

**THE EVOLUTION OF AGRICULTURE IN HURON COUNTY;
A CHAPTER IN PROVINCIAL ECONOMY**

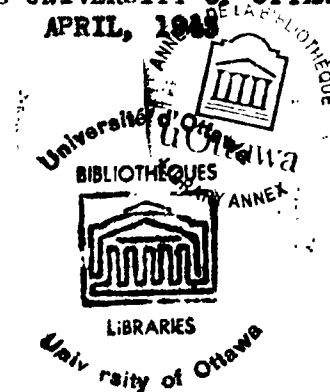
by
Albert E. McWha

A

**THESIS
SUBMITTED IN CONFORMITY
WITH THE REQUIREMENTS FOR THE DEGREE**

OF

**DOCTOR OF PHILOSOPHY
IN THE UNIVERSITY OF OTTAWA
APRIL, 1949**



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PREFACE

Mark Twain's remarks about the weather might be applied, with some reservations, to Canadian local history. Perhaps because of its very omnipresence, this feature of our country's background has failed to provoke an intense spirit of awareness among our native historians. The histories of counties of Ontario are relatively limited in number, and the majority of them have been written by the sons and daughters of the particular localities described. Scholars who have produced laudable efforts in this field may be counted on one's fingers: the outstanding contributions in the meagre list have been those of Professors Fred Landon and James J. Talman, members of the Department of History, of the University of Western Ontario, and of Mr. Edwin C. Guillet, a member of the staff of the Eastern High School of Commerce, Toronto.

The original purpose of the thesis herein presented was to describe the development of Huron County, which, by virtue of its unique background, offered rich opportunities to a would-be historian. As research and study progressed, other aims crystallised, namely: to blaze a trail for future students of local history; to discover the historical possibilities of agricultural journals, government records, and travel literature of the nineteenth century (which had, in most instances, seldom, if ever, been consulted); and to round out the agricultural history of a significant period -- a shaping period in Canadian development -- as the sub-title indicates. It was felt that the history of a specific area might be developed in the most practicable manner, via the theme of agricultural development, chiefly because agriculture, as the "background industry", played such an integral rôle in the success of pioneer development.

The writer acknowledges with thanks the assistance received from those persons with whom he has come in contact while writing this thesis. The staffs of the libraries of the University of Toronto, the University of Western Ontario, Assumption College, the Ontario Legislative Library, the Ontario Archives, the Toronto Reference Library, and the Windsor Public Libraries, exhibited a uniform courtesy. In singling out individuals to whom particular indebtedness exists, the writer expresses appreciation to Dr. George W. Brown, editor of the Canadian Historical Review, Dr. James J. Talman, and Mr. A.R. Kennedy, of the Ontario Department of Highways.

* * * * *

INTRODUCTION

In the course of the development of Canadian history, considerable attention has been devoted to government officials, legislators, traders, and adventurers, but scant attention has been paid to the common farmer, who played a significant rôle in the shaping of the nation's course. In their estimable work on the early history of the Canada Company, the Lisars sisters voiced a tribute¹ to the pioneer farmers:

"If history be teaching by example, no Canadian can overestimate the value of heroic types; for the shades of departed braves stand on the threshold of every deserted log cabin. Hard by, in corners of farm lots, in grass-grown churchyards, a silence as heavy as that of the forest they pierced lies above the dust of the sleeping pioneers, and the story of their struggles is about to be forgotten."

But why should the story of the pioneers' early struggles be forgotten, when there remain so many opportunities to tell it, and thereby to close a gap in the nation's history?

Daniel Webster once affirmed that the farmers were "the founders of human civilisation": the pioneers of Upper Canada, and, more particularly, of the Huron Tract, justified this encomium, and were an important factor in the building of the most prosperous province in the Dominion. There is a romantic aura about pioneer life, but the light of romance is dimmed by the harshness of reality, for the pioneers suffered exceedingly from various privations. That they survived the rigours of life in "the bush" is in itself remarkable; that they laid the foundations of a stable provincial economy is an even greater phenomenon. Assuredly, as "Tyer" Dunlop remarked, the value of the land depended upon "the work and the worth of the men who tilled it."²

1 Lisars, R. and K.K.: In the Days of the Canada Company. (Toronto, 1896), p.x

2 Cf. *infra*, p. 37.

The aim of this thesis is to trace the evolution of agriculture in Huron County from pioneer days until 1880, the year in which the Ontario Agricultural Commission conducted its fruitful investigation. The Huron Tract was unique in that it comprised a large block of land owned by a private company, and was thus outside the aegis of the Protestant Church. Several factors aided settlement, and progress was rapid (although the Canada Company's methods were not wholly unimpeachable), and by 1844, the Huron Tract had outstripped the Western District in agricultural development. The success of the earliest settlers depended upon physical strength and endurance, rather than on intelligence and skill. Dwelling-houses and implements were crude; methods of fertilising, drainage, and crop rotation were rarely practised; crops were principally grain and potatoes, and fruit-culture evoked little interest; livestock were ill-adapted to backwoods conditions, and were generally of inferior grades; the manufacture of butter, cheese, maple sugar and potash was almost entirely a domestic affair.

From 1840 onward, the farmer was influenced by several new developments. Agricultural societies, which aroused interest in more profitable methods of cultivation and stock-breeding, and directed attention to new labour-saving devices, made their appearance, and were implemented by government legislation. Fruit-growing, horticultural, and entomological societies, together with annual provincial agricultural exhibitions, provided additional stimuli in the interests of farming. Discontent over district societies contributed to the formation of independent farmers' clubs, which in turn were superseded by the Grange. The latter was more temperate than its American prototype, yet it incessantly prodded the government into activity on behalf

of the farmer. Another movement during the 'seventies -- the migration to the West -- owed itself in part to soil exhaustion, and to the "National Policy" of 1878, which was violently attacked by the farmer.

Meanwhile, the farmer was experiencing a greater consciousness, and was evincing interest in matters not purely agricultural. Agricultural education was progressing, slowly but surely, after the turn of the century, and farm journals disseminated ideas and methods, principally of American and British origin. The period between 1850 and 1880 was a period of emergence, by the farmer, into the sphere of continental enterprise. And simultaneously, agriculture's significance as an industry was beginning to supplant its importance as a livelihood.

The Huron farm, between 1850 and 1880, underwent a complete metamorphosis, via a process which owed much to the genius of the inventor and scientist, and to the adaptability of the farmer. Substantial, well-groomed buildings replaced log structures; improved methods of fencing, fertilising, and drainage were adopted; and new types of machinery appeared. Rapid development in the various phases of agriculture enabled the farmer to devote more time and energy to other problems which were assuming increasing proportions, namely, agricultural credit, banking, commerce, speculation, and railway expansion. Labour problems vexed the farmer, especially after 1875, when urban centres began to attract young people.

In the meantime, the farm, in its development, was proceeding "from homogeneity to heterogeneity", -- from the simple to the complex. Specialisation was tried, but was found wanting; by the 'seventies, the majority of Huron farmers had turned to mixed farming. The features of crop-raising included the important position accorded to wheat, the flax "furor" of the 'sixties,

and the increased cultivation of certain other crops. The Huron farmer's produce, in field crops, approximated to that of the average Ontario farmer, but in the production of fruit, Huron surpassed the provincial average. Horticulture and reforestation received no small amount of attention, and the development of livestock and dairying was rapid, especially after 1860. Several factors, such as private enterprise, government assistance, commercial agreements, embargoes, and soil exhaustion, contributed to the success of these departments of farming. The cheese-factory system, imported from New York state, enjoyed a phenomenal growth; in the production of eggs, Huron County ranked first in the Dominion.

The economic welfare of the agriculturist was profoundly affected by numerous "pests", including insects, weeds, and swindling salesmen. The chief agent of combat was the farmer himself, aided and abetted by private associations, government legislation, and various publications. The development of marketing facilities and the growth of towns and villages owed much to the excellent roads and railways which traversed the county. Numerous mills and manufactories contributed to the growth of respective communities.

Thus the Huron farm grew and matured, like a living organism, in a manner which was typical of most Ontario farms. The self-sufficing farm of 1830 had its counterpart in the farm of 1880, though the foundations of the latter were erected on a higher plane. Much of the success of the agriculturist lay in his ability to synchronise new economic notes with the old.

* * * * *

CHAPTER I

The County of Huron: General Description

Geographical Position.

The county of Huron, occupying an area of 707,028 acres, or 1,104.8 square miles, is one of forty-three counties, which, with eleven districts, comprise the province of Ontario. Lying between the forty-third and forty-fourth parallels of north latitude and the eighty-first and eighty-second parallels of west longitude, Huron County is bounded on the north by the county of Bruce, on the east by the counties of Wellington and Perth, on the south by the county of Middlesex, and on the south-west by the Sable River and the county of Lambton.¹ Huron County has a frontage on Lake Huron -- which is its western boundary, and from which it receives its name -- of nearly sixty miles, and extends eastward from the lake to distances varying from fifteen to forty miles.

Geological Formation.

The province of Ontario is divided by geologists into six districts: (1) the Lower Ottawa; (2) the Northern Townships; (3) the Ontario; (4) the Erie and Huron; (5) the Manitoulin; (6) the Upper Lakes. Huron County lies within the fourth division, which extends immediately west of the Ontario district, from which it is separated by the Niagara escarpment. Geologically, Huron County is situated almost entirely within the area known as the Devonian series, although a part of Grey and Howick townships lies within the Silurian area.² The Devonian series falls into five groups: (1) Genesee group, in which is included Huron (black) shales; (2) Hamilton group, composed of Ipperwash (gray) limestone and soft bluish shales, and Alpena (gray) limestone; (3) Marcellus group, which comprises Delaware (blue and brownish) limestone; (4) Onondaga group, comprising

Onondaga (bluish-gray) limestone; and (5) the Detroit River group, formed of Lucas (brown) dolomite and gray limestone. The Silurian series, insofar as it affects Huron County, comprises the Cayugan group, in which are included Akron (dark gray) dolomite, and Camillus shale, which contains salt and gypsum beds. (The abundance of salt in Huron was a factor in the rapid development of dairying and fertilizing which took place in the county.) Rock outcrops are located in several areas, particularly in the northern townships⁴.

Above these formations of the Silurian and Devonian series lie deposits of the Glacial, Post-Glacial, and Recent-Age periods. These deposits, spread over the whole Erie and Huron districts, particularly in Huron County, may be classified thus, in ascending order: (1) lower drift clay; (2) upper, or stratified drift clay; (3) lower fresh-water clay and sand; (4) upper fresh-water clay and sand; (5) recent deposits proper. Those which abound most in Huron County are the first, second, and fifth deposits: the first occurring more in the northern part, the second towards the south, and the fifth in various localities of both sections.

Topography.

