stock and Farm Journal**, April, 1889: 99; May, 1889: 123; June, 1889: 150; July, 1889: 182; September, 1890: 291-2; **Farmer's Advocate**, March, 1872: 33; February, 1876: 27; December, 1877: 278; May, 1878: 103; June, 1879: 126; July, 1880: 157; June, 1884: 162; September, 1884: 270; June, 1886: 170; SP 25, Ontario, 1897/98: 101; SP 12, Canada, 1881: 17; SP 15b, Canada, 1913: 357.

growth of the purebred dairy breeds must be seen in light of developments within the Shorthorn world.

The third issue that affected the breeding programs of purebred beef cattle breeders was the American market. Breeding crazes, which developed from the prevailing breeding technology, were particularly strong in the United States and resulted in the demand for certain styles. The response of Ontario breeders to these American crazes indicated clearly that the crazes affected their breeding programs as much as 18th century breeding technology. Two striking examples of craze-related styles, both in Shorthorn cattle and known at the time as various aspects of "Shorthorn fever", are explained in some detail below because they reveal the influence of the American market on breeding programs in Ontario; and they also demonstrate Ontario's success, technologically speaking, in the international breeding world.³⁵

The earliest Shorthorn breeding craze was a particular pedigree craze. Pedigree crazes generally were one example of breeding crazes which were indigenous to purebred breeding in the 19th century.³⁶ They developed through the following

³⁵ SP 6, Ontario, 1878: 11.

³⁶ See P. Henlein, "Cattle Kingdom in the Ohio Valley: The Beef Cattle Industry in the Ohio Valley, 1783-1860", Ph.D. Thesis, University of Wisconsin, 1957: 67-72, 93, 103, for a pedigree craze known as the "Seventeens". It revolved around the purity of 1817 imports of improved cattle with no pedigrees into

reasoning. The question of breeding technique evolved into an obsession over the relative value of two like-to-like breeding methods: in- and line-breeding.³⁷ Like-to-like breeding became linked closely to the concept of pedigree because pedigree provided a certificate for the form of like-to-like breeding used in animal production. Genetic excellence, therefore, could be seen in pedigree and became critical to breeders.³⁸

An obsession over the Duchess line pedigree of Shorthorns had developed by the 1860's. Shorthorn breeders became so devoted to this Bates line of cattle that they inbred the stock to ensure that no outcross appeared at all in the pedigrees. By the 1870's Duchess cattle were extremely valuable because there were so few of them, due to the fact that excessive inbreeding had made them infertile. The crescendo of the craze was reached in September, 1873 at New York Mills in the state of New York.

~~"There were now no Duchesses living on either side of the~~

the Ohio Valley. When the Ohio Importing Company made its famous importation of 61 pedigreed Shorthorns in the 1830's, cattle that had descended from the 1817 imports were looked on as impure. See also SP 23, Ontario, 1903: 104-5. See also E. Heath-Agnew, **A History of Hereford Cattle and Their Breeders** (London: Gerald Duckworth and Co., 1983) 44-5.

³⁷ In 1876, the **Farmer's Advocate** claimed that more purebred herds were actually outbred than inbred. The journal suggested that there were two factions within the purebred world on the issue of breeding technology: in or out breeding. **Farmer's Advocate**, January, 1876: 2-3. Often inbreeding was seen as only in-and-in breeding.

³⁸ See **The Canadian Live-Stock and Farm Journal**, August, 1890: 262. See also, SP 11, Ontario, 1893: 46.

Atlantic descended direct from Mr. Bates' herd, without admixture of blood from other sources, save those at New York Mills", wrote Alvin Sanders, the American 19th century cattle expert from Chicago.³³ Breeders from Canada, Britain, and the United States converged for the sale.⁴⁰ A seven year old red-and-white cow, 8th Duchess of Geneva, was led into the ring. When she left, she had sold for \$40,600 to an Englishman. "One long breath, and then the cheers went up, and thousands there seemed fairly beside themselves, and extravagant things which were said and done would fill a volume."⁴¹ A few days later the cow dropped a dead heifer calf, and soon after died herself.⁴² Within ten years the entire line of pure Bates Duchess cattle was extinct

³³ A. Sanders, **Short-horn Cattle, A Series of Historical Sketches, Memoirs and Records of the Breed and Its Development in the United States and Canada** (Chicago: Sanders Publishing Co., 1900) 442.

⁴⁰ The only major Canadian buyer was Simon Beattie, and he bought one bull. D. Marshall, **Shorthorn Cattle in Canada** (Dominion Shorthorn Breeders' Association, 1932) 240. The person who played the most important role in the New York Mills Sale, as the prominent breeder and manager of the cattle sold there, was a farmer from Ontario. Richard Gibson, an English immigrant who had acted as manager for the Ontario Shorthorn breeder Captain T. E. Robson and had married his daughter, ran the breeding establishment in Geneva, New York that held the sale. D. Marshall, **Shorthorn Cattle in Canada** (Dominion Shorthorn Breeders' Association, 1932) 236-240. He returned to Ontario, bought a 300 acre farm in 1883, and farmed there until his death. **Farmer's Advocate**, January 1883: 3; March 16th, 1911: 451.

⁴¹ A. Sanders, **Short-horn Cattle, A Series of Historical Sketches, Memoirs and Records of the Breed and Its Development in the United States and Canada** (Chicago: Sanders Publishing Co., 1900) 450.

⁴² *Ibid.* 454.

in North America.⁴³ Severe infertility, bred in through excessive inbreeding, finally exacted the ultimate toll.

Canadian breeders, and those from Ontario in particular, were as involved in Bates cattle as were their American and British counterparts. In the 1870's all significant Shorthorn breeders in Ontario bred Bates cattle, and Duchess line Bates cattle more particularly: F. W. Stone, David Christie, George Brown, John Hope who was a breeder in his own right as well as manager of Bow Park, the Miller family, and John I. Davidson.⁴⁴ In fact Clarence, the steer which introduced this chapter, represented the Bates Duchess breeding of George Brown. Notable Canadian breeders outside Ontario were also involved in Duchess cattle and had major connections to the Ontario industry. While the most important Bates Shorthorn breeder in Canada, M. H. Cochrane, was not from Ontario but was from the Eastern Townships of Quebec, his Canadian purebred contacts were entirely within Ontario.⁴⁵ He made his first purchases from the

⁴³ **Ibid.** 455.

⁴⁴ The pedigrees of the cattle owned by these breeders is clearly indicated by checking pedigrees - especially of imported stock - in **History of Short-horned Cattle Imported into the Present Dominion of Canada from Britain and the United States, Chronologically Arranged**, volume 1 to 10, 1867 to 1894. See also **The Canada Herd Book, Containing the Pedigrees of Improved Short-Horned Cattle**, volume 1, Board of Agriculture of Upper Canada, 1867.

⁴⁵ Senator Cochrane bred purebred cattle of several breeds at his farm "Hillhurst". He became deeply involved in the western Canadian ranching industry in the 1880's. He was the prime instigator behind the establishment of the ranching leases which

Miller family in Ontario.⁴⁶ His Herdsman, Simon Beattie was a Scottish immigrant who married into the Miller family of Ontario and worked closely with John Hope, manager of Bow Park.⁴⁷

All these breeders produced Duchess cattle, particularly inbred Duchess cattle, primarily for the American market.⁴⁸ The most successful auction of Bates cattle in Canada was the 1876 sale at Toronto of Cochrane, Beattie, and Hope for George Brown, and it resulted in the sale of animals largely to midwest American breeders for very high prices.⁴⁹ However, while these Canadian men bred Duchess line cattle they were less obsessed, technologically speaking, with the in-and-in breeding pedigrees that fascinated American and British breeders.⁵⁰

opened up the western range and was involved in every aspect of Canada's cattle farming.

⁴⁶ D. Marshall, **Shorthorn Cattle in Canada** (Dominion Shorthorn Breeders' Association, 1932) 117-126.

⁴⁷ *Ibid.* 211

⁴⁸ See **History of Short-horned Cattle Imported into the Present Dominion of Canada from Britain and the United States, Chronologically Arranged**, volume 1 to 10, 1867 to 1894. See also **The Canada Herd Book, Containing the Pedigrees of Improved Short-Horned Cattle**, volume 1, Board of Agriculture of Upper Canada, 1867.

⁴⁹ D. Marshall, **Shorthorn Cattle in Canada** (Dominion Shorthorn Breeders' Association, 1932) 123. Alvin Sanders, **Short-Horn Cattle, A Series of Historical Sketches, Memoirs and Records of the Breed and Its Development in the United States** (Chicago: Sanders Publishing Co., 1900) 518-519.

⁵⁰ This conclusion is drawn by the author from biographies of breeders in breed histories, and articles in many farm journals.

Farmers and most Shorthorn breeders in Ontario as well, even Bates or Duchess line breeders, watched the New York Mills sale and the evolution of Duchess craze with appalled fascination. "The vast proportion of those who have read the newspaper reports of the proceedings of [the New York Mills] sale heartily unite in setting down the purchasers at it, as a body of hopeless lunatics", commented the **Farmer's Advocate**.⁵¹ William Brown, agricultural professor at the Ontario Agricultural College in Guelph, made it clear that he felt valuable inbred Duchess cattle were not appropriate animals for the Canadian farmer. "Short horn history in America and Britain has unfolded several phases that should be warnings to Canada, with reference particularly to 'high blood', without individual merit and productiveness," he stated.⁵² Purebred breeders in Ontario would be concerned until the end of the century at the utter lack of relevance between value, pedigree, and the quality of the animal that was displayed at the New York Mills sale.⁵³ In 1897 the President of the Dominion Shorthorn

⁵¹ September 30th, 1873, cited in D. Marshall, **Shorthorn Cattle in Canada** (Dominion Shorthorn Breeders' Association, 1932) 240.

⁵² SP 16, Ontario, 1879: 12.

⁵³ This statement is not intended to suggest that all American breeders embraced the Duchess craze. Many did not. Even so, the heartland of the craze was in the United States.

Association called the sale "one of the worst days in Shorthorn history."⁵⁴

Shifting Shorthorn colour preference crazes represented the next breeding craze which gripped American breeders. It dominated the period from 1880 to about 1910. Clarence's fate was sealed when American breeders of Shorthorns refused to accept white. He would be a steer and not a breeding bull, regardless of his real quality which was accepted and proven later. Americans preferred red Shorthorns by the 1880's and Ontario's purebred breeders responded by breeding red for that market.⁵⁵ Since evidence suggests that colour crazes were never significant in Ontario, when breeders in the province worked to produce red cattle they proved that they were influenced by the views of American breeders.⁵⁶ Ontario breeders were prepared to breed for American taste more than for what they saw as actual quality.⁵⁷

⁵⁴ SP 26, Ontario, 1897: 127.

⁵⁵ In 1895 **The Canadian Live-Stock and Farm Journal** stated that Ontario's main market for purebred beef cattle was the United States. May, 1895: 98.

⁵⁶ See "The Red, White and Roan - Which Color Should We Adopt?", **The Canadian Live-Stock and Farm Journal**, July, 1886: 176. The article concluded that the red color craze was confined to the United States, but that if Ontario breeders wanted that market, they had better breed more reds. See also **O.A.C. Review**, May, 1896: 2, "Colour Versus Quality in Shorthorns."

⁵⁷ The **Farmer's Advocate** commented on this trend as follows. In an article called "Color in Shorthorns", the journal reported on recent sales of Shorthorns, and noted that solid red was still preferred here. Foreign buyers wanted this colour, and

Professor Brown commented on the problem of colour, quality, and breeding strategies. "I have failed to get one sound reason for the prejudice that at present exists against white cattle, especially in America There can be no objection to a fashion in colours, by the taste of the breeder, or in those who purchase; but we must have **facts** [Brown's emphasis] for any inferiority. It is well known that most of the eminent short-horn progenitors were pure white, and looking at the prize rings in Britain now, it will be found that white still takes off most of the honours."⁵⁶ In the end, Ontario purebred breeders found it difficult to find purebred buyers in the United States or Canada for purebred Shorthorns that were roan (speckled red and white colour) or white. By 1885 white bulls could not be sold even to commercial, or non-purebred, breeders.⁵⁹ While white remained the colour of market show steers, probably as a result of Clarence's performance, by 1902 the American red craze was replaced by a roan craze.⁶⁰ White

breeders were therefore prepared to breed for it. This trend showed the strength of the almighty dollar, because red was known to be the worst colour for Shorthorns. **Farmer's Advocate**, March 11th, 1909: 380-1.

⁵⁶ SP 6, Ontario, 1878: 11.

⁵⁹ **Canadian Live Stock and Farm Journal**, March, 1885: 59. The journal claimed that a red bull would sell in Chicago no matter what his quality was. September, 1885: 226. Ontario breeders had better start breeding more red bulls, the journal warned. July, 1886: 176.

⁶⁰ **O.A.C. Review**, May 1896: 3. Also see A. Sanders, **Short-horn Cattle, A Series of Historical Sketches, Memoirs and Records of**

still could not be sold for breeding stock in that country, regardless of quality.⁵¹

The significance of the American market for Ontario purebred breeders can be seen in other aspects of their breeding programs, and therefore was reflected in the living animals in other ways. Ontario breeders did not just respond to American breeding crazes, even as early as the 1870's, in what type of cattle they chose to raise. They also attempted to predict the American market as well. As the Duchess craze was reaching its peak, several Ontario breeders were already experimenting with the new Shorthorn cattle bred by the Scottish farmer Amos Cruickshank of Aberdeen by importing and breeding them for sale to the American midwest. These breeders were prepared to shift their breeding techniques in order to provide for an animal that they believed would satisfy the American market in the future.

the Breed and Its Development in the United States and Canada (Chicago: Sanders Publishing Co., 1900) 854-5. Arthur Johnston claimed that "Dark red ruined Cattle in the U.S. for many years, in the days of what now is called [sic] the **Colour Craze**. Dark red was always unpopular in Scotland", he added. "They have the worst hair & the thinnest flesh." Arthur Johnston to a breeder in Quebec, May 27th, 1902, Letterbook 7, Arthur Johnston Papers, P.A.O. Red was still well liked after 1902 by Americans, even if a roan craze also existed.

⁵¹ He regretfully informed a buyer in Wisconsin, J. Watters, that the cow he had purchased had had a good white bull calf. Johnston offered to replace the white bull calf with a red heifer. Johnston to Watters, September 14th, 20th, 1901, Arthur Johnston Papers, Letterbook 6, P.A.O.

The most important by far of these Ontario breeders was John I. Davidson, an immigrant from Aberdeenshire. Davidson arrived in Ontario in 1842 as an agricultural labourer.⁶² He began his importations in 1871 through family connections and was so thrilled with the new Aberdeen Cruickshank line that he determined to both breed and import them long before they were recognized as the new beef Shorthorn of the future, either in the United States or Britain.⁶³ Although he did not meet the famous Scottish farmer for nearly another 20 years, the two became firm friends. Cruickshank looked upon Davidson as his agent for North America and in 1888 offered to sell his entire herd to Davidson.⁶⁴ The Ontario farmer was unable to raise the money to do so.⁶⁵ If he had succeeded, the most important late

⁶² G. MacEwan, **Highlights of Shorthorn History** (Winnipeg: Hignell Printing Limited, 1982) 81.

⁶³ D. Marshall, **Shorthorn Cattle in Canada** (Dominion Shorthorn Association, 1932) 176.

⁶⁴ Johnston to F. W. Hodson, May 20th, 1901, Arthur Johnston Papers, Letterbook 6, P.A.O. G. MacEwan, **Highlights of Shorthorn History** (Winnipeg: Hignell Printing Limited, 1982) 81-85. Cruickshank wrote to Davidson saying, "Our connection has been so long standing and so very pleasant to me, I could not think of doing a thing so important without consulting thee and giving thee the first offer of what there is to sell. I would much prefer to let thee have the herd as a whole than dispose of it any other way." Quoted from **Ibid.**, a letter from Cruickshank to Davidson, September 25, 1888, John Miller, Ashburn Papers, owned in 1982 by the great granddaughter of Davidson. Of the 90 original Cruickshank letters that remain in Ontario about 75 of them were printed in 1947 by the Scottish Shorthorn Breeders' Association, Edinburgh, as **The Shorthorns of Scotland - Sittyton.**

⁶⁵ G. MacEwan, **Highlights of Shorthorn History** (Winnipeg: Hignell Printing Limited, 1982) 85.

19th century breeding beef cattle herd in the world would have resided in Ontario. Cruickshank stock would dominate the American midwest (the cattle centre of North America), the rising cattle enterprises of Argentina and Uruguay, and cattle breeding in both Australia and South Africa. Ontario breeding and importing programs would play, however, a major role in the trend towards these cattle within North America.⁵⁶ When the ultimate turning of the tide in favour of Cruickshank-style animals in the American midwest corn belt happened in 1890, it demonstrated the impact of Ontario breeding on that area.

In the fall of 1890 two giants in the world of Shorthorn cattle, American-bred Cupbearer and Ontario-bred Cruickshank line Young Abbotsburn, met in the show ring at the Illinois State Fair. "Probably no event in American show-yard history aroused more intense excitement than attended this memorable meeting", wrote Alvin Sanders, the contemporary American cattle expert.⁵⁷ In his important Illinois farm livestock journal, the **Breeder's Gazette**, he explained by saying that "everyone and his neighbour seemed to be present when the ring for aged bulls was called, and those who could not arrive on time, telegraphed

⁵⁶ The herd was sold to cattlemen in Argentina. At the last moment, however, the deal fell through. The animals were bought by a number of Scottish and English breeders. *Ibid.* 85-6.

⁵⁷ Alvin Sanders, **Short-Horn Cattle, A Series of Historical Sketches, Memoirs and Records of the Breed and Its Development in the United States and Canada** (Chicago: Sanders Publishing Co., 1900) 782.

freely their regrets. The excitement was at a fever heat. It was indeed to be a 'battle royal'."⁶⁸ The winner was Young Abbotsburn. And that contest was only the beginning. As Sanders put it, Young Abbotsburn, after his victory, "fairly carried the corn belt by storm."⁶⁹ He became "universally recognized by practical men as the sort of beast that would convert grain and grass into prime beef on short notice."⁷⁰ Cattle of any breed which were like this bull would dominate beef cattle everywhere in the western world for over half a century.

Purebred cattle in Ontario between 1870 and 1924, therefore, reflected the ideas of breeders on three issues. First, the animals embodied the general breeding technology of the western world, which was based upon the work of 18th century agriculturalists in Britain. Second, the cattle reflected specialization for dairy or beef purposes. Third, between 1870 and 1910 the stock displayed the moulding of 18th century breeding technology to suit purebred breeders' tastes or "crazes" in the United States.

This assessment of the animals themselves also reveals information on beef cattle market characteristics. The midwest

⁶⁸ Purebred cattle were shown by age and sex. Aged bulls means mature bulls. *Ibid.* 783.

⁶⁹ *Ibid.* 785.

⁷⁰ *Ibid.*

market in the United States was clearly vital to Ontario breeders until close to the end of the 19th century. At the same time, numerous comments made in farm journals about the inability of breeders to sell their animals within Ontario from the 1870's to the 1890's, either to purebred breeders or ordinary farmers, confirm that the Ontario market was not significant.⁷¹ Conversely, Ontario cattle and their breeders were important, breeding craze or not, to American breeders in the midwest between 1870 and 1900.⁷² The Ontario connection provided a good link for American breeders to British breeders.

Davidson's success shows how profitable the special Ontario/British bond could be for an Ontario farmer. That bond provided contacts for importation of stock due for the American midwest, and stock to breed animals that would be exported to the United States.

⁷¹ See, for example, SP 10, Canada, 1880: 119, 135, 138. See also A. Sanders, **Short-Horn Cattle, A Series of Historical Sketches, Memoirs and Records of the Breed and Its Development in the United States and Canada** (Chicago: Sanders publishing Co., 1900) 77-85, an a good example of how extensive the selling of Ontario breeders was to the United States in the 1870 and early 1880's. See **The Canadian Live Stock and Farm Journal**, May, 1895: 98.

⁷² Nothing makes the importance of Ontario breeders to the American midwest more clear than the early book on Shorthorns by A. Sanders. From this American specialist's point of view, Ontario played a vital role in the beef cattle purebred breeding industry of the United States. See also SP 11, Canada, 1893: 124.

The midwest market, shaped by breeding crazes, held a boom and bust pattern. Arthur Johnston, well known Ontario breeder and importer, reported to his cousin in 1905 that the Ontario purebred business was in dire straits because "[t]he Americans overdid the business, as they nearly always do, in these matters. I think that about half the Breeders in Iowa became bankrupt & the Iowa Breeders were our best Customers."³ "We will have a fine lot of Cattle in Canada, when you Americans get yours all demoralized, and want some good ones," he wrote to an American midwest breeder who had bought cattle from Johnston in better times.⁴

Details on the market for Ontario breeders and importers for the 1890-1910 period can be seen in the surviving papers of Arthur Johnston.⁵ He did not keep records of his sales but he wrote to prospective buyers or confirmed clients at a rate of about 50 letters a month.⁶ His records are valuable, not so much

³ Johnston to his cousin, January 6th, 1905, Arthur Johnston Papers, Letterbook 9, P.A.O.

⁴ Johnston to Watters, December 28th, 1904, Arthur Johnston Papers, Letterbook 9, P.A.O.

⁵ Arthur Johnston Papers, Letterbooks, P.A.O. Johnston was born in County Tyrone, Ireland in 1839. He emigrated to Ontario in 1846. After attending Normal School, he taught in Pickering Township from 1860-61. Shortly after this he took up farming near Claremont and became a noted Shorthorn breeder and importer. He made his first importations in 1874.

⁶ The Johnston Papers represent only the letters he wrote. He claimed that for every fifty he wrote, only about two replies came back.

for information which they offer on the type of stock that he bred (which was Cruickshank type) as on certain aspects of his market. While it is true that the conclusions drawn here are only from the experiences of this one breeder, his many comments on the general nature of the industry suggest that his story represented widespread patterns."

Johnston was chiefly interested in American midwest buyers throughout his business life. Yet the stock which he bred and imported, animals designed for the American midwest, would find different types of homes across all of North America, because of both the shifting nature of the Ontario purebred industry's market and the various factors which affected that market. Recognizing the market changes and some of these influential factors helps to clarify the position between ordinary Ontario farmers and purebred breeders, with respect to livestock bred to international standards.

It is clear from Johnston's papers that the nature of the purebred market for Ontario breeders was shifting by late in the century. Breeders from the province were selling cattle to a much more complicated market than merely the American midwest.

"Many of his statements on the industry can be backed up with information in Sessional Papers and in Herd Books. For example, in Sessional Papers breeders frequently commented on their market in the midwest, and a feel for where sales took place can be had from **History of Short-horned Cattle Imported Into the Present Dominion of Canada from Britain and the United States, Chronologically Arranged**, volume 1 to 10, 1867 to 1894.

Johnston's most important market for purebred stock from 1895 to 1905 fluctuated between the American midwest and Ontario, but there was also a significant link between him and purebred breeders in the Maritimes. By 1909, however, virtually all his sales were in Ontario. Although Johnston was interested in selling to ranches in the North West Territories, western Canada never featured as largely as any of the above three areas in his sales.⁷⁸

Johnston's papers not only suggest where most sales of this breeder took place, but also who bought the stock. Purebred breeders, not commercial cattlemen, were the buyers. Johnston's papers reveal that the purebred industry's market everywhere was the purebred industry. Sales to the American midwest were to purebred breeders. Sales to the Maritimes tended to be either to government purebred breeding farms or to purebred breeders. Sales to Manitoba and to Ontario were generally to purebred breeders until the late 1890's. It was only after 1900 that Johnston began to sell to ordinary farmers, and at that time his main market had become both purebred breeders and commercial farmers in Ontario. He also had sales by then in the North West Territories which indicated commercial use, but they implied the

⁷⁸ While the Johnston Papers indicate that the Canadian west was not the most significant buying market of Ontario purebred cattle, that does not mean that the west did not find Ontario to be a major supplier.

strength of large companies who bought in great numbers, unlike ordinary farmers.

The letterbooks of Arthur Johnston also indicate clearly how the geography of his sales related to the value of the animals. Since the market for bulls was always steadier than that for females, the prices which he hoped to get for bulls tells us something about the relative strength of these markets, especially because the same animals might be offered for sale at different prices in different geographic areas. By the late 1890's, in Canadian currency, bulls sold in the United States for \$125 - \$150, in Ontario for \$100 - \$125, in the Maritimes for \$100, in Manitoba for \$75 - \$125, and in the North West Territories for \$49 - \$65. His trade in purebred stock, therefore, tended to be most valuable with the American midwest, next with Ontario, followed quite closely by the Maritimes, with Manitoba and more particularly the North West Territories yielding significantly lower returns.

When the purebred/commercial aspect of Johnston's market for his cattle is related to the value of the sales by geographic location, interesting information on what influenced the general spread of improved livestock emerges.

The varying prices of bulls by geographic area indicates that other circumstances than proximity influenced his sales.

Before 1900 the most valuable stock was not sold in the nearest market. Therefore proximity did not seem to stimulate sales as directly as one would imagine. Proximity to purebred breeders apparently did not in itself prompt the sale of purebred cattle, even the less valuable animals, to ordinary producers.

The fact that bull prices did not go up in relation to geographic proximity also suggests that train freight rates were not as significant to sales as might be thought. Apparently freight rates had little influence on how much and where Ontario exported purebred stock. When stock passed to purebred breeders outside of the province, sales were impervious to high freight rates caused by the long distance. It was when sales represented diffusion, or the sale of purebred cattle to ordinary commercial producers, that high freight rates which resulted from distance traveling acted as a barrier.

When the role of train freight rates is considered in the growth (or lack of it) of the western Canadian cattle industry's linkage to eastern breeders, it should be kept in mind that the type of sale, meaning purebred sales to commercial or ordinary producers, or purebred sales to purebred breeders, was perhaps a greater factor in how and where purebred beef cattle spread than freight rates. For example, when rates did come down shortly before 1900, that fact did not stimulate diffusion sales for good quality cattle; it only influenced sales of lower ranks of

purebred stock both in Ontario and outside the province until close to World War 1.⁷⁹

It is possible to draw some general conclusions about market characteristics for Ontario purebred beef cattle breeders from 1870 to the 1920's. First, the industry was built on trade connections with purebred breeders in the United States, but more particularly mainly with those in the American midwest. In many ways the early purebred industry in Ontario functioned as part of the American purebred industry. Second, Ontario purebred breeders acted from the beginning in three capacities: as breeders, importers, and exporters. Because they established international connections with breeders both in Britain and the United States, they always functioned in an international market. Ontario purebred breeders were also always significant players in that international purebred cattle trade. Third, purebred breeders operated more or less separately in a purebred world - international or national - until about 1910. It was not until after 1890 that Ontario breeders even began to serve the Canadian purebred industry and when they did so it was mainly within Ontario only. When sales of purebred Ontario cattle to ordinary farmers began about 1910 anywhere in Canada, that pattern too primarily took place originally within Ontario

⁷⁹ More on freight rates and purebred cattle will be said in chapter four. Information on freight rates and commercial cattle farming will appear in chapter five.

alone.²⁰ Fourth, the late and slow spread of improved cattle needs further analysis before the functioning of the province's or the nation's beef cattle industry can be explained. The topic of diffusion, meaning the spread of improved cattle through sales of purebred cattle to ordinary or commercial producers, is one subject that will be looked at more carefully in the next chapter.

A quantified social study of purebred beef cattle breeders in Ontario is difficult to do. But because Shorthorn cattle and their breeders so dominated the industry over the period, social patterns in the Shorthorn world roughly reflect those of the entire purebred industry. Shorthorn breeders' lists and breed histories therefore reveal some social patterns which were characteristic of purebred breeders generally.²¹ A qualified

²⁰ This pattern was clearly demonstrated in the Shorthorn sale of 1909 at the Toronto Union Stock Yard. Almost all the breeders were from Ontario. They sold 30 head to Americans, mostly from the midwest; and 81 head to Canadians, mostly from Ontario. **Farmer's Advocate**, February 11th, 1909: 205.

²¹ Breeders' lists were given in Ontario Sessional Papers. There are three books on the history of Shorthorns which give good information on the situation in Canada within a world context. They are all good but for different reasons. The earliest, written by an American breeder and beef cattle expert, is **Short-Horn Cattle, A Series of Historical Sketches, Memoirs and Records of the Breed and Its Development in the United States and Canada**, by A. Sanders (Chicago: Sanders Publishing Co., 1900). Written from an American point of view, and by a person who actually knew the earliest breeders in England and North America as well as the living animals, the book has a direct feel for the story which provides a sense of theatre to history. The second, **Shorthorn Cattle in Canada**, by D. Marshall (Dominion Shorthorn Association, 1932) was written by a Canadian Shorthorn breeder who knew personally many Ontario families who

assessment of the Shorthorn situation suggests that the following patterns reflected the social structure of the purebred industry.

In the 1870's breeders were always male, tended to be immigrants who had settled in Ontario some time ago, and were generally Scottish (although a considerable number were both English and Irish).⁸² They could be divided into two groups. The elite group, meaning the most influential one which dominated government positions relating to agriculture and sometimes other political positions as well, and owned superior breeding animals, was wealthy and maintained large herds. Good examples of this group were George Brown and David Christie. The other group tended to be composed of ordinary farmers who had come to Canada as agricultural labourers or small farmers.⁸³ These breeders had smaller herds of less important cattle, were not wealthy, and held no positions of influence within the agricultural regulatory world. Good examples were John I.

bred Shorthorns. Background and connections are dealt with in some depth. The third, **Highlights of Shorthorn History**, by G. MacEwan (Winnipeg: Hignell Printing Limited, 1982) is the most scholarly. Based on some private sources made available to the author by the Canadian Shorthorn Association, the book gives a good sense of historical perspective. Together the three books provide a surprisingly rich field of information on all aspects of purebred cattle breeding in Canada.

⁸² Research for this work suggests that, unlike the dairy industry, the entire beef cattle industry was male gendered.

⁸³ D. Marshall's book on Shorthorns in Canada gives the best overview of the social characteristics of breeders.

Davidson, various members of the Miller family, Simon Beattie, Richard Gibson, John Hope, the Gardhouse family, Arthur Johnston, and John Dryden.

By 1900 the situation that would endure until the 1920's was in place. While entirely male gendered, breeders were more evenly divided among farmers of Irish, English, and Scottish descent who were either native born or immigrant. Three types of purebred breeders could be distinguished by now. The elite group, which held influential positions within either government or agricultural organizations and maintained the best herds of cattle, was not the wealthy faction. Elite and influential breeders also tended to be composed of farmers who had been part of the non-elite group in 1870. It was they who held positions in government and livestock associations and they who owned the most valued cattle, and subsequently it was they who controlled the affairs of the cattle industry. Good examples of this type were Arthur Johnston, John Dryden (Ontario's Minister of Agriculture), John I. Davidson, and various members of the Miller family. The elite group was connected by surprisingly extensive intermarriage patterns.³⁴ For example in 1904 William,

³⁴ See D. Marshall, **Shorthorn Cattle in Canada** (Dominion Shorthorn Breeders' Association, 1932) 77-82. Marshall's book also makes clear that chain connections explained the growth of the purebred industry. Many Shorthorn breeders in Manitoba, and later areas further west in Canada, had family connections with Ontario breeders. Trade patterns in the Shorthorn world were also based on chain connections - even across the American/Canadian border.

the son of John Dryden, Shorthorn breeder and Minister of Agriculture for Ontario, married Margaret Miller, daughter of Mrs. William Miller, who was the wife of a prominent breeder and the daughter of James I. Davidson, a farmer of great importance as an importer.³⁵

There was a wealthy group which owned good cattle too, but its most valuable function within the purebred industry appeared to be its role as buyers of the production of the elite breeder/expert group.³⁶ The importance of the wealthy group to the purebred industry, but not as an elite section of it, was recognized by influential breeders at the time. They articulated it somewhat differently, however. One breeder explained the value of having wealthy men in the industry as follows. "It always strikes me there is perhaps no better safety value for rich men than going into agriculture, as it will keep them from getting too rich. Another way of looking at it, in this age which [sic] the socialistic element is getting strong, there is no better means of getting an even distribution of wealth. If these wealthy men keep at it long enough it will result in a large distribution of wealth throughout the province."³⁷

³⁵ *O.A.C. Review*, January, 1904: 39.

³⁶ The significance of the wealthy section to the entire beef cattle industry will become clearer with information on diffusion which will emerge in chapter three.

³⁷ SP 26, Ontario 1897: 132.

The wealthy group tended to be represented by individuals who bought and bred expensive animals for a few years and then vanished.²⁸ The trend was particularly true from about 1890 to 1910, and this type of breeder was dominated by wealthy lumbermen.²⁹ Some were influenced by nostalgia for boyhood farms.³⁰ For example, W. D. Flatt, a wealthy lumberman, bought the family property, Trout Creek Farm, near Hamilton. He wrote to the **Breeder's Gazette** about the old place. "When my mind wanders back to the old farm, I can see where mother left the candle of love burning brightly in the window, the old door wide open, where father left his footprints of the simple life. I can see the trail of love, sacrifice and devotion plainly marked in the rearing of the family. I can see the trail marked with love, industry and thrift. I can trace all these trails directly into the trail of success." Shorthorns were intertwined with his

²⁸ A particularly good example was W. D. Flatt who bought and raised Shorthorns from 1897 to 1905. In 1901 he bought a heifer named Cicely who had been owned by Queen Victoria. He sold her at an auction sale he held at Chicago in November of that year for \$5000.00. D. Marshall, **Shorthorn Cattle in Canada** (Dominion Shorthorn Association, 1932) 605-7. When Arthur Johnston felt compelled to sell his stock, he wrote to Flatt in 1906, begging him to help make sure that Johnston's auction sale went well. Johnston to W. D. Flatt, February 20th, 1906, Letterbook 9, Arthur Johnston Papers, P.A.O.

²⁹ G. MacEwan, **Highlights of Shorthorn History** (Winnipeg: Hignell Printing limited, 1982) 128-133.

³⁰ See **Farmer's Advocate**, December 15th, 1898: 608; December 20th, 1900: 755.

boyhood farm memories. He distinctly recalled a favourite white Shorthorn heifer.⁹¹

A third group of purebred breeders existed by 1900, which was made up of ordinary farmers who had only one or two animals.⁹² It was this group, of the three, which would increase the most between 1900 and 1920.⁹³ One suspects that these farmers intended to use purebred genetics on their herds, as well as breed purebred stock.

Some overall conclusions can be made about the social background of purebred breeders. Ontario purebred breeders remained male, shifted ethnically from being predominantly Scottish to being more broadly Scottish, Irish, and English. They also became gradually more native born, and less elitist as to wealth over the period. While the numbers of purebred cattle did not grow until after 1900, the number of people who owned them did. Generally speaking, from 1870 to 1924 purebred breeders became more ordinary British Canadian-born farmers, and less wealthy immigrant men who did not make a living as farmers.

⁹¹ Cited in G. MacEwan, **Highlights of Shorthorn History** (Winnipeg: Hignell Printing limited, 1982) 129.

⁹² See **A Directory of the Breeders of Pure Bred Live Stock of the Dominion of Canada**, Dairy Branch, Live Stock Division, Department of Agriculture, Ottawa, 1901.

⁹³ It is clearly evident that this statement is true when the **Directories of Pure Bred Live Stock** from 1901 were compared to those of both 1908 and 1910.

How significant in numbers were Ontario's purebred cattle and breeders compared to the rest of the country before 1920? While it is clear that purebred cattle generally resided in central Canada before the 20th century, it is less clear how strong Ontario's position was relative to Quebec's, particularly in the 1870's.³⁴ At first glance Ontario's purebred position seemed the less influential of the two because in Canada the most significant breeder by far was the Quebec stockman, Cochrane.

However, Cochrane's close relationship to Ontario breeders, which has already been described, suggests that purebred cattle breeding in central Canada reflected linkages which made Ontario the real centre. A look at both Quebec's and Ontario's purebred cattle industries will show how that of Ontario functioned in relation to that of Quebec. Generally speaking, before 1890 one rather good way to begin a study comparing the purebred industry within Quebec and Ontario is to review what is known about the importation of purebred stock.

Importation did reflect purebred centres of interest as well as other characteristics, even if it did not indicate actual numbers of all existing purebred animals in Quebec and

³⁴ Even figures on importation of purebred stock, let alone actual numbers of the animals, are poor for this period.

Ontario. While it was true that in the early 1870's Quebec did import more stock than Ontario, it is also apparent that the animals were less valuable.³⁵ Ontario importers in the 1870's brought in fewer cattle, but unlike Quebec, which imported only from Britain, the stock imported into Ontario came from both that country and the United States. American cattle were on average more expensive.³⁶ By the 1880's Ontario's share generally of imported stock became greater and the province progressively relied more heavily on expensive importation from the United States.³⁷ There was a drop in the number of imported purebred

³⁵ SP 3, Canada, 1873: 258, 270; SP 2, Canada, 1883: 3-5; SP 3, Canada, 1888: 3, 456-7; SP 8, Canada, 1877: 88, 112, 85; SP 9, Canada, 1879: 88, 82-3; SP 12, Canada, 1881: 117, p81-2; SP 12, Canada, 1887: 220-1, 95, vii, 196, 201; SP 14, Canada, 1884: 234-5, p229 (a very complete schedule of imported stock was attached to this Sessional Paper). SP 8, Canada, 1885: 223-7; SP 10, Canada, 1880: 97; SP 5, Canada, 1889: vii-iii. SP 5, Canada, 1874: 27, 49, 110; SP 5, Canada, 1873: 27; SP 14, Canada, 1883: vi, 246-7, 236, 248; SP 3, Canada, 1888: 457. SP 8, Canada, 1895: vii-ix; SP 11, Canada, 1882: vi, 129-130; SP 10, Canada, 1886: 178; SP 7, Canada, 1893: vi, xiii, vii. The **Reports** of the Department of Agriculture, from 1877 until 1893, gave importation data with reasonable constancy. While reports for some years did not indicate the destination of the animals, enough do to prove that more were going to Ontario than Quebec. See also **The Canada Herd Book, Containing the Pedigrees of Improved Short-Horned Cattle**, volume 1, Board of Agriculture of Upper Canada, 1867; and **History of Short-horned Cattle Imported into the Present Dominion of Canada from Britain and the United States, Chronologically Arranged**, volume 1 to 10, 1867 to 1894.

This statement also implies that dairy cattle and not beef were more likely to be imported into Quebec because cattle of the purebred beef breeds seemed to command more money than those of the purebred dairy breeds. See **Farmer's Advocate**, May 6th, 1909: 753.

³⁶ **Ibid.**

³⁷ **Ibid.**

cattle into central Canada after 1890.³⁴ This situation merely reflected the fact that central Canada's, and Ontario's purebred industry in particular, was relying more on its ability to breed and sell its own stock.³⁵

Quebec's purebred industry demonstrated through importation patterns the same characteristics seen in Cochrane's case: British ethnicity and a specific geographic locale. The buyers were people who appeared to be English and who lived in the Eastern Townships.³⁶ Articles in farm journals implied that Quebec breeders had a closer working relationship with Ontario

³⁴ The **Statistical Yearbooks of Canada** indicate this trend.

³⁵ The papers of Arthur Johnston tend to show that imported stock in this period was important for promotional reasons, and that most sales of purebred cattle would result from homebreds that descended from that stock. Arthur Johnston Papers, P.A.O.

³⁶ SP 3, Canada, 1873: 258, 270; SP 2, Canada, 1883: 3-5; SP 3, Canada, 1888: 3, 456-7; SP 8, Canada, 1877: 88, 112, 85; SP 9, Canada, 1879: 88, 82-3; SP 12, Canada, 1881: 117, 81-2; SP 12, Canada, 1887: 220-1, 95, vii, 196, 201; SP 14, Canada, 1884: 234-5, 229 (a very complete schedule of imported stock was attached to this Sessional Paper). SP 10, Canada, 1880: 97; SP 5, Canada, 1889: vii-iii. SP 5, Canada, 1874: 27, 49, 110; SP 5, Canada, 1873: 27; SP 14, Canada, 1883: vi, 246-7, 236, 248; SP 8, Canada, 1885: 223-7; SP 3, Canada, 1888: 457; SP 8, Canada, 1895: vii-ix; SP 11, Canada, 1882: vi, 129-130; SP 10, Canada, 1886: 178; SP 7, Canada, 1893: vi, xiii, vii. The **Reports** of the Department of Agriculture, from 1877 until 1893, gave importation data with reasonable constancy. While reports for some years did not indicate the destination of the animals, enough do to prove that more were going to Ontario than Quebec. See also **The Canada Herd Book, Containing the Pedigrees of Improved Short-Horned Cattle**, volume 1, Board of Agriculture of Upper Canada, 1867; and **History of Short-horned Cattle Imported into the Present Dominion of Canada from Britain and the United States, Chronologically Arranged**, volume 1 to 10, 1867 to 1894.

than French Quebec.¹⁰¹ Importing patterns into Quebec and the relationship of Quebec breeders to those in Ontario so strongly suggest ethnicity division in that province, that it is worth taking a few minutes to look more closely at the situation in French Quebec.

Were all purebred cattle in Quebec possessed by English Canadians? The answer appears to be that most purebred cattle descending from European breeds were owned by English-speaking Canadians in that province before 1890. French Canadian farmers in Quebec used a breed of cattle that had been developed in that province, had no herd book, and was unknown outside the province.¹⁰² The breed, called the French Canadian, was the only cattle breed to have evolved in Canada. The animals had been bred in pure form since 1620 from cattle brought from Normandy and Brittany.¹⁰³ Hardy cows which gave good milk yields at small

¹⁰¹ See, for example, **Farmer's Advocate**, December 15th, 1898: 585-609 for a description of various purebred operations in both Ontario and Quebec.

¹⁰² The cattle were used in a dual purpose way, but tended to be dairy oriented. There is some sense that French Canadian farming, through these cattle, was more dairy oriented than beef. When the commercial, not purebred, production of cattle is considered in Quebec, this trend appeared also to be true.

See J. I. Little, **Crofters and Habitants, Settler Society, Economy, and Culture in a Quebec Township, 1848-1881** (Montreal and Kingston: McGill-Queen's University Press, 1991). Little found that in the eastern townships the raising of beef cattle was ethnically related. Scottish settlers, not French, tended to raise beef cattle.

¹⁰³ Agriculture Canada, **Government Publication 1749B**, Communications Branch, Ottawa, 1986: 7. See also a good article on the French Canadian cow in **Farmer's Advocate**, June 3rd, 1909:

feed costs, they had become almost extinct in Quebec by 1880 as a result of the work of the Lower Canada Board of Agriculture which had attempted to force French farmers to abandon them in favour of Ayrshires.¹⁰⁴

In 1881 several men in the province set out to save the breed. They found that of the few which still survived, 75% were "free of foreign blood"; and in 1886 they opened a herd book.¹⁰⁵ It was left open for ten years in order to gather foundation stock. When it closed to outside registration in 1896, 5,307 cows and 922 bulls were listed.¹⁰⁶ By 1909 the cattle had become common in Quebec, and in fact were the dominant breed along both shores of the St. Lawrence below Quebec City, in the counties west of Quebec city, and in the Lac St. John region.¹⁰⁷ However, purebred herds of good quality were not confined to this area. Some existed in the Eastern Townships, and some both south and north of Montreal.¹⁰⁸

Acceptance of the breed outside Quebec was slow. When French Canadian animals were taken for exhibition in Sherbrooke

916-7.

¹⁰⁴ *O.A.C. Review*, February, 1909: 283.

¹⁰⁵ *Ibid.* 284.

¹⁰⁶ *Farmer's Advocate*, June 3rd, 1909: 617.

¹⁰⁷ *Ibid.*

¹⁰⁸ *Ibid.*

in 1886, *The Canadian Live-Stock and Farm Journal* dubbed the animals as representatives of the "Pure Canadian Cow Scrubess", and stated that if they were an example of agriculture in Lower Canada then farming there was a disgrace.¹⁰⁹ By 1895, when the French Canadian Cattle Breeders' Association was formed, stockmen outside of Quebec began to recognize the fine quality of these animals.¹¹⁰ Although admired more widely, the breed remained rare outside French Quebec.¹¹¹

The resistance of French farmers to the pressure to use Ayrshires, their lack of interest in a herd book, the heavy importation of British cattle by English Canadians in Quebec and English farmers' practical connections with breeders in Ontario and not Quebec, created an ethnic division in the purebred industry in Quebec. French farmers were not involved in the

¹⁰⁹ *The Canadian Live-Stock and Farm Journal*, December, 1886: 346.

¹¹⁰ *O.A.C. Review*, February, 1909: 284. *The Canadian Live-Stock and Farm Review*, May, 1895; Americans were not as prepared to accept the idea that the Quebec cattle had been bred with such purity. *SP 8, Canada*, 1896: xiv.

¹¹¹ In 1908, of all the French Canadian registered cattle in Canada, only 14 (and these were in Ontario) of the total of 557 lived outside Quebec. *A Directory of Breeders of Pure Bred Live Stock in the Dominion of Canada*, 1908. In 1919, of a total of 153 members of the French Canadian Cattle Breeders' Association, 150 lived in Quebec, 1 lived in each of Ontario, Manitoba, and New Brunswick. *The Agricultural Gazette*, 6 (1920): 265. In 1924, the Committee on Agricultural Conditions had not heard of the French Canadian breed. Gustave Toupin, professor of agriculture at the Agricultural College at Oka, was asked to explain the breed. *Committee on Agricultural Conditions*, Dominion Government of Canada, Part 11, 1924: 461-2.

national purebred industry, which was dominated by the British breeds, for the simple reason that they did not use those breeds. Because French farmers continued to resist registering their cattle, the Herd Book does not tell us about actual numbers of these cattle within the province.¹¹² It should be remembered, however, that no herd book actually represents all purebred stock. Even if French Canadian purebred cattle not registered are taken into consideration, evidence suggests that Ontario simply had more purebred cattle.

Ontario was certainly the centre of the purebred industry in Canada after 1900, as the better data for this period reveals. In 1901, Ontario had 4 times as many head of purebred cattle as the province with the next largest number, Quebec.¹¹³ That basic ratio did not change much before the 1920's.¹¹⁴ Numbers of purebred breeders remained by far the highest in Ontario as well.¹¹⁵

¹¹² Perhaps they saw herd books as English tools for purebred breeding.

¹¹³ **A Directory of the Breeders of Pure Bred Live Stock of the Dominion of Canada**, Department of Agriculture, Dairy Branch, Live Stock Division, 1901, page number not given.

¹¹⁴ **A Directory of Breeders of Pure Bred Live Stock in the Dominion of Canada**, Department of Agriculture, Live Stock Branch, 1908, no page given. In 1911 Ontario had over 70,000 head of purebred cattle, Quebec had 18,000, and the province to have the next highest number of purebred stock was Manitoba with just under 11,000. Report of the National Record Board in **The Agricultural Gazette**, 1 (1914): 317.

¹¹⁵ See **The Agricultural Gazette of Canada**, 1 (1914): 133; 3 (1917): 720; 4 (1918): 187; 5 (1919): 281; 6 (1920): 265. See

The ratio of purebred cattle to commercial cattle in all provinces also remained highest in Ontario. Ontario showed the highest proportion of purebred cattle to commercial cattle, and also showed the highest increase in proportion between 1911 and 1921 for all provinces. In 1911 Ontario had 2.82 purebred head of cattle to 1000 head, while the nation had 1.90 per 1000. In 1921 Ontario had 5.48 purebred head of cattle to 1000 head, while the nation had 3.48 per 1000.¹¹⁶ It is clear that the dominance of the industry by Ontario actually grew in relation to the rest of the country over the period under study. It seems clear, then, that Canada's purebred cattle industry before 1920 was primarily one that was located in Ontario.

Since no official voice existed for commercial beef cattle producers in Ontario until after the 1920's, it is difficult to assess their attitudes to animal husbandry. One way to understand their thinking about the technology of beef cattle raising is to establish their acceptance or rejection of purebred breeding technology which was moulded by purebred breeders' attempts to satisfy certain markets, and their

also **A Directory of the Breeders of Pure Bred Live Stock of the Dominion of Canada**, Department of Agriculture, Ottawa, 1901, 1908, 1910.

¹¹⁶ **Census** of 1921, volume V: ci. Ontario had 2,674,875 head of cattle in total and 146,463 purebreds in 1921, while the next closest ratio was in British Columbia with a total of 219,058 head and 8,739 purebred. **Census** of 1921, volume V: 61.

acceptance or rejection of dairy-oriented or beef-oriented cattle.¹¹⁷ Because purebred breeders attempted to influence the attitudes of ordinary cattle farmers on these issues a good deal of contemporary material was generated on this topic.¹¹⁸ The next chapter will analyze beef cattle raising in Ontario by trying to establish the point of view of the ordinary farmer to these issues.

¹¹⁷ The associations for commercial producers in Ontario did not appear until the 1940's. Confirmed by David Adams, Past General Manager of the Canadian Meat Council, February 21, 1995. It is interesting that commercial cattle producers did form organizations to project their concerns in the west before they did in the east. While the Western Stock Growers' Association was established 1896, two cattle raisers' associations had existed in Alberta from 1883.

¹¹⁸ Such purebred breeders might in fact be breeders for the Ontario Agricultural College at Guelph, or the Experimental Farm there. Often the editors of farm journals were purebred breeders. Thomas Shaw of **The Canadian Live-Stock and Farm Journal** and William Weld of the **Farmer's Advocate** are but two examples. Members of the government supported agricultural boards (such as George Brown and David Christie), ministers of agriculture (such as Sidney Fisher, John Dryden, and Charles Drury) were also purebred breeders.

Chapter Three: Commercial Beef Cattle Farming in Ontario

In 1956 Irving Layton wrote a poem, "The Bull Calf".¹ In many ways, extracts from this well-known work serve as a good introduction to general cattle production both in Canada and in Ontario. Layton's powerful work makes it abundantly clear that beef cattle farming was a complex endeavour.

The thing could hardly stand. Yet taken
from his mother and the barn smells
he still impressed with his pride,
with the promise of sovereignty in the way
his head moved to take us in.

"No money in bull calves," Freeman had said.
The visiting clergyman rubbed the nostrils
now puffing pathetically at the windless day.
"A pity," he sighed.

Struck,
the bull calf drew in his thin forelegs
as if gathering strength for a mad rush —
tottered — raised his darkening eyes to us,
.....

Below the hill's crest
the river snuffled on the improvised beach.
We dug a deep pit and threw the dead calf into it.
It made a wet sound, a sepulchral gurgle,
as the warm sides bulged and flattened.
Settled, the bull calf lay as if asleep,

¹ Irving Layton, born in Rumania in 1912, was raised in Montreal. Educated at MacDonalld College in agriculture and at McGill University where he received an M.A., Layton became a well known and respected Canadian poet.

one foreleg over the other,
 bereft of pride and so beautiful now,
 without movement, perfectly still in the cool pit,
 I turned away and wept.

The wrenching pathos of Layton's poem eloquently points out that general beef cattle farming in Canada was more complex than merely reproducing the animals on farms. Why would it make sense to kill calves, and especially bull calves, rather than raise them for beef? The answer to this question lies in the fact that success in commercial beef cattle raising resulted from the interaction of many factors, some of which followed from the combination of agricultural animal husbandry issues and economic conditions. This chapter will concentrate on some of those circumstances. Farming for beef in Ontario from 1870 to 1924 will be assessed here within the framework of three issues: cattle raising systems common to the western world, farmer acceptance or rejection of purebred genetics, and farmer acceptance or rejection of beef or dairy-oriented cattle. It will then be apparent that these three factors created a situation which resulted in what appears to be nonsense practices such as calf killing.

Ontario beef cattle farming must be seen within the framework of ancient livestock systems which prevailed in all western society, and then in comparison to 19th century British and American cattle raising. The production of beef cattle was traditionally segregated into two separate functions: the

farmers who bred the stock and the farmers who fed the stock until it was killed.² It was an old division that dated back to the Middle Ages in Europe. Because it was the British breeder/feeder methods which were the basis of all beef cattle raising within Canada, the United States, and Britain - countries that provided the market place for beef cattle from Ontario - historical background to the situation within Britain explains subsequent patterns that evolved in all three of these countries.³

While British farmers could be both breeders and feeders in early times, generally speaking, breeders were further from market and feeders were closer.⁴ Cattle were known, for example,

² See T. Jordon, **North American Cattle Ranching Frontiers, Origins, Diffusion, and Differentiation**, Histories of the American Frontier (Albuquerque: University of New Mexico Press, 1993). While this book concentrated on various ranching systems developed within Europe and their transmission to North America, Jordon's conclusion was that the British breeder/feeder system won out over all others in North America, and that the ranching industry acted as the breeder section of a breeder/feeder system.

³ Ibid.

⁴ See J. H. Von Thunen, **Der Isolierte Staat, Translated Into Von Thunen's Isolated State: An English Edition of Der Isolierte Staat**, translated by C Wartenburg (Oxford: Pergaman Press, 1966) for a theory on the geographic relationship between areas of production of certain agricultural commodities and the market place. Von Thunen's book was written between 1826 and 1842. He described agricultural rings of production which developed in light of the commodity and transportation methods around urban centers. An economic theory which was spatially related, the work was not used much by English speaking scholars until well into the 20th century. It became important to historical geographers. See, for example, J. Lemon, **The Best Poor Man's Country, A Geographical Study of Early Southeastern Pennsylvania**

to have been walked from Wales to England for feeding from the late Middle Ages. Scottish farmers began producing stock cattle for English feeder farmers shortly after 1700. As the urban London market grew over the 18th century, farmers near the city found it increasingly profitable to feed rather than breed cattle. Demand for feeders rose, and a complicated droving system developed by which the cattle were walked to feeding farmers.⁵

Developments after the mid-19th century changed the way Britain's well established breeder/feeder system worked. With the advent of steamships and railways in the 1840's the balance between stock-breeding and stock-feeding areas of Scotland and England was destroyed. Because old breeding areas could now fatten cattle as easily and more cheaply than the old feeding areas, regions like Aberdeenshire which had been a large breeding area, became feeding areas for the London market.⁶ Feeders were brought into Aberdeen, for example, first from

(New York: W. W. Norton & Company, 1972). While the theory does not hold up generally for agricultural production historically speaking, in a rough sense, the spatial patterns of breeder/feeder systems for beef production support Von Thunen's theory.