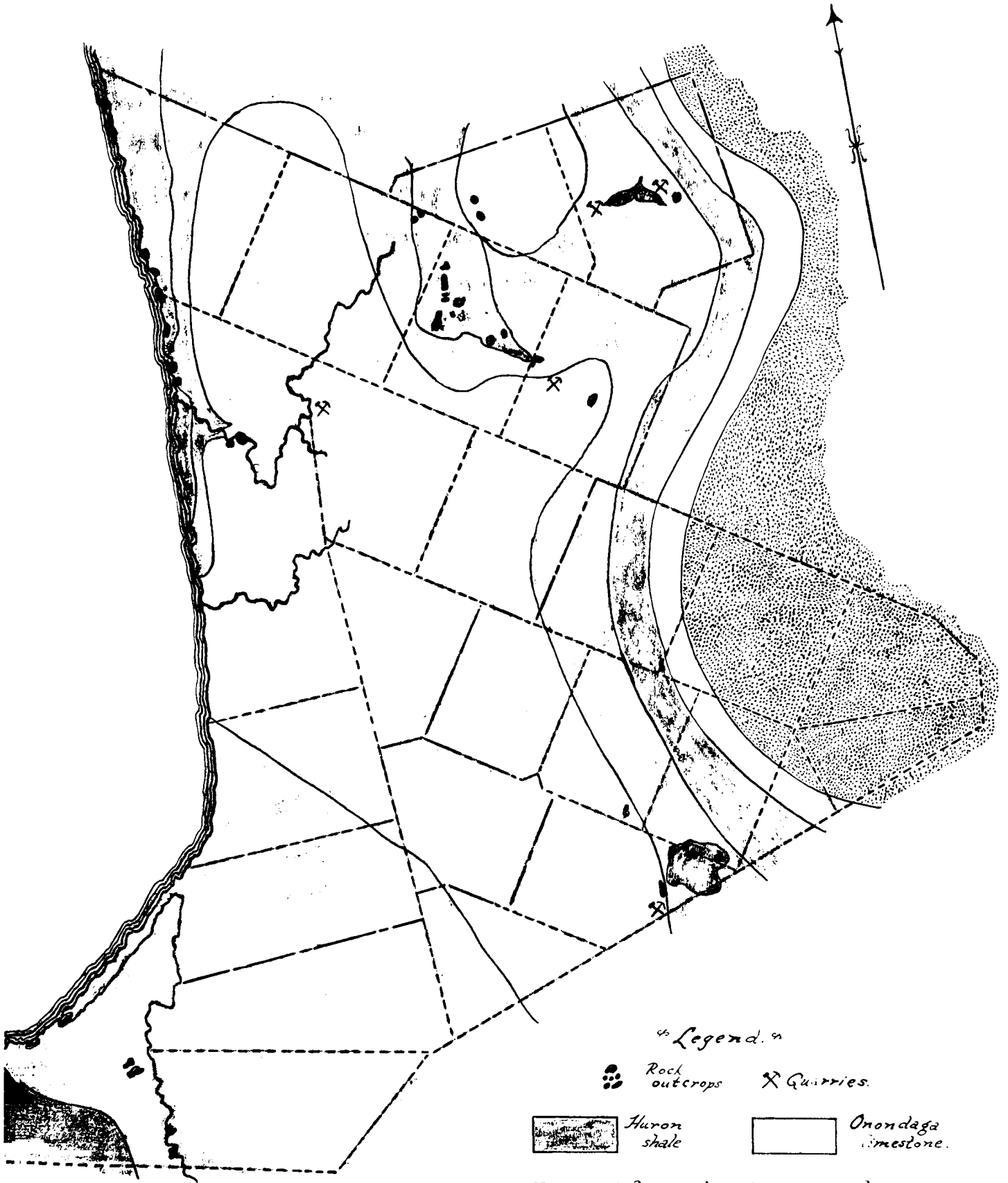
The surface of Huron County is remarkably level, varying from 120 to 250 feet above the waters of Lake Huron, and from 480 to 600 feet above Lake Ontario.⁵ The surface is a compromise between the flat plains of the south-western counties which border Lakes Erie and St. Clair, and the north-western counties which border Georgian Bay. The term "gently undulating" may be applied to a considerable part of the county.

⁶
The soil consists of a deep rich black loam, with a subsoil of clay,

intermixed with sand; along the lake shore, and towards the north, the soil is lighter. Frequent deposits of stone and gravel are found in the northern townships (e.g. Turnberry). About 48 per cent. of the soil consists of clay loam, 16 per cent. of sandy loam, and the remainder of heavy clay, sand, gravel and black loam. The subsoil consists generally of clay and gravel. For agricultural purposes, about 30 per cent. of the land is first-class, 34 per cent. is second-class, and 36 per cent. is third-class.⁷


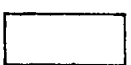
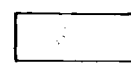

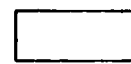
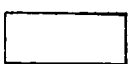
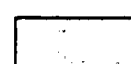

The forests are composed of valuable and useful timber, the predominant species being maple, beech, elm, basswood, hemlock, butternut, black ash, birch, and cedar.⁸

Huron County is both watered and drained by the Maitland, Bayfield and Aux Sables (or Sable) Rivers, with their tributaries, in addition to numerous minor streams which flow into Lake Huron; springs abound throughout the district.⁹ The three branches of the Maitland (north, central, and south) unite at Wingham, and flow west and south, emptying into the lake at Goderich. The Maitland is very circuitous in its course, swift in its movements, and in many places is bordered by rugged, picturesque banks. The Bayfield River rises in Perth, flows through Tuckersmith to Clinton, and then veers south and west, to empty into the lake, at which point it forms the channel of the Bayfield harbour; this river is smaller and less rapid than the Maitland. The Aux Sables (or Sable) also rises in Perth, passes through Usborne and Stephen into the county of Middlesex, and then winds back, to form a part of the boundary between Stephen and the county of Lambton, eventually emptying into the lake north of Kettle Point. The Sable drains a large area, but it is an unattractive stream until it approaches



Legend.

 Rock outcrops
  Quarries.

- | | | | |
|---|----------------------|---|---------------------|
|  | Huron shale |  | Onondaga limestone. |
|  | Upperwash limestone. |  | Lucas dolomite. |
|  | Alpena limestone. |  | Akron dolomite. |
|  | Delaware limestone. |  | Camillus shale. |

the lake; then it presents a more favourable aspect.¹⁰ The rivers are partially navigable, and are well adapted to the erection of mills. There are four or five lakelets in the northern section of Howick township and a considerable area of swamp land. The waters of Lake Huron are beautifully transparent, and have a favourable influence on the atmosphere.

Climate.

The climate in Huron County is much milder than that on the shores of Lake Ontario, and, in keeping with the rest of the province, is extremely salubrious.¹¹ The weather in Huron, in 1831, was described thus: "Winter usually sets in at about Christmas, and lasts until the middle of March, the snow remaining on the ground for nearly a month..... In March the weather is usually tempestuous; in July and August extremely hot, and in October and November, often warm and dry."¹² In 1831, the average temperatures in summer and winter, in the region about Goderich, were 77 degrees, and 22 degrees, Fahrenheit, respectively; 214 days were "clear and fine"; 89 had rain or snow; 62 were cloudy. The average temperature of the winter of 1847-48, reported by a traveller,¹³ was 26 degrees, -- comparatively mild.

During the period 1850 to 1880, the climate of Huron County underwent a noticeable change, becoming increasingly milder. In 1868, Professor George Suckland visited the county, and was greatly impressed by the mildness of the climate:

"..... the shore along Lake Huron, for three or four miles inland, has decidedly a local climate, escaping those late frosts in spring, and early ones in autumn, which are often so prejudicial in higher and remoter situations."¹⁴

The absence of late spring and early fall frosts enabled Huron County to become a successful grain-growing and fruit-growing area. In

1860, Huron farmers were enabled to grow in the open air fruits and vegetables which would have been killed by frosts twenty or thirty years before.¹⁵ The lake shore district, especially, became a fine fruit-growing belt, owing to the climate, rather than to any other single agency.

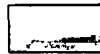

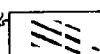
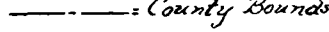



The Townships.

Huron County to-day embraces fifteen townships, nine of which formed a part of the original Huron Tract, and six of which were created out of crown lands. At one time, the county contained seventeen townships, the additional two being McGillivray and Biddulph, which also lay in the Huron Tract.¹⁶ The question of annexation of both these townships to Middlesex County was considered as early as July 22, 1862, when a petition to that effect was drafted.¹⁷ The reason behind the desire for annexation was the comparatively great distance¹⁸ of Goderich: the village of Ireland in McGillivray, for example, was forty-one miles from Goderich, and nineteen miles from London. An act of June 9, 1862, provided for annexation, and in 1865, Biddulph and McGillivray townships left the bounds of Huron County and entered into union with the County of Middlesex.¹⁹

The township of Colborne,²⁰ which faces Lake Huron, is separated from Goderich township by the winding Maitland River, which, with its steep banks, tortuous bends, and scenery, presents a picturesque sight. It was named²¹ in honour of Sir John Colborne, who had preceded Francis Bond Head as governor of Upper Canada. The area²² of Colborne, which is one of the smallest townships in the county, is 33,313 acres, of which 1000 are hilly, 400 are swampy, and 1200 are rolling land. The general character of the soil²³ is clay and clay loam, especially so in the eastern and western portions of the township. The average depth of the soil is ten inches; water is located at



"Political Map of Huron County."

-  The original Huron Tract
 -  Township Boundaries
 -  Townships belonging to Huron County until 1865
 -  County Boundaries
 -  County Seats.
 -  Important towns or villages.
 -  Coloured townships = present County of Huron.
- Dates indicate when separate local municipal government was received.

a depth of from 10 to 100 feet.

The township was first settled about 1830-31, when Michael Fisher and the Dunlop brothers, Robert and William, built homes. By 1834, enough settlers had arrived to warrant the erection of a tavern; ten years later, Colborne had a population of 505, and 1,558 acres were in cultivation. The first municipal meeting was held in 1836.

South of Colborne lies the township of Goderich,²⁴ which consists generally of rolling land, somewhat broken about the borders of the Haitland and Bayfield Rivers, which form its northern and southern boundaries. The township was named after the Right Honourable Frederick John Robinson, Viscount Goderich. It embraces in its 51,777 acres all varieties of soil, ranging from hard clay to bare sand. Along the lake shore, the land is flat, dry, and fertile, but further inland it is somewhat hilly. Goderich is well-watered, for, besides its proximity to Lake Huron, and to the Haitland and Bayfield rivers, clear springs and creeks are abundant. Water lies about 12 to 60 feet underground.

The first settlers in Goderich township date from 1828; the earliest families were the Taylors, Ginns, Sturdy's, Holmeses, Troctors, and Cox's. By 1844, the population had reached 1,673, and 5,156 acres were cultivated. Municipal government was organized as early as 1835.

South of the Bayfield River, lies the township of Stanley²⁵ (44,500 acres), which extends from the lake eastward to the London Road. The township received its name after Edward Geoffrey Smith Stanley, fourth Earl of Derby, who had been one of the most prominent stock-holders in the Canada Company. On the east side, the land is flat, but there are about 3,000 acres of hilly country, and in the central section there is an equal area of marshy

soil. The general character of the soil is good, with clay loam predominating. The township is well-watered by the Bayfield and several small streams; water is about 15 to 40 feet under the surface.

The earliest settlers in Stanley arrived in 1833, when the Reverend Cooper built a farm near the London Road.²⁶ Other settlers followed rapidly, and in 1844, there were 737 persons in the township, and 1,197 acres were under cultivation. In 1836 was held the first township meeting.

The township of ²⁷Hay separates Stanley and Stephen, and lies between the lake and the London Road. It was named in honour of H.W. Hay, joint secretary of the colonies with Lord Stanley. Its 52,886 acres form a rough rectangle, which is about seven miles broad and eleven miles long. The soil is of the first quality, being composed of a fine yellow loam; there is also a large proportion of black loam and sand. Half the area of Hay is rolling land, and the centre of the township contains marshes; some quicksand is to be found. Springs and wells are plentiful, but the largest stream is "Warren's Creek". Water is located at a depth of from 15 to 80 feet.

Settlement did not begin in Hay until somewhat later than it did in the surrounding townships. By 1839, William Wilson, the Walshes, the Bells, and the Cases were the only settlers. In 1844, the township included only 113 settlers, who had cultivated 1,943 acres. The organization of Hay as a separate municipality was effected in 1846.

²⁸Stephen township, situated south of Hay, is separated from Bosanquet township (in Lambton County) almost entirely by the Sable River, which river also flows from north to south through the eastern part of the township; McGillivray township lies to the south. Stephen derived its name from James Stephen, junior, the under-secretary of state for the colonies in the time

of Lord Gederich and Lord Glenelg. Only six miles in width by thirteen miles in length, the township has an area of 54,725 acres. There is considerable sandy soil in Stephen, but on the whole, the land is equal to any in the county, especially along the third, fourth, and fifth concessions. Some swamp-land is to be found, but water, on the average, lies 80 feet underground. One-twentieth of the land is rolling, but cultivable.

The earliest settlers date from 1831-35, during which period James Willis, a Mr. Trivitt, George Webber, and Louis Holman settled. By 1844, 520 acres had been tilled, and the population was in the neighbourhood of 213. Separate municipal organisation was effected in Stephen in 1842; previous to this date, Hay, Stephen, and Usborne had been united.

East of Stephen and Hay lies Usborne³⁰ (42,751 acres), which presents an oddly-shaped figure, extending ten miles along the London Road, which forms its western boundary. On the south lies Biddulph, and on the east, Blanchard, Fullarton, and Hibbert (the last three townships are in Perth County). Usborne received its appellation from Henry Usborne, one of the early directors of the Canada Company. The soil is predominantly clay loam; some stones and limestone formations may be found. A small area of Usborne presents a rolling surface, but for the most part, the land is level. The Sable flows along the third and fourth concessions for some miles; water lies about 20 feet underground.

Settlement in Usborne began in 1831, when William May and Thomas Lamb settled near what is now the town of Exeter. By 1834, a few families had arrived, and ten years later the population was 283, and the acreage of tilled soil was 728. Usborne received separate municipal standing in 1842.

To the north of Usborne lies Tuckersmith, which occupies the acute

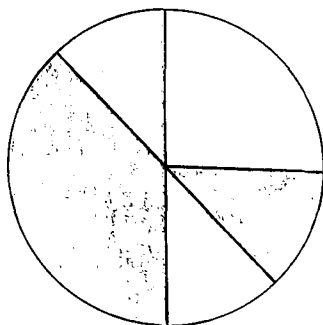
angle formed by the junction of the old Huron and London Roads, and which extends about twelve miles along the former, and fourteen miles along the latter, -- thus presenting a frontage of twenty-six miles on the two most important roads in the county. The township received its name from Martin Tucker Smith, one of the first directors of the Company. It contains 41,000 acres, and is, on the whole, undulating, with an occasional small knoll or ridge. Nine-tenths of the soil is clay loam, which lies fifteen inches deep; the subsoil is a compact, whitish-yellow clay. Along the Bayfield River, which crosses the northern part of the township, lies a narrow strip of low, flat land. In the south, the land is both watered and drained by the Little Bayfield, "Warren's Creek", and minor streams; the central section, however, receives very little moisture. Water lies at a depth of from 10 to 35 feet.

The first settler in Tuckersmith was Neil Ross, who arrived in 1830; more settlers followed in the succeeding years, and by 1844, the population had reached 599, the fourth largest figure in the county, and 2,233 acres were cultivated. Municipal organization occurred as early as 1835.

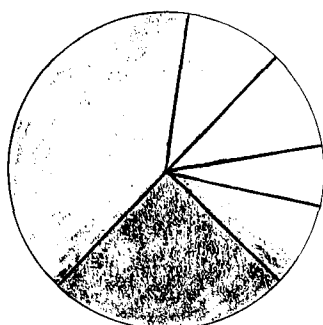
The township of McKillop³¹ extends along part of the north-east boundary of Tuckersmith, opposite the old Huron Road. It received its name from James McKillop, M.P., a director of the Canada Company. In shape, the township nearly approaches a square, containing 52,140 acres. In the western section, the land is level and comparatively light, but farther back it is rolling, and in some places affords a good supply of gravel. The soil is in general a clay loam, with an equal proportion of other kinds. The township is very well watered; in fact, nearly one-third of the area comprises swampy land. A winding branch of the Maitland, Carron Brook, and Silver Creek, together with smaller streams, afford excellent irrigation. Water lies from 12 to 50 feet underground.

SOIL OF HURON COUNTY.

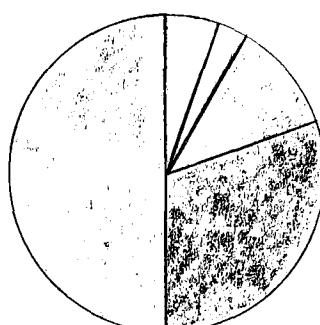
ASHFIELD.



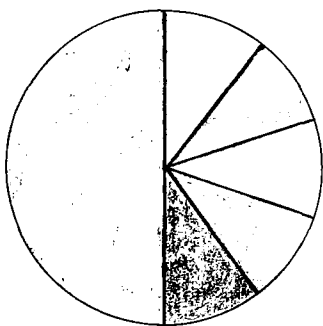
WAWANOSH.



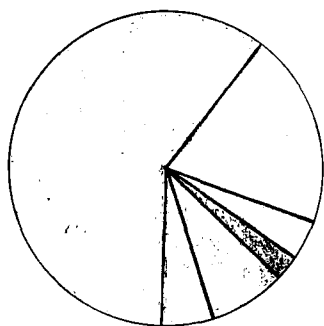
TURNBERRY.



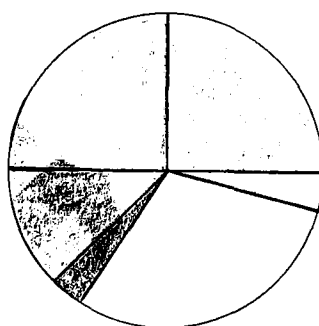
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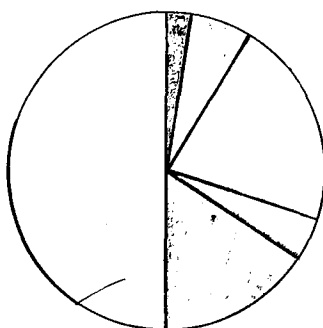
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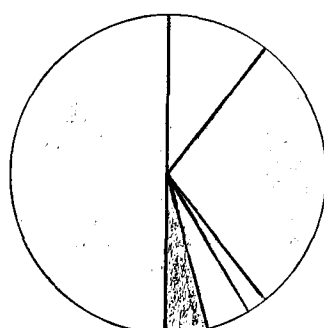
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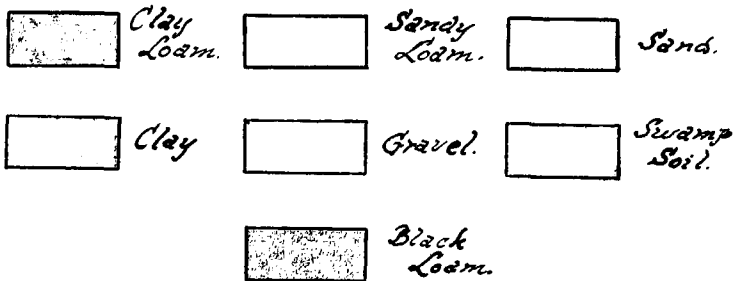
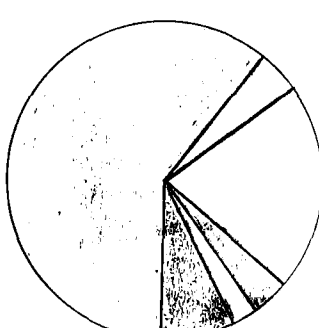
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HULLETT.

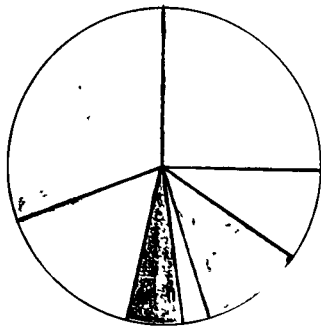


McKILLOP.

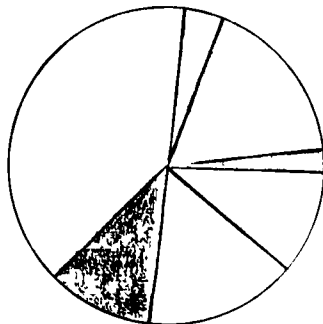


SOIL OF HURON COUNTY. (cont'd)

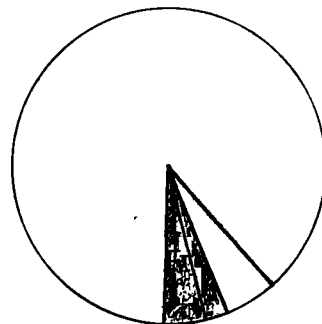
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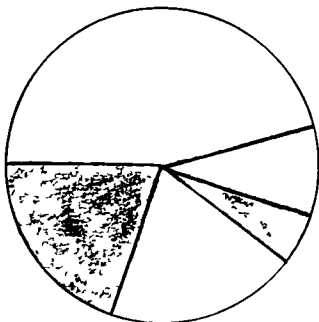
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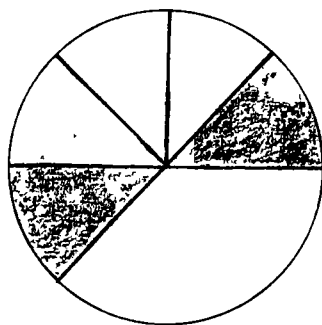
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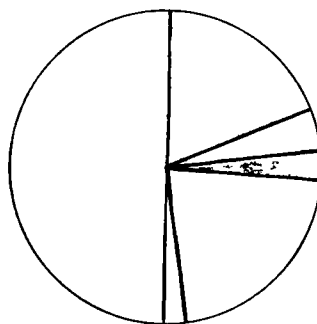
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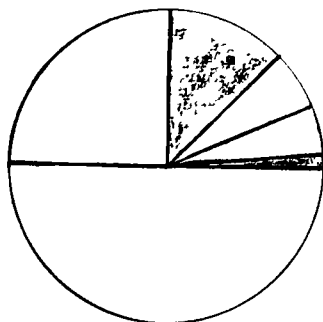
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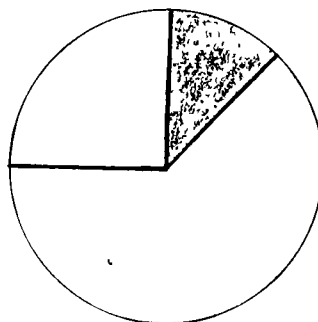
USBORNE.



[MCGILLIVRAY.]



[BIDDULPH.]



The first settlement, in the early 'thirties, was known as "Irish-town" -- composed as it was of such families as the O'Sullivan and the O'Neils. The population, by 1844, had reached only 321, and but 789 acres were under cultivation. The first organization of McKillop, for municipal purposes, took place in 1841-42, in connection with the townships of Hibbert and Logan (Perth County).⁵²

With the exception of Morris, Hullett is the only township in Huron which does not extend its bounds to those of the county. It is bounded on the north-east by Wawanosh and Morris, on the south-east by McKillop, on the south by Tuckersmith, and on the west by Goderich township and the Maitland River. From John Hullett, one of the first directors of the Company, the township received its name. Hullett has an acreage of 53,432, and the general character of the soil is good. The soil in the south is clay, in the eastern and central sections clay loam, and in the west sandy loam. Some sand and gravel are to be found in the central district, in the land bordering the Maitland. Nine-tenths of the surface is rolling but cultivable. Hullett is well-watered by a tributary of the Maitland and by small creeks; water lies 25 feet underground.

Settlement in Hullett did not begin until the late 'thirties, although a few settlers, including Colonel Van Egmond, had entered as early as 1828-29. The figures for 1844 give a total of 195 inhabitants, and only 324 acres of tilled soil. From 1850 to 1852, Hullett and McKillop were united under one municipal organization, but in 1852 they were separated.

The township of McGillivray (66,506 acres) lies south of Stephen, and is bounded by Biddulph on the west, Williams and part of Lobo (Middlesex County) on the south, and the Sable River on the west.⁵³ It received its name

from one of the Canada Company's first directors. One-fourth of the total area of the township is rolling but cultivable; 4,000 acres are hilly, and 1,000 acres consist of low, flat lands. The soil is, for the most part, a heavy clay loam, and the eastern section is best adapted for agricultural purposes. McGillivray is watered by the Sable River, which crosses the whole width of the township twice. Near the "Great Bend", the Sable is so nearly on a level with the waters of Lake Huron that for some years, during the period of early settlement, the river regularly overflowed more than two thousand acres, thus forming an area long known as "the Drowned Lands"³⁴. Water lies at an average depth of 35 feet.