⁵ Because droving involved walking, only hardy breeds of cattle such as the Galloway were suitable for the industry. See J. H. Smith, "The Cattle Trade of Aberdeenshire in the Nineteenth Century", *Agricultural History Review*, 3 (1955).

⁶ *Ibid.*

Ireland by 1860 and then America by the early 1870's.¹ The steamship and the railway, therefore, worked together to make Britain's breeder/feeder industry an international one, geographically speaking.²

Beef cattle farming in the United States, as it developed from colonial times until the 1870's, evolved in a similar fashion to perform the same functions that it had in Britain. Two separate systems - one in the east and one in the southwest - joined together to serve as one process for the production of beef cattle within a breeder/feeder structure. The historical background of the two separate systems, their evolution and their merger, is as follows.

Feeding systems of the most lasting importance originated long before the Revolution in the eastern states of Virginia, Maryland, and Pennsylvania, and these techniques extended to Ohio early in the 19th century.³ They spilled out of the state of

¹ See J. Blackman, "The Cattle Trade and Agrarian Change on the Eve of the Railway Age", **Agricultural History Review**, 23 (1975). See also **Farmer's Advocate**, February 1887: 44.

² It would also change the breed of cattle primarily used for the production of beef. Hardy stock were no longer so necessary because cattle were not required to walk to feeder farmers. Shorthorns, good stall-fed cattle but not particularly hardy, became increasingly popular because they fattened more easily and cheaply than Galloways.

³ See in particular W. P. Bidwell and J. L. Falconer, **History of Agriculture in the Northern United States, 1620-1860** (Washington: Carnegie Institute, 1925).

Ohio into the prairie-grazing breeder areas of Illinois and Iowa by the late 1850's.¹⁰ Railway development in the prairie area in the 1850's caused the spread of corn growing and cattle fattening into the old ranges, which had served as breeder areas and had supplied the feeding areas with stockers. (Stockers are younger feeders.) The feeding areas of the Old Northwest had changed by 1870, not so much in character as in size and dimension. The breeder-feeder relationship had created an enlarged corn belt and tended to push the range sector further west into the Great Plains.¹¹ In the end the Corn Belt would run from Kansas and Nebraska to Ohio, with a southern boundary which embraced parts of Missouri and Kentucky; and a northern boundary that ran through the eastern Dakotas, southern Minnesota, and southern Michigan.¹²

While these developments were taking place in the old Northwest, the Texas grazing section of the beef industry - a breeder and to some degree (by grass) feeder section of ancient Spanish origin - expanded north into the Great Plains.¹³ A review

¹⁰ See *Ibid.*, and R. Jones, *History of Agriculture in Ohio to 1880* (Kent: Kent University Press, 1983).

¹¹ P. Henlein, "Cattle Driving From the Ohio Country, 1800-1850", *Agricultural History*, 28 (1954): 95.

¹² A. Bogue, *From Prairie to Corn Belt, Farming on the Illinois and Iowa Prairies in the Nineteenth Century* (Chicago: University of Chicago Press, 1963) 1.

¹³ See T. Jordon, *North American Cattle Ranching Frontiers, Origins, Diffusion, and Differentiation*, *Histories of the American Frontier* (Albuquerque: University of New Mexico Press,

of where beef cattle were raised, as one sector moved west and the other moved north, demonstrated that by the late 1870's certain spatial patterns were apparent. A geographic belt which was best suited to the raising of these animals was evident, and beef cattle had followed it as they moved west and north.¹⁴ Cattle that grazed on or were fattened in this belt were found to produce superior beef, and in a shorter time than animals raised either north or south of it. Known as the American Beef Belt, it lay between the 36th and 43rd parallel in central Kansas and Nebraska and extended westward to the 100th meridian on the edge of the Great Plains.¹⁵ The natural adaptation of the belt for beef cattle suggested continuation of the divided system of breeder-feeder patterns which had existed in the United States for over two centuries. By the late 1870's the Texas cattle industry of the Plains, a system entirely based on grass for feed, came to fill the role that Illinois had earlier. The cattle industry of the Great Plains became the breeder sector of the feeder system of the Ohio Valley, and it did so within the beef belt.

1993). Jordon made it clear that the Texas cattle industry was itself very complicated, and based on the historical background of various European systems. He argued that it was basically also the British system that won out in Texas.

¹⁴ J. W. Thompson, **A History of Livestock Raising in the United States, 1607-1860** (Washington: Bureau of Animal Economics, 1942) 137.

¹⁵ **Ibid.** 137-8.

While the railways moved the prime feeder areas further west in the 1850's, the union of the Texas industry with the old Northwest feeders in the 1870's did not move the center of the industry farther west again. Illinois and Iowa farmers became both breeders and feeders, and by shifting to intensive feeding of improved quality of stock over a shorter period they successfully competed with the cheaper Texas Plains cattle which served as feeders.¹⁶ The result was a distinct move towards better quality beef that came to market at younger ages. Illinois and Iowa feeder farmers who produced earlier finishing, good quality stock tended to cluster around the purebred breeders. Why purebred breeders were located where they were within the region is not known.¹⁷

Various patterns emerge in this description of the historical development of beef cattle farming within Britain and the United States. First, in both countries there was a natural division in the labour which most efficiently produced beef cattle. Generally speaking, farmers did not necessarily raise calves that they bred. Second, methods of transport affected the geographic relationship between breeder and feeder areas, and the beef market place in both countries. Railways allowed for the production of cheaper beef farther from markets. Traditional

¹⁶ J. Whitaker, **Feedlot Empire: Beef Cattle Feeding in Illinois and Iowa, 1840-1900** (Ames: Iowa State University Press, 1975) 55, 64.

¹⁷ *Ibid.* 82.

producing areas - breeder and feeder - which lay closer to the market could successfully compete with the newer more distant sections, however, by producing better quality stock over a shorter period. Third, breeder/feeder systems which relied on transportation technology could become international as well as national in scope. Fourth, there was a natural geographic area which produced beef cattle better than other sections in North America. Fifth, in the United States successful feeders of high quality stock tended to cluster around purebred breeders. Any review of Ontario's and later Canada's beef cattle farming, its initial functioning, and its later development must be related to these international patterns.

Cattle farming centres existed in Ontario by the 1850's. Early marketing systems probably did more to determine where these centres developed before 1870 than any other factor. Von Thunen's theory of spatial relationship, which suggested that agricultural production was influenced by a combination of transportation technology and geographic proximity to population bases, did not appear to have been as significant here as marketing services within communities.¹²

¹² See K. Kelly, "The Development of Farm Produce Marketing Agencies and Competition Between Market Centres in Eastern Simcoe County, 1850-1875", *Canadian Papers in Rural History*, 1 (1978).

It was the development of fairs, which provided good marketing systems, that explained why beef cattle farming developed over dairy farming in certain areas before 1870. Counties with good soil and proximity to consuming centres, which lacked early market fairs, would not become beef cattle farming centres.¹⁹ The close relationship of Oxford county to New York state, for example, certainly eased a transition to a cattle farming system which was oriented to the cheese industry, but it was the lack of marketing fairs that made it difficult for the county to turn to the raising of beef stock.²⁰

Market fairs also played a role in the location of dairy farming over beef farming where there was poor soil in the province. Poor soil for wheat growing in eastern Ontario was the major reason that cattle farming was started by the 1850's, but the fair situation helped shift the production of cattle towards dairy. There were some market fairs by the 1850's in the upper Ottawa valley, but they did not develop before 1870 in central Ontario or the lower Ottawa valley.²¹

¹⁹ K. Kelly, "The Agricultural Geography of Simcoe County: 1820-1880", Ph.D. Thesis, University of Toronto, 1968: 94.

²⁰ New York state was the centre of the American dairy industry at this time. See E. Brunger, "Dairying and Urban Development in New York State, 1850-1900", **Agricultural History**, 29 (1955).

²¹ L. G. Reeds, "The Agricultural Geography of Southern Ontario", Ph.D. Thesis, University of Toronto, 1955: 138.

Farmers in the counties of Wellington and Waterloo began to turn to beef, not dairy, farming in the 1850's because of the marketing agencies available to them. In these counties, different communities established local fairs, or markets, where farmers could bring cattle for sale and be paid in cash.²² The most important of these was started at Guelph in 1850.²³ Farmers in surrounding areas began to raise cattle for these markets. Fattening stock tended to be centred in Wellington, but soon the London and St. Thomas sections of Middlesex were involved in feeding as well. Feeders were supplied from Kent, Lambton, and Huron counties by the 1860's.²⁴ Therefore, not only were beef farming centres established by that time, but a breeder/feeder system was also developing within that slowly widening centre in Ontario.

Centres of commercial production of cattle, both breeder and feeder, apparently tended also to coincide with the location of purebred breeders from early times. As early as 1851 the counties of Wellington, and Middlesex were among both the most important commercial and purebred beef cattle producing counties.²⁵ By 1861 commercial production of cattle was centred

²² **Ibid.** 137-8.

²³ **Ibid.**

²⁴ **Ibid.** 139.

²⁵ **Census** of 1851, volume 2: 60-65.

where purebred breeding would be concentrated by 1882.²⁶

Geographic patterns of early cattle farming generally suggested that purebred breeders and ordinary producers grouped together with little sense of one following the other, although possibly the fair situation influenced the location of purebred breeders as well. By the early 1880's new purebred breeders seemed to settle near established centres of cattle production on ordinary farms.²⁷

Commercial beef cattle raising had a well established breeder/feeder system by then.²⁸ In 1882 the largest breeding county - the strongest breeding counties could be said to be those with the highest number of cows and calves - was Middlesex with Wellington, Perth, Simcoe, Grey, Bruce, Huron, and Lambton not far behind.²⁹ If feeding counties were considered to be those which had large numbers of what the census called "store" cattle

²⁶ **Census** of 1861, volume 2: 94.

²⁷ See Chapter Two for more on the location of purebred breeders.

²⁸ In the Bureau of Industries' Report of 1883, cattle were listed by county in divisions of Thoroughbred, working cattle [oxen], milch cow, store cattle over two years old, and other cattle. It is important to explain the term "milch" cow. All census data on cattle used the term until at least 1921. It is misleading, and in itself expresses the contemporary difficulty people had understanding purpose in cattle. It was intended to mean milking cows or cows that were milked. In reality it meant cows in milk or with calf - effecting all breeding cows. The term, therefore, includes productive beef and dairy cattle. See the **Census** of 1921, volume V: xci, xcii. It is clearly stated here that this misunderstanding had been evident.

²⁹ See **Appendix B**.

(which meant feeder stock), it is interesting to note the geographic relationship between large breeding counties and the major feeding areas in 1883. Breeding and feeding were done in close proximity. It would appear from the data that breeders both sold their stock locally to other farmers, and also probably acted as feeders themselves.³⁰

Linkage by breeder/feeder apparently did not extend over large geographic areas. The beef centres of Middlesex and Wellington, for example, did not rely on other counties very heavily for feeders. They generated a great deal of the stock themselves for their feeder farmers. Neither did beef cattle breeding centres here supply weaker beef cattle counties with feeders. Farmers within these areas fed the limited numbers that other local farmers bred. The situation suggests regional self-sufficiency.

This breeder/feeder and geographic pattern was still in place in 1891, but by 1912 counties such as Grey and Huron were

³⁰ See SP 23, Ontario, 1897: 88. The many articles over the years in farm journals offered convincing evidence that while breeding and feeding went on in close proximity, they remained two tasks. Real proof that breeding and feeding were separate functions here, even when they were practiced in the same area, cannot actually be had until the selling of livestock became centralized at stock yards. Feeder farmers from the feeding counties - Huron, Perth, Wellington, Peel, Dufferin, and South Ontario - commonly bought their stock at the Toronto cattle market. The fact that they bought stock meant that they did not feed only what they bred. See *Farmer's Advocate*, February 1st, 1900: 64.

close to Middlesex in general production.³¹ The situation had changed slightly by 1924.³² While breeding areas were unclear, because it is not possible to tell where and how many dairy cows were used to produce beef cattle, there is some evidence to suggest that breeding regions still tended to coincide with feeder areas.³³ Feeding areas were clear. Regions farther away from large urban centres played a larger role in the industry than they had been in 1882 or even 1912. While the major beef feeding centres continued to be Bruce, Grey, Huron, Lambton, Simcoe, Wellington, Middlesex, and Perth, the emphasis appeared to have shifted. Wellington's position was slightly weakened, but that of Middlesex seemed to have weakened more.³⁴ Middlesex fed more beef cattle than any other county in 1882, 1891, and 1912. The county feeding the most in 1924 was Bruce (with Huron not far behind).³⁵ While there was evidence that Middlesex's contribution of beef cattle was still strong in the 1920's, it

³¹ SP 67, Ontario, 1891: 79. SP 44, Ontario, 1912: 38-9.

³² **Crop Bulletin**, December 1924: 28, R.G. 49, Ontario Department of Agriculture, P.A.O.

³³ **Ibid.** See SP 15, Canada, 1920: 31 for a table on Ontario produced livestock marketed on public yards by county for March 1919. This table implied that feeder tended to be breeder areas. One notable exception was Grey. This county appeared to have imported feeders.

³⁴ See **Live Stock And Animal Products**, 1920: 19. This table suggested that Wellington's position had not changed. It confirmed, however, that that of Middlesex had.

³⁵ Ontario, Department of Agriculture, **Crop Bulletin**, December 1924: 28, R.G. 49, Ontario Department of Agriculture, P.A.O.

was also entirely clear that the contribution of Bruce, Grey, and Huron had grown in proportion enormously.³⁶

The situation in Ontario between 1850 and 1924 could be compared to the international systems in the following ways. Breeder/feeder systems in Ontario apparently exhibited the historical pattern of labour division in the raising of beef stock, but unlike the situation within Britain or the United States, they did so within close geographic proximity. That pattern reflected the level of transportation technology and centralization of consumers, but differently than in either the United States or Britain. While this evolution could be explained partially by the fact that the province's livestock farming developed coincidentally with railway building, and partially by the fact that the comparison here is being made between nations, Britain and the United States, and part of a nation, Ontario, it is strange that urbanization patterns within this large area did not shift the spatial location of the industry more. It was a more or less unchanging system, geographically speaking, from 1883 to 1921. Furthermore, developments after 1883 did not very dramatically change the spatial pattern which had been laid down between 1850 and 1870 by early marketing systems.

³⁶ SP 46, Ontario, 1922: 44-5. A table is given here for all stock sold or slaughtered by county in the province.

Two other comparisons are worth mentioning. First, within the context of North America, Ontario lay outside the natural American Beef Belt. Second, like the beef feeding centers of the United States, commercial beef farming was centred near purebred breeders.

Production of beef cattle by Ontario farmers must be seen in light of their acceptance or rejection of the only technology known at the time to produce superior living animals: purebred genetics. While the selling patterns discussed in Chapter Two of purebred breeders indicated that acceptance of purebred genetics was very low before 1910, what actually was the growth pattern of the purebred industry between 1882 and 1921?

While there were 23,000 cattle reported as purebred in 1882 out of 1.6 million cattle in the province, the actual number of purebred animals was calculated by Professor Brown of the Ontario Agricultural College to be closer to 13,000 head.³⁷ By 1908 there were fewer purebred cattle in the province (less than 13,000) than in either 1882 or 1901, while there were more cattle generally - a fact which meant that the ratio of purebred cattle to commercial cattle, as well as their actual numbers, had declined between 1882 and 1910.³⁸

³⁷ See **Appendix B. Crop Bulletin**, number 3, August 1882: 18, R.G. 49, Ontario Department of Agriculture, P.A.O. William Brown, **Report on the Herds and Flocks of Ontario**, 1883: 30.

³⁸ **A Directory of the Breeders of Pure Bred Live Stock of the**

While the ratio of purebred to commercial cattle rose between 1910 and 1921, it should be pointed out that the number of purebred animals remained low enough to have little real effect on the provincial herd. Calculations by the Ontario government in 1919 revealed how poor the general quality was even at that ratio.³⁹ The range of scrub, or poor quality, bulls was found to be in various counties between 0% to 15% or 30%, but to be as high as 75% to 80% in a few.⁴⁰ Numbers of good stock may have started to rise by 1910, but there were still not many of these animals by the end of the period under study. This persisting resistance by farmers to the use of purebred cattle must be explained.

Why did Ontario farmers not use this method of improving their beef cattle, earlier and more widely? Five reasons will be looked at in some detail. First, farmers did not see purebred cattle as animals that belonged on ordinary farms. Second, farmers were not convinced that purebred genetics actually

Dominion of Canada, 1908, Live Stock Branch, Dominion Department of Agriculture, no page given.

³⁹ "Only about 2 per cent of the cattle marketed in Ontario stock yards are fit for export", reported the Ontario Department of Agriculture. Ontario, Department of Agriculture, "Better Bulls", Bulletin 281, Ontario Agricultural College, 1920: 5. Export cattle are the highest quality of beef, and therefore serve as the barometer for quality grading.

⁴⁰ **Agricultural Gazette**, 1919: 659. This information appeared to be all that has survived of a survey done in Ontario on the status of purebred livestock in the province.

produced a better product. Third, economic cycles peculiar to beef farming acted as a natural brake on rising purebred to commercial ratios over a number of years. Fourth, the interrelated problem of mechanization and labour pool resources influenced what farmers thought about purebred cattle. And fifth, farmer attitudes to improvement were entangled with their interpretation of purebred breeders' ideas on specialization for dairy and beef purposes. Understanding the fifth factor involves a detailed discussion of the problem of dairy/beef orientation in the general herd, as a concept separate from that of improvement.

A major reason farmers did not see purebred cattle as animals belonging on ordinary farms was the elitism of the purebred industry.⁴² Elitism in the purebred industry was a complicated issue because it was reflected in both breeders and in animals.

The early social structure of purebred breeders alone separated them from farmers. The position - due to wealth and influence in government, agriculturally or otherwise - of the elite section of purebred breeders in the 1870's aroused farmers' sense that breeders were not part of the world of an ordinary farmer. Comments by farmers were few, but those which

⁴² See H. Ritvo, **The Animal Estate** (Cambridge: Harvard University Press, 1987) for an assessment of the relationship of the British aristocracy to purebred cattle breeding in Britain.

did appear in the journals all suggest that in the 1870's purebred breeders were perceived to be men who knew little about agriculture. One man who signed himself "an old farmer" wrote to the **Farmer's Advocate** about David Christie, a prominent purebred breeder and government figure, as follows. "Mr. Christie may be a thundering fine farmer, and able to swell a regular practical farm. What I call a practical farmer is one who has held his own plough."⁴² Lennox Township reported to the government in 1879 that farmers in that area had no interest in purebred stock of any breed, and the implication here was that purebred animals were the pets of rich hobby farmers.⁴³ By focusing on the raising of stock designed to maintain their market with purebred breeders in the United States specifically, purebred breeders indicated clearly that they took little interest in the needs of commercial cattlemen. That reality made their attempts to educate farmers about the value of purebred cattle somewhat futile.⁴⁴

By the 1890's some Shorthorn breeders began to be more aware of the fact that purebred cattle should find a market with

⁴² **Farmer's Advocate**, May, 1873: 73.

⁴³ SP 3, Ontario, 1879: 85.

⁴⁴ See D. Lawr, "Development of Agricultural Education in Ontario, 1870-1910", Ph.D. Thesis, University of Toronto, 1972, for farmer attitudes to the Ontario Agricultural College and the Experimental Farm in the early years of their existence.

ordinary farmers.⁴⁵ "Many of the crazes which in the past have done so much to injure the breed have had their day", noted one producer hopefully in 1895, "and are dead and well buried, such as that for fancy pedigrees without an animal to match, and the craze for a fixed colour no matter how deficient in the more substantial qualities."⁴⁶ "If [purebred cattle] are merely playthings of the rich, and the country at large is reaping no benefits from them, and the ordinary commercial cattle not improved by use, then they are of little value," a cattleman told Ontario purebred breeders in 1898.⁴⁷

Purebred producers were increasingly conscious after 1910 that they should be providing cattle designed for more than the purebred market.⁴⁸ The *O.A.C. Review*, for example, explained the situation in 1919 as follows. "The purpose of all breeders of pure-bred stock should be to improve the ordinary commercial stock in the hands of the average farmer. This constitutes the outlet for the greater part of the registered stock and it

⁴⁵ See P. J. Perry, "The Shorthorn Comes of Age, 1822-1843", *Agricultural History*, 56 (1982) for an assessment of the development of the original improved Shorthorn, based on the first herd book, Coates' Shorthorn Herd Book. Perry believed that the Shorthorn was developed by farmers for use by farmers. The breed was not the creation of the elite classes.

⁴⁶ SP 20, Ontario, 1895: 57.

⁴⁷ SP 28, Ontario, 1898-9: 55.

⁴⁸ This conclusion was made by the present writer on the basis of both farm journals and reports of breed associations over the years.

should take the form of the sale of good sires to be used on grade herds."⁴⁹ Because farmer acceptance of purebred cattle began shortly after this change in breeding strategies of Shorthorn breeders, it would appear that farmers had been influenced by the Shorthorn industry's earlier elitist obsession with American fashion crazes.

The cattle, which resulted from the breeding technology of purebred breeders and the moulding of that technology to meet breeding crazes which emphasized pedigrees or colour, seemed to belong to a separate farming world. The animals themselves, therefore, embodied elitism. Ordinary farmers shied away from such cattle.⁵⁰

"Let me say there are hundreds of our farmers who have a decided prejudice against pedigree, and if a pedigreed animal comes into the ring, they shy off and won't bid on it. I have stood around a ring where there were grade cattle and pedigreed cattle offered. When a grade animal comes into the ring, they would run it up even beyond its value, but the moment a

⁴⁹ *O.A.C. Review*, May, 1919: 405.

⁵⁰ See J. Walton, "Pedigree and the National Cattle Herd Circa 1750-1950", *Agricultural History Review*, 34 (1986) for an assessment of how British farmers reacted to "improvement", purebred cattle, and production of the livestock generally. Walton believed that purebred cattle had not offered any improvement to the national herd in two hundred years. He suggested that farmers never saw these cattle as good farm stock.

pedigreed animal was brought in, they would close right up," noted John Dryden as late as 1903.⁵¹ A farmer reported in 1919 that when he had bought a purebred bull with trepidation some years ago, he had been confronted with disapproval of his neighbors. "In [his] community a purebred animal had been a rarity and the owner was censored for 'putting on airs'", noted the **O.A.C. Review**, journal of graduates of the Ontario Agricultural College.⁵²

Elitism in the animals themselves, and of purebred breeders, can be seen most clearly in the functioning of shows.⁵³ One of the chief ways that breeders of improved cattle attempted to teach farmers to use purebred cattle was to hold exhibitions which offered prize money for stock. Shows, however, acted as a wedge between purebred breeders in general and commercial producers, and also between the various sectors of purebred breeders themselves. By 1874 it was apparent that only expensive imported cattle - animals which no ordinary producer could afford - won the prizes.⁵⁴

⁵¹ SP 23, Ontario, 1903: 104,

⁵² **O.A.C. Review**, June, 1919: 468.

⁵³ See Elsbeth Heaman, "Commercial Leviathan: Central Canadian Exhibitions at Home and Abroad During the Nineteenth Century", Ph.D. Thesis, University of Toronto, 1996: 225-271. While elitism was part of these shows, it was not the only factor in them. The idea that elitism played the only role in livestock shows has been shown by Heaman to be too simplistic.

⁵⁴ The Council of the Agriculture and Arts Association of Ontario reported that in 1874 there was a marked falling off of

The **Farmer's Advocate** was outraged at this state of affairs. Small farmers and small breeders, who made up nine-tenths of the people that shows were supposed to benefit, could never win, the paper stated. Men who had the most money always won the prizes, by going over to England and importing expensive stock. In fact the leading breeders in Ontario numbered about five or six men, the journal claimed, and they did all the winning with imported stock. Thus the ordinary farmer had to compete with the best breeders in Britain.⁵⁵

The Agricultural Society of Wellington South, a major beef cattle producing area, suggested in 1875 that two separate classes be held for purebred cattle - one for province-bred and one for imported stock - because "we find that many farmers, who have good thoroughbred [cattle], feel almost afraid to compete against those breeders who are constantly importing, and making a business of buying and selling stock."⁵⁶ Even in 1914 agricultural societies were reporting to the government that no ordinary farmer would think of showing, because he would have to compete against "professional growers and breeders."⁵⁷

numbers of cattle shown at the various fairs, because only the best imported stock won prizes. SP 1, Ontario, 1874: 202.

⁵⁵ **Farmer's Advocate**, December, 1873: 188.

⁵⁶ SP 1, Ontario, 1875-6: 165.

⁵⁷ SP 42, Ontario, 1914: 57.

The comment made in 1914 suggests that another explanation for lack of farmer involvement in shows had developed by that time. Elitism in shows had extended beyond that seen in the exhibition of purebred cattle. Even showing which was designed for ordinary farm animals, not purebred stock, demonstrated elitism through professionalization late in the century. In 1884 the greatest winning so-called grade or non-purebred steer was The White Duke, a purebred Shorthorn bred by the great Shorthorn farm, Bow Park. The animal was carried to championship by the Ontario Experimental Farm at Guelph.⁵⁸ One well-known showman of non-pedigreed farmer's fat cattle in the 1890's, James Leask, bought his show steers from a top importer and breeder of Shorthorns.⁵⁹ Winning so-called, cross-bred show cattle which came from professional situations did not suggest to farmers that the cattle had been bred for profit outside the show ring.⁶⁰

Although elitism in both the breeders and the animals convinced Ontario farmers that purebred cattle did not make a sensible product for ordinary farms, the farmers also had no reason to think that purebred genetics resulted in better, profitable stock anywhere. It was not actually known how

⁵⁸ SP 13, Ontario, 1884: 38-9.

⁵⁹ Arthur Johnston to James Leask, November 11, 1897. Letterbook 3, Arthur Johnston Papers, P.A.O.

⁶⁰ SP 3, Ontario, 1879: 85.

profitable, and therefore better, purebred cattle could be for the ordinary producer.

It could not be proven to a farmer that he would make more money by buying and using purebred stock. Before 1918 it was hard, in fact, to show how profitable any aspect of farming was for any particular farmer in Ontario. Experiments in feeding cattle and in raising fodder crops, which had been done for years at Guelph, and to a lesser degree at the Dominion Experimental Farms, had done little or nothing to alleviate that situation. These studies were never tailored to meet the various needs of vastly different farms. They also demonstrated a remarkably unstable set of variables in themselves.⁶¹ Variables that created profitability on an individual farm were simply not known.

An interesting indication that farming profitability was not understood occurred in 1919. In front of the Committee on the Cost of Living, two well-known, educated, and successful farmers, E. C. Drury and W. Good, admitted that they were unable to calculate their profits on the basis of relating their costs to their incomes.⁶² Obviously, if important and educated farmers

⁶¹ This conclusion was made by the present writer on the basis of reading many such experiments done at Guelph and at various Dominion experimental farms.

⁶² Canada, Parliament, **Proceedings of the Special Committee on the Cost of Living**, 1919: 181, 190-1. It is hard to explain why this situation was true. The present writer's belief is that the

could not know such answers, agricultural experts would find it difficult to convince the ordinary producer that they were aware of what created profitability for the individual farmer.

In 1918 Professor Leitch of the Ontario Agricultural College began a number of studies on profitability factors on various farms in different areas of Ontario. His study of beef cattle farming in Middlesex county in 1919 proved the financial value of using purebred bulls. "The percentage of farms having profitable cattle was almost twice as great in the group which used pure-bred bulls over 10 years, as in the group which had always used grade bulls." "This proves beyond doubt that the use of a pure-bred bull does pay in actual dollars", wrote Leitch.⁶³ He argued that a purebred bull was the single most important factor in the profits of the farm. Farm size, for example, he did not believe to be as significant.⁶⁴

Attitudes of farmers towards elitism, purebred genetics, and the profitability of purebred cattle did not entirely

definition of economic profitability in farming was undergoing a change in this period. For example, it was beginning to be recognized that cost factors were complicated. It is arguable, also, that the introduction of the income tax in 1917 stimulated interest in issues affecting farm profitability.

⁶³ A. Leitch, "Farm Management, 1919: Part II. The Beef Raising Business in Western Ontario, The Mixed Farming Business in Western Ontario, The Dairying Farming Business in Eastern Ontario," Bulletin 278, Ontario Agricultural College, Ontario Department of Agriculture, June, 1920: 11.

⁶⁴ *Ibid.* 13.

account for the slow spread of improved stock. Changing ratios of purebred to commercial cattle over long periods can be partially explained by the functioning of the cattle cycle.⁶⁵ Natural economic patterns, or cycles indigenous to cattle raising, actually appeared to create built-in repression factors on the rising numbers of purebred stock. In order to show how that rise was checked by this pattern, the cattle cycle itself must be understood.

When the price of cattle was high, the one way that farmers could take advantage of this potential to make money was through higher production, which could only be accomplished by holding back the animals that did the producing: namely heifers and cows. The immediate result was that fewer animals came on the market and this situation brought yet higher prices. The young stock generated by the held-back females would not be ready for market for about 5 years. They then flooded the market, with a resultant lowering of prices. As the value of cattle plummeted, liquidation of stock followed because it became too expensive to feed the animals. A complete cycle lasted 14 years at the end of the 19th and early in the 20th centuries.⁶⁶ Cycles were common

⁶⁵ P. Moncrieff, G. Weaver, and P. Fawcett **Canada's Agricultural Systems**, compiled by, (Ste. Anne de Bellvue: Department of Agricultural Economics, McDonald College of McGill University, 1978) 9-10. For a more contemporary look at the affects of the cattle cycle on beef farming in Ontario, see **The Beef Improvement Ontario Leader**, 1 (1996).

⁶⁶ Cycles are shorter today. They last about 9 years.

all over North America but did not always occur at the same time in different places. Their length was, of course, influenced by many outside factors. One of primary importance was the cost of feed. Weather was another direct factor. Cattle cycles could be related to the problem of the spread of purebred cattle as follows.

The sales of purebred cattle generally would accelerate as peaks in the cattle cycle approached.⁶⁷ This type of rise, however, did not represent a true spread of purebred stock because the sales would decline after the height of the peak.⁶⁸ In other words the system tended to have a self-stabilizing effect. Rising purebred numbers were effectively cancelled by the natural flow of the cattle cycle. Growth periods were compensated for by equal decline periods. It could be argued, however, that in order for beef cattle farming to overcome these checks of the cattle cycle on the growth in purebred numbers, certain conditions within the purebred industry itself had to exist.

In his study of diffusion (meaning the spread of purebred genetics into the ordinary herd) within British Columbia in the

⁶⁷ See the article by William Kerr, "Technological Transfer Through Pure-Bred Herds in British Columbia", **Agricultural History**, 65 (1991). See also **Farmer's Advocate**, December 16th, 1895: 496; April 15th, 1899: 203; June 1st, 1900: 351; February 16th, 1909: 237; February, 10th, 1910: 221.

⁶⁸ **Ibid.**

1920's, William Kerr concluded that the existence of both purebred breeders locally and purebred to purebred sales were central to the success of diffusion in that province.⁶⁹ Rates of diffusion did not rise in British Columbia until a considerable amount of purebred to purebred sale activity had been established. Kerr's ideas are particularly interesting when compared with information on trading patterns of the Ontario purebred industry which emerged in Chapter Two. A period of extensive purebred to purebred sales locally from the 1890's to about 1910 clearly took place before a period when any significant number of sales to ordinary farmers occurred in Ontario. Localization of purebred to purebred sales, therefore, seemed important for the initiation of diffusion here too. It can be argued that other developments in the purebred world also influenced diffusion, or else reflected it. There seemed to be a connection, for example, between the expansion patterns of the purebred industry generally and diffusion in Ontario.

Purebred sales to other purebred breeders can be appraised because such sales were recorded by transfer of ownership documentation. Looking at transfers, then, tells us something about growth patterns generally of the purebred industry, even if they do not indicate geographically where sales took place.⁷⁰

⁶⁹ **Ibid.**

⁷⁰ It should be noted that transfers were made sometimes to ordinary producers. Transfer figures, however, represent all purebred sales, and therefore reflect the purebred industry in

An acceptable set of figures can be compiled on transfers of Canadian purebred Shorthorns from information in various Sessional Papers, farm journals, and **The Agricultural Gazette**.

Shorthorn Transfers

1887 - 625	1897 - 620	1907 - 2,804	1917 - 9,414
1888 - 381	1898 - 1,064	1908 - 2,272	1918 - 11,859
1889 - 379	1899 - 2,006	1909 - 2,827	1919 - 13,185
1890 - 350	1900 - 3,397	1910 - 3,044	
1891 - 378	1901 - 3,019	1911 - 2,639	
1892 - 491	1902 - 3,883	1912 - 2,763	
1893 - 587	1903 - 3,735	1913 - 3,647	
1894 - 493	1904 - 3,930	1914 - 5,813	
1895 - 450	1905 - 2,859	1915 - 5,063	
1896 - 379	1906 -	1916 - 6,987	

Calculated from Sessional Papers, **The Farming World and Canadian Farm and Home, Farmer's Advocate, The Canadian Dairyman and Farming World, and The Agricultural Gazette**.

It is significant that the dramatic rise in purebred to purebred sales coincided with the period beginning about 1913 in which we know from census data that true diffusion began in Ontario.⁷¹ While local sales seemed to be related to the initiation of diffusion in Ontario, then, the internal growth of the purebred industry generally coincided with the diffusion process. Either the sustained success of diffusion needed an expanding purebred industry, or the growth of the purebred

spite of the fact that they contain some sales to non-purebred breeders.

⁷¹ Pointed out in Chapter Two.

industry itself actually reflected the fact that improvement of the general herd was taking place.⁷²

Another issue that affected diffusion, or the use of purebred genetics by ordinary farmers, was the level of the labour pool for farm work. The shortage of labour on farms, which had been developing from the late 19th century, reached critical levels during World War 1. Mechanization could not overcome that shortage and farmers were forced to look for new ways to make their livestock provide profit with less work. The severity of the problem made them consider the use of purebred genetics. A real advance in the improvement of all cattle was the result. Dairy and beef purebred breeders both experienced unprecedented growth in sales to ordinary farmers during the war. Breed associations all reported increased sales.⁷³ As interest in purebred genetics grew, partially as a result of the work of Leitch which proved that purebred animals generated more money, a new question presented itself. Should farmers use only purebred cows, or should they use purebred genetics as improvers

⁷² Note, for example, that the ending of the war did not reduce the number of transfers, nor the level of diffusion. Census data given in Chapter Two indicated that in 1921 there were more purebred cattle in Ontario than in 1911.

It is also interesting to note that the real growth in the Shorthorn industry followed the extensive buying and selling of wealthy hobby farmers between 1890 and 1910, which was described in Chapter Two. Within this framework it could be said that these men played a wider role in the development of both Ontario's and the nation's entire beef farming industry than first appears.

⁷³ See, for example, *Farmer's Advocate*, June 22, 1916: 1066.

of their ordinary stock? Should all farmers, in effect, be purebred breeders?⁷⁴ This question would not be answered until long after the 1920's.

The acceptance or rejection of purebred genetics by farmers was also related to their perceptions about purebred breeder attitudes to specialization in the stock for dairy and beef purposes. Understanding how farmers related improvement to specialization involves an appreciation of the fact that the problem of dairy/beef orientation could be a concept separate from that of improvement.

The idea of purpose specialization in all cattle should be put in some historical context before any discussion about the problem of dairy/beef orientation within both the purebred and general herd in this period is undertaken. The animals had been bred for draft and milk purpose, or use, for centuries in Europe. Urbanization and industrialization in Britain late in the 18th century resulted in an increased demand for meat which existing livestock could not fill. The upgrading of cattle, particularly in Britain, in the late 18th and early 19th centuries was therefore largely concerned with "beefing" characteristics. By the mid 19th century cattle had been bred for three purposes: draft, dairy, and beef.

⁷⁴ See, for example, *O.A.C. Review*, May, 1919: 405.

In Ontario it was clear by 1870 that cattle were not as important for draft purposes as they had been in pioneer times. The rise of superior implements had resulted in the decreased use of oxen for power on farms.⁷⁵ However, how to breed cattle for dairy and beef production would become an increasingly important issue for both farmers and agricultural experts because two separate, specialized, and also lucrative industries for meat and dairy products had developed.

Because the ordinary indigenous Ontario cow was a better producer of milk than beef, contemporary farmers and agriculturalists assumed that the common cow in Ontario was perfectly capable of serving the new cheese industry.⁷⁶ The problem was how to create animals that could serve the beef industry.

The British breeding of cattle for beef over the early 19th century, and the general belief that cattle were naturally better milkers than beefers, led Ontario agriculturalists to link the concept of improvement in cattle, through purebred

⁷⁵ See Chapter One for more information on farm implements and oxen.

⁷⁶ Contemporary comments, in the *Farmer's Advocate* from 1867 to 1911 abound on the good milking and poor beefing of the general Ontario cow. See, for example, *Farmer's Advocate*, July 1887: 194 which stated that native Ontario cows were unsurpassed milk producers but were poor beef producers. See also *Farmer's Advocate*, October, 1881: 247, "Our Native Cows".

breeding, to beefing characteristics.⁷⁷ Therefore the way to "beef" cattle was to use purebred animals of the beef breeds. It is not surprising, then, that by the 1880's the purebred industry was dominated by beef cattle and their breeders. It is also not surprising that there were few purebred dairy cattle. As a result any spread of purebred genetics into the commercial herd tended to bring with it increased specialization of the animals for beef purpose. It cannot be stressed too strongly that until the 1880's any improvement of cattle in Ontario resulted in the beefing of the stock.⁷⁸

The successful breeding of animals for service to the dairy and beef industries, however, proved to be more complicated than beefing and concurrently improving some Ontario stock. The problem became one of degree of specialization. Should the beefing of the herds result in cattle which served the beef industry only? Or should the process lead to livestock capable of both dairy and beef production? Should cattle in Ontario be single purpose oriented, either for dairy or beef, or should they be dual purpose oriented and therefore capable of both dairy and beef production? In other words should the general

⁷⁷ Professor William Brown of the Ontario Agricultural College commented on this pattern to the Ontario Agricultural Commission committee in 1880. **Report** of the Ontario Agricultural Commission, 1 (1881): 266.

⁷⁸ See Allan Fraser, **Animal Husbandry Heresies** (London: Crosby Lockwood & Son Ltd, 1960) 22-3 in particular for the linkage generally between improvement and beefing.

herd be bred to combine dairy and beef characteristics through this breeding program, or should specialized types of cattle be created? In the 1870's agricultural experts favoured the former path, theoretically speaking at any rate.⁷³

It was generally assumed by agricultural experts (who were also often purebred breeders) that a purebred beef sire on the ordinary Canadian grade cow would produce profitable results for the farmer in both the beef and cheese market. The calf from the union would be suitable for fattening, and the calf's birth would put the cow in milk. Careful use of purebred beef cattle on the indigenous dairy-oriented stock, therefore, could create a foundation cattle herd which would provide dual dairy and beef production.

Agricultural experts might suggest the improvement of Ontario herds by the use of purebred beef sires on common cows for dual dairy/beef production, but as purebred breeders they did not produce suitable cattle for that project. Their breeding programs demonstrated confusion over the meaning of

⁷³ By the 1880's, Professor Brown at the Experimental Farm was deeply involved in experiments on the milking ability - density not quantity of milk - of Herefords, Angus, Shorthorns, Galloways and Ayrshires. Three of these breeds were strictly beef breeds, one was possibly dual purpose, and one was dairy purpose. He chose to experiment with beef breeds for the dairy, at the same time that he claimed that there was no such thing as a "general purpose cow." SP 3, Ontario, 1881: 447-452; SP 23, Ontario, 1884: 53, 97-9. See good examples of the confusion in **Farmer's Advocate**, December 1886: 364; February 1887: 44; July 1887: 194; November 1890: 358; March 18th, 1909: 431.

specialization and its relationship to improvement. Attitudes of purebred breeders to purebred genetics were irrevocably entangled in an unclear way with the division that separated beef from dairy animals. That reality made it hard for ordinary beef or dairy cattle farmers to accept the preaching of agricultural experts.

Purebred breeders tried persistently to educate Ontario farmers about proper methods of cattle raising, but their own confusion about specialization and its relationship to improvement was as important as their attempts to encourage the ordinary producer to use purebred genetics. It could be argued that farmer attitude to purebred genetics was a reflection of their refusal to understand breeders' ambiguous attitudes to specialization in cattle, as well as a reflection of farmer views on purebred genetics or improvement. General use of purebred stock, therefore, was intimately related to what farmers thought about the opinions of purebred breeders. A brief review of these opinions indicates how breeders were so confused.

When purpose breeding in purebred cattle was discussed early in the period, it was originally perceived to be an issue of pedigree.²⁰ Obsession with pedigree, and other crazes too,

²⁰ An article called "Breeding for Purpose" in **The Canadian Breeder and Agricultural Review**, in 1885, suggested that pedigree breeding seemed to interfere with the recognition of

blinded early purebred breeders from understanding the value of improved cattle as specialized producers of both meat and dairy products. By the 1880's breeders in Ontario had started to discuss purebred cattle breeding with reference to dairy production, beef production, or a balance of both together.⁶¹ Improvement and specialization were beginning to be seen as separate problems by these men. How to achieve improvement and specialization together, however, was a question that continued to provoke much heated discussion. What breed should be used, whether that breed should serve dairy, or beef, or both, and how best to achieve improvement for any of these purposes, stimulated endless ambiguous suggestions.⁶²

For example, note one position taken in the **Farmer's Advocate** with respect to both purpose and improvement. "Separate animals for special purposes cannot be tolerated on the farm;

type as an expression of beef or dairy production as late as the 1880's. May 1, 1885: 275.

⁶¹ **Ibid.**, January 2nd, 1885: 19-20; April 8th, 1885: 214; December 17th, 1885: 771; **Canadian Live Stock and Farm Journal**, March, 1887: 436.

⁶² For example see the following. **Farmer's Advocate**, February 1876: 27; July 1880: 157; October 1883: 299; June 1884: 162; September 1884: 270; June 1886: 170; December 1886: 364; February 1887: 44; July 1887: 194; August 1888: 237; February 15th, 1900: 90; March 18th, 1909: 431; April 29th, 1909: 709-10. **Report** of the Ontario Agricultural Commission, 1 (1881): 245, 247, 262, 263, 266, 275. **Farming World and Canadian Farm and Home**, September 1st, 1906: 583-4. **Canadian Dairyman and Farming World**, February 12th, 1908: 11. **Farm and Dairy and Rural Home**, February 15th, 1912: 4, 22. **O.A.C. Review**, October 1891: 3, "A Word About Beefing"; October 1902: 7.

neither must there be any mixing of breeds, except in the grading up of common stock. The coming steer must be from as pure beef-raising stock as possible while he should be richly related to the best milk producing families of his breed."⁶³ This formula implied both single purpose and dual purpose at the same time, while linking improvement to beefing qualities only.

By the end of the 1880's agricultural experts, as purebred breeders, seemed generally to have decided that the way to achieve the most economical dairy and beef production was to use dual purpose purebred cattle, not single purpose purebred beef cattle, on ordinary stock. This would create commercial animals which were capable of both beef and dairy production.⁶⁴ Shorthorn breeders, in particular, preached the values of purebred dual purpose for the upgrading of common cattle.⁶⁵ These breeders were prepared to admit that dairy specialization could be related to

⁶³ **Farmer's Advocate**, July, 1880: 157. For more on the confusion, and various ambiguous recommendations see **Farmer's Advocate**, September 1884: 270; July 1887: 194; November 1887: 331; August 1888: 237; April 1889: 111-2; April 1890: 109; May 1890: 141; August 1890: 239; September 1890: 279; April 15th, 1899: 204; September 24th, 1908: 1474; March 18th, 1909: 431; October 6th, 1910: 1292-3; February 2nd, 1911: 176; July 6th, 1911: 1133.

⁶⁴ The specialized dairy breeds were also frequently put forward as dual purpose. While the milking qualities of these cows was not questioned, it was argued that they carried as good beefing characteristics as the beef breeds.

⁶⁵ They continued to do so after the 1880's. For a clear statement on the Shorthorn breeders' position see **Annual Report** of the Dominion Shorthorn Association, 1915: 20, 21, 28-30, 33; and **Annual Report**, 1918: 19-20.

improvement. For this reason they argued that other single purpose beef breeds would soon die out. Shorthorn breeders believed that while other breeds did not lack improvement, they presented a form of specialization which was not acceptable. Richard Gibson, an important Shorthorn breeder, argued that Angus cattle had seen their popularity peak and would soon dwindle. And neither Herefords nor Angus could ultimately be successful because they were such poor milkers. Being improved good beefers was not enough.⁵⁶ Improved cattle should be dual purpose.

The dual purpose purebred message of the breeders and the experts in the 1880's was ambiguous, however, for several reasons. First, most purebred cattle in Ontario were still not dual purpose but were specialized for beef. Second, Shorthorn breeders not only bred for single beef use, but also emphasized that specialization increasingly.⁵⁷ Ontario Shorthorns, by the late 1880's, showed a great reduction in their milking capacity, a fact which indicated that breeders might preach the values of purebred dual purpose but generally bred for a single use.⁵⁸

⁵⁶ *The Canadian Live-Stock and Farm Journal*, April, 1889: 89.

⁵⁷ Some breeders continued to do so after the 1880's. See, for example, SP 15b, Canada, 1913: 356-7.

⁵⁸ *Ibid.*

Some agricultural experts continued until the end of the century to breed for beef specialization while advocating the use of purebred dual purpose stock to create a general commercial herd which could serve both the beef and dairy industries. In 1896 **Farming** stated that Shorthorns in particular made good dual purpose cows.²⁹ Other agriculturalists focused on specialization without improvement. In 1901 **The Farming World** explained how to achieve dual purpose cattle without reference to purebred genetics. Breed a strong beef bull (which was not necessarily purebred) with a good milking background to a high producing dairy cow (also not necessarily purebred), the paper suggested.³⁰ The dream of a provincial herd that was dual purpose, created by any method, did not die quickly.³¹

One imaginative idea on how to use cattle in a dual purpose way appeared in 1913 in **Farm and Dairy & Rural Home**. "Ever and ever the tendency is more and more to dairy cattle. Beef cattle are either standing still or actually on the decline in every province in Canada. Yet we eat as much meat as ever. Shorthorn breeders say that we should use dual purpose animals. These are not profitable and are impossible. Here is my plan for beef. Use purebred dairy cows on purebred beef bulls but do not keep any of the resulting stock - it all goes to slaughter. Replacements

²⁹ **Farming**, January 1896: 276.

³⁰ **The Farming World**, February 12th, 1901: 550.

³¹ See, for example, **O.A.C. Review**, May, 1914: 408.

would come from a purebred dairy herd kept on the farm as well".³² Unfortunately no one in 1913 knew whether this expensive way of keeping cattle would be profitable on a farm.

These were the confusing messages of purebred breeders and agricultural experts about specialization and its relationship to improvement that farmers had to react to when they made their decisions about using purebred genetics on their farms. Farmers experimented with specialization and improvement over the period, but not in the way which agricultural experts and purebred breeders hoped. To begin with, farmers were skeptical about the idea of dual purpose production in cattle.³³ Farmers in fact came quite quickly to believe that the same cattle could not successfully serve both the beef and dairy industries, and preferred, as a result, to breed for single purpose only.³⁴

³² **Farm and Dairy & Rural Home**, January 13th, 1913: 4.

³³ See, for example, **Farmer's Advocate**, June, 1879: 126, "Milk and Beef Together."

³⁴ See, for example, **Crop Bulletin**, November 1886: 34-5, November 1899: 9, R.G.49, Ontario Department of Agriculture, P.A.O.

It should be pointed out that specialization of the dairy industry for cheese, butter, and finally fluid milk added another dimension to the problem of purpose use in cattle. A market for butter, and the use of milk with good fat content for cream, allowed for the production of beef and cream factory milk. This pattern was not clearly discernible until well into the 20th century. By 1959 dual purpose and beef cows accounted for almost half of the cows milked by cream shippers. J. Horner, "Changing Spatial Patterns in the Production and Utilization of Milk in Southern Ontario, 1910-1961", M.A. Thesis, University of Toronto, 1967: 73.

As early as 1869 for example, the agricultural society of Oxford North (which claimed to be the dairy center of Ontario) stated that farmers in that area found it incompatible to raise livestock for both meat and cheese production. "Calves with a lean and hungry look, called in this section of the country 'factory calves'; may be the result of **cheesing** them out of their milk", the organization reported to the Ontario government.³⁵

Remarks in the **Bulletin** of August 1886 revealed clearly that farmers favoured single purpose cattle for either beef raising or dairying.

"[A]fter all that has been said in favor [sic] of the 'general purpose cow' these reports would indicate that she exists rather in theory than in practice. Canadian farmers may believe in her as in any abstraction that looked plausible enough in theory, but in perusing these reports it is always found that dairying and beef production do not progress on the same farm, nor generally in the same locality. The correspondent that has much to say about fat stock generally adds that there is little or nothing done in butter or cheese production in his locality; while on the other hand the report which tells of the flourishing condition of cheese-factories and creameries assures us that fat stock raising is neglected, farmers preferring to realize on the sale of milk and cream to the factories. If, then, the farmers of one section turn their cattle

³⁵ SP 5, Ontario, 1869: 139, 143.

into beef, and those of another into butter and cheese exclusively, it is not easy to understand just when, where and how the mission of the much-admired general purpose cow is to be accomplished. It is not impossible that in the near future Ontario farmers may be found breeding for definite purpose as do any of those stockmen who make a specialty of a certain breed."³⁶

It was the shifting, single purpose specialization emphasis which did much to explain how farmers used purebred cattle. When many Ontario farmers favoured beef production in the 1870's, they clearly used purebred cattle. The beefing of the stock, verified by many contemporary comments and evident as well in general milk reduction, proves that purebred genetics must have been used by farmers because only purebred animals in Ontario at that time could carry strong beefing characteristics.³⁷ Farmers were aware of that fact and were prepared to "improve" their herds in order to "beef" them in the 1880's.

By 1890 many farmers apparently believed that beef production was less profitable and, as a result, were shifting from beef farming to dairying.³⁸ When they did so, their attitudes to the use of purebred cattle changed also because

³⁶ **Crop Bulletin**, August 1886: 49, R.G. 49, Ontario Department of Agriculture, P.A.O.

³⁷ See, for example, **The Canadian Live Stock and Farm Journal**, March, 1887: 436.

³⁸ See, for example, **Farmer's Advocate**, May 6th, 1909: 753. The volatility of the market for Canadian cattle in Britain partially caused this phenomenon. More on factors which affected the marketing of beef cattle will be dealt with in Chapter Five.

they did not link dairy specialization with improvement. For example, as early as 1869, Oxford South Agricultural Society reported to the Agriculture and Arts Association that "[t]here [seemed] to be an idea prevalent with many of our dairymen that any kind of stock or cows [would] answer the purposes of a dairy" with the result that "in the herds of these dairymen many very inferior animals [were] to be seen."³⁹

While the ordinary Ontario cow might have been a better milk than a beef producer, that did not mean that such a cow was a good quality milk producer. Farmers found it difficult after 1880 to see that improved cattle could increase milkiness in cows, however, because of the actions and preaching of the purebred breeders. Farmer resistance to improved cattle for dairy purposes was reinforced by the ambiguous dual purpose message of purebred breeders, and the actual emphasis of breeders on single purpose beef breeding. Improvement remained linked to beefing. "The breeding of [dairy] class cattle is not considered so very important. A high standard of breeding is, in most cases, overlooked by the [dairy] farmer", the **Farmer's Advocate** pointed out in 1900.¹⁰⁰

Farmers began to switch their breeding practices in the 1890's to the use of dairy-oriented cattle in a random, rather

³⁹ SP 5, Ontario, 1869: 143.

¹⁰⁰ **Ibid.**, February 1st, 1900: 64.

than in an improved way. Note, for example, these comments made at a Farmers' Institute meeting. "There is a great difference of opinion as to which breed is the best [for the dairy]. Some think the Jersey, some the Holstein, some the Ayrshire and some the Durhams [Shorthorns]. Think this out for yourself, and what ever breed you consider best start with it and keep on with it. No man ever built up his herd by using a Durham, then a Jersey, and then a Holstein. This is what many have done in the past."¹⁰¹

The general shift by farmers to single purpose dairying in Ontario, therefore, brought with it a move away from the use of purebred cattle. It was this pattern which explains the fact that in 1900 there were fewer purebred cattle, actually and in relation to stock generally, in the province than in 1882. The decline of purebred cattle in Ontario reflected the deterioration of the beef cattle industry generally. The new emphasis on dairying resulted in several other patterns beyond the downfall of purebred cattle.

First, the breeding emphasis of single purpose dairy-oriented type in the 1890's into the general herd resulted in the rise of milk production of cows in the 1890's. Average yields went up 40% in this decade - the greatest increase from 1883 to 1920.¹⁰²

¹⁰¹ SP 23, Ontario, 1897: 124.

¹⁰² R. Ankli, "Ontario's Dairy Industry, 1880-1920", **Canadian**

Second, many farmers simply stopped raising any young stock for meat. When interest in dairying was single purpose, calf killing was often the result. While calves were killed generally under these conditions, more bull calves would be killed than heifer calves because heifers were the future providers of milk. The calf in the poem that introduced this chapter was killed, and Freeman said "no money in bull calves", because the poet was describing dairying with no stock raising for beef.

In fact, at least 200,000 calves were killed at birth in Ontario as early as 1883, and the markets were flooded with calves not four weeks old for slaughter.¹⁰³ As dairying grew in the province increasing numbers of calves were destroyed.¹⁰⁴ Calf killing was higher, logically, in dairy counties and remained a problem throughout the period under study.¹⁰⁵ As late as 1924 for example, there was strong evidence that calf slaughter, or early

Papers in Rural History, 8 (1992): 269.

¹⁰³ **Farmer's Advocate**, April 1883: 102-3. The slaughtering of calves was common in all central Canada, In 1898 **Farming** reported that in Quebec at least 460,000 calves were killed, or "deaconed", a year; and 100,000 useless ones were raised for meat. Since all of these calves were dairy stock, the paper called it scrub beef. **Farming**, August 16th, 1898: 429.

¹⁰⁴ See SP 15, Canada, 1914: 46. Also the Dryden Scrapbooks, **PAO**, for articles from **Farming World**, November, 4th, 1901; **News**, November 18th, 1901; **The Globe**, February 22nd, 1902; **Reformer**, April 19th, 1902. See Abbott, 31. Calves were killed in 1921 because there was no market for them.

¹⁰⁵ See **Farmer's Advocate**, May 15th, 1919: 969.

vealing, was high in the dairy county of Grenville. From a **Crop Bulletin** of that year, Grenville had 527 beef cows and 21,356 milk ones. The combined cow herd of 21,883 resulted in only 5,461 calves.¹⁰⁶

One of the arguments used by the Shorthorn breeders against single purpose specialization in any cattle was that the calf killing pattern, indigenous to single purpose dairying, was both wasteful and an abomination. An alarmed Shorthorn breeder cried that dairy purpose alone "leads to that cruel and revolting practice of slaughtering all, or nearly all, the calves at birth. Much is said these days about making home attractive to the boys on the farm. Is it any wonder that a boy of spirit and refinement should want to get away from those yearly scenes of carnage and bloodshed! It clashes with all our preconceived ideas of the laws of the creator."¹⁰⁷ The **Farmer's Advocate** was inclined to agree. In an article called "Protest Against Calf Slaughter", the journal mourned that "[i]n large districts of the country, this calf murder goes on every spring. Some will blame the low price of beef, others the cheese factory system, for this slaughter; but is it not wasteful and slovenly?"¹⁰⁸

¹⁰⁶ **Crop Bulletin**, December 1924: 28, R.G 49, Ontario Department of Agriculture, **P.A.O.**

¹⁰⁷ **Farmer's Advocate**, April 1890: 109.

¹⁰⁸ **Ibid.**, May 1890: 141.

It is arguable that extensive calf killing indicated the poor dairy quality of these unimproved dairy animals. The practice could be explained by the poor milk yields of the cows. Farmers apparently found that the cost of raising a calf, whether fed on the cow's milk or not, made no economic sense. The cow had to produce greater amounts of milk in order to provide enough money to make raising the calf economically profitable. It was the money her milk provided, not her milk itself, that was required to stop calf killing.¹⁰⁹ Calf slaughter, therefore, could suggest that these cows were unproductive for dairy purposes.

It is possible to see more clearly how unprofitable dairy production was from these unimproved cows by looking at milk yields and profitability over the period.¹¹⁰ While testing milk production of cows was primitive throughout this era, there is considerable evidence that Ontario cows did not yield enough milk after the 1880's to be profitable, and that by the 1920's they still did not generate a satisfactory amount of milk. There was increase in milk production in the 1890's but it was not enough to provide for good profitable cows.

¹⁰⁹ See **Farmer's Advocate**, May 15, 1919: 968-9. The information here suggested that calf killing resulted from poor incomes from milk production. Summer milking only did not provide adequate income to make it sensible to feed a calf over the winter.

¹¹⁰ For information on milk testing systems in different countries see **Publications of the International Institute**, November, 1912: 31-41.

In 1883 it was calculated that the standard cheese factory cow gave 2,784 lbs. of milk a year.¹¹¹ It is not known if that was a profitable amount or not in 1883. By 1892 when cows yielded only 3,000 lbs. a year, there is evidence that they needed to provide close to 5,000 lbs. year to be worthwhile.¹¹² No concerted attempt was made to calculate profitability until 1903, when the figure was set at 6,000 lbs. a year.¹¹³ In 1913 the figure still seemed to be 6,000 lbs. a year when cows averaged only 4,100 lbs.¹¹⁴ By 1920 cows were only yielding on the average 4,423 lbs. of milk a year, while it was believed that they should give at least 6,000 lbs.¹¹⁵ Clearly, when farmers tried to return to milk-oriented cattle, they failed to produce high quality single purpose stock with unimproved animals. Purebred breeders believed the poor performance of dairy cows resulted from that lack of improvement. Productivity

¹¹¹ **The Canadian Live-Stock and Farm Journal**, August, 1885: 212.

¹¹² **The Farmer's Advocate** stated in 1892 that the average cow in Ontario yielded 3,000 lbs. a year. January, 1892: 21. In 1895 the journal implied that a cow should give 5,000 lbs. a year in order to be profitable. October 15th, 1895: 415.

¹¹³ R. Ankli, "Ontario's Dairy Industry, 1880-1920", **Canadian Papers in Rural History**, 8 (1992): 270.

¹¹⁴ **Ibid.**

¹¹⁵ **Ibid.** 268-9. See also **Report** of the Committee on Agricultural Conditions, Dominion Government of Canada, Part II, 1924: 461-475. While these were the averages, there were cows who yielded 20,000 lbs. of milk a year at this time. See **Farmer's Advocate**, July 27th, 1916: 1252, for example.

for them was a result of the use of improved cattle rather than an issue of specialization.

Shorthorn breeders, however, had bowed to the inevitable and begun to address the problem of specialization. By the end of the 1890's, Shorthorn breeders had realized that their market with ordinary farmers would not increase unless they shifted their intense beef breeding programs to ones that encouraged the production of cattle which milked better. In 1897 Arthur Johnston, President of the Dominion Shorthorn Association, addressed fellow breeders as follows. "Another and very potent cause of the recent depression in Shorthorn matters has arisen from the rush of so many of our farmers into the so-called milking breeds, caused to a very large extent no doubt, to the undoubted increase in the consumption of and demand for dairy products all over the British world. The force of this (in many cases) foolish rush has, I believe been spent, and a reaction is unquestionably taking place".¹¹⁶ He predicted that farmers would soon return to Shorthorns, "the only breed that can be relied on to produce good milkers, and at the same time furnish the very primmest [sic] steers and heifers for the butcher."¹¹⁷ An effort

¹¹⁶ SP 26, Ontario, 1897: 127. While farmers used the milking breeds in the 1890's, they did so in a random crossbred way, as the comments made in the same year at Farmers' Institutes and mentioned earlier in this work has made clear.

¹¹⁷ *Ibid.*

was now being made by Shorthorn breeders to make the breeding of the stock match the dual purpose message they preached.

Dairy farmers did not return to the Shorthorn ranks after breeders shifted from beef to dual purpose specialization. Shorthorn breeders responded by starting to breed for either specialized beef or dairy orientation within the one breed.¹¹⁸ While Shorthorn breeders were breeding two types of cattle, each of single purpose, they labeled the extreme dairy stock as dual purpose.¹¹⁹

The confused Shorthorn attitude to specialization was explained particularly clearly in the **Farmer's Advocate**. In 1916 the journal pointed out that Shorthorn breeders still did not understand the concept of dual purpose. They did not breed for dual purpose: they simply called single purpose dairy cattle dual purpose. The **Farmer's Advocate** felt that true dual purpose cattle should be more meat-oriented than dairy-oriented. A "dual" purpose Shorthorn should be one which was a beef producer and yielded no more than 6,000 to 8,000 lbs. of milk a year.

¹¹⁸ Shorthorn breeders of dairy oriented Shorthorns also ran into the resistance of dairy farmers to improved cattle generally. Buyers of dual purpose Shorthorn bulls would only pay \$40 to \$50, whereas a beef producing farmer would pay \$80 to \$150. "We fear that a great many dairy farmers cannot escape the imputation of being oversaving in the class of bulls they buy", remarked the **Farmer's Advocate**. **Farmer's Advocate**, May 6th, 1909: 753.

¹¹⁹ See **Annual Report** of the Dominion Shorthorn Association, 1919: 33-4.

Breeders should emphasize milk less and beef more in animals designed to be dual purpose. "Forget about the 15,000 to 20,000 lb. records and lay more stress on the 1,500 or 1,800 lb. mature steer, or the 1,000 lb. baby beef at twelve to fourteen months. Dual-purpose means serving two purposes, not simply giving milk."¹²⁰

Apparently Shorthorn breeders were not the only ones confused. The **Farmer's Advocate's** explanation of purpose and improvement demonstrated different misunderstandings about the problem. The concept of improvement was still linked by the journal to beef characteristics alone, not to both beef and dairy. The issue of purpose also raged on outside the Shorthorn breed within the purebred industry. In 1916, for example, it was suggested that true dual purpose purebred cattle were from the breed Red Polls.¹²¹

It would take the labour shortage crisis on farms during World War 1 to make dairy farmers begin to experiment with improvement.¹²² They saw that one way to help solve their labour/mechanization problems was to maintain their production with fewer cows which produced more milk. They were prepared to

¹²⁰ **Farmer's Advocate**, July 27th, 1916: 1252.

¹²¹ **Ibid.**, October 5th, 1916: 1648.

¹²² See Canada, Parliament, **Proceedings of the Special Committee on the Cost of Living**, 1919: 181, 190, 201 for information on labour and both beef and dairy production.

test whether the use of purebred genetics would help increase the dairy characteristics of their cows. The **Farmer's Advocate** noted in 1916 that the labour shortage on farms was now so acute that dairymen would have to let some of their cows go to slaughter.¹²³ The journal pointed out that the use of purebred dairy cows was more important than ever because of the labour shortage. The animals would have to produce more, with less labour input.¹²⁴

However, when dairy farmers began to accept improvement during the war, they turned more to Holstein cattle and Ayrshires for purebred genetics than Shorthorns.¹²⁵ By 1920 Holstein breeders reported more transfers than the Shorthorn breeders did, and membership in the Holstein Association was nearly as high as that of the Shorthorn Association.¹²⁶ Dairy farmers continued to reject even the concept of dual purpose production when they began in increasing numbers to use purebred genetics.

¹²³ **Farmer's Advocate**, May 6th, 1916: 787; May 16th: 878c.

¹²⁴ **Farmer's Advocate**, January 7th, 1915: 10; June 1st, 1916: 957; April 5th, 1917: 572. See also **O.A.C Review**, September, 1917: 6.

¹²⁵ See **O.A.C. Review**, April 1916: 304. Note also that in 1913 Holstein transfers were only 2/3rds that of Shorthorn transfers, while by 1920 Holstein transfers exceeded those of Shorthorns. **Farmer's Advocate**, February 20th, 1920: 258. **Twentieth Century Impressions of Canada**, edited by H. Boam (Montreal: Sells Ltd., 1914) 251.

¹²⁶ **Farmer's Advocate**, February 20th, 1920: 258.

The rise of dairying also had ramifications for the remnants of the beef cattle industry that survived the deterioration of beef farming in the 1890's. Dairying actually modified how cattle that still served the beef industry were bred. Many of the farmers who continued to practice beef farming in the 1890's were prepared to abandon single purpose beef farming in order to supplement their beef raising with dairy production. Perhaps the dual purpose message of the agricultural experts had reached them at last. More likely, the market for beef cattle was so much less stable than that for dairy products that even beef farmers sought to practice dairying at least to some degree.¹²⁷ Not only had dairying spread at the expense of beef raising, then, but single beef production had been largely replaced by dual purpose beef farming. The pervasiveness of dairying over beef farming and the production of beef through dual purpose beef cattle in Ontario resulted in a general cattle population that produced less beef and poorer beef.¹²⁸

¹²⁷ Experiments at the Central Experimental Farm, in spite of the extreme variables in them, seemed to suggest that the cost of beef cattle production had doubled between 1905 and 1913. Beef cattle were half as profitable to raise. Dairying, on the other hand, showed a steady rise in profitability over the same period. Since other figures imply that dairying was not lucrative because of low milk yields, and that good quality beef was profitable, this information should be looked at with caution. See Canada, Parliament, **Report of the Board of Inquiry into the Cost of Living**, 1 (1915) Appendix 27: 803-4, 800 - "Cost of Beef Production."

¹²⁸ See in particular, SP 26, Ontario, 1897: 127; **The Canadian Live-Stock and Farm Journal**, April, 1889: 89; SP 23, Ontario, 1897: 124.

When the problem of dairy/beef merged with the problem of lack of improvement in a generalized way in the provincial herds, livestock created to serve the breeder/feeder structure was of poor beef quality. If many breeder farmers tended to use scrub bulls with no purebred genetics and which had inferior beefing characteristics, feeder farmers were then forced increasingly to acquire stock that had low beefing ability, were unprofitable to raise, and which displayed distinct dairy type. When most farmers turned to dairy-oriented cows, Ontario became somewhat locked into the generation of beef stock that fit the following description: poor quality, dairy beef.

The ubiquitous nature of dairying, and its invasion of single purpose beef production, can be proven by how extensive the use of dual purpose beef cattle was in the heartland of Ontario's beef cattle producing areas: southwestern Ontario. In the eastern dairy counties, beef had been known to be of poor dairy quality for decades, and, because of calf killing, was not produced in large amounts there. Real decay of Ontario's beef industry set in when dairy purpose spread to the beef herds of southwestern Ontario.¹²³ When the beef producing heartland began

¹²³ See L. G. Reeds, "The Agricultural Geography of Southern Ontario", Ph.D. Thesis, University of Toronto, 1955: 180. Reeds stated that dairying started to spread to western Ontario after 1914. However there was some indication that that statement is too simplistic. Horner argued that the shift to dairying in that area could be defined as a move to dual purpose dairy/beef production after 1910. Farmers in western Ontario became

to turn out a high percentage of dairy beef, or even dual purpose beef, the whole system was in a state of collapse.

Evidence of dairy beef in southwestern Ontario abounds in the farm journals by the late 1890's. Real proof of how invasive dairy qualities were in the beef herds of the stronghold of Ontario's beef cattle industry can be seen in later documentation. In 1924 the Bureau of Industries changed its methods of collecting data for **Crop Bulletins** in such a way that it was possible to tell how much dual purpose beef cattle had invaded the area. The **Crop Bulletins** of December 1923 and December 1924 can be seen as a Rosetta Stone on how much dairy-oriented cattle were serving beef farming across Ontario.¹³⁰ What makes these two bulletins so interesting is that in 1924, for the first time, beef cows and yearling dairy and beef animals were separated. By comparing the two it is possible to prove that the great beef producing counties were using dairy-type cows in large numbers to produce beef steers by 1924. Thus, while southwestern Ontario had shifted towards dairying, it had

interested in the production of butter, not cheese or milk, and used both beef and dual purpose cows for that purpose. J. Horner, "Changing Spatial Patterns in the Production and Utilization of Milk in Southern Ontario, 1910-1961", M.A. Thesis, University of Toronto, 1967: 34, 61-2, 73. It is interesting that neither author seemed to sense that the rising production of dairy commodities resulted in the decline of both actual beef production and quality of beef.

¹³⁰ See **Appendix C** for comparative returns for December 1923 and December 1924 in the **Crop Bulletins**.

not abandoned beef raising. It had simply abandoned single purpose beef-oriented cattle for that production.¹³¹

It is possible to see how unprofitable dairy beef was by looking at the prices paid for animals slaughtered from the predominantly dairy counties compared to those from the beef counties, where at least comparatively good beef cattle were raised. In 1900 the average price per head of beef meat animals in Ontario was \$32.12 a head.¹³² Cattle averaged \$21.02 from the dairy county Lennox and Addington and \$42.95 from the beef county Wellington.¹³³ Because of low returns on dairy beef and the scarcity of beef-oriented cattle available, even more farmers simply left farming for beef altogether after 1900.

Farmers were finding, throughout various experiments in the use of distinct beef/dairy types, that they could not produce good beef and profitable amounts of dairy products from the same cow. But their actions also indicated that breeding techniques using either single or dual purpose animals, but not purebred breeding genetics, resulted in cattle which were not really

¹³¹ Because extensive calf killing in western Ontario was not revealed in the **Crop Bulletins**, it could be concluded that extreme dairy quality beef did not dominate production. See also J. Horner, "Changing Spatial Patterns in the Production and Utilization of Milk in Southern Ontario, 1910-1961," M.A. Thesis, University of Toronto, 1967: 73.

¹³² SP 26, Ontario, 1900, Table XX: 36.

¹³³ **Ibid.**

desirable for either industry. Note some of the comments made by correspondents for live stock and dairy section in **Crop Bulletin**, November 1899.

From Brant - "The average farmer's stock, especially his cattle, have been crossed by animals of dairy breeds, until the barnyards are crowded with scrubs that are neither profitable for dairy nor beef."
Muskoka - "The common scrub still rules the roost here. Some good bulls, both of milking and beefing breeds, have been brought in, but have received scant attention." From Haldimand - "Cattle ... seem to be degenerating. Drovers complain of the quality of stock for export purposes."¹³⁴

Farmers and purebred breeders had to work out how to create cattle which would serve the meat and dairy industries in a profitable manner by using the technology available at the time, namely dairy/beef characteristics in cattle and purebred genetics, in a combined way. By the 1920's farmers had started to grasp the idea that improvement was a part of all cattle production, not just beef stock production. The result was that while the first wave of general herd improvement had been beef oriented only, the second was both dairy and beef oriented. By that time purebred breeders also realized more clearly that improvement and specialization were separate but important issues for the purebred industry as well. But it was only after the 1920's that cattle would reflect the combined wisdom of

¹³⁴ **Crop Bulletin**, November 1899: 9, R.G. 49, Ontario Department of Agriculture, P.A.O.

these agriculturalists. Only then would livestock increasingly be bred for both improvement and purpose specialization.

The rise of Ontario's dairy industry brought destruction of the province's beef cattle industry through confusion over the combined issues of specialization and improvement. The spread of dairy beef production in Ontario would also have deleterious affects outside the province. The ramifications of producing dairy beef, at the same time that less quality beef was raised, would extend beyond Ontario. This, ultimately, is the reason why it is so important to understand what the province produced and why. As later chapters will demonstrate, Ontario's beef cattle farming was intimately connected to both western Canada and the United States. However, before the linkages of continental beef cattle farming are explained, the major aspects of political regulation of the industry by the Dominion and by the province will be reviewed in the next chapter.

Chapter Four: Regulation and Beef Cattle Farming

".. if we in Canada can establish herds completely free from [tuberculosis], this means that in a very few years Canada will become the great centre for the breeding of high-class cattle, and European countries will have to come to us to re-establish their herds. [Adami's emphasis] They cannot do it at home. We only, and only we, are in a position to make a fruitful endeavour to get rid of the disease in a course of three or four years."

Adami was a professor of Pathology at McGill University, and Pathologist for the Dominion Department of Agriculture. While the disease bovine tuberculosis had brought him into the cattle world, he apparently saw control of bovine illness as part of a vital process that went beyond mere disease containment. A thriving cattle industry, which would result from the elimination of bovine T.B., would promote nation building. Adami's interest in nation building through the cattle industry was in keeping with that nationalistic spirit which prevailed in late 19th and early 20th century Canada. Government policy relating to the cattle industry, and exemplified by Adami's

G. Adami, "On the Significance of Bovine Tuberculosis and Its Eradication and Prevention in Canada", A Paper given before the Canadian Medical Association, 1899: 15.

attitude, reflected a "National Policy" which was composed of many nation building strategies.

The political structure which developed over the years to generate a nationalistic cattle policy was complicated. Policy emanated from both Dominion and provincial levels of government, from voluntary organizations, and from the interrelationships among the three. To understand how policy developed, the historical background must be reviewed.

Organized regulation of agriculture in both Canada and Ontario began with the establishment of the Agricultural Association of Upper Canada in 1846. The organization was created by the many local agricultural societies that had existed in the colony since 1830. In 1850 the Union government created a Board of Agriculture to act as the executive of the Agricultural Association. It was to be connected to an agricultural college and to establish and run an experimental farm in Canada West. The two latter institutions did not come into existence for some time, but the Board quickly took over the direction of all promotional activity designed to stimulate agriculture in the colony and to act as the mouthpiece of the Association. The directions taken by either the Board or the Association were not regulated by the government. The colonial government simply funded the two organizations.

In 1852 the Union government created a position known as "Minister of Agriculture" at the head of a new Bureau of Agriculture. The "Minister of Agriculture" sat, ex officio, on the Board of Agriculture of Canada West, and also on a new Canada East Board which was established to serve a new central Association there. The "Minister" was not to direct the agricultural activities of Canada West or Canada East. The Boards continued to control agricultural policy. The only connection between the "Minister" and the Boards remained the funding that he, as the government's representative, provided them. When the Bureau of Agriculture was replaced by the Department of Agriculture in the United Province in 1862, that situation remained the same: policy, now by the new ministry, continued to emanate from the two Boards.

With Confederation, the Department became the Dominion Department of Agriculture. The province of Ontario then organized its own new agricultural bureaucracy.² A Bureau of Agriculture and Arts was created within the Department of the Commissioner of Agriculture and Public Works to take over the duties of the old Department of Agriculture, which had moved on to serve as the Dominion Department of Agriculture. The old provincial association became known as the Agriculture and Arts Association, and it functioned with the support of 63 district agricultural societies. The old Board continued its role as the

² See **Appendix D**.

head of the Agriculture and Arts Association and carried on educational, exhibition, and experimental work. The connection of all of these bodies - the Board, the Agriculture and Arts Association, and the district agricultural societies - to the new Bureau was through the funding that it provided.

The hegemony of the Agriculture and Arts Association over agricultural regulation had weakened by the 1880's. Its work increasingly had been taken over by both the provincial government and by new voluntary organizations. It lost control of the Agricultural College, founded in 1874, and the Ontario Veterinary College, founded in 1879, to the province. Erosion of the Agriculture and Arts Association's responsibilities relating to the cattle industry continued when new voluntary organizations, the cattle breeders' associations, took over the promotion of cattle production. The passing of an era came in 1895 when the Agriculture and Arts Association was abolished.³

The increased responsibilities of the provincial government over the regulation of agriculture in the 1880's was reflected in the growth of its bureaucracy. A Bureau of Industries was created in 1882 by the government to collect extensive agricultural data every year. The establishment of a Department of Agriculture followed in 1888. Government bureaucracy grew

³ For a very complete history of this important body, see "A History of the Agriculture and Arts Association", Appendix D, SP 28, Ontario, 1896.

more rapidly in Ontario after the beginning of the 20th century when more complex duties increasingly evolved related to cattle farming. By 1914 the Department of Agriculture of Ontario contained the following branches: the Ontario Agricultural College, the Ontario Veterinary College, the Agricultural and Horticultural Societies Branch, the Live Stock Branch, the Farmers' and Women's Institutes Branch, the Dairy Branch, the Fruit Branch, the Statistics Branch, and the Immigration and Colonization Branch.

The main function of the Ontario agricultural bureaucracy, near the end of the 19th century, was the dissemination of funding to organizations, which, generally ran themselves. The government encouraged their growth and made available to farmers the information which these organizations generated, but it did little to direct their behaviour. When regulation shifted away from voluntary associations early in the 20th century, some of the responsibilities of these provincial organizations went forward to the Dominion government and some became shared with the provincial government. By that time the Dominion Department of Agriculture had also developed considerably from Confederation times.

In 1867 the Department of Agriculture of the United Canadas became the Dominion Department of Agriculture but because agricultural policy remained in the hands of the Agriculture and

Arts Association, regulatory matters and promotional activity relating to cattle were not part of the new Department's responsibilities. Of the Department's nine Sections in 1868 only one was related to agriculture, an Agriculture Section, and that contained only a Veterinary Branch.⁴ Thus, the regulation of livestock health was the single agricultural responsibility of the Government of Canada at the time of Confederation. The Agriculture Section of the Department had two branches by 1886, Veterinary and Experimental Farms, when the Dominion Department of Agriculture undertook the promotion of good farming through the study of agriculture on various experimental farms. In 1890 the Department was enlarged to include a bureaucratic structure devoted to the interests of the dairy industry. It was not until the position of a Live Stock Commissioner was created in 1899, as a division of that Dairy Branch, that the Dominion undertook to regulate the beef cattle industry in any way outside of health issues.

The Dominion department increased all of its agricultural responsibilities rapidly after 1900; and the three branches of the Agriculture Section produced new branches, which later might become divisions of other branches. The vast majority of the changes, however, were unrelated to livestock issues. One major exception to this pattern emerged with the regulation of the meat industry. Meat regulation resulted in the enlargement,

⁴ See **Appendix E.**

after 1908, of the Live Stock Branch, which had itself evolved from the Live Stock Division of the Dairy Branch in 1905.⁵

Policy relating to beef cattle farming, namely the regulation and promotion of beef cattle farming in Ontario and Canada from 1870 to 1924 was divided into two spheres: animal health control, which was the prerogative of the Dominion Government, and other cattle concerns generally, which were the changing prerogative of voluntary organizations, the provincial government, and the Canadian government.

The Canadian government's original concern with cattle farming focused on the issue of animal health. It had two aspects, the development of quarantine stations to combat certain specific cattle diseases, and the battle against bovine tuberculosis. While there is overlap between the two stories, because the quarantine stations were used in the fight against tuberculosis, the two issues can be dealt with separately.

The development of Canada's cattle quarantine system demonstrates the vigorous attempts by the Dominion government to protect cattle farming interests, first Ontario's and then the nation's, and also the difficulties it had in doing so in an international context. Large scale beef cattle production had been initiated by the export trade of stock to the United States

⁵ **Ibid.**

during the Civil War, and exportation was always a critical factor in the industry. The rise in exportation of commercial cattle was soon matched by the rise in importation as well as exportation of purebred cattle.⁶ Therefore the beef cattle industry was based on both extensive exportation and importation of living animals. The international nature of the industry introduced the threat of disease to the nation's herds.

Importation of stock carried with it the danger of importing disease, which could infect the commercial as well as purebred cattle destined for export. The result would be ruinous. Countries importing Ontario beef stock would not want to risk receiving diseased animals, for fear of similar decimation of their domestic herds. Early government beef cattle regulation reflected an appreciation of these facts. Quarantine, therefore, was initially based on the premise that the importation of purebred cattle must be regulated in order to protect Canadian commercial and purebred animals. However, it is not possible to understand how Canada's quarantine system worked without an appreciation of the world threat that cattle disease had become to the international industry by 1870, and how that threat had developed.

⁶ A review of the document, **History of Short-Horn Cattle Imported into the Present Dominion of Canada from Britain and the United States**, published in 1894, which covered the period between 1833 and 1894, clearly indicated the rise of importation throughout the 1870's and 1880's to Ontario in particular.

When Britain introduced a free trade policy in the 1840's, live cattle from Europe began to enter the country's beef market. These animals brought with them the three so-called cattle scourges: rinderpest, pleuropneumonia, and foot and mouth disease. All three illnesses were indigenous to Britain by 1848. They were highly contagious and economically devastating.

The first, rinderpest, had death rates of ninety percent.¹ The second, pleuropneumonia, with death rates of fifty percent, attracted special attention because it could so easily be confused with non-infectious, stress-related illnesses. When stock cattle were moved quickly in large numbers to different locations, it was often difficult to distinguish stress symptoms from those of pleuropneumonia.² The result was that this plague was a more hidden menace than either rinderpest, or foot and mouth disease. Losses in cattle from pleuropneumonia alone, between 1855 and 1860, amounted to 26 million pounds, or more than six times the value of stock imported over the same period.³ The third cattle scourge, foot and mouth disease, had a low mortality rate, but it left stock weakened. Cattle were often

¹ N. B. Haynes, **Keeping Livestock Healthy**, a Veterinarian's Guide (Pownal: Storey Communications, Inc., 1985) 307.

² J. R. Fisher, "The Economic Effects of Cattle Disease in Britain and Its Containment, 1850-1900" **Agricultural History**, 54 (1980): 282.

³ **Ibid.** 280.

more susceptible to other illness, were more likely to be barren, gave less milk, and did not gain weight properly.¹⁰

In 1865 a particularly serious epidemic of rinderpest entered Britain from Europe. The problem of disease control and the continuation of free trade was brought to a head. Dealing effectively with the dilemma was made particularly difficult by the fact that comprehension of the origin and nature of all illness was still limited at that time. It was based on a multitude of interwoven theories which reflected attitudes towards sanitation, morality, contagion, and spontaneous generation.¹¹ In 1869 Britain established a policy which was designed to control the spread of cattle diseases and to maintain free trade.

A Contagious Diseases Act (Animals) was passed. It established a system designed to control the movement of live cattle into Britain from areas where any of the three scourges were known to exist. Countries which contained any of the diseases were "scheduled", which meant that animals imported from such countries had to be slaughtered within ten days of landing. Stock from counties that had not been "scheduled" could be shipped inland live within Britain. The basic result of the

¹⁰ *Ibid.* 283.

¹¹ See M. Derry, "Contemporary Attempts to Understand the Cattle Plague of 1865", *Victorian Studies Association, Ontario Newsletter*, 54 (1994).

1869 legislation was that European cattle were no longer allowed to travel alive within the country. This situation offered advantages to any nation which was free of the three scourges and therefore not scheduled. Neither the United States or Canada were scheduled in 1869. By the early 1870's lower transatlantic shipping rates and the non-scheduled position of these two countries resulted in the initiation of a transatlantic trade in live cattle. Stock started to be shipped from the United States to Britain about 1871.¹² By 1873 the first Ontario beef cattle were landed in Britain.

By the 1870's, then, Ontario was involved in an international beef cattle trade which was based on stock importation from and exportation to both the United States and Britain. The Canadian government's attempts to control cattle plagues would be heavily influenced by the cattle scourge situation in both of these countries.

Efforts to stop the spread of the three scourges had been initiated in Ontario before Confederation. Provision for livestock quarantine had been legislated in 1865 in the United Canadas in order to guard against the introduction of

¹² A. Sanders, **Short-Horn Cattle, A Series of Historical Sketches, Memoirs and Records of the Breed and Its Development in the United States and Canada** (Chicago: Sanders Publishing Co.) 809. Perren suggested that the date was 1868. R. Perren, "The North American Beef and Cattle Trade with Great Britain, 1870-1914", **Economic History Review**, series 2, 24 (1971): 432.

rinderpest, through the importation of purebred cattle from Britain.¹³ When the new Dominion government adopted that legislation in 1869 to protect the nation from cattle disease generally, the concern at that point was not with the situation in Britain, but was rather with the prevention of the spread of cattle tick fever from the United States. No quarantine stations were established at that time. In 1876 the transatlantic trade, now well established, became jeopardized by the importation of purebred stock from Britain where a terrible plague of foot and mouth disease was raging. New quarantine regulations went into effect and purebred cattle were now allowed entrance to Canada only through Quebec (Point Levi), Saint John, and Halifax.¹⁴ While detention of stock was not enforced at first, an 8 day quarantine restriction was provided for by 1878.¹⁵

The following year the world cattle trade changed drastically. In 1879 the United States was scheduled by Britain for pleuropneumonia. The Canadian government, under Duncan McEachran as the country's Chief Veterinarian in charge of the Veterinary Branch, immediately became more concerned about the cattle disease situation specifically within the United States. An investigation revealed that pleuropneumonia and foot and

¹³ SP 3, Canada, Report of Agriculture for the Canadas, 1866. Appendix: 74.

¹⁴ SP 8, Canada, 1877: vii.

¹⁵ "The Cattle Quarantine System of Canada", **Morning Chronicle**, 1883: 5-7.

mouth disease had been more or less indigenous in the eastern states since 1843. Significantly, these plagues appeared to be confined to the area east of the Allegheny Mountains: range stock from the western states were disease free.¹⁶

Evidence of cattle plagues in the United States created concern in Canada about the Canadian quarantine system. As the transatlantic trade had grown there had been a continental movement of commercial stock to serve that trade. American cattle, transhipped through Canada to Britain, brought with them the menace of disease and that in turn threatened the privileged position of Canada as an unscheduled country in the international beef cattle market. The danger of illness entering Canada was thought to be related only to the movement of American cattle from the eastern states. So the Minister of Agriculture, J. H. Pope, prohibited the entrance into central and eastern Canada of all eastern American cattle - purebred and commercial. (In 1882, a quarantine station was set up at Point Edward in Ontario for the admission of purebred American cattle into Canada.¹⁷) Cattle were allowed to pass across the southern peninsula of Ontario, however, from one point in the United States to another.¹⁸ When quarantine control was set up in

¹⁶ SP 9, Canada, 1879: viii, 146-149. SP 12, Canada, 1881: vii. SP 26, Ontario, 1897: 6-7.

¹⁷ SP 14, Canada, 1883: ix.

¹⁸ SP 12, Canada, 1881: vii.

central and eastern Canada no attempt was made to regulate the entrance of western American cattle into western Canada.

The American government, in response to British scheduling of the United States, initiated an attempt to solve the problem of cattle disease in the country. A Treasury Cattle Commission was set by Congress in 1881 to inspect exported American cattle at ports of embarkation.¹⁹ The following year Congress broadened the commission's powers to allow it to control interstate transportation of cattle.²⁰ More forceful action was demanded by cattlemen, particularly in the west, and in 1884 the forty-seventh Congress created, within the United States Department of Agriculture, the Bureau of Animal Industry under the direction of Dr. D. E. Salmon.²¹ In 1886 the Bureau was given permission to destroy stock diseased with pleuropneumonia. Between 1886 and 1892 the government spent \$1.5 million buying and destroying cattle located east of the Appalachians.²² Salmon's general strategy was to destroy the illness in the east and thereby prevent it from entering the west.

¹⁹ J. M. Skaggs, **Prime Cut, Livestock Raising and Meatpacking in the United States, 1607-1983** (College Station: A & M University Press, 1986) 81.

²⁰ *Ibid.*

²¹ *Ibid.* 82.

²² *Ibid.* 82-3.

Meanwhile the demand for purebred beef breeding stock increased in Ontario and Canada, and made the entrance of these animals into the country from nations other than the United States essential. Pope created a stricter quarantine for stock from Europe by extending compulsory quarantine to 90 days, because pleuropneumonia was known to have an incubation period of up to three months.²³ The new quarantine structure, and the situation in the eastern United States, triggered the development of a flourishing trade between Ontario purebred breeders and importers, and midwest American cattlemen. In other words the American corn belt purebred breeders, fearful of importing diseased cattle from the eastern states, turned to Ontario as their source for purebred stock.²⁴

Because the station at Quebec allowed cattle of British and European origin to enter the continent and to avoid the disease-infected areas of the eastern states, Ontario importers began to act as agents for midwest breeders. The quarantine station at Quebec housed many animals due for the American west.²⁵ The

²³ SP 12, Canada, 1861: vii. SP 26, Ontario, 1897: 6-7.

²⁴ See "The Cattle Quarantine System of Canada", 1883. SP 14, Canada, 1883: 249-250. **Farmer's Advocate**, July, 1883: 198-9 and September, 1883: 263.

²⁵ The various reports from the individual quarantine stations given in the Sessional Papers within these years actually list the animals in quarantine and their destination. It is clear that the midwest of the United States did indeed use the port of Quebec for importation, and it is also clear that many Ontario breeders were actually doing the buying for them. See **Canada, Statistical Yearbook**, 1885: 235. In 1885, 1356 breeding cattle

situation offered obvious advantages to Canadian steamship and railway companies.²⁶ The **Farmer's Advocate**, however, was not pleased with the trend because the journal saw it as a cost to the taxpayer with no benefit to the ordinary farmer.²⁷ When pleuropneumonia broke out at the Quebec station in 1886, the journal stated that quarantine had failed and all importation of any sort should be prohibited.²⁸ The **Farmer's Advocate** was sensitive to the issue of disease control at this time because the continental situation had changed by 1885. Salmon's efforts to contain pleuropneumonia to the eastern United States had failed.

As early as 1882 McEachran, Veterinary General for Canada, had been concerned that the movement of calves from east to west in the United States could not help but introduce pleuropneumonia and foot and mouth disease to Montana which served as a major cattle supply base for ranching in the Canadian North West Territories.²⁹ By 1885 pleuropneumonia was

entered Canada from Europe, of which only 284 were to remain in Canada.

²⁶ SP 14, Canada, 1883: 250.

²⁷ **Farmer's Advocate**, July 1883: 189-190. September 1883: 263.

²⁸ **Farmer's Advocate**, September 1886: 259.

²⁹ See "The Cattle Quarantine System of Canada, **Morning Chronicle**, 1883. SP 11, Canada, 1882: 137; SP 14, Canada, 1884: 224.

found in Illinois.³⁰ Canada's response was to extend its quarantine system across the country, an action now possible as a result of the completion of the C.P.R. Cattle passing into Manitoba were required to go into quarantine for 60 days at Emerson. By 1887 two inspection stations were established in the west at Maple Creek and Fort McLeod, and quarantine detention was changed to 90 days everywhere in the country. The only stock that could escape the quarantine were settler's effects. These cattle were only compelled to undergo inspection.³¹

The following year, 1888, Salmon requested that the Canadian 90 day quarantine requirement for entrance into the North West Territories be removed, because pleuropneumonia had been eradicated west of the Alleghenies.³² McEachran believed otherwise and in 1889 reported to Deputy Minister Lowe that American cattle, which had originated in the west, been shipped via New York and had landed in Britain diseased, could only have

³⁰ **Farmer's Advocate**, November, 1886: 323.

³¹ SP 7, Canada, 1893: xi-xiv. Also, **The Canadian Breeder and Agricultural Review**, January 2nd, 1885: 15.

³² McEachran to Lowe, August 22nd, 1888, marked private, General Correspondence of the Department of Agriculture, -RG 17, volume 1678, file 1887-1890. McA-McE, **National Archives of Canada**, Ottawa (referred to henceforth as **N.A.C.**).

contracted the illness in the west.³³ He believed that the plague still existed in the east as well.³⁴

In 1892 Canada was finally scheduled for pleuropneumonia by Britain. There was, in fact, little evidence that any cattle from Canada had pleuropneumonia. While a few animals when landed in Britain had exhibited stress-related illness which suggested simple pneumonia, no proof ever came to light - out of massive documentation - that the stock had had pleuropneumonia.³⁵ Regardless of whether the disease existed in Canada or not, much of the reasoning behind the fabric of the quarantine system with respect to American cattle was nullified in 1892. Canada's position in the British market for live cattle was now identical to that of the United States. This fact influenced what the Canadian government felt about the existence of pleuropneumonia in particular within the United States.

In 1893 McEachran revisited the old infected areas of the eastern states, found no evidence of it there, and reported to

³³ McEachran to Lowe, October 19th, 1889, marked confidential. **Ibid.**

³⁴ McEachran to Lowe, November 27, 1891, March 30, 1891 (confidential), April 3, 1891. General Correspondence of the Department of Agriculture, RG 17, volume 1678, file 1890-1891. MacA-MacE, McA-McE, N.A.C.

³⁵ See, for example, SP 26, Ontario, 1897: 6-7. The amount of material generated over the issue was truly astounding. It was only matched in bulk by that which resulted from the attempts by Canadians to have the live trade reopened in the early 1920's.

the Canadian government that the United States in general had been free of the disease for two years.³⁶ Yet in 1891 McEachran had informed Lowe that Salmon had untruthfully stated that there was no pleuropneumonia in New York, and that his inspectors in that state "wilfully [suppressed] the facts in connection with the actual state of affairs."³⁷ McEachran was so determined to keep American cattle out in 1891 in order to maintain Canada's position with Britain, that he had suggested to Lowe that \$100 should be spent paying veterinarians to find the disease in New York state in particular.³⁸

The Americans responded to the scheduling of Canada by imposing a 90 day quarantine on all Canadian cattle entering the United States.³⁹ The combined quarantine regulations of the United States and Britain greatly hampered all Ontario cattle trade patterns.⁴⁰ For the first time since the initiation of the quarantine system, serious and widespread opposition to

³⁶ SP 26, Ontario, 1897: 6-7.

³⁷ McEachran to Lowe, November 27, 1891, March 30, 1891 (confidential), April 3, 1891. General Correspondence of the Department of Agriculture, RG 17, volume 1678, file 1890-1891. MacA-MacE, McA-McE, N.A.C. McEachran actually sent on a letter sent to him from a veterinarian in Brooklyn, who claimed that he knew of the illness in that state.

³⁸ McEachran to Lowe, April 3, 1891. *Ibid.*

³⁹ H. Abbott, "The Marketing of Live Stock in Canada", M.A. Thesis, University of Toronto, 1923: 5. Abbott implied, however wrongly, that the Canadian 90 day quarantine against American cattle came into existence in 1892.

⁴⁰ SP 26, Ontario, 1897: 136.

quarantine regulations began to develop among cattlemen in Ontario. When British scheduling of Canadian cattle became permanent in 1896, Ontario purebred breeders and commercial cattle farmers argued that the encouragement of an export cattle trade with the United States through quarantine revision was now all the more essential. They pressured the Dominion Minister of Agriculture, Sidney Fisher, for changes in Canadian/American quarantine regulations. Fisher and John Dryden, the Ontario Minister of Agriculture, approached the American government with the thought of removing the mutual 90 day quarantine between the two countries.⁴¹

In February 1897 quarantine regulations were revised: commercial and purebred cattle could pass freely between Canada and the United States without detention for the three scourges. The **Breeder's Gazette** of Chicago claimed that the new regulations created a brisk market for Canadian cattle in the United States. Many Canadian commercial animals were shipped to the United States and there was a good market for purebred Ontario bulls in the American west. "There is a good market here for Canadian stock. There is practically no market for American stock in Canada," the journal stated.⁴²

⁴¹ SP 26, Ontario, 1897: 7-8.

⁴² Quoted in SP 26, Ontario, 1897: 9-10.

However, the situation for the Ontario purebred industry was not quite as rosy as this proclamation would suggest, because troublesome tuberculosis regulations on purebred cattle remained in force at the same time that the 90 day quarantine for the three scourges was removed. While purebred cattle were no longer detained at quarantine stations, they could not pass between the two countries without clearance for tuberculosis by the tuberculin test.⁴³ Because corresponding Canadian regulations with respect to tuberculosis went into effect on cattle from Britain, the purebred industry of Ontario was now handicapped on both sides - through importation from Britain and exportation to the United States. Bovine tuberculosis, and how to control it, had become a serious international problem by this time.

The question of containing bovine T.B. through some form of quarantine regulation was far from new in the 1890's. It had been discussed in Ontario as early as 1875.⁴⁴ By 1880 McEachran had become convinced that T.B. should be considered a contagious disease, like the three scourges, and that it should be subject to Canadian quarantine.⁴⁵ However, it was not until after experiments at the Central Experimental Farms in Ottawa indicated that Robert Koch's tuberculin was a reliable

⁴³ **Ibid.**

⁴⁴ SP 10, Canada, 1880: 107-8. "The Cattle Quarantine System of Canada", **Morning Chronicle**, 1883: 23. **Farmer's Advocate**, September 1875: 171.

⁴⁵ SP 10, Canada, 1880: 112-3.

diagnostic tool for the presence of the disease in cattle, that any regulation for control of bovine T.B. went into effect.⁴⁶ After 1894 stock which entered the quarantine stations in Canada for 90 day detention were also given the tuberculin test.⁴⁷ Animals that reacted were either sent back to where they came from or were slaughtered without compensation, at the discretion of their owners.⁴⁸

The change in quarantine regulations in 1897 and the new T.B. test restrictions aroused conflict between the purebred breeders of Ontario and the Dominion government. John Dryden, Minister of Agriculture for Ontario and a Shorthorn breeder, was bitterly opposed to the continued use of the tuberculin test on imported stock. He called it a "fraud and a humbug", and stated that it made no sense that a breeder could buy as many diseased cattle as he wanted in Canada, but could not buy cattle that reacted to the tuberculin test from another country.⁴⁹ Many cattle breeders supported him. One felt that a half dozen more level heads like Dryden would end "this fad".⁵⁰

⁴⁶ SP 8, Canada, 1895: xv.

⁴⁷ **Farmer's Advocate**, December 20th, 1894: 486.

⁴⁸ **Ibid.**

⁴⁹ **The Farming World**, December 18th, 1900: 372. He spoke out many times again the quarantine laws regarding testing for T.B.

⁵⁰ **Farming**, January 25, 1898: 162.

The friction itself between breeders and government over the T.B. quarantine regulations is particularly interesting because it revealed the state of medical knowledge and contemporary attitudes towards disease generally late in the 19th century. Tuberculosis was a misunderstood disease in the late 1890's. For one thing, the connection between the bovine and human form of it was not well understood. Koch had been able to identify the bacilli of tuberculosis as early as 1882, but it continued to be unclear long after that time what connection, if any, existed between bovine T.B. and the human form of it.⁵¹ (While it appeared to contemporaries that both meat and dairy products could infect humans with tuberculosis, that fact was not proven until a later period.) In 1901 Koch himself claimed that bovine T.B. was not infectious to humans. **The Farming World** reported that a French physician had decided to test Koch's conclusions with that scientist's blessings by drinking nothing but milk, teeming with tubercular bacilli, for a year.⁵² Unfortunately, the present writer does not know the results of this experiment!

In addition, in the 1890's it was still not clear to veterinarians or doctors that contagion in any disease was a distinct phenomenon outside such problems as sanitation and

⁵¹ SP 15b, Canada, 1913: 335.

⁵² **The Farming World**, November 12th, 1902: 514.

poison.⁵³ If medical men remained confused about the nature of contagion, practical farmers demonstrated even more confusion about the nature of disease. For example, McEachran reported that an owner of cattle which had been killed by anthrax near Montreal blamed the deaths on the passing of a white fox through the field.⁵⁴

Sanitation, contagion, and even inheritability were intertwined in theories put forward by agriculturalists, in their attempts to understand tuberculosis in the 1880's. A confused article appeared in **The Canadian Live Stock and Farm Journal** in 1887 on this subject. "It is undoubtedly a hereditary disease, for there is no trouble in frequently tracing it from parent to offspring." "What this hereditary taint consists of is difficult to exactly realize." But the journal concluded the illness in cattle was hereditary and resulted from occasional infection.⁵⁵

Confusion between infection and sanitation can be seen in the contemporary conviction that tuberculosis was a particular

⁵³ See SP 39, Ontario, 1913: 188. As late as 1913, Grisdale, Director of the Dominion Experimental Farms, clearly was confused by the concepts of sanitation and contagion in the spread of T.B.

⁵⁴ Bacilli - that of anthrax - were first seen in 1876 by Dr Robert Koch. SP 9, Canada, 1879, Appendix 39: 151.

⁵⁵ **The Canadian Live Stock and Farm Journal**, November, 1887: 658.

menace for purebred cattle. Studies in some parts of the world did indicate that the relationship of the disease to purebred stock could be as high as 100%.⁵⁶ The prevalence of the disease in purebred herds, which tended to be more closely housed, and to share bedding and drinking troughs, made it unclear to breeders whether sanitation or contagion was the source of the disease. So did the system of soiling (stall, rather than pasture, feeding of green fodder in summer), although the connection between soiling and the presence of T.B. did not seem to have been recognized at the time. Dr. John G. Rutherford, who became Veterinary General after McEachran in 1902 and later also Live Stock Commissioner, claimed that George Brown's Bow Park was the "distributing centre for the whole of western Ontario of bovine tuberculosis" and for many parts of the mid western United States as well.⁵⁷ George Brown had been particularly devoted to soiling.⁵⁸ Bow Park's herd almost certainly contained a high proportion of tuberculosis at least partially as a result of this practice, which spread contagion more readily than pasturing.

⁵⁶ "On the Significance of Bovine Tuberculosis and Its Eradication and Prevention in Canada" by G. Adami, a paper given at the Canadian Medical Association in 1899 and printed in SP 14, Ontario, 1902.

⁵⁷ SP 15b, Canada, 1913: 336. As a young man, Rutherford actually worked as a veterinarian at Bow Park.

⁵⁸ Duncan Marshall, **Shorthorn Cattle in Canada** (Dominion Shorthorn Association, 1932) 211-13.

The general confusion about T.B. itself and about the nature of any disease explained to some degree why breeders did not accept the T.B. regulations. However, breeders also distrusted the tuberculin test. They had good reason to do so. In spite of the evident value of tuberculin as a testing agent, it was in fact not problem-free.⁵⁹ To begin with, ambiguities were often apparent in results.⁶⁰ In 1898 Arthur Johnston described how inconsistent results could be. He reported that another Ontario breeder, John Isaac, had had 14 head of cattle tested in Aberdeen, Scotland. Two had reacted. With difficulty Isaac had managed to have the cattle retested after the appropriate time lapse, but now the only one to react was an animal which had not done so the first time.⁶¹

Another problem with the use of tuberculin was that breeders in Britain often refused to allow their animals to be tested. Arthur Johnston wrote to H. Cargill, a wealthy Ontario importer of Shorthorns, about this problem. "I am not afraid

⁵⁹ SP 15a, Canada, 1906: 14.

⁶⁰ SP 26, Ontario, 1897, Appendix of Conference with Sidney Fisher, Dominion Minister of Agriculture: 52-53. SP 28, Ontario, 1898/99: 126-7. SP 24, Ontario, 1901: 11-13. SP 14, Ontario, 1902: 81-95. SP 8, Canada, 1895: xii-xv. SP 8, Canada, 1896: xii. "Tuberculosis in Cattle", Special Bulletin, 1897, Ontario Department of Agriculture. "Report of the Committee on Agriculture and Colonization", 1895, *Journal* of the House of Commons: 12-13. See *Farming*, January, 1896, no page given, May, 1896: 657-8; November, 1896: 152; April, 1897: 464; May, 1897: 619; January 25th, 1898: 162-3.

⁶¹ Johnston to Cargill, May 28th, 1898, Letterbook 3, Arthur Johnston Papers, P.A.O.

that there will be too many cattle imported nor am I much afraid of the prices on the other side. I am, however, somewhat afraid that there will not be plain sailing in getting cattle into Canada owing to the tuberculin test. Breeders in the Old Country refuse to permit a test, even at the buyer's risk, because it involves risk to the whole herd, as you understand & I know some Breeders will not sell with the understanding that they are to be brought to this country, & tested on either side of the water."⁶²

When cattle were tested in Britain, it was not always done carefully. The Dominion government had tried to use British veterinarians for the test before the stock left for Canada, but it had found their work unreliable. McEachran reacted to this problem by having a Canadian veterinarian do the testing in Britain, and sent out Rutherford in 1901. However, falsification of tests by British breeders made the system of maintaining a Canadian veterinarian in Britain unworkable, and it was shortly abandoned.⁶³

Because T.B. testing did not explain the nature of the disease, or offer control either through vaccine or cure, its ability to eradicate or even control the spread of the disease seemed limited to breeders. The failure of Koch's tuberculin to

⁶² Johnston to Cargill, March 31, 1898. Letterbook 3, Arthur Johnston Papers, P.A.O. See also **The Farming World**, December 25th, 1900: 402.

⁶³ SP 15, Canada, 1904: 76.

offer the same protection from T.B. that Louis Pasteur's vaccine did for anthrax, only increased that sense.⁴⁴ Purebred breeders also felt that there was a solution to the spread of T.B. that worked better than the use of tuberculin testing.⁴⁵ Valuable cattle could be preserved under the Bang's System. Dr. M. B. Bang of Denmark suggested, late in the century, that if reacting cows were separated from their calves the calves would remain healthy. By simply running two herds, one diseased and one healthy, the tuberculous problem could eventually be eliminated.⁴⁶

Opposition to the T.B. regulations, caused by all of these issues, led the cattle breed associations in Ontario ask the government repeatedly to remove the tuberculin test requirement on imported purebred stock.⁴⁷ It was not removed. But in 1903 a new system for control of imported purebred tuberculous cattle was adopted when Ontario purebred breeders agreed to testing

⁴⁴ McEachran was aware of Pasteur's vaccine for anthrax and advised its use in Canada as early as 1882. See SP 11, Canada, 1882: 145.

⁴⁵ **The Farming World**, March 5th, 1901: 642.

⁴⁶ SP 14, Ontario, 1902, "The Struggle Against Bovine Tuberculosis" by Bang and translated. One prominent Shorthorn breeder used it with great success and discussed his methods in **Farming World and Canadian Farm and Home**, November 2nd, 1903: 759. "On the Significance of Bovine Tuberculosis and Its Eradication and Prevention in Canada", by Dr. G. Adami, 1899: 13.

⁴⁷ A few examples are as follows. SP 28, Ontario, 1898-9: 31, 126-7. SP 24, Ontario, 1901: 21.

performed under particular circumstances.⁶² Breeders resigned themselves to tuberculin testing of European cattle if it was done in quarantine stations in Canada, while Rutherford agreed not to compel the slaughter of all reacting stock. Only reactors which showed clinical signs of the disease were to be destroyed, and no compensation would be provided to their owners.⁶³ It was also agreed that American cattle could be tested by either the Bureau of Animal Industry or at Dominion quarantine stations. Reactors with clinical signs were either destroyed without compensation or returned to the United States. Other reactors were not subject to slaughter.⁶⁴

Rutherford chose to deal with reacting cattle which were not ordered killed in an interesting way. He stigmatized them. These animals were forced to have a large "T" cut out of their right ear, thereby marking them for the rest of their lives as animals potentially infected with T.B.⁶⁵ The system in Canada for control of tuberculosis lasted until the end of the period under study. Stigmatization, not compulsory slaughter and/or compensation, was the main strategy.⁶⁶ Cattlemen could keep stock

⁶² SP 15b, Canada, 1913: 391; SP 15, Canada, 1904: 76.

⁶³ SP 15, Canada, 1904: 76; SP 15, Canada, 1905: 177.

⁶⁴ SP 15, Canada, 1905: 178; SP 15a, Canada, 1906: 13.

⁶⁵ SP 15b, Canada, 1913: 391; SP 15, Canada, 1905: 55; SP 15, Canada, 1908, Appendix 15 of Miscellaneous: 46; SP 15, Canada, 1904: 76.