Settlement in McGillivray began in 1840; among the pioneers were Patrick Flanagan, James Barber, James C. Priestley, William Carter, and a Mr. Shoults.³⁵ Four years later, the population totalled 440, one-half being Irish, and 808 acres were under cultivation. Municipal government was established as early as 1843.

The township of Biddulph³⁶ lies east of McGillivray and Stephen, and south of Usborne; it is bounded on the east by Blanchard (Perth County) and on the south by London township (Middlesex). Biddulph also received its appellation from a director of the Canada Company. Of its area of 39,154 acres, five-sixths are rolling but cultivable, and one-sixth constitutes low, flat lands. The soil is, in general, a flat clay soil, of good quality, and approximately one-half of the land is first-class for farming. Biddulph is irrigated by a branch of the Sable, which forms a fine glen of several miles in length, in the north eastern corner of the township. Water is located 30 feet below the surface.

In 1830, settlers began to flow into Biddulph, which was only thirteen miles from the town of London, and land was taken up at \$1.50 per acre.³⁷ The first settlers were James and Adam Hodgins, Richard and Thomas Atkinson, and

the Coursee family. In 1834, a colony³⁸ of coloured people was formed under the direction of Frederick Stever, a Quaker from Norwich, who purchased 800 acres west of the village of Lucan. A few of these negroes were emancipated slaves, but the majority of them were refugees who had been driven out of Cincinnati by the enforcement of the Ohio Black Laws.³⁹ By 1844, the population of Biddulph was 1,009 (nearly twice that of any other township in Huron County, with the exception of Goderich), and 1,740 acres were under cultivation. Biddulph was organized as a municipality in January, 1842.

The eleven townships described above lie in the tract originally belonging to the Canada Company. The six⁴⁰ remaining townships are government townships, and were carved out of the crown lands lying immediately to the north-east of the Canada Company's territory.

The township of Ashfield,⁴¹ somewhat triangular in shape, is situated in the north-west corner of the county, on the shore of Lake Huron, and is bounded on the north by Huron township (Bruce County). Ashfield was named after a village in Suffolk, England. About seven-eighths of the township, which is 64,184 acres in extent, consist of rolling lands; the soil is of an inferior quality, especially in the central part. The Ashfield River is the main source of moisture, although much of the land is swampy; water is located at a depth of from 8 to 40 feet.

As Ashfield was not a part of the Canada Company's lands, immigration did not flow into it until 1838-42. Settlement was retarded by two obstacles: (1) the "cash" system of buying land from the government, which did not adopt the "ten years' system" of payment, until 1848; and (2) the purchase of a large tract of land to the north by a group of speculators, under whom improvement was long in forthcoming. In 1844, Ashfield contained

only 266 inhabitants, and a total of 228 acres of tilled land. The first municipal transactions of Ashfield date from 1842, at which time East and West Wawanosh were joined to it.

Wawanosh,⁴² adjoining Ashfield on the east, and bounded on the north by the township of Kinloss (Bruce County) and by a portion of Turnberry, is the largest township in Huron County, containing 83,593 acres. Wawanosh received its name from one of the chiefs of the Chippewa Indians; the meaning of the word is given as "he who embles the water", or "pleasant sailing". The general character of the soil is clay loam, with considerable black loam, especially in the western district. One-fourth of the township consists of swamp land, and rich black muck lies eighteen inches deep in the swamp sections. Wawanosh is considerably broken by the twisting Maitland River, which crosses the whole breadth of the township, and, for a time, rendered the eastern part inaccessible. Water lies about 20 to 40 feet below the surface.

Wawanosh was behind most of the other townships in the county in its early settlement, although a few families settled in the western section during 1840-42. In 1844, the population was 153, and only 87 acres were under cultivation. Until 1862, Wawanosh formed a part of the township of Ashfield, but in that year it became a separate township. Fourteen years later,⁴³ it was divided by the road running north and south between Lots 27 and 28 into two townships, known as East and West Wawanosh.

East of East Wawanosh, and north-east of Ballett, lies the township of Morris,⁴⁴ 62,244 acres in extent, which was named after the Honourable William Morris, a native of Paisley, Scotland, who was president of the executive council of Upper Canada in 1846. The general character of the soil is clay loam, but one-fifth of the land is swampy, and another fifth consists of low,

flat lands. Two branches of the Maitland River flow through the north-east corner of Morris, and the land is extremely broken along these streams. Water lies about 25 feet underground.

Although the government changed its land-selling policy in 1848, and began surveying in 1849, the actual settlement of Morris did not begin until the spring of 1852. There was not a single settler north of the fourth concession until the spring of 1854, when the influx was large, and continued steadily until nearly every lot was occupied within the next few years.⁴⁵ Until 1856, Morris and Grey were united to McKillop for municipal purposes, but in that year, Morris entered on an independently organized existence.

⁴⁴ Grey township (63,935 acres) is situated east of Morris and north-east of McKillop; on the north and east, it faces three townships in the county of Perth, namely Wallace, Elma, and Logan. Grey received its name from Charles, second Earl Grey (1764-1845), who had succeeded in passing the celebrated Reform Bill of 1832. The soil of the township is of good quality, being composed mainly of clay, with an occasional knoll of gravel. In the eastern section, considerable swamp land and beds of quicksand are to be found; the northern part is sandy and gravelly; the western district is predominantly clay loam. Grey is watered by the main branch of the Maitland and by one of its tributaries, and possesses an abundance of clear, cool springs. The land in this township was sold only in September, 1854, although squatters had entered as early as 1850. In 1856, Grey (as was Morris) was organized as a separate municipality.

North of East Wawanosh, Morris, and Grey, lies Turnberry⁴⁴ (34,800 acres), in the form of a mis-shapen triangle; it is bounded on the north by the township of Culross (Bruce County), and on the east by Howick. Turnberry was named after Turnberry Castle in Scotland, the principal house in Carrick

in the twelfth and thirteenth centuries. The township contains a quantity of excellent land, and an even larger quantity (10,000 acres) of swamp and beaver meadow. The undulating surface is, to a great extent, covered with stones, as is Howick. A branch of the Maitland flows through Turnberry, and water is usually about 18 feet underground. The first settlers in the township entered during 1853 and 1854, and the number increased after the land sale of September 4, 1854. For purposes of municipal government, Turnberry was united to Wawanosh until 1854, when it received a separate municipal status.

East of Turnberry and north of Grey is Howick⁴⁴ (67,228 acres), at the extreme north-east corner of Huron County. It is bounded on the north by Carriak (Bruce County) and Normanby (Grey County), on the east by Minto (Wellington County), and on the south by Wallace (Perth County). Howick was named in honour of Henry George Grey (1802-1894), the third Earl Grey, who became Lord Howick in 1829. The surface of the township varies from gently rolling to decidedly rough; the soil is predominantly clay loam. Howick is well-watered by the Maitland, and contains many swamps; water lies 20 feet below the surface.

The first settlers were John Carter (1851), Andrew Mitchell, and Jacob Cook (1853), although the influx did not come until the autumn of 1854. Until 1856, Howick and Grey were united to McKillop, but in that year, each of the three townships obtained separate municipal organisations.

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CHAPTER II

The Settlement of the Tract.Background of Settlement.

It would be impossible to possess a complete understanding and appreciation of the evolution of agriculture in the county of Huron, without some knowledge of the historical background and settlement thereof. The aborigines of the lands about Lake Huron and Georgian Bay were the Huron Indians, called by the French the Northern Iroquois.¹ During the years 1615 to 1618, Samuel de Champlain visited the Huron country,² in response to the Hurons' pleas for assistance against the warlike³ tribes to the south. It is believed that he landed at the mouth of the Menesetung (Maitland) River, in 1618.⁴ In any case, whether Champlain arrived there or not, the mouth of the Menesetung became a frequent stopping-place for the zealous Jesuit priests who entered "Huronie" to win converts to Christianity.⁵ In 1649, a dreadful onslaught by the Southern Iroquois wiped out the Huron settlements and the Jesuit missions as well.

The mouth of the Menesetung was for a long time a port-of-call for fur-traders, and consequently formed the site of several huts and wigwags, the dwelling-places of Chippewas and half-breeds. Although several ships⁶ sailed up the coast, during the latter part of the eighteenth century, the coastline of Lake Huron was not officially surveyed until 1824, when Lieutenant Henry Wolsey Bayfield, "under the order of the Lords of the Admiralty", completed the seven years' task.⁷ In 1826, W.F. Gooding, accompanied by a Frenchman, named Frank Dechamp, established a trading-post at the mouth of the Menesetung.⁸

The real and vital beginnings of Huron County lie in the inception of the Canada Company, a land company formed by English capitalists, under the leadership of John Galt,⁹ for the purpose of encouraging emigration to

and settlement of Canada. The Company possessed a capital of one million pounds sterling. Lords Goderich and Colborne, Lieutenant-General Cockburn, and Colonel Sir John Hawley were influential share-holders, as were Messrs. Biddulph, Bosanquet, Blanchard, Davidson, Downie, Easthope, Ellice, Fullerton, Galt, Hay, Hibbert, Hullett, Logan, McGillivray, McKillop, Stanley, Stephen, Tucker Smith, Usborne, Williams, and others, after many of whom townships in the Huron Tract received their names.¹⁰

The first proposal made by the Company was to take over all the unassigned land in Upper Canada, but this plan was rejected on the grounds that it might be considered too great a monopoly. The second suggestion was that the Company should obtain possession of the crown and clergy reserves. In 1791, the Constitutional Act¹² had stipulated that the governor of Canada, in granting public lands, should reserve for "the support and maintenance of a Protestant clergy lands equal to one-seventh of all those granted in the past or to be granted in the future for other purposes."¹³ In accordance with the second proposal, an agreement was made, on November 26, 1824, between Lord Bathurst, the secretary of state, and the Company, whereby the latter was to receive 1,384,413 acres of crown lands, and 829,430 acres¹⁴ of the clergy reserves, in Upper Canada, at the nominal price of 3s. 6d. per acre -- or at a total cost of £145,150. 5s for the clergy reserves alone. Reverend John Strachan objected to this scheme, claiming that the price was too low, and that 8s. 6d. per acre would be more reasonable.¹⁵ Eventually, the clergy reserves were omitted from the deal, and for them was substituted the "Huron Tract", a block of one million acres, which had formed part of an extensive tract of land purchased by the government from the Six Nations Indians.¹⁶

The terms of the new agreement were contained in a despatch from¹⁷

Lord Bathurst to Sir Peregrine Maitland, the Lieutenant-Governor of Canada:

"..... In lieu of the before-mentioned 829,430 acres (of Clergy Reserves), His Majesty's Government will grant and convey to the Canada Company for the same price (£145,150. 5s. currency) a block of land containing one million acres, in the territory lately purchased from the Indians, in the London and Western Districts. One-third part of the before-mentioned sum of £145,150. 5s. currency shall be expended by the Canada Company in public works and improvements within the said block of land; and the remaining two-third parts only of the said sum of £145,150. 5s. currency shall be actually paid to His Majesty's Government. By the terms 'public works' and 'improvements' will be understood canals, bridges, high roads, churches, wharves, school-houses, and other works undertaken for the benefit of His Majesty's subjects resident within that part of the Province of Upper Canada, in contradistinction to works intended for the use and accommodation of private persons..... The block of one million acres will be surveyed."