⁶⁶ Compensation was used with compulsory slaughter only under

which appeared to be contaminated with the disease. It was up to them, and, as time went on they were less inclined to do so."⁷³ The diplomacy of Rutherford, confirmation that human tuberculosis resulted from the bovine form, and indisputable evidence that the disease was actually spreading in cattle were all contributing factors.⁷⁴ So was the fact that, increasingly, western provinces funded the buying of eastern purebred cattle only after clearance through the tuberculin test.⁷⁵

When the Canadian government introduced in 1919 an Accredited Herd Plan which would guarantee certain herds to be free of the disease, breeders made every effort to cooperate, even though compensation within the plan was limited and stock marked with a "T" was now subject to compulsory slaughter.⁷⁶ The Accredited Herd Plan was a duplication of the one initiated in 1917 by the Bureau of Animal Industry in the United States, and herds that were clean would be allowed to enter the other country without a tuberculin certificate. By 1922, when more

special conditions within certain programs. See SP 15, Canada, 1920: 69; SP 15, Canada, 1921: 93.

⁷³ SP 15, Canada, 1905: 56.

⁷⁴ See **Farmer's Advocate**, October 29th, 1909: 1652-1653; April 1, 1920: 605; May 20th, 1920: 961; August 20th, 1920: 1376. **Farm and Dairy & Rural Home**, January 27th, 1910: 12. SP 15, Canada, 1922: 63; SP 16, Canada, 1924: 32.

⁷⁵ See, for Example, **Report** of the Saskatchewan Department of Agriculture, 1914: 52-4.

⁷⁶ SP 15, Canada, 1921: 92-3; SP 15, Canada, 1922: 63. **Farmer's Advocate**, August 20th, 1920: 1376.

than a 1000 accredited herds existed in the United States, the first herds to be accredited started to appear in Canada.⁷⁷

The friction between breeders and government over health issues and quarantine declined with the resolution of the role of the tuberculin test in the fight against bovine T.B. When the connection of bovine tuberculosis to human health brought the issue of meat inspection to a head a similar conflict between government and cattlemen did not arise.⁷⁸

While meat inspection clearly was a regulatory issue outside that of animal quarantine, a few words about it are not out of place here because it also involved inspection of the live animal. The issue of meat inspection became important in Canada when pressure for it emerged in the two countries who imported cattle or beef from Canada. Early in the 20th century, Britain began to demand that meat imported into that country be inspected. Then in 1906 Upton Sinclair published his book, **The Jungle**, about the ills of the American packing industry. The

⁷⁷ **The Agricultural Gazette**, 6 (1919): 953. SP 15, Canada, 1921: 93. SP 15, Canada, 1922: 63-4. SP 15, Canada, 1923: 64. SP 16, Canada, 1923: 6. By Orders in Council, November 5th, 1921, cattle from the United States from Accredited Herds were admitted into Canada without a tuberculin test. SP 15, Canada, 1924: 32.

⁷⁸ The question of meat inspection and the danger to humans from the meat of sick animals had been raised in Ontario as early as 1876 by the **Farmer's Advocate**, when the journal had been as concerned with the dangers from meat of cattle sick with pleuropneumonia, as it was with T.B. contaminated meat. **Farmer's Advocate**, February 1876: 31.

book aroused considerable concern about the quality of Canadian, as well as American, meat.⁷⁹ In order to protect foreign markets, the Dominion government began to consider meat inspection in Canada. After many discussions with the major Canadian packers over a draft proposal in 1906 and 1907, Rutherford convinced them to agree to a system that provided for inspection of both the live animal and the carcass.⁸⁰ Meat inspection in Canada in 1908 applied only to the beef of animals sold either internationally or interprovincially by packing houses. It did not, therefore, affect all cattle. Nor, in reality, did it affect most of the meat which was consumed domestically in Canada.⁸¹ Meat inspection was, in fact, designed at the time of its initiation to enhance Canada's export trade in meat, not to protect the health of the nation.⁸²

The second major area, within the subject of policy of the regulation and promotion of beef cattle farming was the development of other aspects of cattle policy generally. Cattle regulatory concerns in Ontario provoked a myriad of different policies over the years. All, also, were the prerogative first

⁷⁹ **The Growth and Development of Canada's Meat Packing Industry: A Documentary Commemorating the 50th Anniversary of the Meat Packers' Council of Canada, 1919-1969** (Meat Packers' Council of Canada) 23.

⁸⁰ **Ibid.**

⁸¹ **The Agricultural Gazette**, 2 (1915): 119 stated that about one half of the meat consumed in Canada was inspected.

⁸² See **The Agricultural Gazette**, 1 (1914): 24.

of the provincial voluntary organizations and then of the Ontario government, before any of them became the responsibility of the Dominion government. All first involved primarily the interests of purebred breeders.⁵³ It was only after major purebred concerns were resolved at the Dominion level, that any organization - voluntary or government - took on regulation of the affairs of the commercial producer in Ontario. A look at the development of the regulation of general cattle concerns, then, must start with the evolution of policy for the purebred industry.

A particularly important issue for purebred breeders was the recordation of purebred stock. It would be some time before recordation of the purebred industry left the voluntary sphere in Ontario and passed to governments. The story of the transition of control over recordation from voluntary associations to governments, and of the relationship of breeders to these organizations shows the developing hegemony of government. It also reveals how and where the problem of certification and qualification in purebred animal recordation was worked out for Canada.

⁵³ Breeders argued that their interests were one and the same as national interests. "On the success of the importers and breeders of live stock depends the success of our nation", F. W. Hodson, first Live Stock Commissioner and an Ayrshire breeder, told purebred breeders in 1900. SP 23, Ontario, 1900: 14.

Recordation was a complicated issue because it involved qualification of pedigree standards and certification that a stated pedigree was correct. Because pedigree implied verified quality, it needed certification. The question of who set and controlled these standards and who certified them was initially worked out in Ontario in the 1880's between two organizations, the British American Shorthorn Association and the Agriculture and Arts Association.

Recordation of cattle in Canada originated in Ontario, within the most important Ontario voluntary organization, the Agriculture and Arts Association. In 1867 the Agriculture and Arts Association began publishing a herd book for Ontario's Shorthorns, known as the Canada Shorthorn Herd Book. The Association also set the standards for entrance. The breeders had, at that point, not formed any association of their own.³⁴ The Agriculture and Arts Association, therefore, both qualified and certified pedigree. In the early 1880's the organization altered the qualifications by changing the standard of pedigree without consulting the breeders. It was possible under the new qualifications to grant purebred status to an animal which had resulted from the breeding of four generations of purebred Shorthorns on an original foundation cow of any background. In

³⁴ See A. Bogue, "The Progress of the Cattle Industry in Ontario During the Eighteen Eighties", **Agricultural History**, 21 (1947), for the rise of cattle breed associations in Ontario.

other words, Shorthorns could be declared purebred if all their ancestors were not registered Shorthorns.

The new standards set by the Association made many Ontario cattle ineligible for export as purebred to the United States.³⁵ Because so much of the purebred market for Ontario stock was in the United States, this situation was obviously serious to breeders. "One result [of the lowered standards of the old herd book] was that our American cousins ceased to recognize our herd book altogether, insomuch that our Shorthorn breeders who were looking to the splendid markets of the west as an opening for their cattle were necessitated to register only in the American Herd Book," commented **The Canadian Live Stock and Farm Journal**.³⁶ The Agriculture and Arts Association might have certified, but from the breeders' point of view, it had not properly qualified the product.

³⁵ Arthur Johnston wrote about the controversy some years later, saying that Americans called the Canada Shorthorn Herd Book the Grade Canadian Herd Book. (Grade cattle are crossbred or commercial cattle.) Johnston to Hodson, June 24th, 1896. Arthur Johnston Papers, Letterbook 1, P.A.O.

³⁶ **The Canadian Live Stock and Farm Journal**, February, 1885: 31. Length of pedigree, pedigree itself, and the relationship of either to quality was and is indirect at best.

It is worth pointing out in passing that the four cross system was the one accepted in the British Herd Book. J. Hope, manager of Bow Park, said some cattle in Britain were unregistered and that they were better than the best registered in Canada. He added that importers were not likely to be influenced by long or short pedigrees, but rather by quality. **The Canadian Live Stock and Farm Journal**, January, 1887: 368.

The **Farmer's Advocate**, never a particular friend of the Agriculture and Arts Association, was annoyed about the lowered quality of the new standards. The Canada Shorthorn Herd Book had been a force for the good when it was established in 1867, the journal admitted, and at that time it had had high standards. The new standards - registration after four purebred crosses - was inexcusable. "The fact of the matter is, the Canada Shorthorn Herd Book is an injury rather than a benefit" under the new conditions, stated the **Advocate**. "In the first place it is nothing but a grade registry in reality," explained the journal. The **Advocate** elaborated as follows. "We all know that an animal with four crosses is nothing but a grade and animals of this description are totally unfit to breed from." David Christie showed four cross heifers as grades and won prizes with them - later registering them as purebred.⁶⁷ He was therefore able to use "purebred" stock in crossbred classes, and was even prepared openly to admit this fact by altering their status from grade to purebred after these shows.

Shorthorn breeders responded to the lowering of standards by the Agriculture and Arts Association by establishing an organization known as the British American Shorthorn Association which began to publish the British American Shorthorn Herd Book. The standards set by the new association stated that any Shorthorn eligible for registration under the new regulations

⁶⁷ These quotes are from **Farmer's Advocate**, March, 1881: 65.

must have ancestors which all traced back to animals recognized as purebreds in Britain.²⁸ The breeders set out to certify and qualify, just as the Agriculture and Arts Association did. A controversy raged between the two factions until 1885, when committees for both the Agriculture and Arts Association and the breeders' association worked out a new agreement for a united herd book with the higher standards of the British American Shorthorn Association.²⁹

The amalgamated book was known as the Dominion Shorthorn Herd Book. Pedigree standard, or qualification, was from that point on to be controlled by the new Dominion Shorthorn Association, which replaced the British American Shorthorn Association.³⁰ Certification, however, remained with the Agriculture and Arts Association, which published the Herd Book. The issue of control of the qualification and certification aspects in recordation was settled for the time being. Breeders as an interested group set the qualification, while the Agriculture and Arts Association, as a disinterested group, looked after certification. When the Agriculture and Arts Association was abolished in 1895, however, it handed over all

²⁸ See Arthur Johnston to Hodson, June 24th, 1896. Arthur Johnston Papers, Letterbook 1, P.A.O. See also **Farmer's Advocate**, July, 1881: 157. October, 1881: 248. December 1881: 294.

²⁹ Only imports from earlier than 1865 were acceptable without registration within the new pedigrees.

³⁰ **Farmer's Advocate**, December, 1885: 356.

certification responsibility for recordation issues to the breeders' association.³¹

When they won the right to control standards, Shorthorn breeders learned the lesson that while division weakened their ranks, united organization could promote their interests.³² It was a lesson they would not forget. With the problem of qualification control apparently settled, Shorthorn breeders in Ontario turned their efforts to the promotion of their marketing interests by combining forces with both Shorthorn and other purebred organizations. As early as 1886 Ontario breeders saw the Dominion Shorthorn Breeders' Association as a potential national organization for breeders of Shorthorns, which would enhance the interests of all Canadian breeders. **The Canadian Live Stock and Farm Journal** commented as follows.³³

There is something very suggestive in the name of the new book - 'The Dominion Shorthorn Herd Book.' Shall we not expect that our friends in the Maritime Provinces will act upon the gentle but constant reminder, and register their cattle in our herd book. Although Shorthorns are recorded in a way in these provinces, the standard (our good friends by the sea will pardon us for saying so) is quite too low." "The men, too, of the Northwest can find ample shelter under the roof of the Shorthorn

³¹ **The Canadian Live Stock and Farm Journal**, July, 1895: 147.

³² See Dryden's attitudes in **Farmer's Advocate**, April 1886: 105-6.

³³ **The Canadian Live Stock and Farm Journal**, February 1886: 37.

Dwelling, and along with those from the seashore will find a cordial welcome." **"One Shorthorn Herd Book for the whole Dominion!** [the journal's emphasis] There is a grandeur in the very idea. It puts a reliable brand upon the cattle of this breed from sea to sea. Formerly the Shorthorns of Ontario drew a respect which was justly denied our herd books. But with one herd book for the whole country, that measure of respect given to Ontario cattle would flow eastward and westward to all Shorthorns of the Dominion.

The first move to the unification of associations for the promotion of purebred marketing interests came not from breed unity across the country, however, but rather from species unity within the province of Ontario. In 1892 the Dominion Cattle Breeders' Association was formed.³⁴ Reorganized in 1895, this association undertook new directions in marketing promotion when it joined the united sheep and swine breeders' associations in 1897 in the publication of **The Ontario Agricultural Gazette**, which listed stock for sale owned by members. Later, auctions sale were held jointly by the stock associations as well.

The most important marketing work achieved by the united stock associations was the reduction of railway rates on purebred animals moving to the west as breeding animals. In 1897 J. I. Hobson, President of the Dominion Cattle Breeders' Association, began a campaign to have rates reduced by the Grand

³⁴ See **Farming**, September 1896 for a good article on this and other organizations in Ontario, called "Organized Agricultural Effort in Ontario".

Trunk and the C.P.R.³⁵ Over the next number of years rates did become increasingly favourable to the purebred breeders.³⁶ First, the estimated weights of livestock in less than car-lot loads was reduced by one third and the need to send a man with the stock going farther than 100 miles was abolished. At the same time the rate on car-lot loads of registered stock to Manitoba and the North West Territories was reduced by one half. In 1898 the rates on less than car-lot loads were still further lowered, and by 1899 rates to British Columbia were revised to a lower rate as well.³⁷

The ability of all livestock voluntary organizations to influence such market conditions, however, was not to last. Regulation of train rates for purebred cattle would pass to the

³⁵ Arthur Johnston was determined that the cattlemen be present at the meeting in some force. He wrote to Hobson, "I am therefore writing to you to request or command you to meet me." "Do not fail to be present" "I am not modest, at least I have never heard any one say that I am too modest; but I do not want to face the RC Committee alone." Johnston to Hobson, February 18th, 1897. Arthur Johnston Papers, Letterbook 2, P.A.O.

³⁶ The west was as interested in receiving purebred Ontario cattle as the Ontario breeders were in sending their stock west. In 1898, the government of the North West Territories set aside money to encourage the importation of Ontario purebred cattle and worked closely with the Dominion Cattle Breeders' Association. **Farming**, October 11th, 1898: 129; **Farmer's Advocate**, Western Edition, April 20th, 1904: 575.

³⁷ SP 23, Ontario, 1900: 7. Rates from Ontario and Quebec to the Maritimes remained high, after reductions to the west were in place. Purebred cattle being sent to the Maritimes still paid high freight rates in 1898. **Farmer's Advocate**, May 2nd, 1898: 203.

Dominion government when the issue of controlling railway rates became entangled with the old recordation problem of pedigree certification.³⁸ Duplication and falsified documents had caused the railway companies to demand that better records of registration, or more reliable methods of certification, be established for purebred stock expecting to travel at reduced rates. In 1904 the railway authorities threatened to cancel the half rates on purebred stock. At a meeting of the Canadian Freight Association, it was agreed that no animal would be carried as purebred unless it was accompanied by a reliable certificate that bore a stamp of the Dominion Department of Agriculture, guaranteeing it to be correct.³⁹ It was imperative now that the Canadian Department of Agriculture take certification control of these records from any organization that had certified recordation.

Nationalization of certification meant that purebred records had to be consolidated, so that one herd book in the country served all animals belonging to any breed. Breeders were not opposed to this concept in theory. They had always considered multiplicity of records to be a problem, for both qualification and certification reasons. Ontario's breed

³⁸ Fraudulent pedigrees did happen. A case came before the courts about the validity of the use of a sire named "Cracker", a Shorthorn bull which was allegedly used on some heifers in Alberta in 1908. **Farmer's Advocate**, May 26th, 1910: 883.

³⁹ SP 24, Ontario, 1905: 29. **Farming World and Canadian Farm and Home**, February 15th, 1905: 127-131.

associations had been interested in nationalizing herd books as early as 1885, when the Dominion Shorthorn Association had hoped to represent all Shorthorn breeders in Canada. By 1900 there were still a number of herd books for each breed, but some consolidation had taken place within both the Shorthorn ranks and purebred cattle breeders generally.

By 1897 the maritime Shorthorn associations decided to join the Dominion Shorthorn Association; and there was general agreement in the west, too, that the Dominion Shorthorn Association of Ontario should become the national body for Shorthorns.¹⁰⁰ Cattlemen in the nation who bred purebred stock of any breed tended to be members of Ontario's associations by 1900. The Dominion Cattle Breeders' Association represented every province, the territories, and Newfoundland by that time.¹⁰¹ Generally speaking, then, while multiple herd books still existed in 1900, purebred animals in Canada were registered by organizations that were of Ontario origin.¹⁰² Consolidation of recordation, therefore, would mean the removal of Canada's purebred recordation centre from Toronto to Ottawa.

¹⁰⁰ SP 25, Ontario, 1897/8: 92-5.

¹⁰¹ SP 23, Ontario, 1900: 19.

¹⁰² The **Farmer's Advocate** explained. "The pure-bred records of Canada were instituted under the old Agriculture and Arts Act of Ontario, and in that regard were provincial in character, though patronized by Canadian breeders generally" and had their offices in Toronto. **Farmer's Advocate**, May 1st, 1900: 258.

As early as 1900, and before the rail freight rate/certification crisis, F. W. Hodson, the first Live Stock Commissioner in the Dominion Department of Agriculture, had begun to press the various breed associations to nationalize recordation. The 1904 problem of freight rates triggered the need for immediate action on the recordation problem. When Hodson spoke to the Ontario cattle breed associations about centralizing the records in 1905, the old fear of the breeders that outside organizations threatened to take control of pedigree standards, or qualification, arose again.

The Dominion Shorthorn Breeders' Association resolved: "That we the members of the Dominion Shorthorn Breeders' Association are firmly of the opinion that the conduct of our business should be kept altogether under the control of the Shorthorn breeders that constitute our membership, and that we would oppose any suggestion in the direction of taking from us such control, even to the slightest extent, with the whole of our power."¹⁰³ When Hodson made it clear to the breeders that control of pedigree standards, or qualification, would remain with the breed associations, the purebred industry quickly agreed to the nationalization of records.¹⁰⁴ The bureaucratic

¹⁰³ SP 24, Ontario, 1905, p19.

¹⁰⁴ Nationalization of records was a complicated process and a slow one which would not be complete until 1909. See "The Cattle Industry", by H. S. Arkell in **Twentieth Century Impressions of**

methods of providing for qualification by breeders with certification by an outside body, that had been worked out in the 1880's in Ontario, were reinstated with the transference of certification from various breed associations to the Dominion government. The system of recordation in Canada was now established: breeder associations as an interested group set qualifications, while the Dominion government as a disinterested group undertook certification. The bureaucratic structure of the Live Stock Division changed as a result of its new responsibilities for recordation certification, and rail rate control. It became the Live Stock Branch in 1905.

The Live Stock Branch of the Dominion Department of Agriculture began to undertake new responsibilities once the problems of the purebred industry - recordation, certification, and control of rail freight rates - were under control. After 1913 the Live Stock Commissioner turned his attention to the general regulation of market conditions affecting the commercial beef cattle producer. The need for greater war production after 1914, and then the rapid depletion of commercial cattle after 1917, stimulated the government to attempt to direct the general functioning of the beef cattle industry. The Dominion government tried to act as a check on the natural liquidation aspects of

Canada, edited by H. Boam (Montreal: Sells, ltd., 1914). Arkell gives a good outline of the whole process of nationalization and outlines the bureaucratic structure that went with the new system. See also **Farmer's Advocate**, Western Edition, March 2nd, 1904: 310; March 23rd, 1904: 430; April 5th, 1905: 499.

the cattle cycle, in order to reduce volatility as well as to ensure adequate production. This general policy led to such government actions as the funding of freight rate reductions on feeders and heifers shipped from central stock yards back to farms, free train passage for farmers to the central stockyards, and sire loaning or purchasing plans.¹⁰⁵

When the Dominion government took over recordation certification and control of freight rates, the nature of the united provincial cattle association and united live stock associations in Ontario changed. They became more regionalized and less nationalistic in their outlook. In 1918 the old Dominion Cattle Breeders' Association changed its name to the Ontario Cattle Breeders' Association, and focused its attention on the promotion of Ontario's purebred market interests within both the province and the nation.¹⁰⁶ A united association called the Eastern Canada Live Stock Union, which intended to speak for eastern Canada as a region, was formed in 1917.¹⁰⁷

¹⁰⁵ SP 15a, Canada, 1909: 48. SP 15, Canada, 1916: 23. SP 15, Canada, 1918: 23-4. SP 15, Canada, 1919: 23-4. SP 15, Canada, 1920: 22-3. **The Agricultural Gazette**, 4 (1917): 25, 859-860.

¹⁰⁶ SP 39, Ontario, 1919: 65. The Ontario Cattle Breeders' Association continued to keep up co-operative shipments of purebred stock to the west. However, railway rates continued to be a problem and the association asked the provincial government for funding. The west saw this action as a threat for their own growing numbers of purebred breeders. **Ibid.** 67-8

¹⁰⁷ **The Agricultural Gazette**, 4 (1917): 413.

Policy relating to cattle in Ontario continued to be generated by the provincial government as well as by the purebred livestock associations in the province. Sometimes the Dominion government, provincial government, and the purebred cattle associations would work together for the promotion of beef cattle farming in the province. A particularly good example of co-operative policy was the Better Bull Campaign of 1920.

The Ontario Cattle Breeders' Association, with the financial and personal help of both levels of government, set out to remove as many scrub bulls from certain counties in Ontario as was possible. The various cattle breed associations cooperated with the Ontario Cattle Breeders' Association.¹⁰⁸ The campaign continued with increased Dominion government financial support through the Sire Loaning Policy and Sire Purchasing Policy, which were designed to help farmers buy better bulls cheaply.¹⁰⁹ The Ontario government was joined by the Grand Trunk and the C.P.R. in its Scrub Bull Campaign in 1923.¹¹⁰ Apparently all governments, and even railways, were now prepared to encourage the spread of purebred genetics through financial incentive. The growth of purebred cattle numbers, and the rise

¹⁰⁸ "Better Bulls", Bulletin 281, Ontario Agricultural College, Ontario Department of Agriculture, 1920: 6-10. SP 39, Ontario, 1920: 53-63. SP 15, Canada, 1923: 72.

¹⁰⁹ SP 15, Canada, 1920: 21. SP 15, Canada, 1923: 72.

¹¹⁰ SP 15, Canada, 1924: 43. **The Agricultural Gazette**, 5 (1918): 302.

of diffusion apparent in the period after 1913, must be seen, therefore, partially as a result of the attempt of governments and interest organizations to direct the development of the beef farming industry.¹¹¹

As both levels of government became more involved generally in the commercial beef cattle industry, unnecessary overlap developed. In 1920 a Conference of Representatives of Dominion and Provincial Departments of Agriculture was called to discuss overlaps of responsibility and cooperation. It was agreed, roughly speaking, that the provincial governments should be responsible for all matters relating to livestock production and that the Dominion government should supervise all matters relating to livestock marketing, transportation and kindred phases.¹¹²

This assessment of the historical development of structures designed to regulate and promote the beef cattle industry, and of the policy generated by these bodies suggests some general

¹¹¹ The Live Stock Branch of the Ontario Department of Agriculture was prepared to pay for the train freight rates of Ontario purebred cattle to any farmer within Ontario by 1909. The support of the provincial government of the purebred livestock associations and their auction sales, as well as promotion of the interests of the commercial cattleman financially, earlier than the Dominion government is interesting. Perhaps it helps explain why the province began by 1910 to experience an increased rate of diffusion of purebred genetics, compared to the rest of the nation. See **Farmer's Advocate**, February 25th, 1909: 304.

¹¹² SP 15, Canada, 1921: 114.

conclusions. From the beginning, efforts to stimulate the cattle industry emanated out of different organizations. Animal health regulation was a Dominion concern. Cattle quarantine, essential for the growth of an industry which was from its inception profoundly influenced by international connections, was the responsibility of the Dominion government after Confederation. The story of animal health reveals the development of the quarantine system within a world of international cattle diseases. It also shows that the battle against tuberculosis illustrates contemporary attitudes to disease, as well as demonstrating that conflict between breeders and government did result over some health issues.

General regulatory issues were initially those specific to the purebred industry, and were handled by voluntary organizations which were later replaced by government bureaucracy. However, because the story of that transition involved the rise of professionalism and qualification, the growing interaction of government with the regulation of the purebred industry was also a story about the formation of power to regulate - or the transition of that power to regulate - and perceptions of people about control. The move of responsibility away from voluntary interested associations to government was characterized as well by the general extension of governmental influence over larger aspects of the beef cattle industry.

The story of the development of the Ontario cattle associations and of their shifting responsibilities is particularly interesting because it paralleled that of other voluntary organizations which came into existence late in the 19th century to provide control of market conditions for a particular group. The Canadian Manufacturers' Association, for example, was trying at the same time to guard the interests of small businesses in Ontario for the mutual benefit of the businessmen themselves and the nation.¹¹³ The history of these self-interest associations late in the 19th century could be considered as part of the transition from a rural, small community-based society to one that was larger, industrialized, and urbanized.

Wiebe, in **The Search for Order, 1877-1920**, explained the appearance of such associations (built on interests and not community loyalties) as the logical result of the dislocation of a newly industrialized society.¹¹⁴ The hegemony of these interest-oriented associations, however, did not last long because they were only one step in the rapid transition to government regulation of all groups. The swiftly declining influence of the Dominion Cattle Breeders' Association

¹¹³ See M. Bliss, **A Living Profit** (Toronto: McClelland and Stewart, 1974). Cattle breeders were well aware of the work of The Canadian Manufacturers' Association. See SP 13b, Canada, 1913: 382-5 - "Transportation of Live Stock".

¹¹⁴ R. H. Wiebe, **The Search for Order, 1877-1920** (New York: Hill and Wang, 1967) 129.

represented the norm for the period. Most voluntary organizations which developed to direct the interests of specific groups and to control standards came into existence between 1895 and 1905.¹¹⁵ But about 1900, and more rapidly after 1910, the bureaucratic orientation of people led to the regulation of national affairs by governments, rather than these self-interested associations.¹¹⁶

The recordation regulation story, and the division of certification and qualification echoed a development that was ubiquitous as well in this period: standardization of professionalism, and the problem of control of qualification.¹¹⁷

More generally, the evolution of cattle policy echoed a common theme within this time period: the growth of government influence in every walk of life. Underlying all cattle policy, however, regardless of where it emanated from, was the desire to promote economic profit for cattlemen in the interests of

¹¹⁵ *Ibid.*, p127: 149. While Wiebe was describing the situation within the United States, all evidence from the research on agricultural organizations in Ontario by the writer of this work confirms that the same patterns were occurring in Canada. M. Bliss, in **A Living Profit**, found a similar pattern in the realm of business in Ontario.

¹¹⁶ R. H. Wiebe, **The Search for Order, 1877-1920** (New York: Hill and Wang, 1967) 127, 149.

¹¹⁷ *Ibid.* 114-127. See also R. D. Gidney and W. P. J. Miller, **Professional Gentleman: The Professions in Nineteenth-Century Ontario** (Toronto: University of Toronto Press, 1994).

national development. The economic implications of the beef cattle industry will be looked at in the next chapter.

Chapter Five: Economic Linkage Patterns in Ontario Beef Cattle Production.

The future "lies in the great West, where the corn and the cattle grow; and between Winnipeg and Chicago, choose quickly, England!", said Lorne Murchison, hero of Sara J. Duncan's novel **The Imperialist**, written in 1904.¹ Was Canada's beef cattle industry centred in the western provinces at the beginning of the twentieth century, and was the British market served primarily by that area? Were there shifts in the relative contributions of the different regions of Canada over the years? Did important production linkages between regions exist? Did the Canadian industry function separately from that of the United States? While various historians have looked at the beef cattle industry, mostly in the west, generally speaking they have not asked questions of this nature.² This

¹ Sara Jeannette Duncan, **The Imperialist** (Toronto: McClelland and Stewart, 1904, reprint 1961) 124.

² See the following. S. Evans, "Canadian Beef for Victorian Britain", **Agricultural History**, 53 (1979); R. Perren, "The North American Beef and Cattle Trade with Great Britain, 1870-1914", **Economic History Review**, series 2, 24 (1971); D. Breen, **Canadian Ranching Frontier, 1874-1924** (Toronto: University of Toronto Press, 1983); A. Bogue, "The Progress of the Ontario Cattle Industry in the 1880's", **Agricultural History**, 21 (1947); V. Fowke, **Canadian Agricultural Policy: The Historical Pattern** (Toronto: University of Toronto Press, 1946); H. Abbott, "The Marketing of Livestock in Canada", M.A. Thesis, University of Toronto, 1923. Abbott actually did attempt some understanding of the regional functioning of the industry by 1920, but he did not adequately explain the implications of the data that he used. The figures that he gave for the movement of livestock through central yards did not clearly

chapter will provide answers to the above questions through an assessment of three topics: the way Ontario functioned with other regions within the Canadian beef cattle industry, the position of Ontario and the west in the transatlantic trade in live cattle, and the way Ontario and the nation functioned within the continent.

These subjects will not be examined quantitatively. Even a brief assessment of the available data from two apparently significant sources explains why the topics will not be handled that way. The first source is government data, and a surprising amount of statistical material released by various governments does exist, even from early in the period. However, the material available from the various provincial and territorial Departments of Agriculture, from the Dominion Department of Agriculture; and from Trade and Commerce, and Trade and Navigation will not provide much information, from a quantitative point of view, on the topics under study here.³

The eastern provincial Departments of Agriculture gave no figures on the cattle trade generally - the province's own or

reveal any pattern.

³ Sample **Reports** of the Department of Agriculture for Nova Scotia were read, and the **Reports** of the Quebec Department of Agriculture were checked before 1900. Any data collected by either province was the same as that collected by the Dominion government. Quebec **Yearbooks** started in 1914, and they too used only Dominion statistics.

the nation's - until the 1880's when the Ontario, Quebec, and Nova Scotia Departments relied on Dominion figures for the total export trade only. The provincial and territorial Departments of Agriculture of western Canada reported on numbers of cattle that left that region after the late 1890's, but they did not always or accurately indicate whether the animals were slaughter or feeder stock, nor did the reports reveal specifically where the cattle went.

A brief description of the method these western provinces used to collect figures explains why that source is not very comprehensive for historical quantitative research purposes. Provincial governments in the west used data collected by the railway companies on cattle passing through the central stock yards for statistics on the state of the provincial cattle industries. Railways did not keep track of stock movement, however, in order to understand the patterns of the industry. Rates and fares, which provided income for the railways, were uppermost on their minds. Statistics on the movement of the livestock were a by-product of their business operations. But because the mere movement of animals that they recorded did not take into account the actual functioning of the industry by breeder/feeder regionally, this data is of limited value for an interpretation of the beef industry in the west.⁴

⁴ Endless complex examples of ambiguous data could be given to explain the difficulty in attempting to understand linkage through such figures. See **Appendix F**.

Contemporary men were much aware of that problem. An article on Alberta agriculture in **The Agricultural Gazette** stated, "It appears to be difficult to show by figures the development of the live stock industry of the province. Export figures are commonly secured from the transportation companies. These records are kept in different ways by the different companies. Export figures, likewise, do not teach us much with respect to production."⁵ The way statistical material was generated by western provincial governments explains why the comparison of figures on province to province cattle movements from the west yields no perceivable patterns, and therefore does not allow for quantification.

The statistics of the Dominion government before 1920 are not of much help for quantification of the beef cattle industry within the framework of the three topics under study either. While reports from the Canadian Department of Agriculture (through its quarantine figures), from Trade and Navigation, and Trade and Commerce gave the number of cattle shipped live to Britain and the United States, for example, they did not do so with any consistency by region or by grade. Nor did they record the internal movement of animals either.

⁵ See **The Agricultural Gazette**, 2 (1916): 1069.

The second source which proves unreliable for a quantitative study of the beef cattle industry's regional linkages is market listings in farm journals. Most market reports that existed before the 20th century in farm journals were given erratically or in inconsistent format. If markets were particularly slow, for example, reporting often stopped.⁶ Farm journals also made market reports on different types of beef cattle at different times, and therefore provided data which is not consistent enough to allow a controlled assessment over a period of time. The earliest good study of the functioning of a market that can be done is for one year, 1885, from the farm journal, **The Canadian Breeder and Agricultural Review**.⁷ While a careful review of that year is of interest, of course it does not yield quantitative information about the market for beef cattle in Canada over the late 19th century. Market reports of any sort were also rare before the late 1890's.

In order to study the three topics of this chapter, then, standard data like the two types discussed above - provincial and Dominion statistics, and market reports in farm journals - cannot be relied upon to give a quantified assessment. The material can, however, be used for an analysis of the situation qualitatively, through glimpses at, or "windows" on,

⁶ **Farmer's Advocate**, March 1883: 92.

⁷ See **Appendix G**.

the story. Other sources can enlarge on a qualitative approach.

Ontario's position within the nation's beef cattle industry will be established in this chapter first, qualitatively, through the following reasoning. We know that the functioning of the purebred industry influenced all beef cattle farming. We also know that the breeder/feeder system made regional contribution to any aspect of the beef cattle trade more complex than figures on the sale of finished stock would suggest. Therefore, in order to understand Ontario's position in the beef cattle industry of the nation, the province's relationship to other regions in Canada must be looked at from both the purebred and the breeder/feeder points of view. These linkages will be assessed here on the basis of first, a general look at the relative purebred and breeder/feeder positions of the Maritimes and Quebec within the nation and in relation to Ontario, and second, a more detailed review of how Ontario and the west functioned with respect to both the purebred industry and the breeder/feeder system.

Maritime cattle linkage to the nation's beef cattle industry generally, and to Ontario's specifically, can be inferred only from spotty information. The pattern of purebred linkages, clearer than commercial ones, was as follows. The

Maritimes apparently sent purebred cattle to the west early in the period, but this interprovincial aspect of Maritime involvement in the nation's beef cattle industry did not endure.⁵ While the Maritimes stopped marketing stock much outside the region by the 20th century, the Arthur Johnston Papers make it abundantly clear that these provinces imported purebred stock from Ontario in significant numbers. This pattern was confirmed in 1916 by a livestock expert from Nova Scotia. "We are bound for many years to come to depend for much of our prime pure bred stock upon the Province of Ontario, which Province we believe both by situation and natural resources will continue to be, as it has been in the past, the greatest source of supply of pure bred blood of all kinds of live stock in the Dominion of Canada", Cummings from Truro, observed that year.⁶

Early in the period, the Maritimes played a small role in Canada's commercial beef cattle production for the transatlantic trade.¹⁰ Stock from this region, fed through

⁵ The influence of the stock, however, could be felt for some time. New Brunswick stock, shipped to the Prince Albert area, left a deleterious effect on local herds that could still be observed in the quality of the stock in 1923. D. H. Campbell to Grisdale, April 24th, 1923, General Correspondence of the Department of Agriculture, Rg 17, volume 2985, file 32-4(2), N.A.C.

⁶ SP 39, Ontario, 1916: 48.

¹⁰ SP 10, Canada, 1880, Appendix 28, "Report on the Cattle Trade, 1879": 104, 106.

Maritime linkage systems, was shipped out from Atlantic ports in limited numbers.¹² In 1880, for example, at least 150 head of such cattle, which originated near Moncton and were fed on Prince Edward Island potatoes, were shipped to Britain.¹³ "We are glad to see the Maritime Provinces sharing in this important trade", the **Farmer's Advocate** said.¹⁴ The ability to generate stock for the transatlantic trade through an internal breeder/feeder system suggests the ability to supply beef cattle for internal consumption in the Maritimes. However Maritime participation in the transatlantic trade did not last. No cattle from these provinces were shipped to Britain after 1893.¹⁵ The inability to take part in the transatlantic trade was followed shortly by the importation of slaughter beef cattle. Ontario was known to be a major supplier of finished, fat live cattle, or beef meat, to the area in the early 20th century.¹⁵

¹² **Farmer's Advocate**, April, 1880: 85; July, 1880: 166; August, 1880: 190.

¹³ **Farmer's Advocate**, August, 1880: 190.

¹⁴ **Ibid.**

¹⁵ D H Campbell to Grisdale, April 24th, 1923, General Correspondence of the Department of Agriculture, Rg 17, volume 2985, file 32-4(2), N.A.C.

¹⁵ **Submission of the Meat Packers Council of Canada to the Commission on Inquiry into the Marketing of Beef**, 1975: 7. D. Lawr, "The Development of Ontario Farming, 1870-1914: Patterns of Growth and Change", **Ontario History**, 64 (1972): 250. H. Boam, compiled by, **Twentieth Century Impressions of Canada** (Montreal: Sells Ltd, 1914) 250. **Report of the Board of Inquiry into the Cost of Living**, 1 (1915) Appendix 26: 794-7.

The relationship of Quebec's beef cattle farming to Canada and to Ontario specifically was not unlike that of the Maritimes. Again Ontario played an important role in the province's pure bred industry. Linkage of interests of English Canadian purebred breeders in Quebec to those in Ontario has already been seen in Chapter Two, with Cochrane being the main example. English Canadian Quebec breeders of purebred cattle saw Ontario as the seedstock centre for replenishing, or increasing, their herds before 1920. Professor Barton of McGill University noted that Ontario breeders could have a stronger market in Quebec than they generally realized. "As many an Ontario farmer can testify, Quebec has been a ready market and a fine field for Ontario breeders for some time," he said in 1916.¹⁶ He added that Quebec was increasingly interested in improving its herds, a fact which meant that Ontario breeders would have a good market for some time. While purebred dairy cattle were more common in Quebec than beef, "the commercial home market in Quebec [ranked] with the best, and the outlet beyond this [was] not fully appreciated yet."¹⁷

The commercial beef cattle production of Quebec, and its relationship to Ontario and the nation, are harder to establish. Quebec appeared to generate significant numbers of

¹⁶ SP 39, Ontario, 1916: 62.

¹⁷ *Ibid.* 64.

beef cattle for its needs before the 20th century. The province did so through two avenues: commercial production and self-sufficient production. There is evidence that commercial beef cattle farming was developing in the Eastern Townships of Quebec by 1870.¹⁸ There is also evidence that commercial beef farming, even within the Eastern Townships, demonstrated ethnic distinctions.¹⁹ Cattle were raised for market there by English Canadians.

French Canadian production of beef indicated, through patterns of farm kill for home consumption, self-sufficiency and also non-participation in the nation's commercial beef cattle industry. The killing of animals on farms for home consumption, or farm kill, remained more common in Quebec than in Ontario after the development of central stock yards and packing houses in the nation about 1900.²⁰ Both beef cattle production in the Eastern Townships and farm kill imply that the province could supply, on its own, a great deal of its

¹⁸ See SP 10, Canada, 1880, Appendix 28: 104-6 for a survey done by McEachran. In 1876 the **Farmer's Advocate** reported that the Sherbrooke Meat Company was slaughtering between 250 and 300 animals a week, and implied that most of the stock serving the company had come from the Eastern Townships. **Farmer's Advocate**, July 1876: 126. See J. I. Little, "The Social and Economic Development of Settlers in Two Quebec Townships, 1850-1870", **Canadian Papers in Rural History**, 1 (1978). J. I. Little, **Crofters and Habitants, Settler Society, Economy, and Culture in a Quebec Township, 1848-1881** (Montreal and Kingston: McGill-Queen's University Press, 1991).

¹⁹ *Ibid.*

²⁰ See Appendix K.

beef needs in the late 19th century. Provincial self-sufficiency in beef in turn suggests limited breeder/feeder linkages to any area outside Quebec before 1900.

Farm kill of cattle for beef became less common in Quebec when interest in single purpose dairying arose, and less poor quality dairy beef animals were fattened.²¹ Any commercial beef raising in the province that had existed also appeared to be declining by the end of the century.²² The result was an increased dependence by both English and French Canadians on areas outside Quebec for beef. After 1910 dependence on extraprovincial beef cattle, or beef, increased rapidly. In 1921, over 50% of all cattle, calves (and hogs) received on public yards in Quebec had been sent from outside the province.²³ While Quebec relied on the west, as well as Ontario, for beef cattle, Ontario remained a large supplier.²⁴ In 1922 all quality finished beef cattle seen on Quebec yards had come from Ontario, and appeared to have originated there

²¹ **Origin and Quality of Commercial Live Stock**, 1920-21-22: 45.

²² **Farmer's Advocate**, Western Edition, December 15th, 1903: 1126.

²³ **See Origin and Quality of Commercial Live Stock**, 1919, 1920-21-22: 45, 89.

²⁴ **Ibid.** In many ways the whole reports have to be read in order to see how extensive all the interconnecting patterns were.

as well.²⁵ Quebec was producing virtually no good beef stock by the early 1920's. "Out of a total of approximately 75,000 calves [which originated in Quebec] marketed during the year [1922] only ten head, or 0.013 per cent were of beef type."²⁶ The extraordinarily high number of dairy calves marketed also suggests that Quebec's consumption of beef must have still been, to some degree, poor quality dairy beef.

While evidence is sketchy on the situation in both the Maritimes and Quebec, with respect to how the regions interacted with Ontario in national beef cattle farming, there is enough qualitative information to suggest that Ontario had important linkages to each area, through the purebred industry and also through the commercial production of beef cattle. But while purebred linkages existed throughout the period, the most significant commercial connections came only after 1900, when the regions were less able to rely on themselves for commercial beef cattle. Ontario became a supplier of beef cattle to both areas after 1900. The province's contribution to the national beef industry, through this commercial production, was made that much greater by the fact that the commodity which Ontario provided tended to be the finished

²⁵ *Ibid.* 45, 89. This report is particularly important because it stated that the first attempt to understand Ontario marketing with reference to what stock originated there was done in 1922.

²⁶ *Ibid.* 45.

product: i.e., either live fat cattle (not feeders to be finished) or dressed meat. Thus Ontario, after 1900, used its internal breeder/feeder system to supply these regions with beef cattle. The province did not have significant regional breeder/feeder linkages to either the Maritimes or Quebec throughout the period.

The relationship of Ontario to the Canadian west through the purebred industry and the breeder/feeder system as well was more complicated than that to the Maritimes and Quebec. Ontario's purebred industry played a major role in the development of the nation's western cattle farming.²⁷ While it is difficult to establish how many western purebred cattle came from Ontario, there is some evidence that by 1900 most purebred stock in either Manitoba or on western ranges had originated in Ontario. The **Farmer's Advocate**, Western Edition, stated in 1902 that most of Manitoba's purebred beef cattle had been bred in Ontario or imported by farmers in that province.²⁸ **The Farming World** said that most purebred bulls which were on western ranges in 1901 were from Ontario.²⁹

²⁷ The papers of Arthur Johnston indicated in Chapter Two that Ontario's purebred industry played a role in the rise of purebred cattle in the west.

²⁸ **Farmer's Advocate**, Western Edition, April 21, 1902: 282.

²⁹ **The Farming World**, July 23, 1901: 68. Simon Evans concluded that most of the growth of purebred cattle in Alberta in the 1890's, resulted from the importation of stock from eastern Canada and not the United States. Simon Evans, "Ranching in the Canadian West, 1882-1912", Ph.D. Thesis,

Understanding this strong western market for Ontario purebred cattle is made complicated by the fact that the western region actually represented three markets: Manitoba, the North West Territories (later Alberta and Saskatchewan), and British Columbia. Ontario served each of these three purebred markets somewhat differently.

Manitoba purebred breeders tended to have close relationships with Ontario breeders through family connections, a pattern mentioned in Chapter Two. The Manitoba breeders were also, generally speaking, men with large purebred breeding farms.³⁰ As Arthur Johnston's letters indicated, these breeders were prepared to pay substantial amounts of money for purebred stock. The Manitoba/Ontario purebred connection, then, was mainly one of purebred to purebred breeder.

Characteristics of the two other western markets for Ontario purebred breeders were more complex than that of Manitoba. Early buyers of purebred stock from the other

University of Calgary, 1976: 224.

³⁰ Thomas Greenway, Premier of Manitoba, was a noted Shorthorn breeder. William Van Horne of C.P.R. fame was another breeder of Shorthorns in Manitoba. Van Horne also maintained a herd of Belted Dutch cattle at his summer home in New Brunswick. See Grant MacEwan, **Highlights of Shorthorn History** (Winnipeg: Hignell Printing Limited, 1982) 111, 116-7 and **Farmer's Advocate**, Western Edition, December 14th, 1904: 1805.

western regions tended to be ranchers who were representatives of large companies, which used the stock for a variety of breeding purposes. After 1910 purebred cattle from Ontario tended to go to purebred breeders who were not ranchers in both these western markets.³¹ The difference between the two areas as market places lay in the fact that the British Columbia one opened up later. The potential for a North West Territory market was initiated when the C.P.R. was completed in the mid 1880's, but that market was not well established for Ontario until 1890. The British Columbia market for purebred cattle was not significant for Ontario breeders until the beginning of the 20th century.

Cattle shipped to either area before 1910 were not top quality. While Ontario breeders were aware of that fact, their feelings on the subject were ambiguous. At the first provincial sale of purebred cattle (mainly Shorthorns) in 1901, **The Farming World** recognized that of the 100 bulls which were sold, mostly to western buyers, at least 75% of the stock were of only medium quality.³² The journal argued, however, that the removal of such inferior stock would stimulate Ontario breeders to improve the quality of purebred animals,

³¹ See Chapter Three and the study by William Kerr on the buying and selling of purebred cattle in British Columbia in the 1920's.

³² **The Farming World**, March 5th, 1901: 639.

and therefore the trend would ultimately be a good one for all.³³

At the same time, however, there was considerable concern in Ontario over the phenomenon of poor quality bulls from that province being shipped west. At the general convention of the National Live Stock Association in 1908, a prominent Shorthorn breeder, J. Gardhouse, addressed the problem of Ontario purebred cattle extraprovincial exports and of the province's role as seedstock supplier to the nation. "The breeders of Ontario have neglected to some extent the market of the West," he stated.³⁴ He then continued as follows. "I think the West is suffering to some extent through the actions of unscrupulous dealers who have come into different sections of the Province of Ontario, and have taken out shipments of very inferior stock, and have delivered them to men out there, though they were neither the best stock that Ontario could produce nor the kind that the people of the West require. The Ontario breeders have not paid enough attention to that market."³⁵

³³ **Ibid.**

³⁴ **General Convention of the National Live Stock Association**, published by the Live Stock Branch, Department of Agriculture, Ottawa, 1908: 58.

³⁵ **Ibid.**

Western cattlemen resented the fact that Ontario sent such poor quality animals to the west, and Ontario breeders were not unaware of the feelings of westerners. "The people of Ontario have put up the barriers [against Ontario stock by the west] themselves. They have made a dumping ground of the West of cheap bulls that were left over," noted Gardhouse.³⁶ Western ranchers, however, generally refused to pay what was necessary for top quality stock. At the 1901 purebred auction sale mentioned above, ranchers resisted offering more than \$75 a head.³⁷ Arthur Johnston claimed that ranchers absolutely refused to pay more than \$60 for a purebred bull.³⁸

Regardless of quality, Ontario breeders were not careful to send only healthy stock westward. Western buyers of purebred cattle from Ontario were particularly concerned with the shipment of tubercular purebred cattle from the east.³⁹ At the same livestock convention mentioned above, men from British Columbia commented on both the problem of poor quality from Ontario and also on the tubercular condition of some of the stock.⁴⁰ Expensive cattle arrived from Ontario in a dying

³⁶ **Ibid.**, p67.

³⁷ **The Farming World**, March 5th, 1901: 639.

³⁸ Arthur Johnston, letter dated February 10th, 1897, Letterbook 4, Arthur Johnston Papers, P.A.O.

³⁹ **Farmer's Advocate**, November 20, 1919: 2085.

⁴⁰ **General Convention of the National Live Stock Association**, published by the Live Stock Branch, Department of Agriculture,

state from T.B, and some even had a "T" in their ear, which revealed the fact that they were known to have been reactors to the tuberculin test.⁴¹ Ontario breeders were warned by British Columbia cattlemen that they could and would buy stock more easily, of better quality and free of tuberculosis, from Oregon or Idaho.⁴²

The tuberculosis issue caused increasing interprovincial friction. In 1912 the Dominion government, at the request of British Columbia, made it illegal to import Canadian purebred cattle into that province unless they had passed a tuberculin test.⁴³ The effects of this action were immediately felt in Alberta. Purebred cattle with T.B. which could not pass into British Columbia were sold locally in Alberta.⁴⁴

By 1921 the problem of containing the spread of tuberculosis interprovincially had stimulated the establishment of the Restricted Area Plan in Alberta.⁴⁵ People in specific areas agreed on their own to eradicate T.B. by

Ottawa, 1908: 10-11.

⁴¹ *Ibid.*

⁴² *Ibid.*

⁴³ *Farm and Dairy and Rural Home*, January 13th, 1913: 8.

⁴⁴ Alberta, Department of Agriculture, *Report*, 1912: 283; 1913, p236.

⁴⁵ *The Agricultural Gazette*, 13 (1924): 17.

testing, slaughter, and the restriction of movement of any new stock without testing into an area designated by residents.⁴⁶ In 1922 the Dominion Minister of Agriculture, W. R. Motherwell, adopted the plan for the nation and offered funding to help implement it.⁴⁷ The first place to seek Dominion assistance was not in Alberta, but was rather in Manitoba.⁴⁸ The interprovincial T.B. problem confirms the fact that after 1910 a substantial number of purebred cattle were moving out of other areas of Canada, not the United States, to the west because no importation could take place from the United States without the tuberculin test after 1897. Restricted Area Plans would not have been necessary if purebred cattle had been supplied to the west primarily from the United States, even after the Accredited Herd Plan was in place by 1919.

Ontario's purebred industry played a major role in the western purebred industry and by implication, there was a strong national purebred east/west linkage in the beef cattle industry. Equally, after 1890, the Ontario/Canadian west linkage, with westward shipments dominated by a low quality

⁴⁶ **Ibid.**

⁴⁷ **Ibid.** The funding did not cover compensation for slaughter. SP 16, Canada, 1924: 33.

⁴⁸ **The Agricultural Gazette**, 13 (1924) 17.

product, had a negative effect on the embryonic western purebred industry.

While there were minimal breeder/feeder linkages between Ontario and either Quebec or the Maritimes, it can be demonstrated that there were breeder/feeder linkages between Ontario and the west. These linkages were not, however, what might be expected from the experience of either Britain or the United States. Because the dynamics of any national east/west, breeder/feeder linkages must be seen in light of the historical development of the west's internal breeder/feeder structure as well as that of Ontario, the evolution of the west's breeder/feeder system will be outlined here first.

From the beginnings of the beef cattle industry within that region, the west relied on other geographic areas for its feeders. When the range lands of the North West Territories were opened to cattle production under the ranching leases early in the 1880's, provisions had been made by special regulations for the entrance of American feeders to the North West, but within the quarantine system.⁴⁹ Most stocker, or feeder, ranch cattle that entered the Canadian west under these regulations in the 1880's had originated in Montana.⁵⁰

⁴⁹ A. A. Lupton, "Cattle Ranching in Alberta, 1874-1910, Its Evolution and Migration", *Albertan Geographer*, 3 (1966-7): 50.

⁵⁰ SP 11, Canada, 1882: 137. Stockers are younger feeders.

Cattle in Montana, however, were represented by two types: Texas Longhorns and Shorthorn crosses.⁵¹ It has been repeatedly suggested that the animals introduced to the North West Territories represented the low quality, Montana genetics of Texas Longhorn cattle.⁵² Actually the stock brought in by Canadian ranchers in the 1880's from Montana was of very high quality and carried large amounts of Shorthorn blood.⁵³ This is an important point, as will become more evident later.

⁵¹ Simon Evans, "Ranching in the Canadian West, 1882-1912", Ph.D. Thesis, University of Calgary, 1976: 125-132. See R. H. Fletcher, **Free Grass to Fences, The Montana Cattle Range Story** (New York: University Publishers Incorporated, 1960) for a complete understanding of the complex breeding trends of range cattle throughout the far northwest in the United States.

⁵² See W. M. Elofson, "Adapting to the Frontier Environment: The Ranching Industry in Western Canada, 1881-1914", **Canadian Papers in Rural History**, 8 (1992): 309. E. Wright, "The Highwood River Valley, 1800-1914; a Contribution to the History of Southern Alberta," M.A. Thesis, University of Alberta, 1961: 43. J. Rutherford, "The Cattle Trade of Western Canada", Department of Agriculture, 1909: 7. Some of this confusion results from the fact that scholars do not tend to distinguish properly between stocker/feeder or commercial, and purebred cattle. The problem is compounded by the fact that any stockers that did enter Canada from the American west after 1890 were of poor Longhorn quality. Simon Evans, "Ranching in the Canadian West, 1882-1912", Ph.D. Thesis, University of Calgary, 1976: 221.

⁵³ Simon Evans, "Ranching in the Canadian West, 1882-1912", Ph.D. Thesis, University of Calgary, 1976: 125-132. Cattle in Montana, in turn, had been based on cattle from northern Colorado and southern Wyoming. These animals were known as "Westerns". They were good quality, and were based on Shorthorn/Devon genetics, not Texas Longhorn stock. They were hardy and acclimatized to range conditions. R. H. Fletcher, **Free Grass to Fences, the Montana Cattle Range Story** (New York: University Publishers Incorporated, 1960) 39.

It would appear that not all of the range stock of the early 1880's, however, came from good Montana stock. In 1888, a shipment of 187 cattle from Calgary arrived in Britain. Owing to their extreme wildness they were killed immediately.