Later, the grant was extended to include one hundred thousand additional acres, and the method of payment was revised.¹⁸ The Company agreed to pay £155,000 by July 1, 1835, and thereafter the sum of £20,000 annually for seven years, making a total of £295,000.¹⁹ It should be mentioned that this new arrangement did not interfere with the original one in respect to the crown lands. The latter were in the form of dispersed tracts of 200, 2,000, and 10,000 acres (a few blocks contained from 12,000 to 45,000 acres) and were scattered throughout Upper Canada.²⁰

On August 19, 1826, the Canada Company was incorporated by royal charter;²¹ during the preceding year, Lieutenant-Colonel Francis Coakburn, Simon McGillivray, Lieutenant-Colonel Sir John Harvey, John Davidson, and John Galt had been appointed commissioners for the purpose of proceeding to Canada to examine the territory which the Company was to receive.²² The Huron Tract was explored in 1827, and the Huron road was built through the wilderness between Stratford and what is now the town of Goderich, in 1828.²³ Before the surveying of the Tract was begun, Lord Bathurst instructed Sir Peregrine Maitland, the lieutenant-governor of Upper Canada, that "the block

should be marked out by the surveyor-general or his deputies, and should approximate to the form of some regular mathematical figure, as nearly as might be consistent with preserving any well-defined natural land-mark or boundaries". These instructions help to account for the shape of the Huron Tract, which was nearly triangular in its general outline. The Tract was bounded on the south by a tract of unsurveyed crown lands and by the townships of Lobo, London, Nissouri, and Zorra, and on the north-east by more waste crown lands and Indian reserves. It lay between 43 degrees, 10 minutes, and 43 degrees, 53 minutes north latitude. The whole tract was surveyed by 1832, and was divided into twenty-two townships, viz.:- Bosanquet, in the county of Lambton; Williams, in the county of Middlesex; Blanchard, Downie, Gore of Downie,²⁴ North and South Easthope, Ellice, Fullarton, Hibbert, and Logan, in the county of Perth; and Colborne, Goderich, Stanley, Hay, Stephen, McGillivray, Biddulph, Usborne, Tucker Smith (called Tucker Smith for some years), Hallett, and McKillop, in the county of Huron.²⁵ By 1857, Huron County acquired six new townships, which were formed out of the crown lands to the north, namely: Ashfield, Wawanosh (East and West), Morris, Grey, Turnberry, and Howick. In 1865, however, McGillivray and Biddulph townships became a part of Middlesex County.

In 1879, a movement for further dismemberment in favour of annexation to Bruce County, took place.²⁶ This movement was led by two or three towns in the northern townships, which wished to become county seats. But general opinion supported the "status quo": "We observe that a number of municipalities", stated the Brussels "Post",²⁷ "are taking a decided stand against the dismemberment of present, and the formation of new, counties." A deputation from Turnberry and Howick carried a petition to Attorney-General Mowat against the proposed redistribution of counties, and the movement came to an end.²⁸

Until 1841, the Huron Tract was governed by a Board of Magistrates who sat at London, but in that year an act was passed by the first provincial parliament of Canada "to provide for the better internal government of that part of this province which formerly constituted the province of Upper Canada, by the establishment of local or municipal authorities therein²⁹ and the District of Huron was established, comprising the united counties of Huron, Perth, and Bruce.³⁰ Goderich was made the centre of local government, and Dr. William "Tiger" Dunlop,³¹ M.P.P., was named as the first Warden.

Meanwhile, the government was intent on pursuing an active land policy in the territory to the north of the Huron Tract.³² The Indian title to the lands in Bruce County was surrendered by treaty on August 9, 1836, for a payment of £1250 annually, "as long as grass grows or water runs³³". On April 19, 1847, an order-in-council was passed "to open up the waste lands of the crown in the Huron District" north of Wawanosh and Ashfield. Surveys were made in this area (known as the "Queen's Bush") from 1847 until 1800.³⁴

On May 30, 1849, an act was passed by which the Huron District was divided into three counties: Huron (17 townships), Perth (12 townships), and Bruce (11 townships).³⁵ At the same time, "The County Division Substitution Act" abolished the old territorial district divisions within the province.³⁶ These acts came into force on January 1, 1850. Goderich continued to be the county seat for the three counties until January 1, 1853, by which time Perth County had erected the necessary county buildings at Stratford.³⁷ On May 16, 1856,³⁸ an act for the formation of the provisional county of Bruce was passed; local jealousies over the site of the county town caused a ten-year delay before complete separation was achieved.³⁹ Goderich served as the seat of government for the "United Counties of Huron and Bruce" until January 1, 1867, when Bruce, by the "Redistribution Act, was set apart by itself.

Settlement of the Tract.

In the agreement formulated by the Canada Company and the British government, it had been stipulated that the former would, "in each year, during fifteen years, place one-half of the lands which during those years may have become occupied and purchased by them, in the possession of settlers, either as grantees or as lessees under them, in the proportion of one head of a family for every two hundred acres of such lands."⁴⁰ In the event of failure to comply with this agreement, the Company was to be fined five dollars for each lot left over, such money to be devoted towards internal improvement of that particular locality.

The Canada Company lost no time in attempting to settle the Huron Tract. In 1827 and 1828, Guelph and Goderich were founded, and a connecting road was built through the forests and swamp-lands. Between 1827 and 1830, the financial affairs of the Company were in a precarious condition, but by 1831 the outlook appeared brighter, and the assets indicated £53,000 cash, and 305,000 acres of land paid for but as yet unsold.⁴¹ A vigorous business policy was adopted, and agents were stationed at Montreal, Quebec, New York, and in England, to urge prospective settlers to purchase Company lands. It was during the eighteen-twenties and 'thirties that the flow of emigration from the British Isles to British North America began. The two principal routes from the United Kingdom to Upper Canada were the St. Lawrence waterway and New York, both of which were almost inaccessible during the winter months. From Montreal to York, emigrant settlers were conveyed for twenty-two shillings and sixpence, or five dollars, each, -- exclusive of provisions, which cost about two dollars. The expense of the trip from Great Britain to York was estimated at ten pounds for adults and about half that sum for children.⁴²

In order to encourage the settlement of its lands, the Canada Company allowed "free passage" to the head of Lake Ontario to all settlers who purchased two hundred acres in the crown reserve lands or one hundred acres in the township of Guelph or anywhere in the Huron Tract. The settler paid for his passage, but this money was accepted in lieu of equal payment on his second instalment. The purchaser was allowed to pay for his lot by six instalments within five years, on the payment of the first of which (one-fifth), his right to occupy the land was acknowledged.⁴³ John Galt contracted for cheap fare for emigrants who entered Canada via New York: by the agreement arrived at, the total expense of passage from New York to Detroit amounted to less than ten dollars for adults; the charge for luggage freight was one dollar and twenty-five cents per hundredweight.⁴⁴

During the period 1815 to 1855, a flood of books and pamphlets was written by numerous travellers in Canada, who sought to instruct immigrants to profit by the "experiences" which they themselves had gained. The uninitiated immigrant was warned to beware of friendly strangers, to refrain from an excess of "ardent spirits"⁴⁵ and smoking, and to carry only certain articles -- preferably money -- to Canada. Much of the advice and information, though doubtless well-meant, had the opposite effect, and usually bewildered the immigrant.⁴⁶ The Canada Company inaugurated a policy of extensive advertising,⁴⁷ and sought to give sounder advice in clear, succinct circulars.

By 1834, there were 2,594 settlers in the Huron Tract, 1,168 of whom were in Huron County proper.⁴⁸ By 1838, the number had doubled, and subsequent settlement was proportionately on the increase. What were the factors which contributed towards the rapidity of settlement and the opening up of new areas of farm lands in Huron?

The first factor was indisputedly the Company's early method of

settling and selling land. In order to understand this method, one should first consider the system of purchase of crown lands.

Crown lands could be purchased in one of four ways⁴⁹

- (1) by outright purchase at the "upset price" (so called because at certain periods during the year, lands were "set up" for sale and struck off to the highest bidder), whereby the buyer received a direct title to the land "in free and common socage" forever;
- (2) by the payment of one-fourth the price in cash, and three annual instalments, which had to be paid punctually, or else the land would be confiscated;
- (3) indigent immigrants⁵¹ were allotted land (fifty acres to each head of a family) on condition of actual settlement and the payment of five shillings currency per acre, with interest, annually, the first payment to begin at the expiration of three years⁵²;
- (4) by renting farms for from one to seven years; the yearly rent per acre (near towns) was from seven shillings sixpence to fifteen shillings, and for farms at a distance of ten miles from towns, from five to ten shillings per acre.

Crown lands were purchasable by what was known as "scrip"⁵³ money, which had its origin at the time of the influx of the United Empire Loyalists. "Scrip notes" of the nominal value of five pounds were issued to those officers who did not wish to take up land. The holder of the notes was entitled to draw a proportionate quantity of land at the government "upset price", which was about eight shillings per acre in Upper Canada. Forty scrip notes would entitle a person to five hundred acres of land. These notes were often sold for cash, as late as 1860, for one-half or three-quarters of their value.⁵⁴

On the other hand, the Canada Company, for some time, leased its lands on a "no money down" system, -- a policy which was convenient to immigrants or settlers who had families but no money, and therefore was conducive to rapid settlement. In 1831, land could be purchased in the Huron Tract for as little as three shillings to ten shillings per acre, according to quality and situation.⁵⁵ In 1832, building-lots of half an acre might be

had in the town of Goderich for ten pounds, and farms in the neighbourhood for ten shillings to twelve shillings sixpence per acre.⁵⁵ Until 1834, the greater number of settlers in Goderich township had paid \$1.50 per acre for their land. Early settlers often bought fairly large blocks: in 1830, Mr. Michael Fisher purchased a block of 5,465 acres in Colborne township,⁵⁷ near the bend of the Maitland River; later he resold a large portion of it. In 1835, the Canada Company built the steamer "Menesetung," (which plied between Goderich and ports on Lakes Erie and Ontario until 1838), and the price of land in Colborne township was raised forthwith from \$2.00 an acre to \$2.50, and shortly afterwards to \$3.00. The average price of "wild land" in the rest of Upper Canada, for the years 1828 to 1836, was 13s. 8d. for clergy reserves, and 9s. 7d. for other "wild land."⁵⁸ During this period, "wild land" in New Brunswick and in Nova Scotia was cheaper than it was in Upper Canada.

In 1851, the price of the Canada Company's lands in the Huron Tract ranged from 12s. 6d. to 20s. currency per acre; in other parts of Upper Canada, Company prices ranged from 21s. to 30s. per acre.⁵⁹ The fixed price of crown lands, at that time, was 8s. currency or 6s. 7d. sterling per acre, -- to be paid in full, in cash.⁶⁰ The chief reason for the low price of Company land in the Huron Tract was the government's decision in 1848 to make free grants⁶¹ of land in the territory lying immediately to the north of the Tract. Much of the land to the south of Huron was held by speculators, who hindered the progress of settlement: on the St. Clair River, "wild land" sold at from 40s. to 64s. per acre.⁶²

By the Company's "no money down" system, the lessee was bound to pay, for ten years, an annual rent, which amounted to more than six per cent. interest on the total cash value of the land. In other words, the average lessee paid, throughout the whole term of ten years, the interest on at least seventy acres of bush land, from which he was deriving little or no benefit. It can readily

be seen that the lessee would have very little opportunity to purchase by instalments, and if he failed to pay the total purchase price within ten years, the land would revert to the Company. The result was that scores of lessees fell in arrears, and Huron County, in many sections, was faced with the prospect of desertion and partial ruin.

Necessity had forced the pioneer farmer of Huron to develop the resources of the field and forest to their maximum extent: the fruits of his labours were soon to be reaped. From 1848 to 1852, the highest price for fall wheat was 90 cents, while in remote districts, spring wheat could not be sold at all.⁶³

The years 1853 to 1856 were crowded with events which had great repercussions in the Huron Tract. In 1853, the discovery of gold in California and Australia caused the price of wheat to rise slightly. In 1854, the failure of crops in the southern states and in the south of Europe raised it still higher. The following excerpt is culled from an agricultural journal of the period:

"The wheat crop in the United Kingdom is about two-thirds of an average; and to make up for this deficiency, about 32,000,000 bushels will be required, which, added to average imports, will probably amount to the enormous total of 70,000,000 bushels."⁶⁴

An expansion of "confidence, credit, and currency", an increase in the value of property, and the reciprocity treaty with the United States (March 16, 1855), led to more prosperous conditions. Reciprocity opened up new channels for commerce, and railway construction -- but one phase of general industrial progress -- provided an avenue for much of this trade.⁶⁵ The Crimean War, 1854-56, climaxed these events, and wheat which sold early in 1855 at Toronto, for 4s. (80 cents) per bushel, was sold in 1856 for 11s. 9d. (\$2.35). The price of wheat remained fairly high during 1857 and 1858, owing more to the scarcity of it than to foreign consumption.⁶⁶

The price of all kinds of agricultural produce rose comparatively. Land prices rocketed simultaneously: near Goderich, land which had been bought two years previously at \$18. per acre now sold at \$50. an acre.⁶⁷ In fact,

"..... land in this [Huron] county which, five years ago could have been bought for perhaps six dollars an acre, will now sell readily at thirty-six; and there is not a lessee of a hundred acres in Huron, with say twenty to thirty acres cleared, but may easily obtain from three to four hundred pounds for his right and improvements, even though he may be deep in arrears to the Company; that is, providing the term of his lease be not expired. Many have sold out, and many, through the high price of produce, have been able to pay up and secure their deeds."⁶⁸

Thus agriculture helped to "save the day" for Huron. But what of the effect of these events on newer counties, which had not developed agriculture to a point of self-support? All these events caused "absolute ruin to the settler in the new County of Bruce: he had sold his little stock and poultry at the lowest figure, and had to buy at the highest."⁶⁹ The lands of Bruce County were not cleared, and were not given over to the growing of grains, as were the fields of Huron.

The increase in the value of land-holdings heralded a wave of prosperity in Huron, but it had another influence which was to affect the development of the county in no small degree. When the land rose in value, the Canada Company at once withheld its entire holdings from sale. The large numbers of families which were annually arriving in the Huron Tract would have had to choose between leasing Company lands and returning whence they had come. Another event, however, followed rapidly on the heels of the Company's adoption of a new land policy: this event was the adoption by the government of a new land policy, whereby crown lands might be purchased on the instalment system. People preferred to buy than to lease, and within a few weeks, in the autumn of 1854, 200,000 acres were sold in the "back" townships: Turnberry, Howick, Morris, and Grey. A majority of the newcomers were farmers who had sold their property in the older-settled parts of Canada,⁷⁰ and who were in search of new horizons. By

the spring of 1856, all the crown lands in these four townships were sold, and every two-hundred-acre lot was settled upon.⁷¹ The situation is the more remarkable in view of the fact that these new townships laboured under every disadvantage that could arise from the want of roads, mills, markets, and water communications. Moreover, they were separated from the central part of the county by Hullett and McKillop townships, a large portion of which remained in the hands of the Company, and consequently was slow to develop. The four new townships were, however, to make considerable progress during the next few years, -- a progress which was to be at the expense of the other townships and Goderich.⁷² Goderich, notwithstanding its prospects of a railroad in 1858 and an extensive lake traffic, was almost at a standstill, during this period of hectic land-grabbings; building lots could not be had at any price. Consequently, Goderich failed to develop into the great lake-port which many had visualized as its destiny. Feeling⁷³ grew increasingly bitter towards the Canada Company, because of its "material" interests.⁷⁴

The first factor which contributed towards the rapidity of settlement in Huron was, then, "the Company's early method of settling and selling land"; the permanent influence of the Company's methods, as we have seen, was not favourable to progress. The second factor was the development of the means of transportation and communication. Here was a district which a land company was bound, by agreement, to improve in all possible ways. This fact alone was enough to give the Huron Tract the distinction of uniqueness. In accordance with the agreement which the Company had made⁷⁵ with the British government, roads, bridges, piers,⁷⁶ and mills were constructed, and harbours were improved. The three most important roads in the early history of the Huron Tract were the Huron Road, which linked Goderich to Hamilton, via Stratford and Galt; the London Road, which extended south from Goderich through Clinton, Brucefield and Exeter, to London; and the Bayfield Road,

situated between the first and second concessions of the township of Goderich, nearly parallel to the lake. The Huron Road⁷⁷ was built in 1828 by the Canada Company's engineers, under the direction of Dr. Dunlop. The London Road, constructed by the government, was later improved by the county. Two branches were built from Brucefields:- one to Bayfield, the other through Seaforth and Brussels to Wroxeter. Later, a highway was built from the township of Woolwich, in Waterloo County,⁷⁸ to and through the six northern townships of Huron County; another road, constructed by the Northern Gravel Road Company, linked Goderich to Lucknow, a distance of twenty-two miles. A road between Kincardine and Goderich was later opened by the government, which assumed responsibility for its upkeep.

These roads left much to be desired; for several years they were at times almost impassable, especially after a rain. In winter they provided a swift medium of intercourse. Much money was spent on their improvement by both the Canada Company and the government. The building of the first roads provided many of the early settlers with a means of paying for their land. Money was scarce, and for some years "labour" was the only legal tender at the settlers' command.⁷⁹ One of the earliest settlers in the town of Goderich was Alex McGregor, who came from Zorra (Oxford County), bringing with him several yoke of cattle, with which he worked on the Company's roads.⁸⁰

In 1856, the County Council passed a by-law⁸¹ providing for the gravelling of certain roads; within the next two years, over one hundred and fifty miles of highway were gravelled; a similar amount was gravelled, from 1859 to 1861.⁸² It was during the 'fifties that the real value of the roads as providing market facilities was recognized. The construction of roads preceded the building of numerous inns and taverns. At first, depots containing provisions and tools were established along the roads; these depots gave way to inns, which were established by various enterprising individuals.⁸³

It is noteworthy that toll-gates existed in Huron County until 1873, when the County Council abolished them; Bruce County had abolished them as early as 1867. The first toll-gate in Huron was the one at Maitlandville, across the Maitland River from Goderich; the last one was situated one mile north of ⁸⁴Dangannon.

The construction of bridges and piers, and the improvement of harbours entailed a great expense. For example, in 1854-55, the Canada Company built a bridge over the Bayfield River, and paid one thousand pounds for the cost of erecting only the approaches to it. ⁸⁵ By 1873, there were no less than ninety-two bridges in the county; the value of bridges owned by the county was \$110,000. The Company claimed to have spent \$85,000. in endeavouring to build a good harbour at Goderich. But its labours bore little fruit. The Company, in truth, was again adopting, even as it had done at the time of the "land sales" problem, a "dog in the manger" attitude: the Company feared that the harbour might become the property of the Buffalo and Lake Huron Railroad Company.

The Canada Company assisted in the early construction of grist-mills and saw-mills, which were driven by water-power. It is related that one of the early pioneers in Usborne township went to Goderich and borrowed a half bushel of wheat from the Canada Company, half of which he sowed, or "scratched in", and half of which he ate; he repaid the Company by working at the latter's mill (the "Bell Mill") in ⁸⁶Tuskersmith. It is conceivable that many settlers worked at the Company's mills in part-payment for their hard-won land. On the whole, the early development of roads, bridges, and mills in Huron County was a substantial factor in its progress.

The third factor in the county's development lay in the fact that Huron lay outside the aegis of the Church: the Huron Tract was unique in that it was the only large block of territory of its kind, in which the clergy

reserves were not to be found. The cry of "retardation of development" which was raised against the clergy reserves, and which involved such a serious dispute in the nineteenth century, failed to call forth even an echo in Huron.

The fourth factor in Huron County's rapid progress is to be found in the settlers themselves. They were, in the main, of Irish, Scotch, or English stock; occasionally, one might meet with Dutch and German settlers. All these types possessed a true instinct for pioneer farming. "Tiger" Dunlop, in answer to his own question: "What increases the value of land?", replied: "Nothing but the work and the worth of the men who till it"⁸⁷. And there is some truth in this statement, especially as it is applicable to the Huron Tract. Probably John Galt's greatest contribution to the development of Huron lies, not in his town-founding and not in his road-building, but in his selection of fine settlers, with whom to populate this virgin area.

A fifth factor -- one which is closely allied to the fourth -- was immigration,⁸⁸ both from the British Isles and from the rest of Upper Canada, which continued to replenish the settlement for years. The new arrivals from the "old country" brought with them comparatively new ideas about farming, especially in respect to stock-raising, dairying, and fruit-growing. The "new" settlers from other parts of Upper Canada brought with them a world of experience and the power of adaptability; this fact can be readily understood when one realizes how rapidly the townships of Croft, Morris, Howick, and Turnberry developed.

A sixth factor, and perhaps one of the most permanent factors, was the resources of the county itself: agriculture, the "back-bone" industry of nations, was to provide a key and solution to the county's problems: sustenance and progress. As early as 1844, the Huron district outstripped the Western⁸⁹ district in agricultural improvement.

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CHAPTER III

The State of Agriculture in the 'Thirties and 'Forties.

When the earliest pioneers forged their way into the wilderness of the Huron Tract in the late 'twenties and 'thirties, they found themselves in a veritable paradise. The trees which reared from the virgin soil had not yet felt the white man's axe; the soil itself had not yet known the subjugation of the plough. The forests were inhabited by beasts and birds of several species,¹ and many varieties of fish swam in the numerous streams and in the great lake to the west. Deer, wolves, and bears were plentiful, even as late as 1866.² Good venison could be purchased in winter at twopence per pound.³ Indians would often sell the entire carcass of a deer for one dollar, -- if a settler were able to gather that amount.⁴ Dr. Dunlop, of Gairbraid, was said to have had a fawn as a household pet.⁵ A bounty of six dollars for each wolf-skin was paid by the government.⁶ The Tract was a haven for smaller animals: -- beaver, musk-rat, otter, raccoon, mink, wild-cats, rabbits, chipmunks, and squirrels abounded. The black squirrel was particularly destructive to grain crops.⁷ The swamps in the centre of the Tract were alive with frogs, which ranged from five pounds in weight to the size of a wren's egg.⁸ The most common game-bird was the passenger- or carrier-pigeon, which existed in multitudinous quantities. Strickland tells of having killed as many as twenty or thirty at one shot.⁹ They fed on wild berries, and provided excellent meat. Partridge, quail, snipe, plover, ducks and geese were also prolific,¹⁰ and filled a prominent place in the early settler's larder. The Tract was also the retreat of other wild birds; blackbirds were the most destructive to crops. Probably the farmer's most feared enemies, however, were the mosquitoes¹¹ and the black flies; even Champlain¹² complained of the mosquitoes. A description of the fish which

were to be found in the neighbourhood of the Huron district is given by

Dr. Dunlop¹³

"The rivers and the lake abound with fish, among which may be enumerated the sturgeon, river trout, pike, pickerel, maskononge, mullet, carp, sucker, herring, white-fish, bass, sun-fish, cat-fish, and an undescribed species of the salmon tribe, called a mackinaw trout."

In his new surroundings, the pioneer farmer was in close communion with nature. He essayed to keep his work attuned to nature, and sought to carry on in unison with the seasons:

"The silence of the winter was broken by the first running waters; and howling, quacking, growling and piping, below, with the greetings of robin, blackbird, crow, and bluejay above, were not unlike the tuning of an orchestra. Summer came, and the festoons were bowers of green; the oaks, maples, and beeches, all so many tokens of riches, spread into leaf. In sunny places, the wild plum burst into snow-drifts, white as those just gone; and from its hiding-place the Canadian rossignol sang" sweetly. And¹⁵ at night "all the forests swarmed with myriads of fireflies."

The early history of agriculture in the county of Huron reveals a constant struggle against nature and the elements. We might borrow a phrase¹⁶ from the Lisars sisters, and go so far as to state that the pioneers' conquest of the soil constituted "Huron's age heroic". The pioneer farmer's success depended upon the amount of physical strength and endurance which he possessed, rather than on his intelligence, judgment, and skill. It was not until he had passed the most intense period of his struggle with nature that the pioneer reached even the incipient stage of agricultural evolution.