For a variety of reasons, after the late 1880's American stockers or feeders from this area did not continue to play a large role in the Canadian west's beef industry. To begin with, in 1886 the 20% tariff on all cattle entering Canada from the United States reduced the north movement of cattle.⁵⁴ Quarantine regulations also controlled more carefully the entrance of American stock after pleuropneumonia had been detected in Illinois.⁵⁵ More significant, however, was the disastrous winter of 1887 when 60% to 70% of the Montana herds were wiped out.⁵⁶

By the late 1890's western Canadian ranchers had started to practice a localized form of the breeder/feeder system. Older ranch operations tended to be breeders, called "she-stockmen", while newer ranching centres acted as feeders, called "steermen".⁵⁷ Sometimes the two operations were done on

They provided poor meat, due to the poor pasturage in Colorado, and dressed out at 54%. The **Farmer's Advocate** doubted whether such an endeavour could be profitable. **Farmer's Advocate**, March, 1888: 79.

⁵⁴ E. Wright, "The Highwood River Valley, 1800-1914; A Contribution to the History of Southern Alberta", M.A. Thesis, University of Alberta, 1961: 43.

⁵⁵ See Chapter Four.

⁵⁶ Simon Evans, "Ranching in the Canadian West, 1882-1912", Ph.D. Thesis, University of Calgary, 1976: 143.

⁵⁷ **Ibid.** 230.

the same ranch.⁵⁶ These breeding operations within the west, however, were not capable of supplying the number of feeders needed to sustain the industry. The demand for external feeders continued until about 1905, when factors outside ranching techniques influenced the west's production of these animals. The influx of settlers, the breakup of ranges, the rise of mixed farming, and the spread of dairying all resulted in the increased western generation of feeders.⁵⁷ However, between 1890 and 1905, at the height of the ranching industry, western cattle production reflected the use of external feeders. And between 1893 and 1903 these were largely brought into the west - the North West Territories and British Columbia - from Ontario.

While conditions described above reduced the movement of American feeders north to the Canadian west, one other factor triggered the beginning of a Canadian national breeder/feeder linkage.⁵⁸ That factor was the scheduling of Canada in 1892 by

⁵⁶ *Ibid.* 321.

⁵⁹ The production of feeders by the west did not result in better productivity of the industry within this region, or in better quality stock. See D. Breen, **Canadian Ranching Frontier, 1874-1924** (Toronto, University of Toronto Press, 1983).

⁶⁰ One of the first conclusions made in 1893 from the study of the farm distribution of the cattle which were on the ships carrying supposedly diseased stock was that there was absolutely no contact between any commercial cattle in western Canada and those in the east. SP 7, Canada, 1893: xlll-xiv.

Describing breeder/feeder linkages as being one of absolutely no contact was in fact putting the case too

Britain, which destroyed Ontario's market for feeders in that country. When Ontario stopped functioning as a breeder area for British feeder farmers, in Aberdeen in particular, it began to serve the west as a feeder producer.⁶¹ Thousands of Ontario cattle were sent out to Manitoba and the Northwest after 1892.⁶² It would largely be these Ontario animals that supplied the increase in the west's contribution, seen by 1895, to the overseas trade. Movement of stockers and feeders from Ontario (and Manitoba) to the Northwest continued.⁶³ **The Farming World** was exultant about the trend. "Thousands of

strongly. It should be noted that at least one Ontario feeder farmer used western cattle as feeders before 1893. John McMillan, MP for South Huron, made several trips to Manitoba and the North West Territories to buy feeders in the fall. These animals he shipped back to Ontario, stall fed over the winter, and then shipped them overseas the following spring to Britain. **Farmer's Advocate**, Western Edition, November 1892: 422. McMillan's practice seemed to the exception rather than the rule.

⁶¹ See **Farmer's Advocate**, May, 1887: 142; December 1890: 358 for information on Canadian feeders in Aberdeen, Scotland. See also "Restrictions on Canadian Cattle: Important Statement made at Westminster Palace Hotel," 1893; "The Canadian Cattle Scandal: Report of Sir Charles Tupper" from **Dundee Courier**, 1893; "Stoppage of Canadian Cattle Trade; Injustice to Scottish Farmers", **Dundee Courier**, 1892.

⁶² S. Evans, "Canadian Beef for Victorian Britain", **Agricultural History**, 53 (1979): 757. **General Convention of the National Live Stock Association**, 1908: 14. S. Evans, "Ranching in the Canadian West, 1882-1912", Ph.D. Thesis, University of Calgary, 1976: 211, 230. J. Rutherford, "The Cattle Trade of Western Canada", Ottawa: Department of Agriculture, 1909: 7. **Farmer's Advocate**, November 15th, 1895: 455; September, 1898: 428; March 15th, 1900: 155.

⁶³ The Ontario feeder was worse than the Manitoba feeder. Ontario stock was dairy beef, while Manitoba stock tended to be more beef beef. **Farmer's Advocate**, Western Edition, June

Ontario stockers are sent west annually, and this trade is only in its infancy", the journal stated in September of 1900.⁶⁴ Proof by 1900 that western Canada relied on Manitoba and Ontario, and not the United States, for feeders is clearly evident from the following figures. In 1899 the North West Territories exported from its region about 41,000 head, and in 1900 it imported from Ontario and Manitoba about 36,000 feeders.⁶⁵ The similarity of the numbers suggests that the vast majority of stockers and feeders sent to the Territories originated in Manitoba and Ontario. By 1901 Ontario feeders were sent by the thousands to the new ranches in British Columbia as well.⁶⁶

However, that feeder trade was not to endure. Ontario's exported feeders were, to a large degree, dairy beef animals which would not be profitable. In 1901, for example, "the ranchers [found] themselves with \$100,000 worth of cattle on hand which they had hoped to dispose of [that] year. These

1st, 1904: 789.

⁶⁴ **The Farming World**, September 4th, 1900: 48,

⁶⁵ **Ibid**, July 23rd, 1901: 68. It should be noted, however, that of the 36,000 feeders, only about 11,500 were from Ontario.

⁶⁶ **Ibid**, December 3rd, 1901: 632. One rancher alone wanted 1,500 head from Ontario. "British Columbia is making large purchases of cattle in the east, mainly in Ontario", the paper stated. But the stock was to be bought at as low a price as possible, because of the high cost of freight rates to the coast. **Ibid**. 621.

[were] mostly animals of dairy type and [would] need another year of feeding to put them in shape. It [was] said that they were mostly Ontario stockers, dairy calves saved from early death by the kind hearted westerners."⁶⁷ Ranchers quickly learned that dairy beef stock was unprofitable and by 1903 these men refused to buy Ontario feeders with a colour which suggested that the cattle were related to the purebred dairy breeds.⁶⁸ Quality of eastern Ontario animals, then, was a large reason why western ranchers stopped buying them.⁶⁹ That quality also affected the entire profitability of the western cattle industry.

While ranchers were not happy with eastern feeders, they did not seem to understand that east/west linkage through the breeder/feeder system could work in a fashion similar to that in the United States. They could become breeders more than feeders, and the stock they bred could be finished in Ontario. The west did not start to supply the east with feeders, however, after its production of them got under way. When The Territorial Purebred Cattle Breeders' Association asked the Live Stock Commissioner of Canada to look into the ills of the

⁶⁷ *Ibid*, December 3rd, 1901: 609.

⁶⁸ *Farming World and Canadian Farm and Home*, "The Stocker Trade for Western Ranges", February 2nd, 1903: 7.

⁶⁹ *Ibid*, November 2nd, 1903, p758. *Farmer's Advocate*, Western Edition, June 1st, 1904: 789; March 1st, 1905: 299; May 24th, 1905: 763. The west imported feeders from Mexico as well.

western transatlantic trade in 1903, one of the results of the investigation was a revelation of the fact that western cattle were not sent to central Canada for finishing, but rather were shipped incompletely finished and wild directly to British markets.⁷⁰ It also revealed that western cattlemen were unaware of the highly polished breeder/feeder American system, which was nationally oriented.⁷¹

The Dominion government decided to experiment with a Canadian system for the production of beef cattle, in which the west functioned as breeder area and the east as feeder area. In 1903 range steers were brought to Ontario as feeders "with the view of determining the profit in feeding this class of cattle in Ontario".⁷² The 27 steers were all fed in the Guelph area, but they "would touch no roots or grain for the longest time."⁷³ The animals were also unmanageable. "Their monthly gains are not known as they were always too wild for regular weighing. Some of them seemed almost as wild when taken away on June 1st as they were when they reached Guelph 1st December," commented the *O.A.C. Review*, journal of graduates of the Ontario Agricultural College.⁷⁴ At the end of

⁷⁰ SP 15, Canada, 1903: 146.

⁷¹ *Ibid.*

⁷² *O.A.C. Review*, February 1903: 21.

⁷³ *Ibid.*, March 16th, 1903: 128.

⁷⁴ *Ibid.*

the test, the average gain over the five months was found to be 225 lbs, or 1.5 lbs per day, which was very low even in this period.⁷⁵

"Cattle feeders can judge for themselves as to whether the gain is sufficient to warrant the sending of range steers to Ontario or other eastern provinces," the journal **Farming World and Canadian Farm and Home** said.⁷⁶ "In the future we would advise that the cattle be taught to eat some meal and be dehorned before leaving the West," the journal warned.⁷⁷ The government had tried to show the way - the rest was up to stockmen and feeder farmers.⁷⁸

Ontario feeder farmers were no happier with western feeders than westerners had been with Ontario feeders.⁷⁹ A pattern of finishing western steers in Ontario did not develop. In 1917 the Dominion government again attempted to promote the feeding of western cattle in the east. Poor feed conditions in the west had led to the slaughter of feeders and

⁷⁵ **Farming World and Canadian Farm and Home**, June 15th, 1903: 374. Today animals are expected to gain at least 3 lbs. a day, but gains of up to 5 lbs. a day are not unusual. See also, SP 23, Ontario, 1905: 77.

⁷⁶ **Ibid.**

⁷⁷ **Ibid.**

⁷⁸ **Ibid.**

⁷⁹ **Farmer's Advocate**, Western Edition, June 15th, 1903: 554.

export of them to the United States, while the eastern provinces were short of stocker cattle.²¹ The Minister of Agriculture agreed to pay 50% of the rail freight for carlot loads of feeders from the west to drovers buying for farmers in the east.²¹ Even lack of feed in the west and a surplus of feed in Ontario, as well as government aid, however, was not enough to stimulate the feeding of western stock in the east. Feeding western stock in Ontario remained uncommon until the end of the period under study.²²

Some conclusions can be drawn about the west's production linkage patterns to Ontario, in the commercial beef cattle industry. First, Ontario played a more important role in sheer numbers alone than the United States as a supplier of feeders to the Canadian west. From the scanty documentation in the Dominion Sessional Papers, it can be estimated that only about 5,500 head of cattle shipped to Britain before 1910 from the

²¹ **The Agricultural Gazette**, 4 (1917): 860.

²¹ **Ibid.**

²² This statement is not to imply that no feeding of western cattle was done in Ontario. See **Farmer's Advocate**, May 1, 1919: 861-2. Eastern feeding of western stock, however, remained uncommon. See, for example, **Dairying in the Province of Ontario, 1910**, Toronto, Ontario Department of Agriculture: 45; J. Rutherford's "The Cattle Trade of Western Canada" **Dominion Department of Agriculture, 1909**: 6-11; **Report of the Agricultural Inquiry Committee of Ontario, 1924**, R.G 49, Ontario Department of Agriculture, **P.A.O.**: 33, 35; **Origin and Quality of Commercial Live Stock, 1920-22**: 69; and see **Proceedings of the Special Committee on the Cost of Living, 1919**: 162 in combination with the last listed source.

west had originated in the United States. Ontario feeders which moved west after 1892 and before 1905 greatly outnumbered these animals.

Second, because western cattle shipped from 1906 to 1909 to Britain were often Ontario bred animals, the numbers contributed to the trade by the west in these years exhibited Ontarian as well as western production.²³

Third, the quality of Ontario feeders was inferior to that of the earlier American ones used in the Canadian west. While feeders from Montana had been good beef quality, those from Ontario demonstrated the declining position of beef cattle, caused by the rise of single purpose dairying, within that province. Because the problem of dairy beef spread from Ontario to the western part of Canada through the breeder/feeder system, quality and type of commercial beef stock in western ranch herds after 1890 generally reflected the confusion of dairy/beef purpose breeding within Ontario.²⁴ As one cattleman told purebred breeders at the meeting of the National Live Stock Association in 1908, "Bar the blood of the

²³ **Farmer's Advocate**, Western Edition, June 1st, 1904: 789; March 1st, 1905: 299; May 24th, 1905: 763.

²⁴ The veterinarian inspecting Canadian cattle that arrived in Britain said that cattle from Ontario were also poor quality dairy blood stock. Hopkins to Department of Agriculture, September 9th, 1902, Rg 17, General Correspondence of the Department of Agriculture, Volume 957, file 141508, **N.A.C.**

special purpose dairy cow. The introduction of that blood into the herds of the beef growers of the Province of Ontario has been the greatest curse that has ever been visited the export trade of Canada, and if we wish to save and preserve the trade, this gospel cannot be preached too often or emphasized too strongly."⁶⁵

Fourth, the breeder/feeder system did not function in Canada nationally in the regional fashion that it did in the United States. Ontario feeder farmers did not finish stockers from the west, the way range cattle in the United States were fed in the American corn belt. Both eastern and western beef producing regions in Canada attempted to breed and feed the livestock internally. One result of this pattern was the marketing of unfinished animals from western Canada.⁶⁶ And fifth, railways had not been able stimulate the type of national breeder/feeder pattern that was common in the western world: namely breeding of stock in areas farther from population bases and the feeding of that stock closer to consuming centres.

One important conclusion about Ontario's position in the nation's commercial beef cattle farming can be drawn from this

⁶⁵ **General Convention of the National Live Stock Association, 1908: 86.**

⁶⁶ Western stock sent to Britain was said to both old and unfinished. **Ibid.**

assessment of regional linkage generally in the country. It was the relationship of the west to Ontario which established Canadian regional positions in the transatlantic trade. Information from this brief review of the beef cattle situation in the Maritimes and Quebec suggests that neither region was involved beyond a limited degree, through finished stock or through any breeder/feeder connection, in the nation's transatlantic trade. The trade was, therefore, one of Ontario and the Canadian west. Generally speaking, then, any data on that total trade reflected the contribution of Ontario and the west. When the west's contribution to the total is known, automatically that of Ontario is as well.

Relative regional strength in the nation's industry can be established from a specific comparison of the west's and Ontario's contribution to the transatlantic trade in live cattle. We are aware already from the above assessment of breeder/feeder linkages in Canada that some of the west's contribution to that trade was partially Ontarian production. Knowing marketing patterns and actual numbers shipped by the two regions would enlarge on our understanding of the relative importance of each region. What do we know from available statistics about marketing, and how many cattle the west and Ontario sent overseas?

Important data is available from special investigations which provide examples of actual farm contribution to the transatlantic trade in 1892 and 1894. When information from here is combined with the little material which does exist in government reports on the actual numbers of cattle that western Canada shipped to Britain, and with details from other sources as well, we can estimate the relative importance of Ontario to the west in the transatlantic, live cattle trade.

The Canadian government went to a great deal of trouble to analyze the origin of the stock which arrived in Britain on the ships that carried the supposedly diseased cattle in 1892. However, because men at the time concluded that the collection of standardized data on the geographic linkages of beef cattle raising was virtually impossible, the only in depth regional studies on the marketing of beef cattle that we have before the 1920's are those done on particular shipments in 1892 and 1894.⁸⁷ These investigations, however, provide a good "window" on the functioning of the nation's beef cattle industry generally in late 19th century Canada.

McEachran, as Veterinary General for Canada, ordered an investigation into the origin of the cargo carried in the ships **Monkseaton** and **Huron**. Both cargoes were shipped from

⁸⁷ See **Appendix I**.

Montreal by Messrs. Crowe and Birkendike.²⁸ The cattle, numbering 1210 head, were collected from 122 farms extending from Brandon in Manitoba to Stanstead in the Eastern Townships of Quebec. All the animals were purchased by local dealers who subsequently sold them in the Toronto cattle market to Mr. Rogers, an agent for the eventual owner, Crowe. Of the 122 farms, 106 were in Ontario, 5 were in Quebec, and 11 were in Manitoba.²⁹ Of the 1210 head, 684 were stockers or young feeders.³⁰ It is easy to see that Ontario supplied the most stock, that the nation supplied feeders and finished stock, and that the path through local dealers to the firm which would eventually ship the animals was complicated.

Shipments made in 1894 on five ships, **Toronto**, **Laurentian**, **Lake Superior**, **Numidian**, and **Mentmore**, were also investigated in order to find the farm origin of the stock.³¹ Cattle came from an estimated 60 to 100 farms all over southern Ontario. They were bought near Port Perry, Woodstock, Guelph, Uxbridge, Toronto, Owen Sound, Ripley, Kohler, Claremount, Stouffville, Bowmanville, Manhiem, Mitchell, Hickson, Bright, Chesterville, Brussels, Agincourt, Scarboro, Beaverton, and Blackwater. Most came from the Port Perry area. None came from west of

²⁸ SP 7, Canada, 1893: 25-30.

²⁹ **Ibid.**

³⁰ **Ibid.**

³¹ SP 8E, Canada, 1895, Appendix 4: 25-29.

Ontario.³² Only four farmers from Quebec, all of whom had names that suggest they were English, supplied cattle.³³ The animals were collected in small numbers from farms, sometimes just one per farm, in the various localities by drovers, then bought by agents for larger shippers and then consigned again. Some cattle from nearby farms were bought on the Toronto cattle market and not at the farm gate.³⁴

The pattern that emerges from these two inquiries is clear: most stock did not come from the west but rather came from Ontario; it came from many farms, each farm contributed an average of three animals, and the stock had been bred and fed in the locality. It was also evident that even cattle sent by western shippers such as, Gordon, Ironside and Fares, had been bought from Ontario farms, not from western ranches.³⁵

The limited information in annual Sessional Papers reinforces the pattern that the trade was dominated by Ontario. The contribution of the west in relation to the total

³² **Ibid.**

³³ See J. I. Little, "The Social and Economic Development of Settlers in Two Quebec Townships, 1851-1870", **Canadian Papers in Rural History**, 1 (1978). Little suggests that livestock farming, and beef farming in particular, in Quebec seemed to ethnically oriented. French farmers raised less livestock than British farmers in the Eastern Townships.

³⁴ SP 8E, Canada, 1895, Appendix 4: 25-29.

³⁵ **Ibid.**

transatlantic trade over the period was as follows. In 1887 about 800 head of cattle left Alberta, the first ranch cattle to do so, directly for Britain, out of the 63,000 total of live cattle that were shipped to Britain that year from Canada.³⁶ In 1888, of the 60,828 head shipped through Quarantine stations for Britain, 4,500 came from Alberta.³⁷ In 1894 Manitoba and the North West Territories contributed 19,335 of the 80,531 total.³⁸ The following year the two western regions sent 33,907 head out of the total of 85,863 shipped.³⁹

Other information also confirms that the west did not dominate the trade. Simon Evans, for example, in his study of ranching in Alberta, made calculations on percentage contributions to the trade by the west to Canada's total trade. He estimated that the North West Territories and Manitoba supplied between 10% and 42% of Canada's live cattle to Britain between 1893 and 1901.⁴⁰ Information on west/east contributions to the transatlantic trade also emerged at the general convention of the National Live Stock Association in

³⁶ SP 4, Canada, 1888: 253. SP 10, Canada, 1913: 548.

³⁷ SP 5, Canada, 1889: x.

³⁸ SP 8, Canada, 1896: 142; SP 10, Canada, 1913: 548.

³⁹ *Ibid.*

⁴⁰ Simon Evans, "Ranching in the Canadian West, 1882-1912", Ph.D. Thesis, University of Calgary, 1976: 227.

1908. It reported that in 1906 the west sent 75,000 head overseas, about 46% of 163,994 animals shipped to Britain in that year.¹⁰¹ It also stated that in 1907, the west sent 40,000 head while Ontario shipped 85,000 head (out of total of 137,667 head) to Britain.¹⁰² Information from another source suggests that western contributions to the trade declined rapidly after this year. Abbott, in his study on livestock marketing in Canada, claimed that in 1911 the contribution of the west to the trade was 10,300 head out of 113,795 animals shipped that year.¹⁰³ The disastrous winter of 1906/7 on the ranges, the rise of mixed farming, and the concurrent decline of ranching, combined, affected this shift.¹⁰⁴

The above material all indicates that in the late 19th century Ontario was the main contributor to the trade through complex marketing channels, and that in spite of Ontario's supply of feeders to the area, western Canada did not send the most cattle to Britain even at the height of ranching

¹⁰¹ **General Convention of the National Live Stock Association**, 1908: 106. SP 10, Canada, 1913: 548

¹⁰² *Ibid.*

¹⁰³ H. Abbott, "The Marketing of Livestock in Canada", M.A. Thesis, University of Toronto, 1923: 17. SP 10, Canada, 1913: 548.

¹⁰⁴ **General Convention of the National Live Stock Association**, 1908: 13-18. The disastrous effects of the winter of 1906/7 would be felt beyond that year because the weather killed the youngest stock that would be ready for market by 1910. Cows - the producers - too were lost.

activity. Nor did that basic pattern seem to change. In 1922, of the 21,864 cattle shipped to Britain, 11,769 were from eastern, 1,505 were from western, and 8,590 were from American sources.¹⁰⁵

Clearly Ontario dominated the transatlantic trade in live cattle. Clearly Ontario also dominated any breeder/feeder linkages that existed in Canada. However, poor breeder/feeder linkages by west/east regions in the nation suggest that there might be different geographic breeder/feeder linkages than national ones. In fact comprehensive understanding of the role of either Ontario or the west in the industry cannot be had without an appreciation of commercial beef cattle production from a continental point of view. Both eastern and western Canada operated as suppliers of beef cattle for the American market. There was a natural continental flow of livestock south, but not north. The existence of a north/south, breeder/feeder system can be demonstrated by showing how both the Canadian west and Ontario served the American breeder/feeder system.

The United States had provided the Canadian west with feeders in the 1880's but, as we have seen, that pattern did not endure. It was not long before the situation was reversed.

¹⁰⁵ **Review of Live Stock Market and Meat Trade Situation, 1922: 30.**

While the Canadian west attempted to produce finished stock for direct export to Britain after ranching had developed, by the late 1890's the west served the feeder market of the western United States more naturally.¹⁰⁶ Simon Evans explained this phenomenon by arguing that "the range cattle industry in the United States represented a system of production which spanned a continent."¹⁰⁷ Evans believed that the Canadian west acted as a safety valve, or reservoir, for more feeders destined for the corn belt feeder farmers when necessary.¹⁰⁸ Contemporary comments support Evans' view. The journal, **Farming**, stated in 1898 that the American demand for stocker cattle from Canada was insatiable and that American feeder farmers would pay any price.¹⁰⁹

Ontario also had commercial cattle linkages to the United States, but the province's involvement in the commercial beef cattle industry of the United States was more complicated. Ontario had links with both the American east and west, and

¹⁰⁶ See, for example, **Report** of the Saskatchewan Department of Agriculture, 1920: 226. While these figures do not tell us where the feeder stock went, they certainly indicate that Ontario was not a market for feeders that originated at Winnipeg or farther west, and that the United States was.

¹⁰⁷ Simon Evans, "Ranching in Western Canada, 1882-1912", Ph.D. Thesis, University of Calgary, 1976: 324.

¹⁰⁸ **Ibid.**

¹⁰⁹ **Farming**, March 22nd, 1898: 247.

the province was a supplier of both feeder and finished stock to the United States.

Cattle passing through Toronto's stockyards regularly went on to Buffalo. As early as 1885 there was clear evidence of both Ontario fat cattle and feeders being bought for shipment to New York state.¹¹⁰ By 1919 Ontario's best fat cattle was normally sent to New York, leaving poor quality stock for domestic consumption.¹¹¹ Numerous comments in farm journals suggested that Ontario also supplied the American west with feeders.¹¹² In 1898, for example, 20,000 steers left Ontario for Illinois, Iowa, Nebraska and Missouri.¹¹³

Demand for feeder stock in the American west suggested to important Ontario breeders and farmers, like John Dryden and F. W. Hodson, that the many thousands of dairy calves slaughtered every year in Ontario could be profitably raised and fed in the United States. In 1900 these men set up the Canada and Dakota Cattle Co. with initial share capital of

¹¹⁰ See **Appendix G**.

¹¹¹ **Farmer's Advocate**, February 20, 1919: 313; February 27, 1919, 353; November 6, 1919: 2005.

¹¹² See, for example, **The Farming World**, April 29th, 1902: 445. **Farming**, July, 1897: 694. **Farmer's Advocate**, May 15th, 1897: 219.

¹¹³ **Farming**, November 8th, 1898: 193.

\$400,000.¹¹⁴ The company bought a ranch in South Dakota, and planned to ship Ontario dairy calves for feeding in that area and for ultimate slaughter at Chicago or other American midwest points.¹¹⁵ F. W. Hodson, first Canadian Live Stock Commissioner and Ontario breeder of Ayrshires, argued that the project would make good use of the thousands of dairy calves killed every year on Ontario farms.¹¹⁶ The company intended to feed Ontario beef stock on the ranch as well. "The Canada & Dakota Cattle Company have placed an order with John Davidson of Ashburn, Ontario county, for the purchase of three hundred stockers, to be delivered before the middle of March", announced **The Globe** in 1902.¹¹⁷ Non agricultural people from Ontario were horrified, not at the calf killing as such, but at what appeared to be Canadian fuelling of the American beef and beef cattle industries.¹¹⁸ While the present writer was unable to trace the fortunes of the company, the fact that it existed at all demonstrates the continental functioning of the beef cattle economy and Ontario's involvement in the western American aspect of it.

¹¹⁴ See **The Farming World**, September 4th, 1900: 70.

¹¹⁵ **Ibid.**

¹¹⁶ From **Ibid**, November 4th, 1901. John Dryden Scrapbooks, P.A.O.

¹¹⁷ **The Globe**, February 22nd, 1902 in John Dryden Scrapbooks, P.A.O.

¹¹⁸ Article in **The Mail and Empire**, November 18th, 1901. John Dryden Scrapbooks, P.A.O.

Ontario stock reached the United States through more complex breeder/feeder linkages as well. Stockers from the province were grass-fed on the ranges of western Canada, shipped through Winnipeg to western American feeder farmers, and fattened on corn for the packing houses of the midwest. The beef from these animals was either consumed in the United States or Britain.

Systematic understanding of Canada's export trade to the United States, with reference to eastern and western contribution of finished or feeder stock over the period is difficult. Reports of the various western provinces' Departments of Agriculture gave figures for stock that was shipped south, but only occasionally was the grade of the cattle mentioned, and it was also unclear where stock passing through Winnipeg had originated. Ontario made no detailed effort to understand the role of its export industry with Buffalo.¹¹³

A good "window" on how Canada's beef cattle industry functioned in the American market, from the point of view of finished or feeder stock by region, can be seen in a

¹¹³ It must be remembered that no papers of the Ontario Department of Agriculture for this period have survived. Reports of the department made no reference to the export trade with the United States.

particular document from the United States. When the tariff against live cattle was reinstated in 1922, the American government made a study on the impact of free trade between 1913 and 1920 on importation levels in a document called **Cattle and Beef in the United States, the Tariff Problems Involved**. It is clear from this densely informative study where Canadian stock entering the United States came from and what grade it was, at certain points in time. An analysis of the situation in 1919 serves as a particularly good "window".

In 1919 Canada supplied 70% of imported live cattle into the United States (the figure would be 93% by 1921). Forty percent of total imports into the United States from any foreign country came through Dakota, 33% came through Buffalo, 5% from the St. Lawrence district. (The remaining 12 1/2% of imports into the United States came from Mexico, through Arizona and Texas.) It was estimated that 90% of Canadian cattle that passed through South St. Paul were feeder stock, and that all Canadian cattle passing through Buffalo were fat cattle ready for slaughter. No mention of grade was given for the animals entering from the St. Lawrence.¹²⁰ It is apparent, then, that Ontario supplied fat cattle to Buffalo, that Quebec did not play a large part in the market, and that the west's contribution - while slightly higher than Ontario -

¹²⁰ All of the above was from **Cattle and Beef in the United States, the Tariff Problems Involved**, Tariff Information Series no 30, Washington, 1922: 46.

represented cheaper feeder stock. (It should be pointed out that the influx of Canadian imports represented liquidation after the war, and that greater liquidation took place in the west than in the east.) This "window" at least gives some indication of how important exports to the United States were regionally for Canada, and how valuable they were by grade of stock.¹²¹

All continental linkage patterns functioned within the framework of various factors which influenced how the continental economy worked. One important factor was tariffs. Because it is evident that the natural flow of cattle was south and not north, it was the tariff regulations of the United States which most influenced the continental situation. Cattle were subject to varying duties between the United States and Canada throughout the period between 1866 and 1913. Duties became high enough to interfere with natural trade patterns by the late 1880's, and became a most serious threat to them in 1897 by the Dingley tariff.¹²² Apparently it was not critical enough to stop completely the continental movement of live cattle. The **Farmer's Advocate** noted that the flow of Canadian feeders, from both the east and the west, to mid

¹²¹ They did more than that. They revealed yet again how hopeless so many Canadian statistics were for an assessment of the beef cattle industry. See **Appendix J**.

¹²² See **Appendix H**.

western American feeder farmers continued.¹²³ The Underwood tariff of 1913 provided for free trade in cattle after 1913, and the north/south movement of stockers increased. In 1922 the Fordney bill re-established tariff restrictions on Canadian cattle entering the United States, and the flow of Canadian stock south slowed down.

Tariffs, however, did not seem to shape the structure of the market for beef cattle. While it is apparent in Appendix H that there was a reduction in the movement of stock to the United States as tariffs rose from 1886 to 1897, there were significant enough fluctuations in this trend to suggest that other factors were at work as well. There was not an even climb in exports to Britain within that period either, and the ratio between the numbers of stock shipped to Britain and the United States did not remain static. It is significant that the number of cattle shipped to Britain in 1912 was reduced to 47,868 from 113,795 in 1911 because this drop occurred before the introduction of the Underwood tariff in 1913, which reopened the American market for Canadian cattle, and before the outbreak of World War I.¹²⁴ Therefore, when exports to the United States rose dramatically after 1913, as is clear in Appendix H, it is not evident that free trade with the United States was responsible alone for that trend. It is also clear

¹²³ **Farmer's Advocate**, November 15th, 1897: 494.

¹²⁴ See **Appendix H**.

in Appendix H, that while the Fortney bill reduced trade with the United States, it did not redirect the major export market of cattle to Britain.

The North American beef cattle industry functioned within the quarantine system as well as within the tariff situation. The most serious quarantine regulation for the continental economy was that in the British Contagious Diseases Act (Animals) which resulted in the scheduling of both North American countries over a staggered time frame. American stock passed through Ontario via Toronto on its way to Montreal for export in large numbers in the 1870's, before the scheduling of the United States interfered with that movement.¹²⁵ When the scheduling of the United States in 1879 ended continental uniformity under British quarantine regulations, Canada tightened its quarantine regulations and attempted to keep American stock out of the Canadian trade. There is evidence, however, that Canada's efforts to keep American cattle out of the Canadian export trade to Britain between 1879 and 1892 failed, and that the continent continued to supply the British market as a unit.

¹²⁵ SP 1, Ontario, 1875, Appendix B: 196-7. SP 3, Ontario, 1879: viii. SP 10, Canada, 1880: 98.

In 1892 the government claimed that no cattle from the United States passed through as Canadian.¹²⁶ It is unclear why authorities were sure that this was the case. For example, in 1890 when McEachran was called out by an agent of the Grand Trunk to look at cattle being shipped through for export out of Halifax, but thought to have originated in Chicago, the Veterinary General pronounced the cattle to be Canadian, based on a visual examination.¹²⁷ It is difficult to see why looking at them would prove that they were not from American sources.

Canadian shippers always felt that the transatlantic trade was better served continentally. McEachran reported one of their schemes to Deputy Minister Lowe by sending him the following clipping, from an unknown newspaper.¹²⁸

Chicago Cattlemen Would Prefer to Ship Their Stock from Montreal if Allowed - Mr Bickerdike has just got back to the city from Chicago where he has been making arrangements for the shipment of a large number of American cattle to England via the Grand Trunk and Portland. Mr Bickerdike says that he is more than ever convinced that if the Dominion government would give permission to ship American cattle at Montreal, this port would soon monopolize the cattle export trade of the continent. The Chicago men would much prefer to ship their cattle via the St. Lawrence as the

¹²⁶ SP 7, Canada, 1893: xi.

¹²⁷ McEachran to Lowe, dated March 3, 1890 and marked "confidential", General Correspondence of the Department of Agriculture, R.G. 17, volume 1678, file 1887-1890, McA-McE, N.A.C..

¹²⁸ Ibid.

losses on this route are very small compared with those on the American routes, a fact due to the cooler summer climate of Canada and to the opportunity afforded the cattle of resting and getting their sea legs during the voyage down the St. Lawrence river from Montreal. Mr Bickerdike remarked yesterday that he still hopes that the Government would grant the required permission. He added: "I am just having four hundred and ten cattle shipped from Chicago for the cattle space of the Dominion liner 'Toronto', which leaves Portland next week. These cattle will cross into Canada at Sarnia and when they reach Lynn, Ont., will be detrained, placed in a quarantine yard, and fed and rested until word comes that the ship is ready for them, when they will be once more put on the cars, brought through Montreal and sent on through the Eastern Townships to the lines on the way to Portland. We ask the Government to let us stop those cattle here and rest them on ships especially set apart for American cattle. There is our position in a nutshell."

When Canada was scheduled in 1892 by Britain the two North American countries were under the same British quarantine regulations. The situation was similar to that before 1879 when continental uniformity under British quarantine regulations had prevailed. American cattle again passed freely through Canada and Canadian cattle again passed freely through the United States.¹²⁹ By the late 1890's many Ontario feeders were shipped to Buffalo, finished in the United States, and then shipped to Britain as American.¹³⁰ In 1922, when the combined tariff/quarantine situation was about to change,

¹²⁹ See House of Commons **Debates**, April 23, 1894: 1803-24.

¹³⁰ SP 29, Ontario, 1898-99: 73. Casual comments are made in passing here, but no actual documentation is given.

close to one half of the cattle shipped live to Britain as Canadian were from American sources.¹³¹

With the passage of the Fordney bill in 1922 Canadian cattlemen became increasingly interested in the British market. The only way to achieve an advantage in that market over the United States was through a revaluation of British quarantine restrictions on Canada.¹³² When the British Parliament lifted the embargo and Canadian store cattle were again admitted to Britain live in 1923, at a point in time that coincides with the end of this study's review, the quarantine situation reverted to what it had been before 1892 and after 1879. In spite of divided continental quarantine status under British regulations, Canada did not serve the transatlantic market more than the American one. In 1924 Canada exported twice as many animals to the United States as to Britain.¹³³

Both tariffs and quarantine regulations influenced how smoothly the continental economy worked, but they could not

¹³¹ **Review of Live Stock Market and Meat Trade Situation, 1922: 29-30.** The new live cattle trade with Britain never amounted to as much as was expected. See **Appendix H.**

¹³² See D. Breen, **Canadian Ranching Frontier, 1874-1924** (Toronto: University of Toronto, 1983) for a more detailed description on how the live trade in cattle to Britain was re-established.

¹³³ See **Appendix H.**

direct it. The continent had a well developed breeder/feeder system which operated north/south, and that system continued to function in spite of these impediments.

Many other factors influenced how the continental economy worked: feed conditions, weather, variations in the cattle cycle being only a few. A major influence on the movement of cattle within the continent, throughout the period under study, was freight rates on trains and ships. Moving cattle was always a more expensive proposition in Canada than in the United States.¹³⁴ This factor was particularly influential on the development of the beef cattle industry in the west. The amount of feed available at any particular time, weather conditions, or variations within the cattle cycle could not entirely explain why so much stock was moved from the west to the United States as feeders. Transportation costs probably

¹³⁴ The problem of freight rates is too large to be dealt with in detail in a thesis of this nature. So much material was generated on the issue that a study could be done on this subject alone. Generally speaking, moving cattle anywhere in Canada was always more expensive than in the United States, when the mileage was exactly the same. For examples see the following. SP 23, Ontario, 1901: 57-8. SP 24, Ontario, 1901: 21. SP 26, Ontario, 1897: 6, 18, 53, 133-4. SP 15b, Canada, 1913: 348, 382-5. Report of the Railway Rates Commission, 1895: 2-14. SP 11b, Canada, 1895: 11. Ontario, Department of Agriculture, **Report** of the Agricultural Inquiry Committee of Ontario, 1924, R.G. 49, Ontario Department of Agriculture, **P.A.O.**: 31-3. Canada, Parliament, **Report** of the Committee on Agricultural Conditions, 1924: 336. SP 15, Canada, 1903: 144-152. **Debates**, House of Commons, April 23rd, 1894: 1803-1829. **The Farming World**, December 24th, 1901: 696-7.

affected the ratio of feeders to finished stock that was produced in the Canadian west.

Rail rates were not the only problem connected with the railways. Range cattle were ready for shipment east in the fall of the year, and there were usually not enough cars to carry them.¹³⁵ The disastrous losses in the winter of 1906-7 were in part caused by the inability of the railways to move the animals out in the fall of 1906. This necessitated the return to the ranges of animals which should have been moved either east or south. The result was overstocked ranges on top of severe weather conditions.¹³⁶ Conditions at railway yards in the west were also totally inadequate.¹³⁷ They were too small, and did not have enough water and feed.

Similarly, a major influence on the continental point of embarkation for cattle bound for Britain was ocean shipping rates, and conditions on ships at sea. As with train rates,

¹³⁵ Car shortages and concentration of stock movement to certain times of the year were problems that continued throughout the period. See **Report** of the Alberta Department of Agriculture, 1906: 70. Also see **Report** of the Saskatchewan Overseas Livestock Marketing Commission, Department of Agriculture, Government of Saskatchewan, 1927: 286-7.

¹³⁶ See **Report** of the Alberta Department of Agriculture, 1906: 70.

¹³⁷ **Report** of the Beef Commission, in **Report** of the Alberta Department of Agriculture, 1907: 42. SP 8, Canada, 1880: 99-104; SP 8, Canada, 1903: 144, 145, 151. See also **The Canadian Live Stock and Farm Journal**, October 1887: 624.

ocean shipping tended to be more expensive from Canada.¹³⁸ As with rail transportation too, rates were not the only difficulties with shipping.¹³⁹ In the winter months, for example, Ontario cattle could only reach overseas market through such ports as Boston and Portland.¹⁴⁰ At the same time, however, the route out of the St. Lawrence was generally easier on cattle because some of the travelling was done in more protected waters than the open ocean. The route was also more direct for many mid-west feeders and even range stock from Wyoming.¹⁴¹ Rates on either railways or ships alone, therefore, did not direct the trade.

In conclusion, then, all national and continental linkages demonstrate that Ontario clearly played a most significant role in all aspects of the nation's beef cattle industry. The province's purebred industry, although deeply involved in the

¹³⁸ SP 8, Canada, 1885: viii. See H. Abbott, "The Marketing of Livestock in Canada", M.A. Thesis, University of Toronto, 1923: 14, 20-22, 25, 27.

¹³⁹ Conditions for livestock on ships were not good. See **The Canadian Live Stock and Farm Journal**, June 1895: 122. See also S. Plimsoll, **Cattle Ships** (London: Kegan Paul, 1890). While this book dealt with American ships, the work concerned the authorities at Ottawa. A copy of it was sent to Deputy Minister Lowe of the Department of Agriculture. MacE per Baker to Lowe, September 25th, 1890, General Correspondence of the Department of Agriculture, R.G. 17, volume 1678, file 1887-1890. McA-McE. N.A.C.

¹⁴⁰ See **Farmer's Advocate**, August, 1878: 182.

¹⁴¹ **Ibid**, September, 1877: 193. See also **Debates**, House of Commons, April 23rd, 1894: 1803-1829.

American one as Chapter Two has indicated, after the 1890's became an important supplier of Quebec and the Maritimes, and the major supplier of the Canadian west. In the realm of commercial beef cattle production, Ontario was the chief provider of finished fat cattle to both Quebec and the Maritimes. Proof that Ontario dominated the national beef cattle industry, however, arises primarily out of evidence which suggests its hegemony over the western Canadian arm of the industry. One demonstration of the strength of Ontario in the national industry can be seen in the functioning of the transatlantic trade. While the west's contributions partially reflected the production of Ontario through east/west, breeder/feeder system linkages, in sheer numbers alone of stock transhipped, Ontario dominated that trade.

However, in spite of the province's strength within the nation, both the eastern and western regions of Canada had strong commercial north/south linkages. There was a natural flow of feeders from the Canadian west south, and not east, because of the larger size of that market. There was a natural flow of finished fat Ontario stock, as well as feeders, south for the same reason.

While trade with Britain tended to overshadow trade with the United States as a result of tariff issues between 1878 and 1913, the real significance of the American/Canadian trade

within that period was, not so much its size, but rather the fact that it indicated certain characteristics about the general beef situation in both countries. A continental economy was functioning without respect for international boundaries. While tariffs and quarantine regulations shifted the numbers of animals that flowed across the border, they did not seem to redirect the nature of production along more national lines. The continent functioned as a unit with respect to production linkages by region.

Chapter Six: The Beef Cattle Industry and the Meat Industry.

The production of the livestock was influenced ultimately by the end of the market chain: namely consumption. It set in motion the whole process. But the link between farmer and consumer was at best indirect because the cattle industry was not one and the same as the meat industry. Factors which influenced one did not necessarily influence the other. Difficulties often arise in understanding the two industries' relationship to each other, through the final and ultimate connection of consumption. This chapter will show how the beef cattle industry functioned separately from the meat industry, by demonstrating that beef cattle production on farms did not reflect consumer demand as directly as might be thought.

In order to assess consumption against production on the farm, we must know something about consumption patterns. What actually were they in the period under study? Unfortunately information that we have on beef eating habits, in any of the three countries involved in this story, is very ambiguous. Estimates of consumption levels of beef and of various food stuffs in the western world, over the nineteenth and early twentieth centuries, are notoriously contradictory. Some indicate that there was a general trend to increased consumption in all meat, but beef in particular, throughout the period.¹

¹ See R. Perren, *The Meat Trade in Britain, 1840-1914* (London:

Ojala, in **Agriculture and Economic Progress**, stated that it was normal for consumption levels of animal products to rise in western countries under stable economic conditions.² The implication could only be, from Ojala's point of view, that consumption rose overall over the 19th and early 20th centuries. Evans believed that British consumption of beef increased between 1870 and 1912, as a result of both population growth and greater per capita consumption.³ Abbott argued that because demand was inelastic at all times, any decrease in consumption that might be evident merely reflected shifting beef cattle production levels, not a trend away from the eating of beef.⁴

There is considerable evidence that consumption levels in Canada in particular were rising over the period. One large sector of society that appeared to be consuming more beef by the

Routledge and Kegan Paul, 1978) 3. See also R. F. McFall, **The World's Meat** (New York: D Appleton and Company, 1927) 575-583.

² See E. M. Ojala, **Agriculture and Economic Progress** (London: Oxford University Press, 1952) for an excellent study of the affairs of agriculture and the economy of Britain.

³ Simon Evans, "Ranching in the Canadian West, 1882-1912", Ph.D. Thesis, University of Calgary, 1976: 322.

⁴ H. Abbott, "The Marketing of Live Stock in Canada," M.A. Thesis, University of Toronto, 1923: 135.

The United States Department of Agriculture calculated that Americans had changed their diet by the turn of the century from meat making up half of the diet of the people in 1830, to meat representing only one third of food consumed in 1900, but the government recognized that the move alone to consume more cereal, sugar, fruit, and vegetables did not establish alone whether the shift over even that more lengthy period reflected change in wants or compelled change in diet. **Report** of the United States Department of Agriculture, 1909: 20, 22.

end of the 19th century was the farming one in Ontario. In the 1870's and 1880's more pork than beef was consumed by farm families, probably because of difficulties in refrigeration but possibly because farmers could not afford to give up the cash generated by their beef cattle.⁵ By 1899 it was believed that farm families ate as much beef as pork.⁶

Farm family consumption of beef was certainly facilitated in Ontario, before the advent of widespread home refrigeration, with the creation of "beef rings" at the beginning of the 20th century.⁷ "Beef rings" were cooperative concerns which represented a club of farm families numbering between 16 and 40, with 20 as the most common. Most rings operated from May until the time that the meat from every animal which each member had contributed had been eaten.⁸ In 1911 the **Farmer's Advocate** did a private survey on beef rings in Ontario.⁹ The journal found the rings widespread in the counties of Halton, Simcoe, Huron,

⁵ **Farming**, January 3rd, 1899: 325.

⁶ **Ibid.**

⁷ Beef rings seemed to exist in the west as well. See **Farmer's Advocate**, Western Edition, March 5th, 1902: 163; June 15th, 1903: 562; April 6th, 1904: 575; February 15th, 1905: 216.

⁸ See "Beef Cattle", by W. Toole, Bulletin 310, Ontario Agricultural College, Ontario Department of Agriculture, August, 1925: 47. A constitution and by-laws were provided by the Ontario government to any group who wished to establish a ring.

⁹ **Farmer's Advocate**, June 29th, 1911: 1087.

Waterloo, Victoria, Bruce, and Grey.¹⁰ Almost none had failed. The only one reported to have done so was one that had used a butcher who was not also a farmer.¹¹ "It was always choice meat as each shareholder provided a steer each year. He had to offer a prime one, else he would be in contempt in the community", explained John Marshall, a farmer from Dufferin county.¹² By 1920 farm families in Ontario ate more beef, and apparently better quality beef, than they had in the 1880's.

Another indication of increased Canadian beef consumption can be seen in the particular pattern of cattle and beef movements generally within the west late in the war.¹³ The internal consumption of Alberta, Manitoba, and Saskatchewan reached high levels, and very quickly over a short period of time between 1914 and 1919.¹⁴ There is no evidence that the

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² J. Marshall, *Half Century of Farming in Dufferin*, no publisher or date given: 22.

¹³ See *Reports* of the Department of Agriculture for Saskatchewan, 1909, p30; 1911: 108; 1912: 244; 1913: 76; 1919: 223-4; 1921: 252. *Report* of the Department of Agriculture for Manitoba, 1918: 164. These records of cattle movements, compared with exports, suggest this conclusion. See also H. Abbott, "The Marketing of Live Stock in Canada", M.A. Thesis, University of Toronto, 1923: 25. See Breen's table, p204, on exports of live cattle.

¹⁴ See, for example, *Report* of the Alberta Department of Agriculture, 1917: 214-5. Of the total number of cattle shipped through provincial yards in 1917, some 198,290 head, only 59,319 were exported from the province. The remaining 138,971 head, those which were moved locally, represented a good many mature

consumption of western cattle within that region resulted in reduced consumption within Ontario, because the link between western and eastern cattle production was still very weak in 1918.

Other statistics, however, indicate that a decline in meat eating was the natural trend in consumption patterns over the same period in the United States, Britain, and Canada. For example, the United States Department of Agriculture's figures on the consumption of meat by different countries, which included the United States and Britain (but not Canada), showed that meat eating per capita had been declining generally from 1840 and that rapid decline began at the turn of the 20 century.¹⁵ Because estimates of Canadian consumption suggest that

animals. Only 18,075 of the total number of stock through the yards were either calves or yearlings and could have served as feeders. Compare these figures to those in the **Report** of 1924: 109. Regardless of whether the stock was finished or feeder, a higher ratio of animals were leaving the province than in the war. Of a total of 301,663 head which went through the yards, 195,207 were exported and 106,456 were moved locally.

Simon Evans noted this trend to high beef consumption in the west. He felt that there was a marked increase in per capita consumption there by 1911. Simon Evans, "Ranching in the Canadian West, 1882-1912," Ph.D. Thesis, University of Calgary, 1976: 305.

¹⁵ **Report** of the United States Secretary of the Department of Agriculture, 1909: 19-20. Information in this report suggests that the United States remained one of the highest meat consuming nations in the world, in spite of the fact that meat consumption in that country appeared to have been declining per capita since 1840. Britain, too, remained a major consumer, even in this report. The greatest meat consuming nation in any study was Australia. See also **Cattle and Beef in the United States, the Tariff Problems Involved**, Tariff Information Series no 30, Washington, Government Printing House, 1922, for another report

beef eating patterns in Canada resembled those of the United States and Britain, it seems fair to assume that data which indicated declining consumption in the United States and Britain also indicated a decline in Canada.¹⁶ Trends in consumption, either up or down, seemed to be common to all three countries. But what were those trends?

How can these estimates and various pieces of evidence, which together suggest contradictory patterns, be understood? To begin with it is difficult to see long term trends in eating patterns over periods as short as 30 or 40 years. A review of beef consumption in all three consuming countries from various sources between 1870 and 1987 clearly shows that patterns seen over 30 or 40 years could demonstrate extreme volatility.¹⁷ There is real evidence, for example, that if beef eating declined between 1870 and 1920, it rose again shortly after that time.¹⁸

Volatility suggests that certain variables partially explained changes in eating patterns. Some of these variables were unique to specific time periods and places. Increased farm beef-eating in Ontario between 1880 and 1920, and western Canadian consumption in the war are particularly good demonstrations of

in the trend towards reduced beef and meat consumption in western countries and particularly the United States.

¹⁶ See **Appendix L**.

¹⁷ **Ibid.**

¹⁸ See **Ibid.**

short term trends which could be accounted for by specific variables with respect to time and place. In Ontario the existence of beef rings facilitated the eating of beef on the farm after 1900, and in the west the stimulation of the war led to increased beef cattle production generally. There were other variables which could influence consumption levels, but were not particularly specific to period or place. A few examples of this type of variable follow.

There was built-in volatility of demand itself, which was reflected in the seasonality of beef consumption in Ontario. Markets showed that summer was not a time of beef eating, particularly early in the period, due to refrigeration problems.¹⁹ In the 1880's the fall also was not a period of high beef consumption. Cheaper meats such as pork and poultry were preferred then.²⁰ But because late summer and autumn were also times of heavy marketing and therefore lower beef prices, by the 1920's beef eating at that season had increased.²¹ In December

¹⁹ See **The Canadian Breeder and Agricultural Review**, for a thorough look at the meat market for 1885. See also various graphs on market prices from 1900 to 1919 in H. Abbott, "The Marketing of Live Stock in Canada", M.A. Thesis, University of Toronto, 1923. See **The Origin and Quality of Commercial Live Stock Marketed in Canada**, 1920-21-22, 1923, 1924. See **Annual Review of the Live Stock Market and Trade Situation**, 1922, 1923, 1924.

²⁰ **The Canadian Breeder and Agricultural Review**, December 31st, 1885: 806.

²¹ H. Abbott, "The Marketing of Live Stock in Canada", M.A. Thesis, University of Toronto, 1923: 138.

prices always recovered because of increased demand and a now limited supply. Thus while seasonality of beef eating became less evident as time went on, it still existed in the 1920's in Ontario. Another factor in the volatility of demand was the presence of economic recession, which affected the temporary paying power of urban working classes. In fact, reduced beef consumption over short periods was understood by Ontario farmers to reflect general recession periods.²²

There was also built-in volatility, which was impervious to the influence of abruptly shifting demand, to farm production of beef meat. The operation of the cattle cycle, for example, provided for a constant variable in supply for consumers; and guaranteed that prices, supply, and demand did not accurately relate to each other at any given point in time.²³ Since cattle cycles tended to last up to 15 years and varied by location, it is evident that consumption patterns over less than 20 years reflected the influence of the cycle as much as changing consumer demands. In fact the relationship of cattle cycle peaks simultaneously to recessions probably counteracted a tendency to falling consumption rates.

²² **The Canadian Breeder and Agricultural Review**, December 31, 1885. p806. **Farming**, November, 1896: 185.

²³ Cattle cycles were seen most predominantly in exporting, not importing countries. **The Market for Beef and Veal and Its Factors** (Paris: Organization for Economic Co-operation and Development, 1967) 72.

It was the combined effects of different variables which helps to explain why data on consuming patterns over rather short periods of time can yield such conflicting results, and why actual consumption rates could fluctuate. The conflict itself, however, implies that there was not an immediate relationship between how much beef people eat and production of cattle on the farm. It is that ambiguity which this chapter intends to explore.

Many contemporary authorities argued that demand for beef was stronger than production levels in both the United States and Canada suggested.²⁴ Beef cattle, as opposed to dairy stock, were known to have declined in numbers in the United States from 1894 to 1914 by 38%.²⁵ Studies done in the United States on beef cattle farming suggested that after 1905 beef consumption in that country declined largely because of these cattle

²⁴ See "The Live Stock Situation" by H. S. Arkell in **Agricultural War-Book of 1915**, p56. See also H. Boam, compiled by, **Twentieth Century Impressions of Canada** (Montreal: Sells, Ltd., 1914) 250.

Cattle supplies in Canada were not keeping up with demand. See also H. Abbott, "The Marketing of Livestock in Canada", M.A. Thesis, University of Toronto, 1923: 13. Abbott noted that a decline in cattle shipped to Britain just before 1914 matched a steady rise in price. Therefore demand for beef in Britain must have outstripped supply as well.

See also **Report**, Bureau of Animal Industry, 1908: 393.

²⁵ L. R. Edminster, **The Cattle Industry and the Tariff** (New York: The MacMillan Company, 1926) 10-11, 235-9.

shortages.²⁶ A similar trend to reduced numbers of beef cattle and increased demand existed in Canada.²⁷ H. S. Arkell, Canadian Live Stock Commissioner, stated in 1914 that per capita consumption in Canada was down because of cattle shortages.²⁸

Did evidence of decreased consumption in this period actually reflect the inability, which is suggested in this information, of the farmer to supply the product? In other words, was demand greater than supply? And why was the supply so inadequate? It is that apparent shortage which must be explained, because it reveals that the beef cattle industry and the meat industry were in fact separate endeavours.

Some contemporary American economists offered explanations for the falling output of beef stock. Prior to 1890, the cattle industry's expansion was understood by them to represent a combination of high demand and low costs.²⁹ Costs, in fact, -----

²⁶ See the **Report** of the Department of Agriculture of the United States, 1909: 20. The decline in consumption was explained by the inability of production increases to match the related increase in the population.