His first concern was not the growth of crops, but the erection of a suitable dwelling in the wilderness in which he found himself. The site of the house or log shanty¹⁷ depended on several factors, such as the soil, the proximity to a spring of fresh water, a road,¹⁸ a mill, a river, or neighbours. The quality of the land was ascertained from the trees which grew upon it: the harder the wood, the richer was the soil.¹⁹ The most suitable time

of year to commence building operations was in the early fall, when black flies and mosquitoes had become fewer in number. One man could clear a space for a house and prepare the necessary logs for construction, within one week. A log shanty, twenty-four feet by sixteen feet, contained ample room to begin with; the floor was composed of hard earth covered with straw, or of board slats. A small cellar was often dug near the fire-place, commodious enough to hold a large quantity of potatoes.²⁰ Sometimes root cellars were made by excavating holes in a contiguous clay bank, and covering them with clay and manure.²¹

The average cost of a log cabin was \$15., of a log house \$45., and of a log barn \$25. After saw-mills were erected, sturdy frame-houses could be built for about \$120. The charge for sawing one hundred feet of one-inch boards was three shillings, and for two-inch boards five shillings.²² Sometimes a bargain was made between the farmer and the mill-owner, whereby the latter accepted a share of the wood cut in lieu of cash payment. Boards were usually cut from the white pine, spruce, and hemlock.

Perhaps the greatest task²³ which faced every settler was that of clearing the land.²⁴ By a process known as "under-brushing"²⁵, all the small trees and shrubbery were cut down. The brush was then piled in wind-rows, if the timber were coniferous, or in heaps if it were deciduous; then it was left to dry, for seven or eight weeks. Meanwhile, the larger trees were chopped down. In felling trees, a notch was usually cut into each side of the tree, a yard from the ground. The trees were felled in the same direction, were trimmed, and were then squared into convenient lengths. Sometimes trees were "girdled"²⁶; a circle was cut deep into the bark, completely around the tree; the sap was prevented from rising, and the branches, deprived of nourishment, ceased to grow. But the dead branches, when they fell, endangered the lives of cattle; besides, the shading properties

of the tree were destroyed. For these reasons, then, this method was not followed very extensively. After the trees were cut down, "logging" took place, by which process the heavy pieces of wood were drawn into a heap by means of a chain fastened to a yoke of oxen. After the wood was sufficiently dry, the first burning took place. The charred remains were collected and the second burning, or "branding", was carried out.

Opinions varied as to the amount of land which could be cleared by settlers within a limited period of time.²⁷ One writer²⁸ estimated that six men could chop and burn off an acre in one day; another²⁹ claimed that one man could chop an acre a week but could not burn the brush within that period. But as a general rule, an able-bodied man could clear an acre of land in less than ten days, and might clear, fence, and put under crop ten acres of land within twelve months.³⁰ The average charge for cutting timber, clearing and fencing land, if the farmer engaged outside help, was £3. per acre;³¹ chopping was done for 30s. per acre, and logging for 20s. per acre.

The newly acquired land next had to be fenced. The first fences were composed either of felled trees or of split rails. The usual type was the "snake fence"³² or "zig-zag" rail fence,³³ made of split rails, eleven feet long, placed one above the other, seven rails in height. Various kinds of wood were used, but the black-ash and cedar³⁴ furnished the best material, as they lasted from ten to fifteen years. Rails of pine, maple, or beech were rarely built. Five or six rods of fence could be cut and split in one³⁵ day. Ordinary fences cost 1s. 3d. per rod; post and rail fences 1s. 10d., and ditching, 1s. 6d.

The actual cultivation of the soil was for several years impossible, owing to the prevalence of stumps and the mass of interlaced roots. Stumps were the bane of the farmer's very existence. Probably one of the happiest moments of his life was experienced when these obstacles were completely removed.

TABLE: Progress of Settlement in Huron County, by 1840:

<u>Township</u>	<u>Popu- lation</u>	<u>No. of families</u>	<u>Acres Cleared</u>	<u>Acres Chopped</u>	<u>Frame Houses</u>	<u>Log Houses</u>	<u>Frame Build- ings</u>	<u>Log Build- ings</u>	<u>Grist Mills</u>	<u>Saw Mills</u>	<u>Dis- tilleries</u>
Biddulph	420	42	1480	70	-	90	-	62	-	-	-
Colborne	225	33	1280	37	4	42	7	41	-	4	-
Goderich	1847	113	5103	329	155	308	12	231	1	3	3
Hay	60	6	242	85	1	14	1	14	-	-	-
Hullett	62	11	401	76	2	15	3	11	-	-	-
McGillivray	142	21	586	101	-	32	-	33	-	-	-
McKillop	143	23	460	49	-	29	2	22	-	1	1
Stanley	211	36	663	43	2	55	-	43	1	1	-
Stephen	91	7	350	94	2	13	2	19	-	-	-
Tuckersmith	342	30	1467	257	2	70	4	76	2	1	-
Usborne	138	9	520	43	-	26	2	40	1	1	-
TOTALS:	3,681	331	12,552	1,184	168	694	33	592	6	11	4

Note: In 1840, there were also, within the Huron Tract, three grist mills -- one in each of East Williams, North Easthope, and Bosanquet; seven saw mills, -- two in East Williams, and one in each of West Williams, Bosanquet, Ellice, North Easthope, and South Easthope; and three distilleries, -- two in East Williams, and one in South Easthope.

The spectacle of acres of burning stumps³⁶, on a late autumn evening, must indeed have been an enjoyable one. And if burning did not eradicate the stumps, time and weather completed the process. Stumps generally occupied about one-eighth of the area of a field.³⁷ The removal of the last stump presaged a new freedom and a new era, and was often the occasion for a celebration. The land was now freed from its "imprisonment", and the future success of the husbandman was no longer dependent merely on his brawn, but increasingly on his reasoning faculties.

The early farmer's implements were of the crudest kind, and the scanty products of his toil were harvested in an extremely laborious manner. The first necessary implement was an axe, preferably one manufactured in Canada, as axes made in Great Britain were unsuited to the tasks imposed upon them in the Canadian wilderness. A first-rate axe cost, "handle and all, seven shillings and sixpence currency, but then it is a treasure afterwards".³⁸ An amusing story is told concerning James Willis, who settled on the present site of Exeter, in 1832. He walked all the way to London, to purchase a hoe, but the cheapest hoe cost three shillings, two shillings more than he had. So he walked home and planted his potatoes with the help of an axe.³⁹ What little ploughing⁴⁰ was done was accomplished with the aid of a pair of stout oxen and an axe, with which obstructing roots were chopped away. But for the first few years, ploughing was quite impracticable, and was replaced by the spade, fork, rake, and hoe; moreover, a good plough cost between two and three pounds⁴¹, -- more than the early farmer could afford to pay. Much use was made of a harrow or "drag", which consisted of the crotch of a tree, drawn by oxen over the rough surface. A "brush-harrow", or top of a small tree, was used to cover turnip and other small seeds.⁴²

Harvesting was a difficult operation; hay was cut with a scythe, and grain was reaped with a toothed sickle or home-made cradle scythe.

A good cradler could cut two or three acres a day. Grain was bound into sheaves with the aid of a wooden rake. At first, most of the grain was threshed by hand; but later a flail⁴⁵ was made by joining with leather strips the ends of two long hickory poles. Corn was cut with a sickle or sharp short-handled hoe; then it was stood up in sheaves. After a week or two, the ears were collected and placed in wooden cribs, to be dried.⁴⁴ By 1850, there were about fourteen grist-mills in the Huron Tract, nine of which were in Huron County.⁴⁵ Very often the farmer contracted a business deal, whereby the mill-owner kept a certain percentage of the wheat in return for grinding it. Settlers often went from Tuckersmith to London, a distance of thirty-five miles, taking with them sacks of wheat on the backs of oxen, and returning on the same day with the flour. Some settlers went as far as Port Stanley, over sixty miles away, to have their wheat ground.⁴⁶

Gradual improvements in implements came about in the early 'forties: the first portable threshing machine (an eight-horse power thresher, with no separator) had been introduced into Canada in 1836, and four years later appeared the first tread-mill, operated by one horse. Both these inventions were of American origin.⁴⁷ An improved harrow, of Scottish manufacture, was also brought in: it was equipped with forty teeth, and covered a swath of nine feet. Ploughs of improved pattern, lighter and more effective, began to be manufactured; crude clover-seed cleaners and root-cutters were also coming into use.

The ordinary crops⁴⁸ which the Huron farmer planted were wheat, oats, barley, Indian corn, potatoes, turnips, pumpkins, mangel wurzels, and peas.⁴⁹ Spring wheat was usually sown from the 20th April to the 15th May, about one bushel to the acre. The average yield in the Huron Tract, over a ten-year period,⁵⁰ was twenty-five bushels per acre. Fall or winter wheat was generally planted during the first two weeks of September, and the average yield was less than

that of spring wheat. Oats were sown during April, about one and one-half bushels to the acre; the average yield was forty bushels. Barley was sown during the latter part of May, and it yielded thirty bushels. The following extract from Major Strickland's book is of interest:⁵¹

"In May the settler should plant Indian corn and potatoes. The Indian corn should be planted with the hoe in rows, three feet apart, and thirty inches in the row. A pumpkin seed or two could be sown in every second or third hole in each third row. The corn must be hilled up five or six inches. Potatoes on the new land are also planted with the hoe, and in hills, about five thousand to the acre. Two hundred and fifty bushels per acre are no uncommon crop. I have assisted in raising double that quantity. Both white turnips and swedes do well, especially on new land."

In 1829, Strickland had the honour of being the first man to put the plough into the soil of the Huron Tract; he planted four acres of wheat and oats.⁵² Rye did not flourish very well, although the average yield was thirty bushels per acre. Buckwheat was cultivated only to a limited extent, and yielded twenty-five bushels.

Turnips were sown by hand during June, and yielded nearly one thousand bushels per acre. Pumpkins, planted in May, yielded three hundred bushels;⁵³ they provided, for some years, the commonest winter food for cattle. The mangel wurzel, a species of beet-root, was also used as cattle-feed.⁵⁴ Peas, sown early in spring, produced twenty-five bushels per acre. Beans did not thrive at all in the Huron district. Hemp and flax were cultivated only to a very small extent.⁵⁵ A few of the early settlers planted hops, from which was made home-brew. During the early years of settlement, cleared land was too valuable to be used in growing hay for cattle, when it was difficult to grow enough grain for food for the farmer and his family. When hay was planted, it was in the form of timothy. A long coarse grass which grew in natural or beaver meadows was also useful for fodder. The lack of grass was one of the greatest privations of early settlement.⁵⁶ Meadow-lands often averaged one ton

of hay per acre, worth from forty to fifty shillings. Mowing commenced in July, and reaping in August. The cost of seed, cultivating, and harvesting, averaged from thirty-five to forty shillings per acre. The regular returns of a small farm in wheat, provisions, and so forth, averaged about four pounds in value. For some years, however, money was so scarce in the Huron Tract that it was often impossible to sell even wheat for cash.⁵⁷

The current prices⁵⁸ of grain in Upper Canada, in 1832, per bushel of sixty pounds, were:- wheat: 4s. 6d.; barley: 3s.; oats: 1s. 6d.; rye: 3s. 6d.; buckwheat: 3s.; Indian corn: 3s. 6d.; potatoes: 2s.; peas: 2s; clover seed: 30s. The current prices of provisions in 1832 were: butchers' meat: 3¹/₂d. per lb.; fowls and ducks: 1s. per pair; turkeys and geese: 3s. each; butter: 9d. per lb.; cheese: 6d. per lb.; flour: 25s. per barrel of 196 lbs.; salt: 15s. per barrel of 8 bushels; tallow: 4d. per lb.⁵⁹

The earliest settlers in Huron seldom cultivated gardens because they could utilize the time more profitably by growing grain and other of the more staple crops. Captain Robert Dunlop, the brother of Dr. William Dunlop, kept a garden at Gairbraid. Mention has already been made of Major Strickland's first ploughing.⁶⁰ The first real agricultural settler on the Huron Tract was Colonel Anthony Van Egmond,⁶¹ who, within twenty months, cleared one hundred acres, fifty of which were sown with wheat; he also planted turnips and oats. Van Egmond's wife cut the first sheaf of wheat in Huron, in 1829; the cutting was made the occasion of a ceremony by the officials of the Canada Company.⁶² On the whole, the first crops in the Huron Tract, as in other parts of the Western district,⁶³ were remarkable.