²⁷ See "An American View on the Beef Cattle Situation. Present Status of the Industry" in **Report of the Board of Inquiry into the Cost of Living**, 1 (1915): 43-47. The committee that sat on this Board obviously saw the American pattern to be like the Canadian.

²⁸ H. Boam, compiled by, **Twentieth Century Impressions of Canada** (Montreal: Sells Ltd, 1914) 250.

²⁹ L. R. Edminster, **The Cattle Industry and the Tariff** (New York: The MacMillan Company, 1926) 10-11, 235-9.

remained low or were actually becoming lower in that period.³⁰ These men argued that after 1890, with the shrinkage of range lands, costs rose and resulted in a marked falling off in the production of beef cattle.³¹ Other contemporary experts did not agree. They argued that cost conditions before 1890 were aberrant, that beef cattle production would rise when costs stopped fluctuating, and therefore that the cost situation did not explain the industry's economic performance from the 1890's until shortly before World War I.³²

Better explanations, which are somewhat hidden, can be given for the performance of beef cattle farming's service to the meat industry in the period within Ontario. The province's farms raised animals that reflected two characteristics in particular which related to the problem of consumer demand. One was dairy beef and one was earlier maturing livestock. This study has shown us that it is impossible to separate the affairs of the beef cattle industry from those of the dairy industry in Ontario. The two were intimately related, even for the production of meat. Low beef prices, high grain prices, and other factors described in this work in the 1890's played a role in the initiation of progressive liquidation of beef stock and a turn to dairying.

³⁰ **Ibid.**

³¹ **Ibid.**

³² **Ibid.**

Because dairy beef could supply meat as well as beef-bred animals, the prevalence of dairy cattle does not in itself mean that less beef meat was potentially available for consumers in Ontario. The shortage of beef beef created a rising demand for that product alone, and a reduction of beef eating because of the ubiquitous presence of dairy beef. What was perceived at the time to be a shortage of beef-producing stock could actually reflect a shortage of beef beef as opposed to any beef. Dairy beef dominated sale stock on the Union Stock Yard in Toronto by 1908.³³ The rising production of dairy beef, however, was completely in conflict with taste demand for beef. Dairy beef was not desirable to consumers and in 1908 the large Toronto beef abattoirs announced that they refused to buy dairy animals for slaughter.³⁴ The pervasive presence of dairy beef even mystified experts at the time because of its total irrelevance to consumer tastes.

The production of dairy beef remained a serious problem after 1908. When feeder farmers in western Ontario reported in 1916 that the same number and same quality of feeders were available that year as had been for the past number of years,

³³ *Canadian Dairyman and Farming World*, March 18th, 1908: 21.

³⁴ *Ibid.*, March 20th, 1908: 2.

they were confirming that dairy cattle for beef still dominated the heartland of Ontario's beef cattle farming.³⁵

The **Farmer's Advocate** commented sadly as follows.

Feeders report about the same number and about the same degree of finish, but [they] lament the advent of the dairy cow and the consequent lack of quality in the feeder stock of the country. One can still go to the stables and find one or two loads of the broad, deep, well-fleshed kind, but the feeder who acquires them no doubt did considerable driving and culled them from some stock-yard offerings. Often a 'scalper' or dealer can supply a good load of steers, but it is all the same - he did the driving. Sometimes it appears as though the quality of the dairy stock up and down the township lines is not good enough to compensate for the loss of many of those short faces, broad muzzles, wide foreheads and deep, well-fleshed bodies that were formerly so numerous.³⁶

Farmers may have bemoaned the decline of beef stock but they were not stimulated to produce more of it. The return of high beef and livestock prices by 1910, as well as strong consumer demand for quality beef, was not enough to stimulate higher production on the farm in Ontario of good quality beef stock. These conditions could not overcome the existence of other problems that hampered beef cattle production. For example, by 1913 while the price of beef was very high, the margin between the selling of slaughter stock and the buying of

³⁵ **Farmer's Advocate**, April 20th, 1916: 705. The steady number of feeders also indicated that farmers had not increased the production of beef cattle. They simply sent more existing stock to slaughter.

³⁶ **Ibid.**

feeders was so small that little or no money was made by the feeding farmer.³⁷ Feed costs were also high.³⁸ When war broke out these patterns became stronger in Ontario, partially as a result of political intervention.

The Dominion government's encouragement of wheat production brought the price of that crop up to such heights that livestock farming became, in contrast, even more unprofitable. The result was that cattle were not produced for beef purposes in larger numbers in Ontario, even though demand made it seem as sensible for a farmer to raise that type of stock.³⁹ The demand for beef was met by sending existing beef stock to slaughter. By 1916 production of beef meat was up through the marketing of many females and calves.⁴⁰ Even good grade beef Shorthorns, heavy in calf, went to the block because the high price for beef made them too expensive for farmers to buy, or more attractive to

³⁷ **Farmer's Advocate**, May 1914: 1036; April 15, 1915: 626.

³⁸ **Ibid.**

³⁹ The war did not change long term production levels in Ontario. From 1908 to 1941 the number of milk cows and other cattle fluctuated between 2.6 and 2.7 million head. I. Drummond, **Progress Without Planning, The Economic History of Ontario from Confederation to the Second World War** (Toronto: University of Toronto Press, 1987) 35.

⁴⁰ **Farmer's Advocate**, January 7th, 1915: 13; March 11th, 1915: 380; January 13, 1916: 43, 1216. In January, 1916 Ontario sent the highest ratio of heifers to all stock and the lowest ratio of steers of any province to slaughter. **The Agricultural Gazette**, 3 (1916): 230.

sell than to keep.⁴¹ By 1917 those high prices sent purebred beef females as well to slaughter.⁴² Because these animals were the generators of beef stock, and because the pattern appeared to be widespread in North America, the future of the continental industry looked bleak.⁴³ World shortages were predicted.

Reduced eating of beef meat, then, can be partially explained by the widespread presence of beef which was undesirable to consumers, as much as by actual scarcity of beef produced on farms. The prevalence of undesirable dairy beef also suggests that farmers did not change their cattle breeding habits in order to respond to consumer pressure. Did farmers never breed animals which supplied meat that matched consumer taste?⁴⁴ There is evidence that they made some effort to do so when they at least started to respond to information which resulted from experiments undertaken on the production of earlier maturing animals.

Early maturity, as an ideology, was promoted successfully in Ontario before the victory of Young Abbotsburn in Illinois. Note, for example, the careers of two important purebred Shorthorn steers in the 1880's. The first, Dominion Champion,

⁴¹ *Ibid.*, April 26th, 1917: 711.

⁴² *Ibid.*, April 26th, 1917: 1283.

⁴³ *Ibid.*, January 7th, 1915: 13.

⁴⁴ It could be argued that they did so through calf killing.

was calved on January 10th, 1876, and won a number of prizes at fall exhibitions in 1880.⁴⁵ He weighed 1,540 lbs. at two years and ten months when he was put on full feed, meaning grain or corn. He was ultimately slaughtered at the age of four years, eleven months on the 15th of December, 1880, weighing 2,900 lbs. He was greatly admired at the time.⁴⁶ The second, The White Duke, was calved on May 6th, 1881 and bought by the Experimental Farm at Guelph when he was 19 months old.⁴⁷ When he was slaughtered at the age of two years and seven months, on December 17th, 1883, he weighed 2,110 lbs.⁴⁸ What is important here is that in a span of only a few years, the killing age of a most admired prize beef steer had been shortened from nearly five years to two and half years.

When farmers started to feed cattle for kill at an early age in Ontario by intense corn feeding, however, the stock did not provide quality beef. Offensive meat, from a consumer's point of view, resulted. In 1885 **The Canadian Breeder and Agricultural Review** reported on the developments of meat quality

⁴⁵ **Report** of the Ontario Agricultural Commission, Toronto: Printed by C. Blackett Robinson, 1 (1881): 237.

⁴⁶ **Ibid.**, all material back to the last footnote. Mr. Willmot commented to the Ontario Agricultural Commission as follows. "His symmetry was perfect throughout - colour purely white. I notice he has taken during 1879 and 1880, no less than eleven first prizes as best fat steer, at the Dominion, Provincial, and other leading Agricultural shows."

⁴⁷ SP 13, Ontario, 1884: 38-9.

⁴⁸ **Ibid.**

in Ontario which the journal believed had resulted from the recent pattern of intensive corn-feeding in the province.

Butchers' beef had been transformed, not just in the ratio of lean to fat, but also in the nature of the fat itself.⁴⁹ Early in the century consumers wanted fat, not so much because their tastes were different, but rather because the fat of that time was more desirable to eat. The shift in cattle feeding methods, with intense emphasis on corn as fodder, had changed the nature of the fat.⁵⁰ It was no longer desirable to eat, and therefore represented waste to the consumer. Meanwhile the dressed weight of lean meat on an animal had not changed with corn fodder, a fact which the journal believed was not understood by feeder farmers.⁵¹ Corn feeding did make the animal gain more weight and also more quickly, but the ratio of fat to lean shifted to fat.⁵² By 1885 consumers paid for three pounds of fat and bone for every pound of lean meat.⁵³ This ratio was most common in old, cattle which would not mature early but were heavily corn-fed.⁵⁴

⁴⁹ **The Canadian Breeder and Agricultural Review**, March 6th, 1885: 147; March 13th, 1885: 166.

⁵⁰ **Ibid.**

⁵¹ **Ibid.**

⁵² **Ibid.**

⁵³ **Ibid.**

⁵⁴ **Ibid.**

It is quite clear that farmers and agriculturalists in Ontario were confusing genetics with feeding because it can be proven that the feeding was not the problem. Corn feeding as such did not produce the quality of beef described in **The Canadian Breeder and Agricultural Review**. While corn feeding was new in Ontario in the 1880's, it was anything but new in the United States where prime fat steers had been fed on the product for centuries. It had existed in Maryland from colonial times. Corn fattening had been introduced to the middle and lower Scioto Valley in Ohio by settlers from the South Branch of the Potomac in the 1790's.⁵⁵ As early as 1805, corn-fattened cattle were walked from Scioto to markets in Baltimore and yielded a profit.⁵⁶ In fact the use of corn as feed made the Ohio Valley the centre of the American beef industry by 1830.⁵⁷ The relationship between beef and corn had been intimate, then, from the beginning of the 19th century; and older, fat, corn-fed steers had been popular for over half a century.

Agricultural experts in Ontario did not recognize that it was the type of animal which farmers bred that made it difficult

⁵⁵ R. L. Jones, **History of Agriculture in Ohio to 1880** (Kent: Kent State University Press, 1983) 88.

⁵⁶ P. Henlein, "Cattle Driving from the Ohio Country, 1800-1850", **Agricultural History**, 28 (1954): 83

⁵⁷ P. Henlein, "Shifting Range-Feeder Patterns in the Ohio Valley Before 1860", **Agricultural History**, 31 (1957): 1.

to produce good quality, earlier maturing steers. It was not yet widely understood in 1885 that efforts to finish corn-fed fat cattle of the older type in a shorter time could not be successfully done with reference to beef quality, because the animals were not bred to be fed that way.

It would be the way the cattle were bred, not what they were fed, that would make the difference. The stock had to be bred to be fed for earlier maturity. The man who had seen, most clearly and at the earliest point in time, that early maturity required different genetics was Amos Cruickshank, Shorthorn breeder in Scotland. The man in North America who had seen this reality first and was able to capitalize on it was James I. Davidson of Ontario. It would be Young Abbotsburn who signalled the agricultural triumph of type in 1890. He proved to agriculturalists that the problem was not to adjust corn feeding to the animal, but rather it was to change the animal that was fed, in order to provide a product satisfactory to the consumer. He proved that breeding could be utilized with corn, to make earlier maturity match the quality demanded by consumers. He also proved, therefore, that breeding techniques could sometimes reflect consumer demand. And farmers responded by starting to raise stock like him, not the old genetic type, when they produced beef stock finished on corn.

The **Farmer's Advocate**, Eastern and Western Edition, explained the situation to farmers.⁵⁶

In the days gone past there was a scramble for the largest and fattest animals. Many good breeders are still after the same type. It is not wanted. Smaller animals, of better quality and medium weight, are more desirable; they make better beef and bring better prices. Breeders and feeders should watch this change in the market and prepare for it. Get your bulls of medium size and good quality. Have your fat steer and heifer from 1,100 to 1,400 lbs. weight, under three years, and well covered with rich juicy meat, not over-burdened with fat.

The whole process of the move to earlier maturity reveals what difficulties were encountered when the living animal was deliberately modified to provide a different quality of meat, and how uneven that change could be. Lag time was required. Even further lag time was required for that change to affect the general industry. While farmers did start to raise this type of stock by the end of the 19th century, widespread production of beef cattle did not appear to reflect the early maturing type before the 1920's.⁵⁷

⁵⁶ **Farmer's Advocate**, Both Editions, December 1890: 392.

⁵⁷ See "Better Bulls", Bulletin 281, Ontario Agricultural College, 1920: 5. **Farmer's Advocate**, Western Edition, January 15th, 1903: 59. In 1904, cattle shipped to Britain averaged 1,500 to 1,600 lbs. a head while the most popular stock there weighed 1,100 lbs. **Farmer's Advocate**, Western Edition, July 6th, 1904: 968.

The Canadian veterinarian who inspected incoming stock in Britain reported in 1902 that "[the] cry of the world's cattle markets for the last five years or more has been for early maturing stuff, and well finished, a cry which seems to be disregarded by our Canadian cattle growers, especially ranchers". Hopkins to the Department of Agriculture, September

Dairy beef and early maturity partially explain the production of beef meat, in relation to its desirability or lack of it to the consumer, from the point of view of raising the living animal on the farm. Clearly, however, the quality of beef in these animals, through dairy beef and even early maturity, reflected consumer taste in a most imperfect and uneven way. There were other reasons why farmer production of cattle did not mirror consumer taste more closely.

One was the way the international beef cattle economy functioned in relation to animal breeding. Consumers in urban Ontario demanded smaller and smaller lean cuts, beyond those achieved by the Young Abbotsburn type. By 1922 it was estimated that the average buyer wanted meat from a 700 to 1000 lb. animal, which was not more than 18 months old.⁶⁰ The proportion of such stock on the Canadian market between 1918 and 1922 remained roughly 15 to 16%.⁶¹ Clearly farmers were not responding to the demand of the local consumer. They had good reasons for

9th, 1902, General Correspondence of the Department of Agriculture, R.G. 17, volume 957, file 141508, N.A.C.

⁶⁰ H. Abbott, "The Marketing of Live Stock in Canada", M.A. Thesis, University of Toronto, 1923: 133. Abbott got his information from the Canadian Meat Council. It was fortunate that he did. In 1971 a fire destroyed most of their records. Interview with David Adams, past General Manager of the Canadian Meat Council, February 17th, 1995.

⁶¹ **Ibid.**

failing to do so, which arose from the way the international beef cattle economy worked.

The market price for Canadian cattle was always driven by the international market price.⁶² Farmers found that steers weighing 1000 to 1200 lbs. commanded a better price because they brought more on the foreign market. The animals also dressed out at 51% compared to 46% for a 700 to 1000 lb. steer.⁶³ The smaller animals required different breeding, as well, to bring them to finish properly.⁶⁴ It therefore made no sense to raise stock that brought in less money, required new seed stock, and could only find a market in Canada. If domestic demand did not match foreign with respect to animal type, production would favour the foreign requirements. Even though the packing houses were doing most of the purchasing of cattle for domestic consumption in the country by the 1920's, they could not control prices of stock. Beef cattle price at home, then, fluctuated by world price.⁶⁵

The shortage of the most desirable domestic meat on the home market caused a rise in retail prices for those cuts. But

⁶² See **Appendix G** for a good example of this trend. The market in 1885 clearly reflected prices on the British market.

⁶³ "Dressed out at" means the percentage of meat available from the total carcass weight.

⁶⁴ H. Abbott, "The Marketing of Live Stock in Canada", M.A. Thesis, University of Toronto, 1923: 134.

⁶⁵ **Ibid.**

that rise did not just reflect the scarcity of that meat. Other factors, which became evident from the two inquiries into the cost of living between 1915 and 1919, also contributed. In 1915 the Inquiry into the Cost of Living found that, even while consumers were inclined to eat only this quality of beef, the price paid by them reflected less a rise in cost of the living animal than retail marketing factors.⁶⁵ Consumers paid more for the meat than world pricing for the live animals which supplied the beef suggested, because of cost factors such as telephone calls to butchers and delivery expenses. The findings of the Cost of Living Committee in 1919 revealed the same pattern. People would phone several times a day, changing their minds about what cut they wanted, without either seeing the meat or knowing the prices. They merely asked for the best cuts.⁶⁶ Butchers and retail meat store owners alike also reported that poor beef simply could not be sold. "It is upon those who insist on having only the best cuts that the increased price of

⁶⁵ Canada, Parliament, **Report of the Board of Inquiry into the Cost of Living**, 1 (1915): 38. See tables done by H. Abbott, "The Marketing of Live Stock in Canada", M.A. Thesis, University of Toronto, 1923. It is clear that prices of beef on the Toronto market remained generally level from 1903 until 1917. Price rise came at that point as the packing houses in both the United States and Canada competed for Canadian cattle. See **Cattle and Beef in the United States, the Tariff Problems Involved**, Tariff Information Series, no 30, Washington: Government Printing House, 1922: 79.

⁶⁶ Canada, Parliament, **Proceedings of the Special Committee on the Cost of Living**, 1919: 217.

livestock falls most heavily," the committee of the Inquiry stated in 1915.⁶⁸

Another reason that farm production did not reflect very well what beef eaters wanted was that consumer wishes were not especially well known by farmers. One way to see how hard it was for farmers who produced beef cattle - breeders and feeders - to understand consumer demand for beef in relation to a type of existing livestock can be seen in the function of fat stock shows.

Shows for slaughter stock became more common by the third quarter of the 19th century in both the United States and Canada. These exhibitions were designed to reward the animals who gave the best carcass of meat. Farm journals felt that valuable lessons could be learned from these shows. One "of these [was] that the most money [was] not in monstrosities of flesh and suet."⁶⁹ But while butchers found such animals unprofitable, extreme types of fat show animals were intended to represent exaggerated type, and therefore continued to win prizes in spite of their unpopularity with butchers and consumers. Emphasis on fat show animals, relatively speaking, did not change. The dichotomy of awarding fat animals,

⁶⁸ **Report of the Board of Inquiry into the Cost of Living**, 1 (1915): 38.

⁶⁹ **The Canadian Breeder and Agricultural Review**, January 2nd, 1885: 3.

regardless of their extremeness of desirable type, prizes when they were not wanted by butchers or consumers struck some people as ridiculous."⁷⁰ "These fat, bloated monsters only fill one with compassion", remarked the journal, **Farming**.⁷¹

Winning carcasses were always lean, while winning live fat stock for slaughter was always fatter than animals which provided winning carcasses.⁷² The explanation offered to farmers for this strange combination was that live fat stock was judged for export qualities, while the carcasses were assessed for domestic consumption.⁷³ Cattlemen were angry because they believed that carcass shows did not take into account the contribution of either breeders or feeders of cattle to the meat industry.⁷⁴ Apparently butchers were telling farmers how to produce the living product.⁷⁵ Butchers lectured feeder farmers by telling them what butchers would buy. The feeder farmers taught the breeder farmers by only buying what the butchers dictated.
 "We thus see that the farmer is the pupil of the feeder, and the feeder is the pupil of the butcher. We never see the farmer or

⁷⁰ SP 23, Ontario, 1902: 46-47, 56-7. **Farmer's Advocate**, October, 1875: 184; January 1885: 2; November 1885: 329; January 1886: 10-11; November 1887: 331. **Farming**, November 1895: 148-9.

⁷¹ **Ibid.**

⁷² **Ibid.** See **Appendix M**.

⁷³ SP 23, Ontario, 1902: 45-7.

⁷⁴ **Ibid.**

⁷⁵ **Farmer's Advocate**, January 1885: 2; January 1886: 10-11.

the feeder teaching the butcher," commented the **Farmer's Advocate**.⁷⁶

Stockmen felt that they had production problems that were unrelated to a butcher's needs. Breeding animals did not just need to have a good loin and rib.⁷⁷ The Minister of Agriculture for Ontario, John Dryden, commented that the average farmer did not understand what consumers wanted as a result of the confusion in these shows. Furthermore he could not understand why farmers were encouraged to produce inferior or less valuable commodities for the home market and the best or most expensive for overseas.⁷⁸

Another reason it was hard for farmers to be aware of the nature of consumer demand was that marketing systems for livestock shifted late in the 19th century, in such a way that cattle producers became increasingly isolated from the wants of consumers. Because the actual meeting place of the cattle industry and the meat industry was in the marketing of livestock for slaughter, the ability of farmers to understand the quality of the living animal in relation to consumer taste was influenced by livestock marketing structures. The decline of fairs, the centralization of marketing systems for cattle, and

⁷⁶ **Farmer's Advocate**, January, 1886: 11.

⁷⁷ SP 23, Ontario, 1902: 57.

⁷⁸ **Ibid.**

the rise of railways resulted in the isolation of farmers from the meat market. The story of the development of central marketing systems late in the century and their relationship with both fairs and railways shows how farmers became increasingly isolated from consumers.

The relationships between local fairs, railways, and the marketing of beef cattle were complex between 1850 and 1880. In the 1850's and 1860's cattle were walked to the fairs, and if sold as feeders, were walked back to their destination farms. Slaughter stock, too, were commonly walked to their killers, the butchers. Those animals destined for urban points, either for domestic consumption or export, were the most likely to be shipped on trains.

A more significant early impact of railways on the marketing system was the effect they had on the role of the middleman position between farmer and meat producer. Railways actually stimulated the development of this middleman position. It had been predominantly farmers who sold finished stock to meat producers, or butchers, in the 1850's and 1860's.⁷³ That situation was to change rapidly. Rail heads stimulated the

⁷³ By 1871 cattle dealers in Simcoe county were handling about 350 head a year. K. Kelly, "The Agricultural Geography of Simcoe County: 1820-1880", Ph.D. Thesis, University of Toronto, 1868: 95. A look at *Might's City Directory* for Toronto over the years, revealed that there were no cattle dealers in that city until the 1880's.

growth of selling agents for cattle because the larger numbers of animals which could be handled at these points made such a position viable. As more cattle dealers, or drovers as they would be known, handled the selling of stock for the farmer, farmers became less aware of both market conditions and the quality of production of other farmers.³⁰ Finished stock could no longer be evaluated as meat producers. Isolation from the general meat industry was the result. That trend was intensified when drovers started doing the buying and selling of feeders as well.³¹

While railways stimulated the growth of new middleman positions between the cattle industry and the meat industry, they did not immediately bring about the demise of marketing fairs. These actually became established more widely in Ontario by the 1870's in spite of railways, and flourished until the 1880's, when railways finally did nullify them.³² Railways appeared to change the monetary functioning of these fairs and that factor also helped bring about their extinction. The few

³⁰ L. G. Reeds, "The Agricultural Geography of Southern Ontario", Ph.D. Thesis, University of Toronto, 1955: 139.

³¹ It should be pointed out that the whole system was very complex even at that time. Drovers and cattle dealers were often breeder farmers. Feeder farmers were often drovers. Interview with David Adams, past General Manager of the Canadian Meat Council, February 17th, 1995.

³² L. G. Reeds, "The Agricultural Geography of Southern Ontario", Ph.D. Thesis, University of Toronto, 1955: 139. K. Kelly, "The Agricultural Geography of Simcoe County: 1820-1880", Ph.D. Thesis, University of Toronto, 1968: 95.

markets which had existed in the province in the 1880's all failed partially because they operated on a sort of barter system: a cow was paid for, not in cash as had been true in earlier times, but rather by trade for a product with another farmer.⁶³

The demise of the fairs increased farmer isolation from the marketing process. **The Canadian Live Stock and Farm Journal** bemoaned their passing, because the journal believed that the lack of these monthly fairs in Ontario eliminated selling options for farmers. They were then forced to rely on the railways to market their cattle and to pay in the process excessive freights. Rates were high over short distances, arbitrary weights were set rating stock - weights that no animal would ever weigh, and rates were high on a few head. "A shipper of six head [was] charged as much as a full car."⁶⁴

The combination of trains, cattle dealers, and the extinction of marketing fairs resulted in a trend to terminal collecting points for cattle in larger urban areas by the late 1870's in Ontario. Because the markets in Ontario would be dominated by the focal point of Toronto, it is sensible to look at the developing marketing system from the perspective of cattle bound for Toronto. In 1877 the Western Cattle Market was

⁶³ **The Canadian Live Stock and Farm Journal**, January, 1889: 5.

⁶⁴ **Ibid.**

opened, with rail terminals for the Grand Trunk and the Northern Railway.³⁵ Commission agents, to facilitate the buying and selling of stock, were established at the market at the same time. The system was modeled on that of the Chicago yards.³⁶ Commission men acted as agents for buyers, and purchased cattle from drovers and dealers. From the farmer's point of view the formation of a central stockyard made the position of middleman more complex. The needs of farms and the meat market became more remote from each other. The growth of the live cattle trade to Britain increased that trend because the trade made Toronto a centre of cattle selling and buying on an even larger scale.³⁷ The number of cattle dealers in the city mushroomed.³⁸ The yards had become overcrowded as early as 1885.

The city planned to spend \$100,000 on the building of new yards where there would be better railway facilities and space

³⁵ D. R. McDonald, **The Stockyard Story** (Toronto: New Canada Publications, 1985) 29. It should be noted that railways, from the beginning, were involved in the buying and selling of cattle. Interview with David Adams, past General Manager of the Canadian Meat Council, February 17th, 1995.

³⁶ A very good description of the functioning of the Chicago stockyards was given in, United States, Department of Agriculture, **Report of the Bureau of Animal Industry**, 1888: 358-366.

³⁷ This was a gradual process, but an important one. See J. B. Spencer, "Beef Raising in Canada", Bulletin 13, Department of Agriculture, Ottawa, 1910: 94.

³⁸ See *Might's City Directory*. There were 29 dealers listed in 1881, 40 in 1892 and 59 in 1902.

for the building of public abattoirs.²⁹ Butchers and dealers were unhappy about the move because the location was far from their places of business. They urged the city to repair the sheds and build slaughter houses at the existing location.³⁰ The city acquiesced, but no public abattoirs, or any abattoirs for that matter, were built. The problem of the yard's inability to service the large domestic market and the export market, however, continued and became increasingly pressing.

In 1897 a group of private citizens decided to raise the capital to finance the building of larger yards.³¹ By 1902 the company they had formed had succeeded in raising \$400,000 by selling shares worth \$1.00 a piece. It is interesting to note who the company's promoters were. The group was headed by J. D. Allan, a wholesale merchant, and had an advisory board composed of John Dryden, Ontario Minister of Agriculture and Shorthorn breeder, Richard Gibson, the prominent Shorthorn breeder and President of the Dominion Shorthorn Association, and A. P. Westervelt, the secretary of Ontario's united purebred livestock associations. The directors of the new company were Allan, Timothy Eaton, W. H. Smith, the president of the Harness, Hunter and Saddle Horse Society of Canada, E. Snell, an old and

²⁹ **The Canadian Breeder and Agricultural Review**, June 12th, 1885.

³⁰ **Ibid.**, June 17th, 1885: 371.

³¹ **Farming**, December 21, 1897: 122.

established Shorthorn breeder and cattle exporter from Guelph, F. W. Hodson, the Dominion Live Stock Commissioner and an Ayrshire breeder, and the prominent Toronto lawyer, Andrew Dodds.⁹² It is possible to see here the interconnected interest of government officials and the purebred industry in the combined affairs of beef cattle farming and the meat industry, as well as alliances with professionals and other retail store businesses.

Farmers were told that the promoters, "who comprise men sufficiently conversant with the live stock trade of the country and what is required in the way of cattle markets, etc., to put the business on the best possible footing, have not gone about the matter blindly. Representatives of the company have made a thorough inspection of the leading cattle markets and stock yards both in Europe and the United States and are in a position to go ahead and equip a market on the most up-to-date plan."⁹³

The company, known as the Union Stock Yard Company, agreed to pay the city \$10,000 a year for 30 years as rent on the condition that the city close the Western Cattle Market. At the end of the contract the city had the option of buying the yards

⁹² D. R. McDonald, **The Stockyard Story** (Toronto: New Canada Publications, 1985) 37. A copy of the original prospectus of the company was given here.

⁹³ **The Farming World**, October 1st, 1901: 363-4.

for an appraised value.³⁴ The company also promised to charge no more to dealers and drovers than the old yards had.³⁵ The new yards were located conveniently near both the C.P.R. and the Grand Trunk railways.³⁶ When the Union Stock Yard opened in 1903, the Grand Trunk refused to cooperate with the new company, and with the city's blessings, tried to keep the cattle trade at the old Western Cattle Market.³⁷ The flow of dealers, drovers, and commission agents to the new yards, however, redirected most livestock to that point. By the end of its first year of operation 74,000 head of livestock had been received on the yards.³⁸ The railway was forced to capitulate.

The centralization of killing cattle had not advanced as rapidly as the centralization of selling them through yards. The first abattoir in Canada for the slaughtering of cattle, the Harris Abattoir, was established at Toronto in 1901.³⁹ A close

³⁴ **Farming**, December 21st, 1897: 122. This group of men raised \$400,000 for the project by selling stock in the company. D. R. McDonald, **The Stockyard Story** (Toronto: New Canada Publications, 1985) 38.

³⁵ **The Farming World**, October 1st, 1901: 364.

³⁶ **Ibid.** 363.

³⁷ **Farming World and Canadian Farm and Home**, August 1903, p549. D. R. McDonald, **The Stockyard Story** (Toronto: New Canada Publications, 1985) 60.

³⁸ **Ibid.** 37.

³⁹ This is the general consensus of any one writing on the subject. **Might's City Directory of Toronto** also suggests the same thing. It is interesting, then, that the **Farmer's Advocate**, Western Edition, claimed that Pat Burns planned to build a beef

relationship between the yards and killing centres followed rapidly. The first decade of the 20th century saw the consolidation of a marketing/killing system in Toronto which had existed in the American midwest since the 1850's. One American company from the midwest played an important role in this consolidation.

The huge Chicago-based packing company, Swift & Co., became interested in the potential for packing in Canada and had a many faceted plan for doing business in Toronto. In 1908 the company bought the Union Stock Yard. Next, it encouraged joint ownership of the yards and the creation of several packing facilities owned by several companies on the yards. The two largest packers in Toronto who actually worked in consort with each other, the Wm. Davies Co. (pork packing) and the Harris Abattoir, were convinced in 1910 to move the operations of the Harris Abattoir to the new yards, in exchange for Harris ownership of stock in the Union Stock Yard Company.¹⁰⁰ In 1911 Swift's Canadian Company, the Canadian subsidiary company of Swift & Co., bought the abattoir built near the yards in 1905 by the Levack Company, and planned to pack both pork and beef.¹⁰¹ From that time

abattoir in Calgary in 1900. **Farmer's Advocate**, Western Edition, April 20th, 1899: 198.

¹⁰⁰ A. Child, "The Predecessor Companies of Canada Packers Limited", M.A. Thesis, University of Toronto, 1960: 140.

¹⁰¹ Interview with David Adams, past General Manager of the Canadian Meat Council, February 17th, 1995. D. R. McDonald, **The Stockyard Story** (Toronto: New Canada Publications, 1985) 38.

forward, the stockyard would have a close and confusing relationship with the packing industry.

The stockyard actually operated simply as a warehouse for cattle. It provided a meeting place for the buyers and the sellers of stock. It had no direct interest in the price of the animals, because it made its profit on feed and handling charges.¹⁰² Its function, however, did not seem as clear as that to some of the people who used the yards.

Its treatment of drovers and cattle dealers brought complaints almost immediately. The relationship of these men with the yards was made all the more difficult because these individuals were not convinced that the packing houses' interests could be separated from those of the yard. In 1916 a group of drovers complained to the Minister of Agriculture in Ottawa about the treatment they received by both the yards and the packers. For example, they believed that hay distribution, which should have been the responsibility the yards, was controlled by the packers.¹⁰³ Regulation of conditions for drovers and the animals themselves, however, was shortly to follow. In 1917 the Dominion government took over permanent

¹⁰² **The Agricultural Gazette**, 7 (1920): 67. **Proceedings of the Special Committee on the Cost of Living**, 1919: 162-175.

¹⁰³ Ball to Bright, June 26th, 1916. General Correspondence of the Department of Agriculture, R.G. 17, Volume 1263, File 250137, N.A.C.

control of the yards and two officials were at the Union Stock Yard from that time on. One supervised the health and welfare of the stock and the other advised prospective buyers on conditions and prices.¹⁰⁴

Regulation of conditions improved the situation to some degree, but it did not clarify to people at the time just what the relationship was between the Union Stock Yard and the packing industry. Contemporary butchers and cattle dealers still did not believe that the interests of the yard and the packing industry could be separated. Each continued to see their concerns as being affected by the combination of the yard and packers.

Public disclosure of ownership was not compulsory, a fact which only added to the confusion. The manager of the Union Stock Yard in 1919 told the Cost of Living Committee that he did not know if Swift & Co. owned the yards or not.¹⁰⁵ T. Bartrum, a Toronto butcher, was asked by the Committee: "Why is it that the Harris people, buying enormous quantities of cattle, take no steps to have cattle come to their own abattoirs, but rather go five or six miles to West Toronto Junction, and have to have the cost of building new plants.?" He answered, "There must be some

¹⁰⁴ **The Agricultural Gazette**, 7 (1920): 67. **Proceedings of the Special Committee on the Cost of living**, 1919: 295.

¹⁰⁵ **Ibid.** 490-3, 501.

kind of understanding between the Harris people and those who control the Union Stock Yard."¹⁰⁶ In the end, evidence brought before the Cost of Living Committee did reveal that the interests of Union Stock Yard were intertwined with those of the packing industry. The stockyard was known to be owned by Chicago packing interests, the Harris Abattoir, Sir John Eaton, and others - some of whom also had interests in Swift Canadian Company.¹⁰⁷

The story of stockyards and packing houses was in fact intertwined, making it both one, and at the same time, two separate topics. While not much has been written on the subject with respect to beef in Canada, for the purposes of this work the topic as a whole need only be approached in the following way.¹⁰⁸ The relative position of butchers to packing houses should be explored first, and then the relationship of drovers, cattle dealers, and commission agents to farmers should be looked at next. All of these relationships are significant to

¹⁰⁶ *Ibid.* 247.

¹⁰⁷ *Farmer's Advocate*, July 17, 1919: 1399. The relationship of the Wm. Davies Co. to The Harris Abattoir did not seem to be known in 1919.

¹⁰⁸ More attention has been given to pork packing, and the relationship of pork packing to stockyards. See M. Bliss, *A Canadian Millionaire, The Life and times of Sir Joseph Flavelle, Bart., 1858-1939* (Toronto: University of Toronto Press, 1978). Some information on beef packing and stockyards is in A. Child, "The Predecessor Companies of Canada Packers Limited", M.A. Thesis, University of Toronto, 1960; and *The Story of Our Products, Canada Packers Limited* (Toronto: The Jackson Press, 1943).

this story, because they shifted the selling chain from a farmer's point of view by making the middleman position more complex.

A review of the changing relationship between the major killers, butchers and packers, helps explain how the position between farmer producer and meat consumer became wider, through an extended middleman position. Butchers had ambiguous feelings about both the central yards and the packers in relation to their welfare. It appeared to some that they had poorer access to livestock sold by dealers and drovers because the commission agents most frequently worked for the larger killers, the packers. Therefore packers seemed to deprive butchers of their raw material for the retail trade.

In 1913 the City of Toronto responded by opening a public abattoir at the old Western Cattle Market specifically for butchers so that they could buy and kill livestock.¹⁰⁹ By 1919, however, it was apparent that the abattoir and the yards were not heavily used.¹¹⁰ The members of the Committee on the Cost of Living of 1919 were puzzled. "The city of Toronto has spent half a million dollars on a municipal abattoir to give the butcher a chance to kill his own beef. Why has it not been done?", asked a

¹⁰⁹ *The Agricultural Gazette*, 2 (1915): 1203-5.

¹¹⁰ *Proceedings of the Special Committee on the Cost of Living*, 1919: 513-515.

member of the committee.¹¹¹ Another member of the Committee commented: "The city of Toronto's municipal governments [sic] has done everything in its power to make it possible for men to buy a steer and kill it, take the meat away, and put it in cold storage."¹¹²

Butchers did not use the abattoir or Western Cattle Market because no stock was taken to those yards. They were forced, as a result, to buy on the Union Stock Yard. Increasingly, they did not buy live cattle, but rather dead meat. Some butchers believed that packers made it cheaper for butchers to do a retail business with the consumer in spite of the fact that they were less likely to be killers as well. The packing houses themselves claimed that they could kill more efficiently and cheaply than butchers, thereby saving them money.¹¹³ Not all butchers were happy with this development within their trade. One commented to the Cost of Living Committee in 1919, "I say

¹¹¹ *Ibid.* 246.

¹¹² *Ibid.* 247.

¹¹³ Report of **Board of Inquiry into the Cost of Living**, 1 (1915): 42. A. W. Waller, General Manager of Swift Canadian Company, stated, "[that] is the evolution that has taken place in the last forty years. It prevents the waste created by the local butcher in doing his slaughtering, and had made it impossible for him to compete in business. If he paid the same price for cattle on the hook that we do, his beef would cost him more on the hook than we would have to pay for our beef." "The men at the abattoir are highly expert in the handling of all by-products." **Proceedings of the Committee on the Cost of Living**, 1919: 166.

that we curse the day they [the packers] ever came to Toronto."¹¹⁴

Because the role of killer had in reality passed from the butcher to the packer, butchers now found that their trade had changed. They tended to be retail meat sellers only. As one butcher told the Committee on the Cost of Living in 1919, "There are few butchers in Toronto. There are meat cutters, but few butchers."¹¹⁵ That change meant a lengthening of the middleman position, because the role of killer and retail meat seller now tended to be separated. The introduction of the packing industry as the major killers shifted the relationship of farmers to that aspect of the meat industry. In short, from this time on, the problem between butchers and the packing industry not only lengthened the middleman position but also became a problem separate from farmers. Farmers were, however, as a result of this lengthening of the killing and retail process, more isolated from the meat product.

Their concerns became focused, as a result, on the relationship between themselves and drovers or cattle dealers, and the extended relationship between these individuals and commission agents. The position of farmers between drovers and commission agents also shifted the selling chain by redirecting

¹¹⁴ *Ibid.* 250.

¹¹⁵ *Ibid.* 247.

the middleman position. The complicated layered selling procedures of farmers, however, cannot be appreciated without comprehension of the role in particular of commission agents.

The patronage of the new yards over the old, by drovers and cattle dealers - probably because of the steady sales made possible by the new abattoirs nearby - meant that commission agents also moved their headquarters to the Union Stock Yard. Regulation of these buyers and sellers of cattle was established shortly after by the creation of a Live Stock Exchange in 1910 at the Union Stock Yard. The Exchange controlled the activities of its agents, and after 1918 was itself supervised by the Dominion government, under the Live Stock and Live Stock Products Act, which regulated the stockyard.¹¹⁶ In 1919 the activities of agents was further curtailed by the government. They were now prohibited from buying and selling stock; they could only act for the seller.¹¹⁷

The complicated chain of sale from farmer through drover or cattle dealer, to commission agent, and thence to either packer or butcher quite quickly made farmers see drovers as speculators between commission agents and themselves.¹¹⁸ Co-operative

¹¹⁶ **The Agricultural Gazette**, 7 (1920): 69.

¹¹⁷ **Proceedings of the Special Committee on the Cost of Living**, 1919: 289.

¹¹⁸ **Ibid.** 506, 509-511.

shipping of livestock resulted from this impression.¹¹⁹ It began in Ontario in 1917 and originated in farmer organizations or farmer clubs. Cattle were sold through these channels, either by organizations established solely for livestock shipping, or by branches of co-operatives which had already been formed for the shipment of other food products. A livestock committee of each organization made the arrangements for an individual to undertake the actual handling and collecting of the stock. This person was paid either a salary or put on commission.¹²⁰ At first these co-operatives acted through a commission agent, but in 1919 the United Farmers' Company bought a seat on the Live Stock Exchange.¹²¹ Farmers now had their own commission agent, and by 1923 that agent handled 25% of cattle sold on the Union Stock Yard.¹²²

The attempts by farmers to simplify the middleman position were practiced by the packing houses as well. By 1922 there was a return to some degree of direct purchase by the killer from the producer. Packers bought directly from country points in several ways. Country drovers were sometimes paid a commission by packers on purchases of stock drovers made on behalf of

¹¹⁹ *Farm and Dairy & Rural Home*, October 10th, 1918: 4.

¹²⁰ *The Agricultural Gazette*, 6 (1919): 638-640.

¹²¹ *Ibid.* 640.

¹²² H. Abbott, "The Marketing of Live Stock in Canada", M.A. Thesis, University of Toronto, 1923: 41.

packers. Sometimes drovers who went out to the country to buy were salaried employees of packers.¹²³

Apparently packers, as well as farmers, found it preferable to avoid the complicated middleman position. Packers could reduce their costs by avoiding the yards and by getting the stock more cheaply directly from farmers.¹²⁴ The attempts by both the producers and the killers to simplify the procedure created a complex selling and buying system by the 1920's which varied from the most primitive to the most complex.

In 1922, according to Abbott in his study of livestock marketing, farmers sold their stock through the following avenues:¹²⁵

- 1) Sale to central yards, by sale to country drovers, co-operative shipping associations, or direct shipment.
- 2) Sale direct to a packer or abattoir.
- 3) Direct sale for export.
- 4) Sale to a local butcher in a farmer's area. These sales only represented that of calves. Most cattle in Ontario at this point were killed at the plants in Toronto.¹²⁶

¹²³ *Ibid.*, p34. Interview with David Adams, past General Manager of the Canadian Meat Council, February 17th, 1995.

¹²⁴ H. Abbott, "The Marketing of Live Stock in Canada", M.A. Thesis, University of Toronto, 1923: 35.

¹²⁵ *Ibid.* 29.

¹²⁶ *Ibid.* 34-6.

Abbott calculated that between 1919 and 1922 farmers' actions clearly revealed a trend away from the use of the central yards and to more direct sales to the packers.¹²⁷ It should be remembered, however, that in spite of the trend, which suggests to some degree problems of readjustment from a decentralized system to the centralized one that had developed in less than 20 years, most sales went through the yards. They dominated all cattle selling in Ontario by the 1920's. In 1920 about 64% of cattle in Canada were sold through the yards.¹²⁸

The selling of cattle was made more complex by the re-sale pattern of stock seen on the yards. Buyers on the yards fell in four categories: Canadian packers, local butchers, country buyers (for feeders), buyers for export. Abbott broke out the relative importance of these classes on an average over the period 1918-1922, by cattle and calves. Packers took 55.5% of the cattle and 62.1% of calves. Butchers took 7.2% of cattle and 24.9% of calves. Country points took back for feeding 21.7% of cattle and 3.8% of calves. Exporters took 15.8% of cattle and 9.2% of calves.¹²⁹

¹²⁷ *Ibid.* 30-1.

¹²⁸ *Ibid.* 30. Because all cattle in Ontario that were slaughtered, were killed in Toronto, this figure is probably low for the situation within Ontario.

¹²⁹ *Ibid.* 34.

Clearly the whole marketing system of beef cattle became centralized and complicated very rapidly in this period. The complexity resulted partially from imperfect transition to the more modern centralized state, and partially from the technological diversification of the entire meat industry. The immediate reaction to the complexity was an attempt by both producer and killer to achieve a less layered middleman position. In spite of this effort, however, the importance of the central yards and their structure of selling, remained the key feature of marketing of cattle for farmers and killers.

The implications for farmers were deleterious. First, the cessation of violent fluctuation in prices did not result, as had been hoped with the specialization of selling through commission agents. It appeared to farmers that the more complex middleman position resulted in speculation by drovers and dealers. Second, farmers were increasingly isolated from the market and therefore from knowledge of the value of their product, the needs of the meat market, and the nature of consumer demand. The ultimate result was that the marketing of cattle had little significant affect on how they were produced on the farm.

What we know about consumption patterns between 1870 and 1924 suggests that the beef cattle industry did not respond

quickly to the demands of the meat industry. In fact the functioning of the two industries remained remarkably separate from each other. The animals themselves would not closely reflect what consumers wanted, because farmers produced a quality of livestock as a result of various pressures which were only marginally related to consumer demand. Farmer ability to react to consumer wants was hampered by volatility indigenous to both livestock production and consumption, general economic concerns, the international structure of the industry, basic problems of livestock husbandry, the structure of fat stock shows, and the rapid changes in the marketing of livestock which lengthened the middleman position and thereby isolated farmers from consumers.

Chapter Seven: The Subsequent Development of Beef Cattle Farming

in Ontario and Conclusions.

Beef cattle farming in Ontario between 1870 and 1924 has been analyzed here in a broad way, in an attempt to understand some of the complexity of its dynamics. By assessing farmer efforts to make the living animal match various markets, the

characteristics of those markets, political regulation of beef cattle farming, and its relationship to the meat industry, this aspect of agriculture begins to take on a contextual framework within Canadian life late in the 19th and early in the 20th

centuries. A detailed summary of certain patterns which emerge from this study, and a cursory review of a few aspects of the beef cattle situation in the western world between 1920 and 1990 in relation to some of those patterns can lead us to tentative broader conclusions. First, then, what patterns do emerge from

this study?

To begin, the shift from monoculture wheat cropping to mixed farming was initiated by the move to beef cattle

production. Agricultural practice in Ontario changed in response to extensive cattle raising. Crop husbandry, methods of

preserving fodder plants, and animal feeding programs were all revolutionized. Cattle farming also stimulated the growth and diversification of the farm implement industry. The need for

complex cropping tools, as well as substitutes for human labour,

lay behind the expansion after 1870 of the industry that wheat cropping had created.

Beef cattle farming, from the point of view of animal production, must be assessed within the framework of two major areas: purebred cattle breeding and commercial stock raising. The story of each is important for an appreciation of the dynamics of cattle farming generally.

Purebred cattle in Ontario were produced on the basis of the breeding technology of 18th century British agriculturalists, as were all such cattle in the western world. However, Ontario stock represented the moulding of that technology to create the type of animals which American purebred breeders wanted. The cattle did not necessarily reflect, therefore, the characteristics which an Ontario farmer would want, nor were they aimed at that market before 1900. Before 1910 the main market anywhere for breeders was other purebred breeders, not ordinary farmers. Ontario's purebred industry had significant ties to all areas in Canada by 1910.

The position of purebred breeders on the question of specialization, or purpose breeding, of cattle to serve the beef and dairy industries was also important in the story of beef cattle production. While purebred breeders held the only technological key known at the time for superior stock

production, namely purebred genetics, they confused the issue of improvement with that of specialization in cattle for beef or dairy purposes. They preached dual purpose for beef production, but actually bred single purpose until well into the 20th century.

The commercial production of beef cattle by ordinary farmers must be seen in light of their attitudes to the purebred industry. Farmers had many reasons for their lack of interest in purebred breeders and purebred cattle. First, they believed that both the breeders and the stock demonstrated elitism, while purebred breeders, as agricultural experts, could not prove to farmers that improved stock was profitable. No one knew before 1918 what sort of combinations provided for profitability on an individual farm. On top of this, the economics of the cattle cycle provided a built-in check on the expansion of purebred cattle into the commercial side of the industry. It would appear that the ability to overcome the natural checks of that cattle cycle was partially generated within the purebred industry itself. The real spread of purebred cattle within the general herd did not occur until there were substantial local sales between purebred breeders and sustained growth in the industry.

Farmer views on purpose also influenced the extent of their use of purebred genetics. While purebred breeders preached dual purpose, farmers preferred single purpose. Purebred breeders

confused the issue of improvement with purpose, but farmers did so as well. They linked beef purpose alone to improvement. The first wave of diffusion of purebred genetics into ordinary Ontario herds reflected their concern with beef in the 1880's. Farmers rejected improvement when they moved away from beef farming and to dairying after the 1880's, because they still linked improvement with beefing characteristics.

The shift to dairy farming over beef farming, therefore, resulted in the decline in the improvement of the province's cattle in the 1890's. Dairying became so pervasive in Ontario by the late 1890's that even the remaining beef farmers, who might in theory prefer single purpose, tended to supplement beef production with dairying. The general emphasis of farmers on the dairy industry, on top of their reactions to the purebred position on improvement and dairy/beef purpose, led to the overall generation of animals that destroyed beef farming, from a profit point of view, in Ontario. The province's herds came to represent, in a general way, poor quality dairy beef. At the same time, the complex and fluctuating interaction of purebred breeders and ordinary farmers also resulted in the production of cattle that did not serve the dairy industry very well either. Unimproved dairy cows were no better for the dairy industry than dairy purpose stock was for the beef industry.

When the Shorthorn breeders realized that dairy farmers would not accept improved cattle which were bred for beef, some breeders turned to milking strains in order to provide a true dual purpose animal. Because dairy farmers continued to reject the concept of dual purpose, they remained uninterested in purebred cattle. When dual purpose Shorthorn breeders began by 1914 to produce a single purpose dairy cow which they labelled as dual purpose, dairy farmers did not turn to the dairy Shorthorn. They continued to reject even the concept of dual purpose. After acute labour shortage on farms suggested that better production with fewer animals might be achieved by using purebred genetics, they began in increasing numbers to use Holstein cattle.

The second wave of improvement, or diffusion of purebred genetics into the ordinary herds, therefore reflected generally the "dairying" of cattle as well as the "beefing" of the stock. Improvement was now linked by farmers to dairy qualities as well as beef qualities. The acceptance of improvement with dairy characteristics allowed for clarification of the concept of purpose itself. Comprehension that improvement and specialization for both of these characteristics could be combined came, therefore, with the second wave of improvement.

The production of commercial beef cattle must also be seen within the ancient framework of the breeder/feeder structure.

The breeding and the feeding of the stock were two separate operations which could link the industry regionally. Ontario was both a major breeder and a feeder producer throughout this period. The province's internal system produced beef cattle for consumption in both Quebec and the Maritimes with increasing frequency after 1900. The relationship of Ontario to western Canada via the breeder/feeder structure was more complex. While Ontario's beef producing cattle played a significant role in the development of the western Canadian cattle industry, through the movement of feeder stock to the western ranges, both east and west attempted to finish cattle separately from each other. Ontario also influenced the western cattle industry because the province supplied the west with feeders which reflected the cattle farming situation within Ontario. Because dairy beef stock represented the general production of Ontario, the problem of poor quality dairy beef spread from the east to the west.

The pervasive presence of dairy beef in Canada's beef cattle production did much to explain the decline of the nation's role in the transatlantic trade with Britain before 1914. The trade collapsed partially because Canada was unable to compete with either Argentina or the United States in quality of product.¹ While it has been suggested by an important scholar of

¹ See P. H. Smith, **Politics and Beef in Argentina, Patterns of Conflict and Change** (New York: Columbia University Press, 1969); J. Fogarty, "Staples, Super-Staples and the Limits of Staple Theory: The Experience of Argentina, Australia and Canada Compared", in **Clio's Craft**, edited by T. Crowley (Mississauga:

the British market for meat that Canada's reduced contribution to the trade resulted from the fact that internal consumption matched supply, evidence of the effects of dairy beef suggests that quality of the product better explains the trade's performance.²

Canada's beef industry was hampered by its dairy industry at a time when quality mattered the most. In contrast, Argentina was completely focused on the production of beef with no interference from dairying. By sheer volume the American industry was able to provide a good uniform product in spite of the presence of dairy beef in that country.

In 1902 the official Canadian veterinarian in Britain, who inspected incoming cattle, summed up the situation. Canadian "cattle [were] the offspring of parents with a lot of the blood of the dairy breeds, Ayrshire, Holstein, Jersey etc, in them - - - - - the use of animals with such breeding as dams of beefsteers [sic] [could] not be too severely deprecated."³ The remedy was to use of beef breeds for sires. He continued:

Copp Clark Pitman Ltd., 1988); L. R. Edminster, **The Cattle Trade and the Tariff** (New York: The MacMillan Company, 1926) 41-50, 103-6, 148-181.

² R. Perren, **The Meat Trade in Britain, 1840-1914** (London: Routledge and Kegan Paul, 1978) 162-3.

³ Hopkins to the Department of Agriculture, September 9th, 1902, General Correspondence of the Department of Agriculture, R.G 17, Volume 957, file 141508, N.A.C.

Parsimony in bulls in which connection it might be mentioned that the prices paid for bulls by the Argentine and American ranchers and farmers, the significance of which is not fully appreciated until comparisons are made between prices obtained from the three nationalities for their beef cattle, the lack of knowledge of what constitutes an up-to-date beef animal in addition to the use of cheap bulls used undoubtedly contribute to keep Canadian cattle at their present low level on the British markets.⁴

Canada had other difficulties as well in maintaining a strong transatlantic trade. The country faced higher freight rates by rail and sea compared to its competitor, the United States. Transportation facilities in Canada (yards, conditions on trains and ships) were also inferior. On top of these problems, the nature of the market - glut and volatility - was hard to overcome in a country which was only capable of limited production on a seasonal basis. In reality Canada's beef cattle raising functioned more naturally as an arm of the North American industry rather than on its own.

The breeder/feeder linkages of the nation were generally stronger with the United States than between regions in Canada. Canadian commercial cattle farmers played a significant role as generators of feeders for American farmers and of fat finished cattle ready for slaughter. The pattern of such linkages was not changed by tariff structures or quarantine regulations. While the market could shift in response to these problems, it never

⁴ **Ibid.**

did so with any permanence. Redirection of the industry along more national lines, therefore, did not happen. It was this continental situation which supplied the transatlantic trade in live cattle to Britain, and the way that transatlantic trade worked showed in turn how the continent served that market.

The functioning of the transatlantic trade, with respect to commercial cattle, was but one indication of how global beef cattle farming was. The purebred industry always reflected both continental and transatlantic affairs. Ontario breeders were importers as well as exporters. This international aspect of the industry made it subject to regulations which were unique to livestock. One type of such regulation was quarantine. The system that developed in Canada reflected the transcontinental needs of the purebred breeders, and an attempt to fuel commercial production. General consensus in both Ontario and Canada on the value of the quarantine system was only threatened by confusion over the nature of disease itself, and culminated in the crisis over the tuberculin test. Another type of regulation with international implications was the certification and qualification of purebred cattle by recordation. The nationalization of purebred pedigrees was a story about the growing hegemony of government over the affairs of purebred breeders.

An assessment of the way the cattle industry functioned with the meat industry, through consumption patterns, revealed that the two industries were not as closely related to each other as would generally be thought. Cattle production did not appear to mirror consumer demand well. The pervasive presence of dairy beef, which could not be sold, and the slow response of farmers in the production of earlier maturing stock, both indicate how the living animal did not reflect, and how difficult it was to make it reflect, quality of meat desired by consumers.

In fact it could be demonstrated that farmers were rather isolated from what the beef eater wanted. The functioning of fat stock shows produced very ambiguous messages about good quality beef. Consumption levels did not seem to relate well to levels or type of cattle production on farms because of the changing methods of marketing cattle late in the 19th century. The demise of weekly fairs, the rise of railways, and the centralization of marketing systems weakened the relationship between the farmer producer and the meat consumer by stimulating the development of an ever more complex middleman position. Farmers knew less about consumer desires as the centralization of both killing and selling cattle advanced. They attempted to reverse that trend by the end of the period under study.

This work has introduced a number of issues that were not resolved in the period under study. By pursuing how some of them were dealt with after 1924, a cursory review of a few aspects of the beef cattle situation in the western world between 1920 and 1990 emerges. For example, how was the issue of improvement of the general herd worked out? Did scientific knowledge about improvement replace the 19th century method of recognizing it in purebred breeding? In other words did improvement separate itself from the concept of pedigree and purebred herds?

The production patterns seen in beef cattle farming after the 1920's indicate that the role of purebred genetics did not disappear. It would seem that the theory behind nineteenth century cattle breeding, namely the importance of using purebred breeding in production, was at least partially the right one. Scientific technology could not replace the use of the purebred herds for improved general beef cattle. It did, however, shift how purebred cattle were used and how they were evaluated. The use of artificial insemination to perpetuate certain traits that could be traced, such as birth weights, weight gain per day, fertility, carcass quality etc., replaced to some degree the emphasis on pedigree. A decline in the use of shows as the sole arbitrator of quality in purebred genetics also resulted. The relationship between scientific technology and purebred breeding in the production of beef cattle was worked out between the 1920's and the present as follows.

The spread of purebred cattle began after the 1920's. By the 1950's beef breeding farmers relied heavily on purebred herds. While meat quality might have improved, real problems emerged with respect to cattle breeding from the use of purebred stock but little knowledge of genetics. Increased emphasis on early maturity and small short cattle as the means to produce small beef cuts, with only the show ring to dictate breeding techniques, led to a favouring of bulls with wide, short heads as the most desired breeding stock.⁵ The result was dwarfism in cattle. The trait bred homozygously (or truly), particularly in Herefords.⁵ Poor genetic traits were bred into the stock through the pursuit of certain visual characteristics. The situation was not dissimilar to the demise of the Duchess Shorthorns in the 1870's, when pedigree obsession with this Bates line of cattle resulted in the inbreeding of infertility to such a degree that extinction resulted.

Fortunately the rising demand for leaner meat and the sophistication of the science of genetics by the 1960's combined to allow for a correction in breeding techniques. The influx of new breeds, which produced less fat-marbled meat, and artificial insemination technology, lead to a revolution in beef cattle

⁵ G. Fairbain, **Canada Choice, Economic Health, and Moral Issues in Food From Animals** (Ottawa: Agricultural Institute of Canada, 1989) 19.

⁶ **Ibid.**

farming. While the importation of the European breeds resulted in new purebred genetics, these purebred animals were used for diffusion purposes into the general herd in a different way than simply to spread purebred genetics.

Through the use of artificial insemination the purebred European breeds were crossed on the old domestic purebred herds of Shorthorns, Angus, and Herefords in order to produce what was known as hybrid vigour. Beef cattle which result from the crossing of particular breeds in a particular way display hybrid vigour, which means that they grow at faster rates than either of their parents. Random interbreeding of breeds is not the same thing. By 1987 cross-breeds representing hybrid vigour dominated 66% of cattle marketed in Canada.⁷

At the same time that it changed the role and function of purebred breeding, scientific technology has in some ways increased the prestige of the purebred industry and the perception that pedigree could demonstrate quality. For example, it has made possible an increased amount of financial investment put into purebred herds, surely an indication of their perceived value. The whole problem of quality, and its relation to pedigree, played itself out again in the 1980's in the Hereford breed. A bull, named Perfection, born in 1982 in Kentucky, rose to great eminence. Through the possibilities of artificial

⁷ **Ibid.**

insemination, he generated over 2 million dollars in semen sales. His progeny sold readily for over \$200,000 a head. Questions about his purity, not his quality, were raised. DNA testing of his blood, and that of his progeny, proved that he might possibly not be purebred. By 1987 he, his offspring, and his potential offspring were disqualified from both the American and Canadian Herd Books. Breeders with Perfection stock started a new herd book. Financial losses were horrendous, and an agreement went ahead to readmit Perfection stock to the Herd Books in the face of mounting lawsuits.²

The old question of pedigree, purity, and the relationship of either to quality which had plagued the Shorthorn breeders in Ontario in the 1880's explained the story of Perfection's fate. The issue of how to define quality had not been solved by science. It is still difficult to assess exactly what value there is in pedigree, or purity, to quality.

How was the problem of dairy/beef diffusion solved in Ontario and Canada? By the 1960's, in both the United States and Canada, there was a marked division between dairy and beef type cattle, and a shift to the dominance of beef over dairy animals. In both countries 66% of the stock was beef, just under 33% was dairy and 5% was dual purpose.³ Beef production here, then,

² **Ibid.** 23-4 for all information on Perfection.

³ **The Market for Beef and Veal and Its Factors** (Paris:

resulted primarily from specialized beef animals. These two countries were the only ones in the western world at that time with such a sharp beef/dairy division. Dual purpose cattle dominated Europe.¹⁰

That situation would not endure. Dairy cattle would again play a more significant role in the beef cattle industry. By the 1990's most countries were using not only beef cattle, but dairy cattle as well for beef production, through terminal artificial insemination beef sire crosses.

How did the system of breeder/feeder work regionally in Canada? Beef cattle production shifted to the western provinces, with both breeding and feeding taking place there. By the 1980's about 80% of the nation's beef cattle lived in the west, with most of the remainder residing in Ontario.¹¹ Ontario became a feeder for western cattle. In 1987 Ontario fed out 37.8% of slaughter cattle, but contained only 11% of the nation's beef cows.¹² That year Alberta fed out 30.6% of slaughter stock.¹³

Organization for Economic Co-operation and Development, 1967) 59.

¹⁰ **Ibid.**

¹¹ Agriculture Canada, **Publication 1749B**, Ottawa: Communications Branch, 1986: 12.

¹² D. Runnion, R. Goff, and G. Martin, **A History of Limousin in North America** (Fort Collins: Limousin World, 1987) 143.

¹³ **Ibid.**

Canada continued to supply the continental market - feeders being drawn into the American market when supply in that country could not meet demand.¹⁴

Did farmers learn to react more closely to consumer demands, and if so when? As the issue of quality became better understood, so slowly would the connection between farmer and meat consumer become clearer. Grading of beef also helped focus both producer and consumer about the availability of certain beef types. Grading of beef was started in 1927, but because it was optional, ten years later only 5% of it was actually graded.¹⁵ A full system was not established until 1948.¹⁶ Direct contact by the farmer producer with the consumer was established much later - possibly because grading did not become entrenched for so long. By the 1980's the various cattle producers' associations were funding the Beef Information Centre, an organization designed to inform the consumer about the product.¹⁷ The international nature of the beef industry is revealed by the fact that both Australia and New Zealand cattle producing

¹⁴ **The Market for Beef and Veal and Its Factors** (Paris: Organization for Economic Co-operation and Development, 1967) 66.

¹⁵ G. Fairbain, **Canada Choice, Economic Health, and Moral Issues in Food From Animals** (Ottawa: Agricultural Institute of Canada, 1989) 13.

¹⁶ **Ibid.**

¹⁷ **Ibid.** 108.

associations also fund this Canadian organization.¹⁸ Since Canada plays such an important role as a supplier of feeders for the American market, American consumption is of direct concern to Canadian beef farmers. Canadian farmers, therefore, help fund organizations like this one in the United States.¹⁹

Because agricultural production results from the interaction of a number of other critical factors, consumer demand has remained somewhat peripheral to farm thinking. For example, in 1987, a livestock marketing specialist still felt it necessary to warn Minnesota cattlemen as follows. "The beef industry needs to focus on consumers and produce what they desire. It's the beef industry that must change. Consumers aren't going to adapt to the beef industry."²⁰

Did Canada continue to play a significant role in the North American purebred beef industry? A number of factors allowed Canadian purebred breeders to maintain an important position within that industry. One was a change in qualification regulations established by the breeders for recordation. Acceptance of artificial insemination by purebred beef breeders in the 1960's entirely shifted the potential of their market. The purebred dairy breeders in North America accepted the use of

¹⁸ **Ibid.**

¹⁹ **Ibid.**

²⁰ **Ibid.** 114.

artificial insemination for registration purposes before the beef breeders.²¹ Beef breeders had feared that such an action would undermine their bull markets.²² When they agreed to the use of A.I. (artificial insemination) for registration purposes, they found the market for good bulls stronger than ever, and that the rise of cross-breeding for hybrid vigour shifted their sales' potential.²³ The need for new purebred genetics from different breeds, therefore, coincided with the rise of A.I. technology, and the understanding of hybrid vigour. It also coincided with the old question of quarantine. New quarantine problems were another factor in the success of Canada's purebred industry.

In the 1940's an outbreak of foot and mouth in Mexico had led the three North American nations - Canada, the United States, and Mexico - to agree to prohibit the importation of live cattle from any country where foot and mouth disease, or rinderpest existed.²⁴ There were no provisions for quarantine, either, for stock from these countries.²⁵ Quarantine was provided for stock from Britain, however, off New York at Plum Island.

²¹ D. Runnion, R. Goff, and G. Martin, **A History of Limousin in North America** (Fort Collins: Limousin World, 1987) 7.

²² **Ibid.**

²³ **Ibid.**

²⁴ **Ibid.** 8.

²⁵ **Ibid.** 10.

The rise of the science of genetics, the use of artificial insemination, and the demand for new breeds of beef cattle were used by the Canadian government to promote Canada's role as importer of seed stock for North America. In 1965 the Canadian government announced its plans to open a quarantine station for cattle from Europe at the old immigration station at Quebec on Grosse Isle.²⁶ "It was a brilliant economic and political move" noted the historians of the French breed of cattle, Limousin, which entered North America at this time.²⁷ The situation in the 1960's was not unlike that of the 1880's. Quarantine stations at Quebec served as the entrance point to the continent for purebred cattle.

The Canadian government intended to help Canadian cattlemen capitalize on the growing demand in the United States for new genetics from different European beef breeds, which were to be used for hybrid vigour on domestic herd bases of Hereford, Shorthorn, and Angus cattle. American veterinarians were asked to help supervise the quarantine, so that it met United States Standards.²⁸ Quarantine was six months at the station, three months on a local farm, and after that the stock could not leave

²⁶ **Ibid.**

²⁷ **Ibid.**

²⁸ **Ibid.** 11.

Canada for five years from date of entry.²⁹ "It was another master stroke of economic policy that ensured the future position of Canada as the seedstock centre of North America," noted Limousin breeders.³⁰ Canada continued to be respected in North America as a producer of good purebred cattle.

How did marketing patterns of beef cattle change in relation to the meat industry? While railways had centralized the market for beef cattle and killing in large urban centres, the move that was initiated in the 1920's of the killer back to the farmer producer, through a less complicated middleman position, continued. Truck transport played a significant role in that trend, but not until nearly 1950. While transport by truck for livestock was developing by 1920, at that time it only affected the marketing of hogs within a thirty mile radius of Toronto's city limits.³¹ The change in hog marketing, however, had been rapid. In 1918 hauling by truck had been initiated to the Union Stock Yard, and by 1920 three quarters of the hogs which had come to Toronto within a radius of twenty five miles

²⁹ **Ibid.** 12.

³⁰ **Ibid.**

³¹ D. Cowan, and F. C. Hart, "Motor Transport in Rural Ontario", Bulletin 277, Toronto, Co-operation and Markets Branch, Ontario Department of Agriculture, 1920: 10.

from the city had been delivered by truck.³² No butcher steers arrived on truck in 1920 at the yards.³³

By 1950 that pattern had changed. "While rail transportation facilities were originally a major factor in packing plant and stockyard location, [by 1956] the motor played an ever-increasing role in the collection and delivery of livestock", noted the Council of Canadian Meat Packers.³⁴ For example, the number of cattle delivered to the yards by truck in 1940 was 49.4% and in 1955 it was 76.6%.³⁵ There was also a move towards direct delivery of the stock to the packing plant from the farm. In 1940, 28.1% of cattle sent to the plants went straight from the farm.³⁶ By 1955, 36% did so.³⁷ "The decline in the proportion of livestock passing through the public markets has been common to both Canada and the United States", stated the Council of Canadian Meat Packers in 1956.³⁸ This pattern

³² *Ibid.* 9.

³³ *Ibid.* 10.

³⁴ **The Industrial and Development Council of Canadian Meat Packers' Submission to the Royal Commission on Canadian Economic Prospects** (Gordon Commission), 1956: 8.

³⁵ *Ibid.*

³⁶ *Ibid.* 9

³⁷ *Ibid.*

³⁸ *Ibid.*

tends to distort market figures because these result primarily from reports of sales on the stockyards.³⁹

The shifting position geographically of the killing plants reflected, as well as reduced and changed the role of central stock yards. Plants originally had been built near concentration points of the consuming public, but by the 1950's they were more likely to be located near livestock concentration.⁴⁰ Better refrigeration and the development of custom feedlots, on top of decentralized marketing of livestock, all led to the location of newer slaughtering and processing plants closer to major cattle production areas.⁴¹ Relationship between the killer and the farmer seemed closer, and the role of the drover or commission agents on central yards has been reduced.

When information arising from this research project into the situation within Ontario between 1870 and 1924 is looked at in light of developments after the 1920's, it is reasonable to conclude that many of the basic features of the western world's modern beef farming were laid down in period under study. Broad conclusions can be made from this implication.

³⁹ Ibid.

⁴⁰ Ibid. 4.

⁴¹ Submission of the Meat Packers' Council of Canada to the Commission on Inquiry into the Marketing of Beef, March, 1975: 4.

*

*

*

Almost from colonial times, farming for beef in Ontario was a complex operation. It required extensive knowledge of a number of factors. In spite of this extensive knowledge, the occupation could be hazardous because it was so sensitive to international situations. Canada's beef farming was part of an international industry from 1860. By 1875 it was part of a transatlantic system in which Canada and the United States functioned together. The structure of regulation of the modern industry (tariffs, quarantine, promotional policy, and recordation) were laid down late in the 19th and early in the 20th centuries in response to that situation.

Ontario's dairy industry played a large role in the decline of the province's beef cattle industry. Because the nation's beef cattle industry was not centred in the west at the height of the ranching period, but rather was centred in Ontario, the situation within that province reflected the national situation. Poor quality dairy beef spread from Ontario to western Canada.

Basic patterns of modern beef farming in the western world appear to have changed little, fundamentally speaking, since 1920. The major change has been complexity at an increasing rate. The shifts in the industry from 1920 to 1990, however, indicate that some of the fundamental difficulties of the earlier period are still with us. Better transportation, greater

scientific knowledge, better understanding of both human and animal medical health, and superior technology have not eliminated the need to address the following.

While consumer demand is important for the economic health of beef cattle farming, it should be recognized that the needs of the meat and cattle industries are not the same. Livestock husbandry has special requirements of its own. Within that framework, the purebred industry is central to cattle production. International quarantine remains another important issue for cattle farming, and late 19th century methods of disease control - ie. restriction of movement and slaughter - have persisted in modern attempts to contain the spread of cattle disease. It should also be remembered that there is a significant link between dairy and beef characteristics in cattle and the production of meat.

Appendix A: Population of Ontario in 000's, 1871-1921

	URBAN	RURAL	TOTAL
1871	459	1,265	1,724
1881	680	1,351	2,031
1891	845	1,295	2,140
1901	936	1,247	2,183
1911	1,328	1,199	2,527
1921	1,707	1,227	2,934

Calculated from I. Drummond, **Progress Without Planning, the Economic History of Ontario from Confederation to the Second World War** (Toronto: University of Toronto Press, 1987) Table 3.14 and 10.1.

Real decline in the rural population began in the 1880's. The problem of agricultural labour reservoir became critical, however, between 1901 and 1911 because the declining rural population was accompanied by a proportionately sharp rise in the urban population. This trend meant that a smaller group was feeding ever more people.

Appendix B: The Cattle Situation in Ontario in 1882

(* means young cattle to be fed for beef.)

	purebred	working	milch	*store	other
Lake Erie Co.					
Essex	418	295	9639	4547	10437
Kent	538	175	16542	8415	17246
Eglin	498	318	17826	9838	19160
Norfolk	718	366	13111	3824	10748
Haldimand	461	90	10636	3850	10383
Welland	281	240	7740	2750	6705
Lake Huron Co.					
Lambton	659	39	18086	12807	23187
Huron	1030	471	26943	17777	36590
Bruce	707	913	22245	11409	26532
Georgian Bay Co.					
Grey	682	2230	26094	15345	33484
Simcoe	785	870	18961	9475	20532
West Midlands					
Co.					
Middlesex	1420	87	32636	24421	37260
Oxford	959	91	27781	10177	19172

	p/b	Work	Milch	Store	Other
Brant	428	27	7907	2958	7438
Perth	559	223	23652	10966	28779
Wellington	1419	551	19705	11962	27014
Waterloo	754	158	12953	4792	14650
Dufferin	184	420	9174	5376	11677
Lake Ontario Co.					
Lincoln	338	79	6818	2344	5456
Wentworth	482	251	11534	3341	9907
Halton	529	260	8017	3839	8830
Peel	552	45	9734	4554	9281
York	950	147	20879	6798	16157
Ontario	829	169	15556	7542	20839
Durham	652	111	8857	4146	9981
Northumberland	535	255	13263	3971	9213
Prince Edward	375	43	9690	1700	4883
Lennox and Addington	326	431	12508	3995	7945
St. Lawrence and Ottawa Co.					
Frontenac	331	499	20002	5809	14546
Leeds and Grenville	906	87	37185	7554	14050

	P/b	work	milch	store	other
Dundas	452	32	24359	3251	9701
Stormont	447	10	13083	1597	5514
Glengarry	494	11	20112	2698	8615
Prescott	304	53	11391	2444	7214
Russell	160	27	6179	1650	4318
Carleton	302	37	20508	6251	15073
Renfrew	173	246	13226	5295	12116
Lanark	278	127	18327	6251	15818
East Midland Co.					
Victoria	309	332	14453	5580	15745
Peterborough	421	293	11977	4461	12005
Haliburton	28	438	1966	725	2341
Hastings	496	1286	24948	4870	11197
Northern					
Districts.					
Algoma	26	414	1305	379	1497
Muskoka	62	620	2090	761	2090
Parry Sound	40	378	1054	366	1395
Totals	23297	14245	680652	272861	617001

The province contained 680652 "dairy" cows. Cattle serving for beef logically could be assumed to be a combination of "working" (oxen, which would be slaughtered when too old to work), "other", and "store" - or 14245 + 272861+ 617001 - for a total of 904107 head.

Purebred Cattle in Ontario by Breed in 1882

	@	#	#	#	#	*		
			Devon	Shorthorn	Herford	Angus	Galloway	Ayrshire
Lake Erie Co.								
Essex	31	233	33	25	16	80		
Kent	32	380	41	1	37	47		
Eglin	67	321	13	19	24	54		
Norfolk	57	438	46	5	50	122		
Haldimand	22	367	16	0	46	10		
Welland	37	190	9	3	14	28		
Lake Huron Co.								
Lambton	71	487	8	5	34	54		
Huron	61	731	36	25	40	137		
Bruce	46	492	30	8	42	89		

Georgian Bay**Co.**

Grey	42	514	35	6	48	37
Simcoe	50	583	28	7	53	64

West Midlands**Co.**

Middlesex	146	1077	44	13	64	76
Oxford	58	679	21	5	24	172
Brant	8	391	3	0	10	16
Perth	31	438	10	10	22	48
Wellington	36	1118	125	9	77	54
Waterloo	13	670	18	6	5	42
Dufferin	8	139	7	9	12	9

Lake Ontario**Co.**

Lincoln	23	265	5	0	32	5
Wentworth	29	313	10	2	9	119
Halton	37	429	1	1	12	49
Peel	36	462	11	0	23	20
York	27	741	22	4	27	127
Ontario	33	749	6	0	24	17
Durham	51	453	21	6	36	85
Northumberland	45	327	11	4	28	120

Prince Edward	13	142	14	1	32	173
Lennox and Addington	29	151	2	3	25	116

**St. Lawrence
and Ottawa Co.**

Frontenac	7	156	10	4	31	123
Leeds and Grenville	18	289	17	7	32	543
Dundas	17	106	22	5	39	263
Stormont	23	85	8	9	15	307
Glengarry	26	130	40	6	3	289
Prescott	5	87	25	5	3	179
Russell	5	69	2	4	1	79
Carleton	116	16	7	2	26	135
Renfrew	8	67	1	0	10	87
Lanark	2	107	5	10	16	138

**East Midland
Co.**

Victoria	54	197	14	3	16	25
Peterborough	46	173	37	2	80	83
Haliburton	14	3	0	2	4	5
Hastings	48	176	16	27	27	202

Northern

Districts.

Algoma	1	17	1	0	2	5
Muskoka	20	37	3	1	4	2
Parry Sound	2	18	0	16	2	2
Totals	1440	15119	834	280	1177	4437

@ means a triple purpose breed

means a beef purpose breed

* means a dairy purpose breed

(Appendix derived from Ontario, Department of Agriculture, **Crop Bulletin** no.3, 1882. R.G. 49. Ontario Department of Agriculture. P.A.O.]

**Appendix C: A Comparison of the Cattle Situation in Ontario
Between 1923 and 1924.**

Cattle in 1923 (from Crop Bulletin 157, December 1923)

	Bulls	Milch	Calves	Steers	Other
Lake Erie Co.					
Essex	1100	22305	8512	1769	6712
Kent	1047	24547	15925	99992	17421
Eglin	1716	33676	13667	4824	14186
Norfolk	1232	23162	8130	613	7093
Haldimand	742	17208	8987	2115	7571
Welland	665	13530	5172	989	4250
Lake Huron Co.					
Lambton	1187	32462	23613	13920	29446
Huron	1692	39556	30085	16704	37362
Bruce	1383	33407	25555	15342	34428
Georgian Bay Co.					
Grey	1967	44326	32872	16930	40213
Simcoe	2086	45777	29727	14353	33250
West Midlands Co.					
Middlesex	2443	54721	29235	16760	38176

Oxford	2621	50003	15713	4732	15482
Brant	697	15514	6474	1155	6235
Perth	1830	37270	23556	7959	23670
Wellington	1412	32715	23654	9971	23216
Waterloo	953	20465	12081	1476	9108
Dufferin	945	16662	12427	6595	13310

Lake Ontario

Co.

Lincoln	530	11039	4160	548	2831
Wentworth	825	18335	7451	1414	6230
Halton	765	1591	7828	2867	7103
Peel	1036	20015	9396	4195	8408
York	1666	36989	13866	3873	12848
Ontario	1202	27393	17380	7269	19594
Durham	933	18762	12127	5131	13882
Northumberland	1753	27535	13156	3235	13112
Prince Edward	1056	17197	4993	241	3559
Lennox and Addington	1602	25684	10001	2774	9274

St. Lawrence

and Ottawa Co.

Frontenac	2187	31622	12524	1349	9898
Leeds and	2502	38316	11531	754	10257

Grenville

Dundas	1905	31371	7047	114	6230
Stormont	1792	29392	5857	92	4925
Glengarry	2107	32154	7657	313	7242
Prescott	2316	29454	8161	330	7216
Russell	1617	24070	6812	325	5978
Carleton	2604	44910	15523	5190	16485
Renfrew	2704	30795	20042	9121	20539
Lanark	1653	27748	16522	6283	18560

East Midland**Co.**

Victoria	899	21221	15106	7442	18446
Peterborough	1300	22806	12725	4199	13310
Haliburton	256	4247	2849	675	2536
Hastings	3550	47347	18971	2755	15718

Northern**Districts.**

Algoma	277	6130	3404	846	3126
Muskoka	2443	54721	29235	16760	38176
Parry Sound	398	8245	5703	2007	6296

Cattle in 1924 (from Crop Bulletin 161, December 1924)

			Milk		Beef		Other
	Bulls	Milk	Beef	Yearlings	Calves		
Lake Erie Co.							
Essex	1047	20402	2472	4410	2608	7173	2769
Kent	1040	21160	4433	4903	9426	14393	28630
Eglin	1040	21160	4433	4903	9426	14393	14183
Norfolk	1237	23098	931	5401	1362	7051	1230
Haldimand	770	16026	1084	3450	4610	8008	3135
Welland	666	12488	732	2730	1560	4434	1359
Lake Huron Co.							
Lambton	1330	29866	3824	5652	17527	22249	21920
Huron	1764	36215	4797	7647	22958	29507	28630
Bruce	1454	30720	4057	5654	19127	25692	31605
Georgian Bay Co.							
Grey	1898	39585	5583	6691	23624	31155	30216
Simcoe	2133	41940	5292	10031	19407	28412	20440
West Midlands Co.							
Middlesex	2481	52262	4295	11258	17127	28192	28905
Oxford	2683	48858	2492	10698	3950	15308	7560

Brant	750	15052	1007	4352	3793	6564	2060
Perth	1847	34980	3185	8769	12738	22608	13756
Wellington	1366	27819	5554	5992	18110	23236	15740
Waterloo	1044	19560	1132	5049	6148	11576	2999
Dufferin	777	14348	2441	2948	8459	11934	10976

Lake Ontario

Co.

Lincoln	467	9833	607	2317	1310	3810	798
Wentworth	869	18093	924	4488	2652	6581	2734
Halton	784	13702	1338	3299	4316	7220	4466
Peel	1111	18942	2186	5952	4556	9237	5112
York	1692	35788	1928	9154	4640	12682	6085
Ontario	1304	24348	3768	5171	12234	16979	15030
Durham	900	16812	2271	4597	7180	11390	7113
Northumberland	1733	27182	2267	6682	4490	12588	4631
Prince Edward	1160	17043	788	3377	910	4680	617
Lennox and Addington	1646	26182	1097	4803	2999	9525	2762

St. Lawrence

and Ottawa Co.

Frontenac	2252	30806	1572	6524	2168	11139	3091
Leeds and Grenville	2656	39438	1052	9636	1899	10893	2673

Dundas	2026	32007	440	6602	263	6747	1092
Stormont	1767	29509	461	5505	234	5451	1013
Glengarry	2171	31688	1400	6295	566	6972	1470
Prescott	2223	28985	1246	6488	517	755	1368
Russell	1738	24186	1173	5234	874	6658	1409
Carleton	2518	43893	2819	9213	4480	14770	7862
Renfrew	2747	27654	4797	6967	9445	18582	10210
Lanark	1726	26857	2897	7002	8336	15933	10130

East Midland

Co.

Victoria	899	18855	3084	4206	10009	14598	11970
Peterborough	1265	22367	1307	5725	5764	11980	5802
Haliburton	282	3872	202	534	1432	2758	1220
Hastings	3601	46230	2358	10324	3123	17141	4187

Northern

Districts.

Algoma	374	5969	483	1772	1693	3271	1529
Muskoka	318	6922	339	1877	1573	3973	1468
Parry Sound	424	7447	562	2103	2452	5170	2845

**Appendix D: Development of the Ontario Department of
Agriculture.**

It is difficult to outline the work of this department before 1920. No records of the Ontario Department of Agriculture's work before 1920 have survived. Neither have papers of the various early and influential ministers. What we know about the department's early activities, outside of secondary sources, tends to lie in reports made in Sessional Papers. In the early years, the Commissioner, and then the Minister, merely sent on the reports that various bodies made to them. The following, therefore, cannot actually encompass all the work of the department.

Reports to the Commissioner of Agriculture and Arts and Public Works, 1868.

The Commissioner worked through independent agricultural bodies in the province. Each one received funding from the government and each reported to the Commissioner. The independent agricultural organizations in 1868 were:

- 1] Agriculture and Arts Association.
 - 2] 63 District Agricultural Societies.
 - 3] Board of Agriculture - with its educational and exhibition work.
 - 4] Fruit Growers' Association of Ontario.
- The Mechanics' Institutes also reported to the Commissioner.

Organizations Reporting to the Commissioner in 1882.

- A] Government Body Reporting to the Commissioner
 - 1] Bureau of Industries [established in 1882 as a result of the Ontario Agricultural Commission's report of 1881.]
- B] Independent Bodies Reporting to the Commissioner, 1882.
 - 1] Agriculture and Arts Association.
 - separately under it.
 - a] The Ontario Agricultural College [founded in 1874]. Under this institution the Experimental Union was formed in 1879. It made its own reports. By 1885 it was being funded by the government.]
 - b] Ontario Veterinary College [founded in 1879].
 - 2] District Agricultural Societies.
 - 3] Poultry Associations.
 - 4] Cattle Breed Associations.
 - 5] Fruit Growers' Association.
 - 6] Dairymen's Association of Eastern Ontario.
 - 7] Dairymen's Association of Western Ontario.

- 8] Ontario Creameries Association.
- 9] Beekeepers' Association.

Department of Agriculture, established in 1888.

The main work of the new department was that done by the Bureau of Industries. The various outside bodies continued their separate work. Duplication sometimes resulted.

The strength of voluntarism in the organizations, which promoted farming in the province, is made clear by a long article in the journal **Farming**, in September, 1896; called "Organized Agricultural Effort in Ontario - What the Banner Province of the Dominion is Achieving for the Advancement of Agricultural Industry by Means of Governmental Enterprise and Voluntary Association."

Structure of the Department of Agriculture, 1912.

The Department now functioned under distinct branches which had partially taken over the responsibilities of some of the independent bodies. The branches were:

- 1] The Agricultural College.
- 2] The Veterinary College.
- 3] The Live Stock Branch.
- 4] The Farmers' and Women's Institutes Branch.
- 5] The Dairy Branch.
- 6] The Statistics Branch.
- 7] The Immigration and Colonization Branch.
- 8] The Agricultural and Horticultural Societies Branch.

Appendix E: Development of the Dominion Department of Agriculture

	Sections	Branches	Divisions
1868	1 Agriculture	A Veterinary	
	2 Immigration and Emigration		
	3 Public Health and Quarantine		
	4 Arts and Manufacture		
	5 The Marine and Immigrant Hospital at Quebec		
	6 Census, Statistics and the Registration of Statistics		
	7 Patents of Invention		
	8 Copyright		
	9 Industrial Design and Trade		
1900	1 Agriculture and Arts	A Health of Animals	I Cattle Quarantines
		B Experimental Farms	I Agriculture Division (Field Crop and Animal Husbandry)
			II Horticulture
			III Entomology

Sections	Branches	Divisions
		III Animal Husbandry
		IV Horticulture
		V Cereals
		VI Chemistry
		VII Entomology
		VIII Tobacco
	C Dairy and Cold Storage	I Extension of Markets
		II Cold Storage
		III Fruit
		IV Dairying
	D Seed Commissioner	I Seed Growing
		II Seed Testing
		III Seed Inspection
	E Live Stock	
	F Publications	
2 Patents of Invention		
3 Copyrights, Trade Marks, Industrial Designs and Timber Marks		
4 Public Health and Quarantine.		

Appendix F: Data Relating to Cattle Marketed in Alberta.

D. Breen, in *Canadian Ranching Frontier, 1874-1924*, gave a table based on reports of the Alberta provincial Department of Agriculture from 1905 to 1911, to indicate how many cattle left the province in a given year; and, of that number, how many went east and how many went west; as well as how many stayed within the province.¹ The actual **Report** of the Department of Agriculture for 1906 gave figures which matched Breen's.² When the **Report** of 1910 was looked at by the writer of this work, it was apparent where the government got its figures. Government inspection agents were at shipping points of the railways and took count of stock movements. Total stock movement was then interpreted to be Alberta's own use, and use outside the province, of its cattle.

The **Beef Commission** of 1906 stated that it was a characteristic of Alberta's beef cattle industry that 50% of the province's production would stay in Canada and 50% would go to export.³ So, using the department's or Breen's figures, the number of Alberta cattle exported in 1906 should be one half of the total which resulted from local shipments of 8,398, plus all shipments out of province of 82,830 (for a total of 91,228). That meant that 45,614 head stayed in Canada and 45,614 were exported.⁴ We can see that 45,614 minus 8,398 (for a total of 37,216) went somewhere in Canada outside Alberta. We were told that 8,941 were sent west. Therefore we should be able to assume that 37,216 minus 8,941 (or 28,275) equals shipments to somewhere in eastern Canada.

Other figures suggest that we cannot use this data to make that assumption about the movement of Alberta cattle to eastern Canada. The **Report** of 1909, for example, gave figures which cannot be matched to Breen's very well. It stated that 128,000 head were marketed in Alberta of which 75,000 left the province⁵ (A figure that is close to that 50% level which earlier was described by the **Beef Commission** as export percentages). Breen's figures were 103,013 head leaving the

¹ See **Appendix H**.

² Alberta, **Report** of the Department of Agriculture, 1906: 75.

³ Alberta, **Report** of the **Beef Commission**, in the Report of the Department of Agriculture, 1907: 33.

⁴ See **Appendix H**.

⁵ Alberta, **Report** of the Department of Agriculture, 1909: 237.

province (against 75,000 from the **Report**) and 38,806 (against 78,000 from the **Report**) head staying.² Trying to pin down the data through other figures is equally unprofitable. Note the following example.

In 1910 the C.P.R. stated that it carried 154,540 head of cattle in Alberta: of which 12,000 were feeders, 15,000 were moved to other ranges, and 51,627 were for export (unclear whether that means out of province or out of country). Breen's figures indicated that 123,283 were shipped out of province that year, and that 60,986 were shipped locally - making total movements or shipments 184,269. This figure makes no sense in light of the C.P.R.'s statement.

Meanwhile the **Census** of 1911 stated that the number of cattle sold in 1911 in Alberta was 256,840 (of which 29,209 were milch cows, which therefore might not have been bought for slaughter).³ These figures do not seem reasonable with respect to those of 1910, and the sense is that the C.P.R.'s were more accurate because they distinguish what was just movement of stock and what was finished beef or beef ready to be finished out of province. Even so, it is hard to see why the figures are so different. It is also hard to see how many were exported to Britain and how many to the United States; let alone how many and in what condition (finished or as feeders) to eastern Canada.

Census data on the North West Territories was in the Dominion Sessional Papers pre-1905 but did not reveal any figures on beef cattle production. Numbers of stock on farms was all that was given.

² See **Appendix H**.

³ Alberta, **Report** of the Department of Agriculture, 1910: 259.

⁴ Canada, Trade and Commerce, **Census** of 1911, volume 1V: lxxxii.

Appendix G. The Canadian Beef Market in 1885 from "The Canadian Breeder and Agricultural Review".

In January the markets in Toronto and Montreal started out slowly because butchers had a large supply, which had lasted well beyond Christmas. Few cattle, as butchers' steers, entered either market until later in the month, but by then sales were good if the supply did not outstrip the demand. Quality of stock offered, however, varied hugely. By February the weather made it easy to bring in dressed meat (suggesting country packing or killing) and the butchers found it more economical to sell this dead meat, rather than to do the killing themselves. The result was a depressed domestic market for live cattle. Because dressed meat continued to enter the market throughout March, the demand for live steers for domestic consumption remained reduced.

While quality was generally volatile in the winter months, it did not in itself dictate the ability to sell. Sometimes buyers and sellers would not meet over prices that other weeks resulted in sales. There was mention of good quality steers, for example, from the Guelph area that could find no buyer. Prices and supply did not seem to be related as closely as one would think. Brinkmanship of both sellers and buyers, for example, could shape the market and produce shifts in glut and price. Brinkmanship also was reflected in the city markets of Toronto and Montreal, relative to each other. Where stock did not sell in one, the animals were sent on to the other. Demand for butchers' steers could be extremely volatile, as a result. Generally, though, good quality animals sold well and were in demand even if in limited numbers only. Quality found buyers in any market more easily than poor material, in spite of its greater cost.

By summer the price and supply of local butchers' steers still showed volatility. The summer heat tended at times, for example, to reduce the demand. Level of quality also changed constantly. The quality of butchers' steers seemed to be less stable, however, when the quality of export cattle offered was better. By late October there was demand for feeders to fill the distilleries of the city. Strong demand lasted for a limited period only, however, and only good quality wanted.

The main feeder market seemed to be only the distilleries. The market for young feeders, or stockers, seemed to be Buffalo. (The movement of stockers and feeders from farm to farm appeared to be confined mostly to the country. One feels that the stock which moved in this fashion was not reflected in any large numbers in the city markets in 1885.) Butchers' steers seemed to be of poorer average quality as the season moved on towards Christmas. Butchers slowed their buying before the Christmas rush.

Over the year there were a few constant patterns in the domestic trade. The best quality steers, mentioned by location, were said throughout the year to have come from the Guelph area. The demand for milk cows remained stable but also fairly weak throughout the year. The value of cows sold for milking purposes, and not slaughter, was decidedly lower than that of beef stock. When milk cows went on the market for slaughter, they were always considered poor beef quality.

The pattern of the market for cattle exported to Britain over the year was as follows. While the winter of 1885 saw less stock sold for export than the summer, the number of Canadian cattle that left Canada for Britain in the winter via the Grand Trunk through the United States was quite considerable. In fact good demand for export cattle continued through the winter, long before the St. Lawrence had opened for the season.

Many such animals passed through both cities in transit because they had been bought at country points. More cattle appeared to change hands in Toronto, however, for export than in Montreal. Cattle for export that could not find buyers in Toronto, however, were often sent on to Montreal or Buffalo for sale. Cattle that was bought for export in Montreal passed through the St. Clair (Grand Trunk) market only. Quality and volume varied more in that market than in the Viger market. (In fact the Viger market revealed a stability in trade and in numbers of animals on the market over the year that was not seen in either the other market of Montreal or in the Toronto market.)

~~Slowly over the winter and spring an increasing glut of~~ beef cattle was developing in Britain. Surprisingly, the depressed markets which resulted there did not seem to stop the flow of export cattle from the countryside to the central Canadian markets. Easter produced a volatile market in Britain like the Christmas one - oversell and then depressed conditions. By May, as the season was about to open on the St. Lawrence, receipts generally of stock were lower in Britain and the market there had stabilized. Most export cattle bought by May now were waiting for export through that route. However, lower ocean rates in the United States did make some Canadians ship the livestock out of Boston, even if the animals had to go as American that way.

By late May the market was again glutted in Britain and prices were down. Receipts of export cattle at Montreal and Toronto turned light in response. By June prices were better in Britain because receipts worldwide were light, even though numbers shipped from North America generally were heavy. By June a great many more export steers had been bought for

export at country points than earlier in the year, and passed through both Toronto and Montreal only in transit.

Quality seemed quite stable for export stock which were stall-fed steers, but by late June grass-fed steers were on the market and these brought poor prices. By July the receipt of export stock generally in Toronto and Montreal had risen. The markets in Britain were depressed by then, because although numbers shipped from North America generally had fallen off, they are higher from elsewhere.

By August there was a good demand for export steers on Canadian markets in spite of low prices and glut in Britain. Even though the British market was very sluggish in August and glutted with oversupply, receipts of export cattle at Toronto remained very high. Quality of export cattle also seemed good in Canada at that time, and prices for such stock there remained good. By October the British market was about to collapse. Prices of export shipping cattle in Toronto were now quite low, but the supply of stock for sale continued large. By late November the St. Lawrence had closed, but shippers were still speculating on the Christmas British market, and were prepared to send cattle through Portland if prices recovered. The British market did not recover over Christmas, and the movement of shipper cattle fell off.

Appendix H: Canadian Exports of Live Cattle, 1868-1924.

(Note the figures do not always match - Breen's were from Canada Year Books.)

Year	From Trade and Commerce SP 10, 1913		From D. Breen, Ranching Frontier...	
	Britain	United States	Britain	United States
1868		40667		
1869		61967		
1870		104609		
1871		77550		
1872		19454		
1873		22391		
1874	63	36671		
1875	455	34651		
1876	638	20809		
1877	4007	13851		
1878	7433	17657		
1879	20587	21316		
1880	32680	16044		
1881	49409	7323		
1882	41519	15914		
1883	37894	23280		
1884	53962	30593		
1885	69446	67758		
1886	60549	25338		
1887	63622	45765		
1888	54248	40047		
1889	60000	37360		
1890	66965	7840		
1891	107689	2763		
1892	101426	551		
1893	99904	402		
1894	80531	256		
1895	85863	882		
1896	97042	1646		
1897	120063	35998		
1898	122106	87905		
1899	115476	92834		
1900	115056	86989		
1901	119050	46244		
1902	148927	31743	148924	21619
1903	161170	10432	161170	5699
1904	148301	3517	148301	1991
1905	159078	3696	159077	2130
1906	163994	4726	163904	2783
1907*	149340	8184	149340	7360

Year	Britain	United States	Britain	United States
1908	124015	23612	124015	18938
1909	143661	16130	143661	13194
1910	140424	12210	140424	10413
1911	133795	7576	113795	7024
1912	47868	9807	47868	9654
1913			12069	22959
1914			9778	185761
1915			0	149604
1916			1752	170775
1917			0	104979
1918			0	144021
1919			0	268724
1920			479	415956
1921			131	221278
1922			35418	121060
1923			25758	199272
1924			59486	98322

* means 9 months

Appendix I. Contemporary Attempts to Document Internal Movement of Cattle.

In May of 1894, the Marquis of Ripon suggested "that some more efficient system should be adopted of marking all cattle exported to the United Kingdom, so that in the event of any suspicious case arising it might be traced to the place of origin in order that special examination, including the slaughter of contact animals." "The present system of marking enables the owners to identify their own cattle after the voyage on landing; and in the cases of reference in the past this information has enabled the farms and localities whence the animals came to be indicated and trace out; that is worth the exception of a few animals bought on the open market." "A system of indicating every animal, in such way as to enable it to be trace to the point whence it came, at the time of purchase, could only be carried out by a system of ear tags, or branding, at the place and time of purchase. Cattle are purchased for shipments in all parts of the Dominion east of the Rocky mountains, on farms, in open markets, and on ranches; it follows, in view of the great extent of territory, a system of this nature would be complex and somewhat difficult to carry out with sufficient supervision of details to secure perfect accuracy. The employment of special staff all over the Dominion would be necessary, to afford reasonable assurance that every mark on every animal obtained or purchased at point distant thousands of miles from each other, could be properly certified." "It has not, in the circumstances of the past, been thought that it would be useful to attempt to put a system in practice; and especially in view of the substantial effectiveness of the present practice so far, in enabling contact animals to the detail of localities and farms to be trace; and having in view the uniform results of the information which has been obtained. In the case of exports of ranch cattle from the North-west [sic], all animals have their particular ranch marks."²

"Report on Marking Cattle Exported" - by Baker, McGill University, Professor of Anatomy of Comparative Medicine, Office of Inspector of Stock, Montreal.

"I have been making further investigation with reference to the feasibility of tracing cattle exported, to the herds from which they came, by means of marks put on at this port, or at other places before they leave the country." "I find, for

¹ See SP 8E, Canada 1895: 6. "Papers referred to the Minister of Agriculture on the Subject of the Scheduling of Canada by the Board of Agriculture".

² Ibid. 7

instance, that out of 200 car loads received at the Grand Trunk Railway Stock Yards, 30 car loads were shipped from Toronto and 170 car loads were from various other stations along the line. Of those which we may call direct shipments, 65 cars loads were in single car lots, and 105 car loads were shipped in two or more loads from each station. In some cases eight or ten cars from one station." "At the Canadian Pacific Stock Yards out of 200 car loads: - Sixty came form Toronto; 30 from Manitoba, and the North-west [sic]; 95 from various stations shipped in two or more car lots; and 15 car loads came in single lots." "I do not think that any marks we might put on the cattle here, would, excepting in a very few cases, be any more reliable help in tracing the cattle than the marks that are now put on them by the shippers for identification when they reach their destination." "If the cattle are to be marked that they may be traced to the herds whence they came, the marks must be put on them before they leave." "When the cattle get here, it is only now and then that those in charge of them would be able to tell us anything more definite than they were shipped at such a station and were bought from the farmers in the neighbourhood. It is only when there is something specially striking about the appearance of an animal that the persons in charge can tell exactly where it came from." "There is no system which we can adopt at this port that will enable us to trace the cattle directly beyond the station whence they were our in the cars. The shipper could inform us of whom he bought the cattle in a particular car, and, in such a case all the farms which contributed to that collection would be equally open to suspicion of having sent a suspected animal." "The shipping of cattle has been, so far this season largely in small lots which renders tracing by the owners' marks more reliable, than when one man ships large numbers, bought up from smaller men, who just ship and mark their own cattle." "The small shipper does not mark his cattle until he is certain he cannot sell to the larger. If he has to ship himself he puts a mark on them." "The only thing we can do here that I can see is to have all cattle marked with the scissors, before they change hands, - that is when a small dealer sells to the large shipper, and have the marks, so put on, entered in the stock yards shipping book; and also in the inspection book that we use." "This would not be, by any means, a perfect system of marking. The only perfect system would be ear tags or branding, by the farmer or feeder before the cattle leave home, and the marks made by him, reported by the shipper to the Inspector, who would note and inspect the marks as well as the cattle, and enter them on the certificate, where they will remain on record."³

³ Ibid. 20.

Appendix J. Canadian Regional Contribution of Commercial Beef Cattle to the Export Trade With the United States.

These figures were found in **Cattle and Beef in the United States, the Tariff Problems Involved, 1922, Reports of Trade and Commerce, and Reports of various provincial Departments of Agriculture.** The year 1919 will be focused on here. In 1919 cattle entering the United States were stated by **Cattle and Beef in the United States, the Tariff Problems Involved** to have numbered: from Canada 356,834, from Mexico 82,340 - for a total of 439,174 head. Comparative estimates of the cattle, "as close to the truth as possible", were also given. Forty percent of the total number of cattle imported into the United States was stated to have come through Dakota - 175,670 head, of which 90% were feeders. Therefore western Canada sent 158,103 feeders to the United States in 1919, and 17,567 head of finished slaughter stock. Ontario sent 33% of the total number of cattle imported into the United States to Buffalo - all of which were finished. Ontario therefore sent 144,927 head. Quebec sent 5% of the total - or 21,959 head (not known whether finished or not - but one would suspect not).

Now compare the figure given for stock that left western Canada and went into the United States, as a total against the figures for internal trade movements within Canada from the various Departments of Agriculture for the prairie provinces. From the **Report of Manitoba in 1919, the Union Stock Yard at Winnipeg** sent 105,698 feeders and stockers to the United States. It also sent 145,146 head of cattle there as well in 1919. Surely this, if anything, indicates how stock yard figures distort cattle movements.

Trade and Commerce stated that in 1919 Canada exported to the United States 268,724 head over one year of age, and 39,838 head under one year of age - for a total export of 308,562. A separate table in Trade and Commerce listed the figures slightly differently - 271,579 over one year of age and 39,917 under one year of age - for a total of 311,496 (compare to American figures of 356,834). These figures do not match overly well.

Looking at figures for the next year does not clarify the situation for the year 1919. **Live Stock and Animal Products** listed figures for interprovincial movement in 1920, but made clear that numbers given for export to the United States did no take into account stock that could move between provinces and ultimately end up in the United States. However an interesting table, here, did indicate what stock left stockyards in 1920 in Montreal (two of them), Toronto, Edmonton, Calgary, Winnipeg for the United States in 1920. From Toronto - 17,112 cattle and 16,836 calves. From Montreal

Yard 1 - 288 cattle and 4,816 calves. From Montreal Yard 2 - 811 cattle and 8,128 calves. From Winnipeg - 77,928 cattle and 1,447 calves. From Calgary - 16,007 cattle and 226 calves. From Edmonton - 3,562 cattle and 0 calves. These add up to 147,161 head of stock moved in 1920. This is a queer number when compared to the 1919 one, and does not match in geographic ratio what was said about imported stock into the United States by Americans. Ontario contributed too little in this situation, and less than half of that could possibly be finished (yet in 1919 it was stated that 100% from Ontario was finished). Even if these figures were not for 1919, they do not seem balanced.

Appendix K: Beef Cattle Production in Quebec.

The ratio of slaughter stock sold to farm kill, seen in census data, indicates the level of self-sufficiency and commercial production in different provinces. Census material on farm kill and stock sold for slaughter between 1900 and 1920, in Quebec and Ontario, suggests a greater rate of farm kill in Quebec. Therefore Quebec was more self-sufficiently oriented and less commercially oriented with respect to beef meat than was Ontario.

Note the situation within both Quebec and Ontario.

Quebec.

1900

Total value of livestock killed on farms (Census of 1901 did not break up value by species) - \$8,008,328.¹

Total value of livestock sold (Census of 1901 did not break up value by species) - \$6,650,486.²

1910

Total value of all livestock killed on farms - \$8,609,944.³
 (Cattle killed on farms - \$1,239,136.⁴
 Swine killed on farms - \$6,480,961.⁵)

Total value of all livestock sold - \$20,129,977.⁶
 (Other cattle, beef cattle sold - \$3,900,404.⁷
 All cattle sold - \$7,427,231.⁸
 Swine sold - \$5,065,286.⁹)

¹ **Statistical Quebec Yearbook**, 1914: 220.

² Canada, Trade and Commerce, **Census of 1911**, Volume 1V: xciii.

³ **Ibid.**

⁴ **Ibid.** 400-1.

⁵ **Statistical Quebec Yearbook**, 1914: 220.

⁶ **Ibid.** 220.

⁷ **Ibid.**

⁸ **Ibid.**

⁹ **Ibid.**

Animals "sold" does not necessarily mean sold for slaughter, as the break up of value by species in 1910 indicates. Over 5 million dollars of the total 20 million reflected sales of milch cows. Another 5 million represented the sale of horses. Therefore only a rough ratio of the number of cattle killed on farms compared to the number of cattle sold for commercial kill can be had in either 1900 or 1910. The higher value of total species farm kill, however, to total species sold in 1900 must imply self-sufficiency on the farm. There is also evidence that farm kill in 1900 was actually higher than the Census stated.¹¹ While the ratio of farm kill to commercial selling for kill seemed to have shifted by 1910, it looks as if about one third of beef cattle in Quebec were still killed on farms in 1910.

Ontario

1900

Total value of animals killed on farms - \$9,687,109.¹²

Total value of animals sold - \$35,385,376.¹³

1910

Total value of all livestock killed on farms - \$9,474,294.¹⁴

(Cattle killed on farms - \$1,504,866.¹⁴)

Total stock sold - \$76,490,854.¹⁵

(Cattle sold, including milch cows - \$31,013,066.¹⁶)

Ontario was clearly more commercially oriented than Quebec by 1900. At least two and half times as many animals were sold off farms than were killed there. While Quebec relied less on farm kill after 1900, the province still had a higher ratio of farm kill to commercial production than did Ontario.

¹¹ Canada, Trade and Commerce, **Census** of 1911, Volume IV: lxxx.

¹² *Ibid.* xciii.

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ *Ibid.* 400-1.

¹⁶ *Ibid.* xciii.

¹⁷ *Ibid.* 400-1.

In 1920, the situation is somewhat clearer with better Census material.¹⁷

Quebec - In that year 314,609, valued at \$8,634,659., head of live cattle were sold off farms. (Average value of \$27.45) On the farm, 134,720 head, valued at \$3,779,254., were slaughtered. (Average value of \$28.05)

Ontario - In that year 702,254 head of live cattle were sold off farms in Ontario and were valued at \$36,397,752. (Average value at \$51.83) On the farm, 102,245 head, valued at \$4,293,481., were slaughtered. (Average value at \$42.00)

Clearly Quebec still relied to a considerable degree for beef on farm kill. About one third of the province's beef production was consumed on the farm self-sufficiently. In Ontario about one seventh was. Note also the prevalence of dairy beef in Quebec by the lower values. Dairying in Quebec was more important, by far, than beef cattle farming by 1920.

While the figures in reports of **Live Stock and Animal Products** do not provide comprehensive understanding of cattle movements, an overall look at them convincingly indicates a greater movement of beef cattle into Quebec, overall, compared to any other province by 1920. The most major movement was from Alberta and Ontario.¹⁸

¹⁷ All material relating to 1920 is from Canada, Dominion Bureau of Statistics, the **Census** of 1921, Volume V: 52-3.

¹⁸ **Live Stock and Animal Products**, 1920: 26-9.

Appendix L: Per Capita Consumption of Meat (in lbs) in Britain, Canada, and the United States.

In 1899 Canada's consumption of dressed meat per capita a year was 129 lbs., to the United States' 140 lbs., Britain's 115 lbs., and Australia's 208 lbs. (From **Publications of the International Agricultural Institute**, *Bulletins of Agricultural Statistics*, 2 (1912) 11. Published by the Publications Branch.) However, **Board of Inquiry into the Cost of Living Report** of 1915 gave quite different figures for Canada and Britain (but none for the United States), and figures which suggested a rise in meat consumption. In this source it was stated that Canada consumed per capita 175 lbs., and Britain consumed per capita 120 lbs. in 1915. (Volume 1: 38.) (The British figure matched Perren's in R. Perren, **The Meat Trade in Britain, 1850-1914** (London: Routledge and Kegan Paul, 1978) 3.) It must be remembered that these figures reflect consumption of all meats, not just beef.

However, other sources suggest that there was a decline in beef eating in the United States, relative to an increase in hog eating by the 1920's. If all meat eating was reduced, then, beef eating was declining more rapidly. (See **Livestock Under the AAA**, by D. A. FitzGerald (Washington: The Brookings Institution, 1935) 11.)

The Department of Agriculture for British Columbia claimed in **The Agricultural Journal** that Canada's beef consumption was 59 lbs. per capita, and the United States' consumption of beef was 84 lbs. per capita in 1923. (**The Agricultural Journal**, 1923: 282.) At the same time McFall reported that in 1923 Canada's consumption of beef was 70.55 lbs. per capita, the United States consumed 70.4 lbs. per capita, and Britain consumed 63.4 lbs. per capita. (From R. J. McFall, **The World's Meat** (New York: D Appleton and Company, 1927) 578-9.) McFall's figures indicated that beef eating represented about half of all meat eating, a fact that rather contradicts the information in **Livestock Under the AAA**.

It is difficult to put consumption figures in a table, because the information does not exhibit steady variables. The following is a list of data, sometimes conflicting, which together does suggest a pattern.

1899 pre capita consumption of meat.

United States - 140 lbs.,
 Britain - 115 lbs.,
 Canada - 129 lbs..

Canada, Department of Agriculture, **Publications of the International Agricultural Institute**, *Bulletins of Agricultural*

1900 per capita consumption of meat.

United States - 185.5 lbs.,

Britain - 121.3 lbs.

(Reduced consumption is computed by assessing the falling ratio of head of cattle compared to head of people from 1840 to 1909.)²

1915 per capita consumption of meat.

Britain - 120 lbs.,

Canada - 175 lbs.³

1923 per capita consumption of beef and meat from various sources.

I]United States - 84 lbs.,

Canada - 59 lbs.⁴

II] (Beef represented about 1/2 meat consumption⁵)

1923 per capita consumption of beef: United States - 70.4 lbs., (or 141.7 lbs. meat) Canada - 70.55 lbs. (or 141.1 lbs.), Britain - 63.4 lbs. (or 126.8 lbs.).⁶

III] 1923 per capita consumption for Canada: beef - 70.5 lbs., pork - 81.5 lbs.

1927 per capita consumption of meat.

Canada: beef - 75.5 lbs., pork - 77.5 lbs.⁷

North American consumption of beef to all meat was between 40 and 50%. World ratio was beef 48% to all other meat in 1964.

Statistics, 2 (1912): 11.

² United States of America, **Report** of the Department of Agriculture, 1909: 18.

³ Canada, Parliament, **Report of the Board of Inquiry into the Cost of Living**, 1 (1915): 38.

⁴ British Columbia, Department of Agriculture, **Agricultural Journal**, 1923: 282.

⁵ R. J. McFall, **The World's Meat** (New York: D Appleton and company, 1927) 578-9.

⁶ D. R. McDonald, **The Stockyard Story** (Toronto: New Canada Publications, 1985) 38.

⁷ **Ibid.**

⁸ **Ibid.**

Between 1955 and 1964 the increase in meat eating in the world was due to increased eating of beef.

1955 per capita consumption of beef.

Canada: beef 96.8 lbs. (or 193.6 lbs. meat).⁹

1963 per capita consumption of beef.

Canada: beef 85.8 lbs. (or 171.6 lbs. meat)¹⁰

Beef eating over pork eating increases with prosperity and a rise in population - because it is a less expensive meat. Beef reflects prosperity, therefore, because its use increases in ratio to all meat eating at that time. So if beef eating rises, it is a sign of increased prosperity.¹¹

1987 per capita consumption of meat.

United States: beef - 105 lbs., pork - 62 lbs., chicken - 79 lbs. (all meat - 246 lbs.)

Canada: beef 91 lbs., pork 61 lbs., chicken 62 lbs. (all meat 214 lbs.)

Europe: beef 51 lbs., pork - 79 lbs., chicken 37 lbs. (all meat 167 lbs.)¹²

It seems reasonable to make the following conclusions about patterns of consumption from this data.

Generally speaking there was a rise in all meat eating throughout Europe and North America. North Americans tended to consume more meat than Europeans, and also more beef in ratio to other meat. The ratio of beef to other meats in North America was just under 50% - but that ratio shifted with cycles of economic depression and prosperity. Canada's consumption patterns were similar to those of the United States, but were at a slightly lower level. Short term falls in meat eating provoked concern that there was a serious decline in beef eating habits of the population. The figures over at least 90 years do not reflect that pattern; but rather suggest that meat consumption has risen. There has been a shift in the last 30 years to a greater emphasis on poultry. This situation reflects changing

⁹ **The Market for Beef and Veal and Its Factors** (Paris: Organization for Economic Co-operation and Development, 1967) 19-20.

¹⁰ **Ibid.**

¹¹ **Ibid.** 22

¹² G. Fairbain, **Canada Choice, Economic Health, and Moral Issues in Food From Farm Animals** (Ottawa: Agricultural Institute of Canada, 1989).

consumer demand for meat type, not reduced demand for meat itself. Beef quality and acceptance of beef generally showed shifts over the entire period (1870 - 1987).

Appendix M: Discussion in 1902 About the Characteristics of a Good Carcass.

Mr Stewart of Alberta: "As a representative from Alberta, from whence we expect to ship a car load of export cattle next year to this city [Guelph], I should not like to come all this distance and not know from which standpoint the cattle are being judged."

Mr Smith: "I should like to say that this is the question we laid out for our association to determine. We are endeavouring to get at that very point. At Chicago the animal that was awarded the first prize alive was not considered when dead the best animal for export. At that show they settle it in this way, that, in making a decision as to the best carcass of beef, you must judge it from the standpoint of the market that will pay the highest price. You can therefore compete in the live class with a much fatter animal than the one that you would select for the general market."

Mr Stewart: "Do you not think it is the export trade the people of Canada have to look to, not the home consumption? The animal that has been awarded first prize in the carcass would be altogether too thin for the export to Great Britain, and it is to the British market that we look for the principle outlet of our best cattle. That first prize carcass came from an animal that was long and lean when alive, and it killed out the same. I am a purchaser in Alberta of export cattle for Gordon & Ironsides, the biggest shippers from the west. If I bought animals like that one I should soon be told that my services were no longer required. I have been asked to represent Alberta by the Government, and I shall be asked to select cattle that are to come here for exhibition next year. That is the reason I want to know what we should bring, and on what basis they will be judged."

Mr Campbell: "What about the rule in our prize list that all animals except for dairy purposes are to be judged from the breeders' and consumers' standpoint. Have the judges of the carcasses considered the breeder or have they judged altogether from the home trade standpoint? Were the judges instructed to consider the breeders' standpoint at all?"

A judge answered, and stated that the old country wanted lean meat and carcasses. Stewart asked the judge what condition was he considering the arrival of the carcass - dead or alive?

SP 23, Ontario, 1902: 45 for all of the above.

Mr Waller answered, speaking as a butcher: "We are judging the animals that are most suitable for the butcher and the consumer. We want early maturers that will not produce too much fat."

Mr Rennie: "Speaking as a feeder, how is it that to-day and for years past the cry has been that you could not make animals too fat for the export trade?"

Mr Campbell: "[I]t is evident to everyone in this room that the feeder and breeder have been entirely lost sight of in the decisions that have been arrived at ... in beef." The prize animals here are fat - ready for the Christmas market.

Mr Smith: "Surely you are not educating the people to produce beef for the Christmas market?"

Mr Anderson: "Are we to understand that the animal that got the first prize is for show purposes - that you buy them for advertising, although for commercial purposes you prefer a carcass like the first prize carcass?"

Mr Tyson: Yes. "You cannot get an animal too fleshy, but you can get it too fat".

Mr Smith: "It is absurd then to give prizes for animals that are suitable only for the Christmas trade? We should give prizes for beef that is useful for 365 days in the year."²

C. F. Curtiss, agricultural expert from Iowa: "The foreign market has charged [sic?] more than our own. Today the export cattle are not the heaviest or ripest cattle that come to our market. Our market pays a higher price for the heaviest and ripest than the foreign market will pay". "The question has often been asked on our side: 'Why is it that the animals win on foot are generally unfit to win on the block?' and the contention has been that judgment in one case or the other is wrong, many claiming that the animals winning on foot ought to win on the block. There is one particular point which the animal reaches when it is in the best condition for the block. You may carry an animal somewhat beyond that point for the show on foot without spoiling its appearance but you do so at the expense of the carcass."

John Dryden said that the points of excellence should match.

Mr Curtiss replied: "Mr Dryden takes the position that a good many of our people do. It looks logical and reasonable, but I think there are other considerations which we must take into

² **Ibid.** 46-7 for all material back to the last footnote.

account.³ These animals are not judged for the purpose of selecting an animal that will give the best carcass; if you did that, you would discard a large part of the animals that have been winning on foot at this show [Ontario Provincial Winter Fair] or at any other show. You could go into the stock yards and select a steer that would win on the block. This show is a demonstration from the breeder's standpoint as well as the feeder's standpoint. One reason why the butcher's judgment of fat is generally unsatisfactory to the breeder is that the butcher simply looks at the points he can make money out of; he wants a steer that is all loin and rib. The breeder knows that you cannot sacrifice heart girth an low, level form, and a good lowerline, etc., without disregarding what is essential to you as a breeder. We want to see the possibilities of these animals. We know we can stop short of the excessive condition that makes an over-fat animal, but we have no assurance that we can get him there."

Dryden agreed, but said that the average farmer did not understand consumer demands. Why do we produce inferior commodities for the home market and the best for overseas? "Somehow we get mixed up in the show ring type and the breeding type and in the ideal animal to produce, so far as the consuming public is concerned"

Mr Day, agricultural expert at the Ontario Agricultural College: "The idea in putting on a class of export steers was to bring out that point?"⁴

Mr Dryden: "Exactly; but I am not sure whether we know yet or not. How are we to tell when a steer is ready for market? How are you to tell that an animal will come first alive and dead?"

Mr Curtiss: "We cannot do it; I do not believe there is any man living who could have judged these carcasses when on foot, and told which would come first on the block." You have to know how the animal was fed.⁵

(Curtiss's opinion appeared to be the right one. In 1910 an interesting experiment was done at the Ontario Agricultural College.⁶ A white, smooth, beautiful steer and a plain, rough-shouldered, low-backed steer were slaughtered. The plain one

³ *Ibid.* 56 for all material back to the last footnote.

⁴ *Ibid.* 57 for all material back to the last footnote.

⁵ *Ibid.* 58 for all material back to the last footnote.

⁶ *Farmer's Advocate*, February 10th, 1910: 209.

dressed out at 65% with good marbled meat, while the white beauty dressed out at 63% with not as good meat. "The call is rather to inquire into the soundness of theories commonly held, and to examine whether in following the butcher's ideal of a smooth, fine, trim-bellied type, breeders of beef cattle may not have sacrificed feeding qualities, without securing a proportionate advantage in the quality and percentage of meat," the **Farmer's Advocate** noted.⁷⁾

⁷ Ibid.

Selected Bibliography

Primary Sources: Not Printed.

1] Manuscripts.

National Archives of Canada, Ottawa: [N.A.C.]
 - R.G. 17, Records of the Department of Agriculture
 General Correspondence

Public Archives of Ontario, Toronto: [P.A.O.]
 - Manuscripts
 Arthur Johnston Papers, MU 1611-1622.
 John Dryden Scrapbooks, MU 2588-2592

University of Guelph Archives, Guelph:
 - Private Papers
 George C Creelman Papers.
 Thomas Shaw Papers.

2] Interviews.

David Adams, Past General Manager of the Canadian Meat Council, interviewed by the present writer: February 17th, 1995. February 21st, 1995.

Primary Sources: Printed.

1] Government Documents.

Canada:

Department of Agriculture:

- **A Directory of Breeders of Pure Bred Live Stock of the Dominion of Canada, 1901, 1908, 1910.**
- **Annual Review of the Live Stock Market and Meat Trade Situation, 1922, 1923, 1924.**
- **Census of Canada. 1871, 1881, 1891.**
- **Comparative Prices, 1911.**
- **Reports. Dominion Shorthorn Breeders' Association. 1901-1920.**
- **General Convention of the National Live Stock Association, 1908.**
- **Publications of the International Agricultural Institute. 1911-1912.**
- **Statistical Yearbooks of Canada. 1885-1924.**

- **The Agricultural Gazette of Canada, 1914-1924.**
- **The Origin and Quality of Commercial Live Stock Marketed in Canada. 1920-1924.**

Dominion Bureau of Statistics:

- **Census of Canada. 1921.**
- **Live Stock and Animal Products. 1920-1924.**
- **Monthly Bulletin of Agricultural Statistics. 1918-1924.**

Parliament:

- **Sessional Papers, 1867-1924. [SP, Canada.]**
- House of Commons.
 - **Debates. April 23rd, 1894. April 30th, 1917.**
 - **Journals. Volume 16, 1882, Appendix 2. Volume 18, 1884, Appendix 6. Volume 19, 1895, Appendix 3.**
 - **Proceedings of the Select Committee on the Cost of Living, Ottawa, 1919.**
 - **Proceedings of the Special Committee of the House of Commons to Inquire into Agricultural Conditions, Two Volumes, Ottawa, 1924.**
 - **Report of the Board of Inquiry into the Cost of Living, Two Volumes, Ottawa, 1915.**

Trade and Commerce:

- **Census of Canada. 1911.**
- **Handbook of Agricultural Statistics. Part VI, Livestock and Animal Products - 1871 - 1965. Historical Series of Livestock and Animal Products in Canada, 1966.**

Pamphlets and Other Documents.

Agriculture Canada. **Canada's Agri-Food System: An Overview,** Ottawa: Agriculture Canada, 1981.

----- **Publication 1749B,** Ottawa: Communications Branch, 1986.

Arkell, H S. "Observations upon Government Assistance to Agriculture in certain Countries of Europe", Bulletin 15, Branch of the Live Stock Commissioner, Ottawa: Department of Agriculture, 1911.

Dawson, J. **Changes in Agriculture to 1970, Staff Study,-** Ottawa: Economic Council of Canada, 1964.

Department of Agriculture. **Agricultural War-Book, Patriotism & Protection 'More than Ever',** Ottawa: Department of Agriculture, 1915.

- . "Finish the Feeders in Canada; Keep the Heifers at Home", Pamphlet 20, Live Stock Branch, Ottawa: Department of Agriculture, 1916.
- McEachran, D. "Tuberculosis in Cattle", Farmers' Bulletin no 1, Ottawa: Department of Agriculture, 1897.
- Munn, G. H. "Feeds for Wintering and Winter Fattening of Beef Cattle in Eastern Canada", Exhibition Circular no 106, Ottawa, Dominion Experimental Farms [no date given but in the 1920's period].
- Rutherford, J. G. "The Cattle Trade of Western Canada", Ottawa: Department of Agriculture, 1909.
- Spencer, J, B. "Beef Raising in Canada", Bulletin 13, Ottawa: Department of Agriculture, 1910.

Alberta:

- Department of Agriculture.
- **Reports.** 1905-1924.

British Columbia:

- Department of Agriculture.
- **Reports.** 1913-1924.
- **The Agricultural Journal.** 1916-1923.

Manitoba:

- Department of Agriculture.
- **Reports.** 1890-1924.

Nova Scotia:

- Department of Agriculture
- **Reports.** 1903. 1924-5.

Ontario:

- Department of Agriculture.
- **Crop Bulletins.** 1882-1924.
- **O.A.C. Review.** 1889-1916.
- **Report** of the Agricultural Inquiry Committee, 1924.
- **Report** of the Ontario Agricultural Commission, 5 volumes, 1881.
- **The Ontario Agricultural Gazette.** 1897-1902.

Legislature.

- **Sessional Papers.** 1867-1924. [SP, Ontario.]

Pamphlets and Other Documents:

Brown, W. "Milk and Beef from Permanent Pasture", Bulletin IV, Ontario Agricultural College. Toronto: Ontario Department of Agriculture, 1886.

----- "Oatmeal and Wheat for Store Cattle", Bulletin XXVI, Ontario Agricultural College. Toronto: Department of Agriculture, 1888.

----- "Specimens of Holstein Beef", Bulletin XXV, Ontario Agricultural College. Toronto: Department of Agriculture, 1888.

----- "The Free Power of Durham Cattle", Bulletin XXIV, Ontario Agricultural College. Toronto: Department of Agriculture, 1888.

----- "Report of William Brown on the Herds and Flocks of Ontario", Toronto: Legislature of Ontario, 1883.

Cowan, D., and F. C. Hart. "Motor Transportation in Rural Ontario", Bulletin 277, Co-operation and Markets Branch, Toronto: Ontario Department of Agriculture, July 1920.

Duff, J. "Dairying in the Province of Ontario", Toronto: Ontario Department of Agriculture, 1910.

Leitch, A., and J. C. Neale. "Farm Management: Part I. The Dairy Farming Business in Western Ontario", Bulletin 275, Ontario Agricultural College. Toronto: Ontario Department of Agriculture, January 1920.

----- "Farm Management, 1919: Part II. The Beef Raising Business in Western Ontario, The Mixed Farming Business in Western Ontario, The Dairying Farming Business in Eastern Ontario," Bulletin 278, Ontario Agricultural College. Toronto: Ontario Department of Agriculture, June 1920.

Ontario Agricultural College. "Better Bulls", Bulletin 281, Ontario Agricultural College. Toronto: Ontario Department of Agriculture, November 1920.

Ontario Department of Agriculture. "Tuberculosis in Cattle", Special Bulletin of the Ontario Department of Agriculture, Toronto: Ontario Department of Agriculture, July 1897.

Shaw, T. "Corn Ensilage for Making Beef", Bulletin XLIX, Ontario Agricultural College. Toronto: Department of Agriculture, 1890.

Toole, W. "Beef Cattle", Bulletin 310, Ontario Agricultural College. Toronto: Department of Agriculture, August, 1925.

Quebec:

Department of Agriculture.

- **Statistical Yearbooks** for Quebec. 1914. 1919.

Legislature.

- **Sessional Papers**. 1880-1885.

Saskatchewan:

Department of Agriculture.

- **Reports**. 1905-1924.
- **Report** of the Saskatchewan Overseas Livestock Marketing Commission, 1927.

The Union of the Canadas:

Board of Agriculture of Canada West.

- **The Canada Herd Book, Containing the Pedigrees of Improved Short-Horned Cattle**, volume 1, 1867. CIHM no. 22495.

Board of Registration and Statistics.

- **Census** of the Canadas. 1851, 1861.

The United States of America:

- **Cattle and Beef in the United States, The Tariff**

Problems Involved, Washington: Government Printing, 1922.

Congress.

- Senate [51st Congress, 1st Session]
Relations with Canada. Testimony Taken by the Select Committee on Relations with Canada.

Department of Agriculture.

- **Foreign Markets for American Products**, 1901.
- **Reports**. 1895-1911.
- **Report** of the Bureau of Animal Industry. 1886-1909.

3] Farm Journals:

Farm and Dairy & Rural Home. 1908-1918. Canadian Institute for Microreproductions [CIHM]. CIHM no. 05026.

Farmer's Advocate [Eastern Edition]. 1867-1920. Microfilm, National Library, Ottawa.

Farmer's Advocate [Western Edition]. 1890-1910. Microfilm, National Library, Ottawa.

Farming. 1895-1900. CIHM no. 04047.

Farming World and Canadian Farm and Home 1903-1907. CIHM no. 05015.

The Canadian Breeder and Agricultural Review. 1885. CIHM no. 04033.

The Canadian Dairyman and Farming World. 1908. CIHM no. 05025.

The Canadian Live-Stock and Farm Journal. 1886-1895. CIHM no. 04046.

The Farming World, for Farmers and Stockmen. 1900-1902. CIHM no. 04236.

4] Other Printed Primary Source Material:

Adami, J. G. "On the Significance of Bovine Tuberculosis and Its Eradication and Prevention in Canada", a paper for the Canadian Medical Association, in 1899. Reprinted from the **Canadian Journal of Medicine and Surgery**, December 1899. CIHM no. 11541.

Edminster, L. R. **The Cattle Trade and the Tariff**, New York: The MacMillan Company, 1926.

Fream, W. "Canadian Agriculture; the Eastern Provinces", **Journal of the Royal Agricultural Society of England**, new series, 21 (1885): Part 1 and 2. CIHM no. 09760 and 09762.

Henderson's Directories Alberta Ltd. **Henderson's Alberta Gazetteer and Directory**, Calgary: Henderson's Directories Alberta Ltd., 1924.

History of Short-horned Cattle Imported into the Present Dominion of Canada from Britain and United States, Chronologically Arranged, volume 1 to 10, 1867 to 1894. CIHM no. 02737.

Lovell, J. and Son. **Lovell's Montreal City Directory**, Montreal: John Lovell and Son, 1886-1901.

Marshall, D. **Shorthorn Cattle in Canada**, no place given:
Dominion Shorthorn Association, 1932.

Might's Directories Ltd. **Hamilton City Directory**, Hamilton:
Might's Directory Ltd., 1901-1912.

----- . **Toronto City Directory**, Toronto: Might & Taylor, 1867-
1912, 1924.

Plimsoll, S. **Cattle Ships**, London: Kegan Paul, 1890.

Rennie, J., edited by. **The Growth and Development of Canada's
Meat Packing Industry: A Documentary Commemorating the
50th Anniversary of the Meat Packers Council of Canada
[1919-1969]**, no place given: Canadian Meat Council, 1969.

Sanders, A. **Short-Horn Cattle, A Series of Historical
Sketches, Memoirs and Records of the Breed and Its
Development in the United States and Canada**, Chicago:
Sanders Publishing Co., 1900.

Shaw, Thomas. **Feeding Farm Animals**, Chicago: Orange Judd
Company, 1907.

----- . **Animal Breeding**, Chicago: Orange Judd Company, 1901.

----- . **The Study of Breeds**, Chicago: Orange Judd Company,
1900.

Sheldon, J. P. "Report on the American and Canadian Meat
Trade", **Journal of the Royal Agricultural Society of
England**, new series, 8 (1877): 337-355.

**Speech of the General Manager of the Canadian Meat Council at
the 70th Annual Meeting of the Canadian Meat Council,**
February, 1990.

"Stoppage of Canadian Cattle Trade; Injustice to Scottish
Farmers", **Dundee Courier**, 1892. CIHM no. 13906.

**Submission of the Meat Packers Council of Canada to the
Commission on Inquiry into the Marketing of Beef**, March,
1975.

"The Canadian Cattle Scandal: Report of Sir Charles Tupper"
from **Dundee Courier**, 1893. CIHM no. 24878.

"The Cattle Quarantine System of Canada", **Morning Chronicle**,
1883. CIHM no. 00579.

- The Industrial and Development Council of Canadian Meat Packers' Submission** to the Royal Commission on Canadian Economic Prospects [Gordon Commission], 1956.
- Winnipeg Directory Publishing Co. **Henderson's Directory of the City of Winnipeg**, Winnipeg: Winnipeg Directory Co., 1884.
- Tupper, C. "**Restrictions on Canadian Cattle: Important Statement made at Westminster Palace Hotel**", 1893. CIHM no. 25050.
- Von Richthofen, Walter Baron. **Cattle-Raising on the Plains of North America**, New York: D Appleton and Company, 1885.

Secondary Sources

1] Books

- Agriculture Canada. **One Hundred Harvests: Research Branch Agriculture Canada, 1886-1986**, Ottawa: Agriculture Canada, 1986.
- . **Canada's Agriculture, The First Hundred Years**, Ottawa: Agriculture Canada, 1967.
- Atack J. and F. Bateman. **To their Own Soil: Agriculture in the Antebellum North**, Ames: Iowa State University Press, 1987.
- Beckett, J. **The Agricultural Revolution**, Oxford, U.K., Cambridge, U.S.A.: B. Blackwell, 1990.
- Bidwell, P. W., and J. L. Falconer. **History of Agriculture in the Northern United States, 1620-1860**, Washington: Carnegie Institute, 1925.
- Bliss, M. **A Canadian Millionaire, The Life and Business Times of Sir Joseph Flavelle, Bart., 1858-1939**, Toronto: University of Toronto Press, 1978.
- . **A Living Profit**, Toronto: McClelland and Stewart, 1974.
- Boam, H., compiled by. **Twentieth Century Impressions of Canada**, Montreal: Sells Ltd., 1914.
- Bogue, A. **From Prairie to Corn Belt, Farming on the Illinois and Iowa Prairies in the Nineteenth Century**, Chicago: University of Chicago Press, 1963.
- Brado, E. **Cattle Kingdom, Early Ranching in Alberta**, Toronto: Douglas and McIntyre, 1984.
- Breen, D. **Canadian Ranching Frontier, 1874-1924**, Toronto: University of Toronto Press, 1983.
- Burrows, G. **History of Dairy Shorthorn Cattle**, London: Vinton & Company, 1950.
- Canada Packers Limited. **The Story of Our Products, Canada Packers Limited**, Toronto: The Jackson Press, 1943.
- Clemen, R. A. **American Livestock and Meat Industry**, New York: The Ronald Press Company, 1923.

- Cohen, M. G. **Women's Work, Markets and Economic Development in Nineteenth Century Ontario**, Toronto: University of Toronto Press, 1987.
- Critchell, J. T. and J. Raymond. **A History of the Frozen Meat Trade**, London: Constable & Company Ltd., 1912.
- Cruikshank, K. **Close Ties, Railways, Government, and the Board of Railway Commissioners, 1850-1933**, Montreal and Kingston: McGill & Queen's University Press, 1991.
- Danhof, H. **Change in Agriculture, The Northern United States, 1820-1870**, Cambridge: Harvard University Press, 1969.
- Dempsey, H., edited by. **The CPR West**, Toronto: Douglas and McIntyre, 1984.
- Drummond, I. **Progress Without Planning, The Economic History of Ontario From Confederation the Second World War**, Toronto: University of Toronto Press, 1987.
- Drummond, W. M., W. J. Anderson, and T. C. Kerr. **Review of Agricultural Policy in Canada**, Ottawa: Agricultural Economic Research Council of Canada, 1966.
- Ensminger, M. E. **Beef Cattle Science**, Danville: The Interstate Printers & Publishers, Inc., 1987.
- ET al. **The Frozen and Chilled Meat Trade, A Practical Treatise by Specialists in the Meat Trade**, London: The Gresham Publishing Company Ltd., 1929.
- Fairbain, G. **Canada Choice, Economic Health, and Moral Issues in Food from Animals**, Ottawa: Agricultural Institute of Canada, 1989.
- FitzGerald, D. A. **Livestock Under The AAA**, Washington: The Brookings Institution, 1935.
- Fletcher, R. H. **Free Grass to Fence, The Montana Cattle Range Story**, New York: University Publishers Incorporated, 1960.
- Fowke, V. **Canadian Agricultural Policy: The Historical Pattern**, Toronto: University of Toronto Press, 1946.
- Fraser, A. **Animal Husbandry Heresies**, London: Crosby Lockwood & Son Ltd., 1960.

- Gagan, D. **Hopeful Travellers: Families, Land, and Social Change in Mid-Victorian Peel County, Canada West**, Toronto: University of Toronto Press, 1981.
- Garner, F. H. **The Cattle of Britain**, London: Longman's, Green and Co., 1944.
- Gates, P. **Agriculture and the Civil War**, New York: Knopf, 1965.
- . **The Farmer's Age, Agriculture 1815-1860**, New York: Holt, Rinehart and Winston, 1960.
- Graham, W. H. **Greenbank: Country Matters in 19th Century Ontario**, Peterborough: Broadview Press, 1988.
- Harrow Early Immigrant Research Society. **Harrow and Colchester South, 1792-1992**, Altona: Friesen Printers, 1993.
- Haynes, N. B. **Keeping Livestock Healthy, A Veterinary Guide**, Pounal, Vermont: Storey Communications, Inc., 1985.
- Heath-Agnew, E. **A History of Hereford Cattle and Their Breeders**, London: Gerald Duckworth and Co., 1983.
- Innis, H., edited by. **The Dairy Industry in Canada**, Toronto: The Ryerson Press, 1937.
- Johnson, P. C. **Farm Animals in the Making of America**, Des Moines: Wallace Homestead Book Company, 1975.
- Jones, R. **History of Agriculture in Ontario 1613-1880**, ----- Toronto: University of Toronto Press, 1946.
- . **History of Agriculture in Ohio to 1880**, Kent: Kent University Press, 1983.
- Jordon, T. **North American Cattle Ranching Frontiers, Origins, Diffusion, and Differentiation, Histories of the American Frontier**, Albuquerque: University of New Mexico Press, 1993.
- Leavington, P. **Canada's Holsteins**, Markham: Fizhenry & Whiteside, 1983.
- Lerner, M. and H. Donald. **Modern Developments in Animal Breeding**, London and New York: Academic Press, 1966.
- Little, J. I. **Crofters and Habitants, Settler Society, Economy, and Culture in a Quebec Township, 1848-1881**,

- Montreal and Kingston: McGill-Queen's University Press, 1991.
- MacEwan, G. **Highlights of Shorthorn History**, Winnipeg: Hignill Printing Limited, 1982.
- Pat Burns, **Cattle King**, Saskatoon: Western Producer Prairie Books, 1979.
- McDonald, D. R. **The Stockyard Story**, Toronto: New Canadian Publications, 1985.
- Marshall, J. **Half Century of Farming in Dufferin**, no publisher listed or date.
- McCalla, D. **Planting the Province, The Economic History of Ontario: 1784-1870**, Toronto: University of Toronto Press, 1993.
- McCallum, J. **Unequal Beginnings: Agriculture and Economic Development in Quebec and Ontario until 1870**, Toronto: University of Toronto Press, 1980.
- McFall, R. J. **The World's Meat**, New York: D Appleton and Company, 1927.
- Minchinton, W. E., edited by. **Essays in Agrarian History**, volume 1 and 2, Newton Abbot: David & Charles, 1968.
- Mingay, G. **The Agrarian History of England and Wales, 1700-1850**, volume 6, edited by J Thirsk, Cambridge: University Press, 1967-1991.
- and J D Chambers. **The Agricultural Revolution, 1750-1880**, London: Batsford, 1966.
- Moncrieff, P. M., G. D. Weaver, P. Fawcett, compiled by. **Canada's Agricultural Systems**, Department of Agricultural Economics, Ste. Anne de Bellevue: Macdonald College of McGill University, 1978.
- Nourse, E. **Agricultural Economics**, Chicago: University of Chicago Press, 1916.
- Ojala, E. M. **Agriculture and Economic Progress**, London: Oxford University Press, 1952.
- Perren, R. **The Meat Trade in Britain, 1840-1914**, London: Routledge and Kegan Paul, 1978.

- Piva, M., edited by. **A History of Ontario, Selected Readings**, Mississauga: Copp Clark, Pitman Ltd., 1988.
- Phillips, W. G. **The Agricultural Implement Industry of Canada**, Toronto: University of Toronto Press, 1956.
- Purdy, H. **Breeds of Cattle**, New York: Chanticlear Press Inc., 1987.
- Reaman, G. E. **The Trail of the Black Walnut**, Toronto: McClelland and Stewart Ltd., 1957.
- Ritvo, H. **The Animal Estate**, Cambridge: Harvard University Press, 1987.
- Runnion, D., R. Goff, and G. Martin. **A History of Limousin in North America**, Fort Collins: Limousin World, 1987.
- Schlebecker, J. **Cattle Raising on the Plains, 1900-1961**, Lincoln: University of Nebraska Press, 1963.
- Shannon, F. **The Farmer's Last Frontier, Agriculture 1860-1897**, New York: Holt, Rinehart & Winston, 1961.
- Shortt, A., edited by. **Canada and Its Provinces**, Toronto: Glasgow, Brook & Company, 1914.
- Skaggs, J. M. **Prime Cut, Livestock Raising and Meatpacking in the United States, 1607-1983**, College Station: Texas A & M University Press, 1986.
- Slicker van Bath, B. H. **The Agrarian History of Europe, AD 500 - 1850**, translated by O Ordish, London: Edward Arnold, 1963.
- Smith, P. H. **Politics and Beef in Argentina, Patterns of Conflict and Change**, New York: Columbia University Press, 1969.
- Stacey, C. P. **Canada and the Age of Conflict, Volume One: 1867-1921**, Toronto: University of Toronto Press, 1984.
- Steffen, J. O. **Comparative Frontiers**, Norman: University of Oklahoma Press, 1980.
- The Market for Beef and Veal and Its Factors**, Paris: Organization for Economic Co-operation and Development, 1967.

- Thompson, J. A. **History of Livestock Raising in the United States, 1607-1860**, Washington: Bureau of Agricultural Economics, 1942.
- Thompson, F. M. L. **English Landed Society in the Nineteenth Century**, London: Routledge & Kegan Paul, 1963.
- Trow-Smith, R. **A History of British Livestock Husbandry, 1700-1900**, London: Routledge and Kegan Paul, 1959.
- Voisey, P. **Vulcan: The Making of a Prairie Community**, Toronto: University of Toronto Press, 1987.
- Von Thunen, J. H. **Der Isolierte Staat, Translated into Von Thunen's Isolated State: An English Edition of Der Isolierte Staat**, by C Wartenburg, Oxford: Pergaman Press, 1966.
- Whitaker, J. **Feedlot Empire: Beef Cattle Feeding in Illinois and Iowa, 1840-1900**, Ames: The Iowa State University Press, 1975.
- Wiebe, R. H. **The Search for Order, 1877-1920**, New York: Hill and Wang, 1967.
- Wood, A. C. **Old Days on the Farm**, Toronto: McClelland, Goodchild and Stewart, 1918.
- Wood, J. D., edited by. **Perspectives on the Landscape and Settlement in Nineteenth Century Ontario**, Toronto: McClelland and Stewart, 1973.

2] Articles

- Allen, R., C. Dodge, and A. Schmitz. "Voluntary Export Restraints as Protection Policy: the U. S. Beef Case", **American Journal of Agricultural Economics**, 65 (1983): 291-296.
- Ankli, R. "Ontario's Dairy Industry, 1880-1920", **Canadian Papers in Rural History**, 8 (1992): 261-276.
- and W. Miller. "Ontario Agriculture in Transition: the Switch from Wheat to Cheese", **Journal of Economic History**, 42 (1982): 207-215.
- Atack, J. and Bateman. "Self-sufficiency and the Marketable Surplus in the Rural North, 1860", **Agricultural History**, 58 (1984): 296-313.

- Blackman, J. "The Cattle Trade and Agrarian Change on the Eve of the Railway Age", **Agricultural History Review**, 23 (1975): 48-62.
- Bogue, A. "The Progress of the Ontario Cattle Industry During the 1880's", **Agricultural History**, 21 (1947): 163-168.
- . "The Agricultural Press in Ontario in the 1880's", **Ontario History**, 38 (1946): 43-51.
- . "Social Theory and the Pioneer", **Agricultural History**, 34 (1960): 21-34.
- Brunger, E. "Dairying and Urban Development in New York State, 1850-1900", **Agricultural History**, 29 (1955): 169-173.
- Derry, M. "Contemporary Attempts to Understand the Cattle Plague of 1865", **Victorian Studies Association**, Ontario Newsletter, no. 54 (1994): 8-13.
- Dixon, L. V., and W. K. McPherson. "A Quantitative Evaluation of the Ability of Individuals to Grade Live Cattle", **American Journal of Agricultural Economics**, 48 (1966): 61-74.
- Duncan, C., "Agriculture and the Industrial Teleology in Modern English History: An Essay in Historiographic Provocation and Sociological Revision", **Canadian Papers in Rural History**, 7 (1990): 335-362.
- Elofson, W. M. "Adapting to the Frontier Environment: The Ranching Industry in Western Canada, 1881-1914", **Canadian Papers in Rural History**, 8 (1992): 307-327.
- Erickson, A. B. "The Cattle Plague in England, 1865-1867", **Agricultural History**, 35 (1961): 94-103.
- Evans, S. "Canadian Beef for Victorian Britain", **Agricultural History**, 53 (1979): 748-762.
- Firch, R. "Discussion: Commodity Price Analysis", **American Journal of Agricultural Economics**, 47 (1965): 1320-1322.
- Fisher, J. "The Economic Effects of Cattle Disease in Britain and Its Containment, 1850-1900" **Agricultural History**, 54 (1980): 278-294.
- Fletcher, T. W. "The Great Depression of English Agriculture, 1873-1896", **Economic History Review**, series 2, 13 (1961): 417-432.

- Fowke, V. "Royal Commissions and Agricultural Policy",
Canadian Journal of Economics and Political Science, 14
(1948): 163-175.
- Fussell, G. "The Size of English Cattle in the Eighteenth
Century", **Agricultural History**, 3 (1929): 160-181.
- . "Crop Husbandry in Eighteenth Century England",
Agricultural History, 15 (1941): 202-216; and 16 (1942):
41-63.
- . "Animal Husbandry in Eighteenth Century England",
Agricultural History, 11 (1937): 96-116.
- Gates, P. "Agricultural Change in New York State, 1850-1890"
New York History, 50 (1969): 115-142.
- Hall, S. A. "The Cattle Plague of 1865", **Medical History**, 6
(1962): 45-58.
- Henlein, P. "Cattle Droving From the Ohio Country, 1800-1850",
Agricultural History, 28 (1954): 83-94.
- . "Shifting Range-Feeding Patterns in the Ohio Valley
Before 1860", **Agricultural History**, 31 (1957): 1-11.
- Hopkins, J. "Forecasting Cattle Prices", **Journal of Farm
Economics** [American Journal of Agricultural Economics], 9
(1927): 433-447.
- Horner, J. T. "The United States Governmental Activities in
the Field of Agricultural Economics Prior to 1913",
Journal of Farm Economics [American Journal of
Agricultural Economics], 10 (1928): 429-460.
- Huttman, J. P. "British Meat Imports in the Free Trade Era",
Agricultural History, 52 (1978): 247-261.
- Jones, C. and H. Socolofsky, introduced by. "Science and
Technology in Agriculture", **Agricultural History**, 54
(1980): 1-591. [special edition.]
- Jones, E. L. "The Changing Basis of English Agricultural
Prosperity, 1853-73", **Agricultural History Review**, 10
(1962): 102-119.
- Jones, R. "The Beef Cattle Industry in Ohio Prior to the Civil
War", **Ohio Historical Quarterly**, 64 (1955): 168-194.

- Katzman, M. T. "The Von Thunen Paradigm, the Industrial-Urban Hypothesis, and the Spatial Structure of Agriculture", **American Journal of Agricultural Economics**, 56 (1974): 683-695.
- Kelly, K. "Notes on a Type of Mixed Farming Practiced in Ontario During the Early Nineteenth Century", **Canadian Geographer**, 17 (1973): 205-219.
- . "The Transfer of British Ideas of Improved Farming to Ontario During the First Half of the Nineteenth Century", **Ontario History**, 63 (1971): 102-112.
- . "Wheat Farming in Simcoe County in the Mid-Nineteenth Century", **Canadian Geographer**, 15 (1971): 95-112.
- . "The Development of Farm Produce Marketing Agencies and Competition Between Market Centres in Eastern Simcoe County, 1850-1875", **Canadian Papers in Rural History**, 1 (1978): 67-88.
- Kelso, M. M. "A Critical Appraisal of Agricultural Economics in the Mid-Sixties", **American Journal of Agricultural Economics**, 47 (1965): 1-16.
- Kerr, W. A. "Technological Transfer Through Pure-Bred Herds in British Columbia", **Agricultural History**, 65 (1991): 72-99.
- . "Selective Breeding, Heritable Characteristics and Genetic-Based Technological Change in the Canadian Beef Cattle Industry", **Western Journal of Agricultural Economics**, 9 (1984): 14-28.
- , and D Quan. "Truncated Estimates for Incomplete Technical Change in the Canadian Cattle Industry", **American Journal of Agricultural Economics**, 65 (1983): 581-586.
- Landon, F. "Some Effects of the American Civil War on Canadian Agriculture", **Agricultural History**, 7 (1933): 163-169.
- . "The Agricultural Journals of Upper Canada", **Agricultural History**, 9 (1935): 167-175.
- Lawr, D. "The Development of Ontario Farming, 1870-1914: Patterns of Growth and Change", **Ontario History**, 64 (1972): 239-251.
- Leavitt, C., "Attempts to Improve Cattle Breeds in the United States, 1790-1860", **Agricultural History**, 7 (1933): 51-67.

- . "Transportation and the Livestock Industry of the Middle West to 1860", **Agricultural History**, 8 (1934): 20-33.
- Lemmer, G. "The Spread of Improved Cattle through the Eastern United States to 1850", **Agricultural History**, 21 (1947): 79-92.
- Leuthold, R. "The Price Performance on the Futures Market of a Nonstorable Commodity: Live Beef Cattle", **American Journal of Agricultural Economics**, 56 (1974): 271-279.
- Little, J. I. "The Social and Economic Development of Settlers in Two Quebec Townships, 1850-1870", **Canadian Papers in Rural History**, 1 (1978): 89-113.
- Loehr, R. "Self-Sufficiency on the Farm", **Agricultural History**, 26 (1952): 37-41.
- Lupton, A. A. "Cattle Ranching in Alberta, 1874-1910, Its Evolution and Migration", **Albertan Geographer**, 3 (1966-7): 48-58.
- MacKenzie, A. "Animal Husbandry in the 1840's as Reflected in the Agricultural Journals of Canada West Before 1850", **Ontario History**, 66 (1974): 115-128.
- Marr, W. "Did Farm Size Matter? An 1871 Case Study", **Canadian Papers in Rural History**, 6 (1988):
- Marsh, J. M. "A Rational Distributed Lag Model Quarterly Live Cattle Prices", **American Journal of Agricultural Economics**, 65 (1983): 539-547.
- McCalla, D. "The Wheat Staple and Upper Canadian Development", **Canadian Papers in Rural History**, 6 (1988):
- . "The Internal Economy of Upper Canada: New Evidence on Agricultural Marketing Before 1850", **Agricultural History**, 59 (1985): 397-416.
- McInnis, M. "Perspectives on Ontario Agriculture, 1867-1930", **Canadian Papers in Rural History**, 8 (1992): 17-128.
- , "The Changing Structure of Canadian Agriculture, 1867-1897", **Journal of Economic History**, 42 (1982): 191-198.
- McMurry, S. "Who Read the Agricultural Journals? Evidence from Chenango County, New York, 1839-1865", **Agricultural History**, 63 (1989): 1-18.

- Moore, D. C. "The Corn Laws and High Farming", **Economic History Review**, series 2, 18 (1965): 544-561.
- Parker, W. N. "A Note on Regional Culture in the Corn Harvest", **Agricultural History**, 46 (1972): 181-190.
- Perren, R. "The North American Beef and Cattle Trade With Great Britain, 1870-1914", **Economic History Review**, series 2, 24 (1971): 430-444.
- and F Capie "The British Market for Meat, 1850-1914", **Agricultural History**, 54 (1980): 502-515.
- Perry, P. J. "High Farming in Victorian England", **Agricultural History**, 55 (1981): 156-165.
- "The Shorthorn Comes of Age, 1822-1843", **Agricultural History**, 56 (1982): 560-566.
- "Agricultural History, A Geographer's Critique", **Agricultural History**, 46 (1972): 259-268.
- Plumb, C. B. "Felix Renick, Pioneer", **Ohio Archaeological and Historical Publications**, 38 (1924): 3-66.
- Pomfret, R. "The Mechanization of Reaping in Nineteenth Century Ontario: a Case Study of the Pace and Causes of the Diffusion of Embodied Technological Change", **Journal of Economic History**, 36 (1976): 399-415.
- Raithy, G. "From A Milk Cow and Ox to A Livestock Business", **Agricultural History of Ontario Seminar Proceedings**, University of Guelph, 1976: 56-62.
- Reutinger, S., and A. C. Egbert. "A Dynamic Long-Run Model of the Livestock Feed Sector", **American Journal of Agricultural Economics**, 47 (1965): 1288-1305.
- "Short-Run Beef Supply Response", **American Journal of Agricultural Economics**, 48 (1966): 935-951.
- Russer, G. C., and J. W. Freebairn. "Effects of Changes in the Level of U S Beef Imports", **American Journal of Agricultural Economics**, 57 (1975): 677-688. -
- Schlebecker, J. "Dairy Journalism: Studies in Successful Farm Journalism", **Agricultural History**, 31 (1957): 23-33.
- Schneidau, R. E., and E. M. Babb. "An Analysis of Adjustments Made by Local Livestock Marketing Agencies to Packers-and-

- Stockyard Regulation Prohibiting Service Charges", **American Journal of Agricultural Economics**, 47 (1965): 1395-1399.
- Skeoch, A. "Development of Plowing Technology in Nineteenth Century Ontario", **Canadian Papers in Rural History**, 3 (1982): 156-177.
- Smith, J. H. "The Cattle Trade of Aberdeenshire in the Nineteenth Century", **Agricultural History Review**, 3 (1955): 114-118.
- Sosnick, S. "On the Distribution of Price Changes at a Bull Auction," **American Journal of Agricultural Economics**, 47 (1965): 1306-1320.
- Stearns, R. "Agricultural Adaptation in England, 1875-1900" **Agricultural History**, 16 (1932): 84-101, 130-149.
- Talman, J. J. "Agricultural Societies of Upper Canada", Ontario Historical Society, **Papers and Records**, 27 (1931): 545-553.
- Taylor, D. "London's Milk Supply, 1850-1900: A Reinterpretation", **Agricultural History**, 45 (1971): 33-38.
- . "The English Dairy Industry 1860-1930", **Economic History Review**, series 2, 29 (1976): 585-601.
- Taylor, H. "A Century of Agricultural Statistics", **Journal of Farm Economics** [American Journal of Agricultural Economics], 21 (1939): 697-717.
- Tryfos, P., "Canadian Supply Functions for Livestock and Meat", **American Journal of Agricultural Economics**, 56 (1974): 107-113.
- Walker, R. L. and J. R. Franzmann. "Trend Models of Feeder, Slaughter, and Wholesale Beef Cattle Prices," **American Journal of Agricultural Economics**, 54 (1972): 507-512.
- Walton, J., "The Diffusion of Improved Shorthorn Cattle in Britain During the Eighteenth and Nineteenth Centuries", **Transactions of the Institute of British Geographers**, new series, 9 (1984): 22-36.
- . "Pedigree and the National Cattle Herd circa 1750-1950", **Agricultural History Review**, 34 (1986): 149-170.

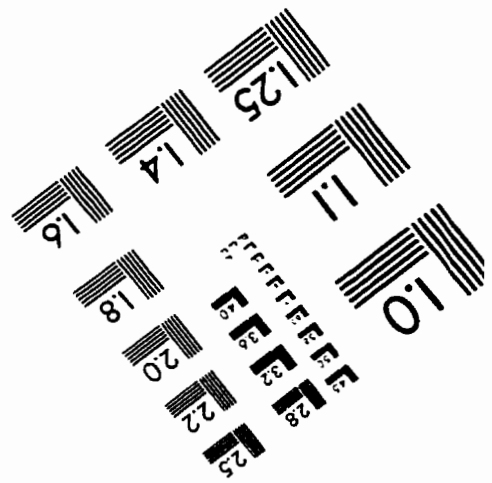
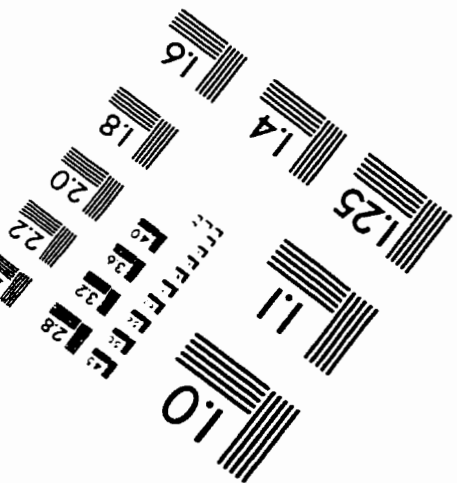
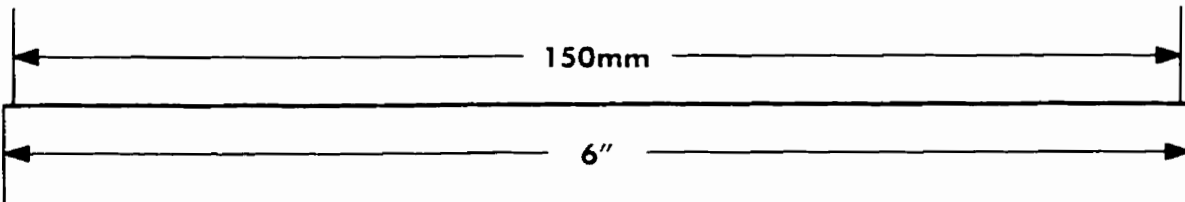
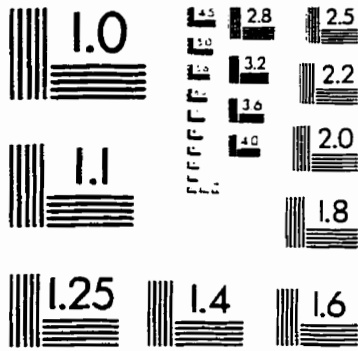
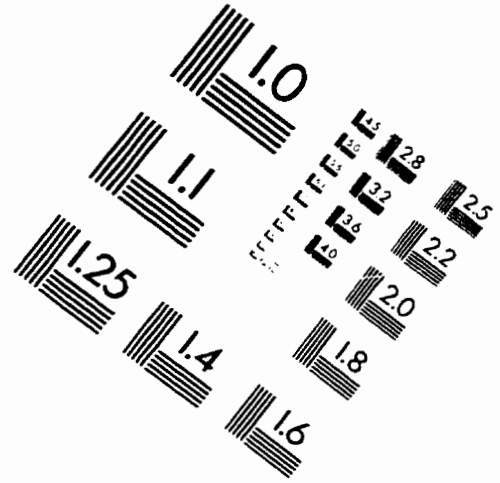
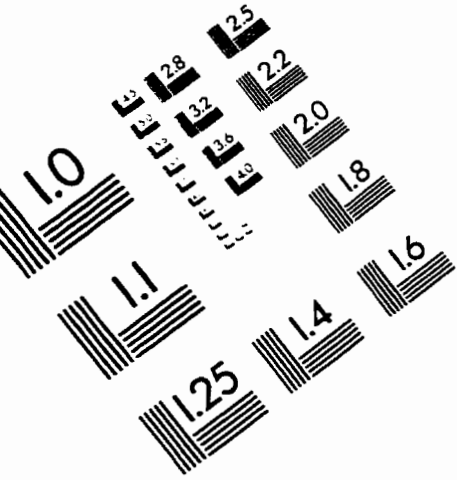
- Wentworth, E. "A Livestock Specialist Looks at Agricultural History", *Agricultural History*, 25 (1950): 49-53.
- Whetham, E. "The Trade in Pedigree Livestock 1850-1910", *Agricultural History Review*, 27 (1979): 47-50.
- Witt, L. W.. "Role of Agriculture in Economic Development - A Review", *American Journal of Agricultural Economics*, 47 (1965): 120-131.
- Zimmerman, W. D. "Live Cattle Export Trade Between the United States and Great Britain, 1868-1885", *Agricultural History*, 36 (1962): 46-52.

3] Unpublished Theses

- Abbott, H. "The Marketing of Livestock in Canada", M.A. Thesis, University of Toronto, 1923.
- Bogue, Allan G. "Ontario Agriculture Between 1880 and 1890 with Special Reference to Southwestern Ontario", University of Western Ontario, M.A. Thesis, 1946.
- Child, Arthur. "The Predecessor Companies of Canada Packers Limited", M.A. Thesis, University of Toronto, 1960.
- Evans, S. "The Passing of a Frontier: Ranching in the Canadian West, 1882-1912", Ph.D. Thesis, University of Calgary, 1976.
- Haslett, E. "Factors in the Growth and Decline of the Cheese Industry in Ontario, 1864-1924", Ph.D. Thesis, University of Toronto, 1969.
- Heaman, E. "Commercial Leviathan: Central Canadian Exhibitions at Home and Abroad During the Nineteenth Century", Ph.D. Thesis, University of Toronto, 1996.
- Henlein, P. "Cattle Kingdom in the Ohio Valley: The Beef Cattle Industry in the Ohio Valley, 1783-1860", Ph.D. Thesis, University of Wisconsin, 1957.
- Hilts, Stewart G. "In Praise of Progress: Attitudes to Urbanization in Southwestern Ontario, 1850-1900", Ph.D. Thesis, University of Toronto, 1982.
- Horner, John. "Changing Spatial Patterns in the Production and Utilization of Milk in Southern Ontario, 1910-1961", M.A. Thesis, University of Toronto, 1967.

- Kelly, K. "The Agricultural Geography of Simcoe County: 1820-1880", Ph.D. Thesis, University of Toronto, 1968.
- Lawr, D. "Development of Agricultural Education in Ontario, 1870-1910", Ph.D. Thesis, University of Toronto, 1972.
- Reeds, L. G. "The Agricultural Geography of Southern Ontario", Ph.D. Thesis, University of Toronto, 1955.
- Toon, Charles C. "Some Aspects of the History of Agriculture in Canada West and Ontario Between 1850 and 1870", M.A. Thesis, University of Western Ontario, 1938.
- Winder, G. "Following America into Corporate Capitalism: Technology and Organization of the Ontario Agricultural Implement Industry to 1930", Ph.D. Thesis, University of Toronto, 1990.
- Wright, Emily. "The Highwood River Valley, 1800-1914; A Contribution to the History of Southern Alberta," M.A. Thesis, University of Alberta, 1961.
-

IMAGE EVALUATION TEST TARGET (QA-3)



APPLIED IMAGE, Inc
1653 East Main Street
Rochester, NY 14609 USA
Phone: 716/482-0300
Fax: 716/288-5989

© 1993, Applied Image, Inc., All Rights Reserved