The Huron Tract abounded in wild berries and fruits. Raspberries, strawberries, blueberries, blackberries, huckleberries, bilberries, and a species known as "manaberries"⁶⁴ grew in large quantities.⁶⁵ Later, gooseberries⁶⁶ and currants were introduced by many settlers from England, but these kinds

of fruit did not thrive very well at first.⁶⁷ Wild grapes, which were small and somewhat bitter, were considered suitable for making preserves and wine, but little attempt was made to improve them.⁶⁸ Native plums were also not very good in their raw state, but they too made "an excellent preserve and good wine".⁶⁹ The black cherry, prized for its fine wood, produced fruit which had an astringent taste and large stones.⁷⁰ Apple and plum trees were cultivated at an early date in Huron, and flourished:

"Apple and plum orchards should be planted as soon as possible, and well-fenced from the cattle and sheep. The best kind of grafted fruit-trees, from three to seven years old, can be obtained at a shilling a tree; ungrafted at four shillings the dozen. The apple-tree flourishes extremely well I gathered, last year, out of my orchard, several Ribstone pippins, each of which weighed more than twelve ounces, and were of fine flavour."⁷¹

In the early years of "fruit culture", little attention was paid to orchards after they were first planted. Howison describes pigs running loose among the fruit-trees, which were "neither fenced, pruned, nor manured at any time".⁷²

The first cattle in the Huron Tract were of somewhat inferior quality, and did not equal the same breeds in England. Cows were not housed in winter, but were allowed to roam about, "with imploring looks and shrunken sides",⁷³ browsing in the bush with their offspring.⁷⁴ It is recorded that in one township in Huron, fifteen hundred head of cattle were lost through neglect, during one winter; but this is very likely an exaggeration. A cow and a calf could be purchased for about £5. On an average, a cow yielded ten quarts of milk per week, from which a quantity of butter and cheese was made,⁷⁵ chiefly for home consumption. During the summer months, lean cattle gained in pasture from 170 pounds to 220 pounds, and yielded from 780 to 820 pounds of meat, as well as 100 pounds of tallow.⁷⁶ Oxen were at first more numerous than horses; they were hardier than horses, could forage for themselves, and when disabled could be converted into food. A yoke of oxen could be purchased for from £10

TABLE: Livestock Production in Huron, 1840:

Township	Oxen	Horned Cattle	Horses	Sheep	Hogs
Biddulph	136	522	41	358	677
Colborne	80	353	15	197	547
Goderich	283	1496	127	597	2316
Hay	30	129	21	108	82
Hullett	14	37	53	79	174
McGillivray	60	259	13	113	239
McKillop	48	85	146	63	204
Stanley	74	332	12	117	300
Stephen	38	185	11	35	176
Tuckersmith	122	577	31	365	618
Usborne	48	217	9	136	248
TOTALS:	933	4,192	479	2,168	5,581

to £15.⁷⁸ Many of the earliest settlers paid for part of their lands by working with oxen on the Canada Company's roads: a notable example is Alex McGregor, who brought from Terra (Oxford County) several yoke of oxen for this purpose.⁷⁹

The Canadian horse was not very highly esteemed, in the early years;⁸⁰ horses were not very well adapted for use in the bush, and it cost more to feed them than to feed cattle. A horse could be purchased for about £10;⁸¹ an ass could be had for from 7s. 6d. to 10s. The breeds of horses and cattle which were to add so much to farm profits, were not introduced into the district until the late 'forties and 'fifties.⁸² The first pair of horses in Huron County was owned by Mr. Biscoe, who settled on the Huron Road, near Clinton.⁸³

The pigs in Upper Canada were referred to as "a vile degenerate race", -- "the scavengers of Canada"⁸⁴ -- and could be compared to nothing but "a small greyhound, with the head of a rhinoceros, and ears like huge plantain leaves."⁸⁵ They were very useful for food, and were common in all the early settlements.⁸⁶ On March 9, 1820, William Dunlop wrote from the Huron Tract to his sister Nell, and expressed his desire to have some pigs of the breed owned by his father in Scotland.⁸⁷ In 1833, John Faldane, another early settler in Huron, purchased some pigs of the razor-backed variety, but they ruined his potato crop.⁸⁸ Because it was difficult to keep them out of the crops, pigs were a great nuisance; lack of fences permitted them to roam freely,⁸⁹ feeding on acorns and refuse. Pigs could be bought for a few shillings and could be fed cheaply. Five bushels of peas or Indian corn would keep and fatten a hog fit for market;⁹⁰ buckwheat was also used for pigfeed.⁹¹ Sheep were of poor quality at first, and were less adapted than were the pigs to backwoods conditions; sheep cost from ten to twenty shillings each.⁹²

Chickens, ducks, geese, and other fowl were common in most communities, as might be expected. The presence of hawks, eagles, and foxes made the

existence of fowl hazardous, but the system of harvesting left much grain on the surface of the earth, and fowl were almost self-sup⁹³ porting. Poultry was perhaps the cheapest of all the farmer's stock, ranging in price from a few pence to a couple of shillings.

Dairying was relatively unknown, as a commercial industry. What butter, cheese, and eggs were produced were used for the farmer's own consumption. Occasionally, they could be bartered for other goods. In one week, a cow would yield enough milk to manufacture three pounds of butter and four pounds of cheese. The value of butter was about 8d. per pound and of cheese about ⁹⁴5d. Eggs, as late as 1867, had little or no commercial value, and were rarely sold for money;⁹⁵ the method of storing eggs for export was not introduced until the 'sixties.

Reference should be made to the farmer's "auxiliary" industries, which consisted of maple-sugar making, bee-keeping, and the making of potash and pearlash. Maple-trees were tapped in early spring, and the sap was collected in small pails, which were emptied into a large vat, prior to boiling. The resulting maple sugar and maple syrup were much prized.⁹⁶ Maple beer, maple wine, and maple vinegar⁹⁷ were also manufactured by the farmer. One maple-tree yielded, on an average, five pounds of sugar, worth from 3d. to 4d. per pound; a grove of maple-trees might produce for the owner as much as £40 in one season.⁹⁸ Some settlers in the Huron Tract made as much as "one thousand pounds of sugar, and from three hundred pounds to five hundred pounds was a common thing."⁹⁹

Bees were not very common in the Huron Tract, and honey was quite ¹⁰⁰rare. But the mass production of maple sugar provided the farmer with an abundant supply of "sweet-stuffs",¹⁰¹ and honey was not sorely missed. Wherever it was produced, honey was worth from ¹⁰²3d. to 5d. per pound.

The making of potash and pearlash which were used in the domestic manufacture of soap, provided the farmer with a source of revenue for some years. The ashes which remained after the burning of timber and under-brush were collected and placed in a vat. Twenty-five bushels of wood-ashes would make one hundred pounds of potash, and two men could prepare one ton of potash

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in a month. If wood-ashes were not to be had, the farmer collected and burned vegetable substances, preferably herbaceous plants, shrubs, and hard-woods.

The resulting ashes were soaked in large vats of water, called "leaches", which were heated over a fire. Through holes in the bottom of the vats, salts of

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lye (also called "lixivium" or "lixidium") were drained into other containers.

Pearlash was made by calcining potash in an oven, in order to free it of all

impurities. If a farmer did not wish to manufacture potash, he could sell

his ashes for 5d. a bushel. Potash, in 1831, was worth about 17s. 6d. per

hundredweight, and could sell for as high as £1. 5s. in Montreal. In 1845,

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the value of ashes was computed at £3 per acre. Pearlash involved more labour

in its manufacture, and fetched a higher price. But this source of revenue

was rendered almost negligible by the high cost of transportation (the expense

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of carriage was often as high as 3s. per hundredweight) and by the increased

knowledge of chemistry in Europe. So by 1846, ashes which were not made into

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soap for home use were left on the ground as a fertilizer, or were exchanged

for "a little whiskey, tea, or cloth." The value of ashes as a fertilizer was recognised

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for many years: in 1859, ashes were considered as "valuable to the agriculture

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and commerce of Canada."

The early settlers were often assisted in their labours by a number of sons. Occasionally, however, it was necessary to hire outside help. The

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wages in Upper Canada were higher than those in Lower Canada, and the wages

in the Huron Tract compared favourably with the former. In 1852, agricultural

labourers in Upper Canada (and in the Huron Tract) received from 2s. 6d to

4s. per day, or 30s. to 60s. per month, including board; farm labourers in Lower Canada received from 2s. to 3s. per day, or 20s. to 50s. per month, including board. By 1850, wages in Upper Canada had increased to from 40s. to 70s. per month, and from £20 to £25 per year, including board in each instance. The wages of female labour remained unchanged from 1830 to 1850; female servants received from 10s. to 20s. per month, including board, and were rarely hired by the year. During the early years of settlement, labour was often repaid by produce. Many farmers helped to pay for their lands by working on the Canada Company's roads. Then too, it was a common practice for farmers to help each other, especially in harvest-time.

Notwithstanding all the help he could muster, and the ardour which he constantly exhibited, the farmer was beset by many enemies: frost, drought, storms, blight, rust, insects, harmful birds and beasts, -- and ignorance. Wheat-rust proved so serious in the Huron Tract in the late 'forties, that, as one grizzled pioneer remarked: "Had it not been for the introduction of Egyptian wheat, which proved rust-resisting, I believe many would have starved."¹¹² Sometimes, when a blight proved particularly damaging to other crops, settlers subsisted on turnips for weeks. Blackbirds and squirrels were destructive to grain crops;¹¹³ wolves and even bears endangered the lives of cattle. But ignorance was perhaps the farmer's greatest enemy; he had no scientific knowledge of farming. Fertilisation of the soil was limited to the scattering of a few ashes over the field; manure was seldom used at first for this purpose.¹¹⁴ Rotation of crops was comparatively unknown, in Upper Canada, or if known, was rarely practised. Drainage was carried on very crudely, or in many instances, was left completely to nature. Stock-breeding was also a rarity for several years. Dairying, as a commercial venture, was considered only as a very remote

possibility. The formation of agricultural societies and the holding of fairs and exhibitions were to prove incentives to agricultural progress. The state of agriculture in the 'thirties and 'forties "up Huron way" was indeed a far cry from the agricultural situation in later years.

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Chapter III; The State of Agriculture in the 'Thirties and 'Forties.

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- 7 Strickland, Major Samuel: Twenty-Seven Years in Canada West (London, 1853), vol. I, pp. 302-4.
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CHAPTER IV

Agricultural Societies and Education.

Agricultural Societies.

The period of development of agricultural societies (1840-1880) witnessed remarkable strides in agricultural progress. These strides manifested themselves in various forms: agricultural societies, ploughing matches, dairymen's associations, horticultural societies, fruit-growers' associations, farmers' clubs and organisations, and agricultural legislation. Societies stimulated interest in more profitable methods of cultivation and stock-breeding, and directed attention to new labour-saving implements. Legislation with respect to agriculture was passed in Ontario as early as 1830, but had no real significance until the formation of agricultural societies, during the 'forties, was begun on a large scale. During the period 1850-1875, the history of agricultural legislation closely parallels that of agricultural societies. Dissatisfaction over the methods of certain organisations gave rise to independent farmers' clubs, which in turn were superseded by a great movement, known as the Grange, which was to have a considerable effect on legislation, and on the farmers' status in the realms of business, commerce, and society.

The history of agricultural societies extends as far back as the seventeenth and eighteenth centuries, when English gentlemen farmers gathered chiefly for the comparison of stock.¹ The first agricultural society in British North America was formed in 1765 at Windsor, Nova Scotia; in 1789, Lord Dorchester formed one at Quebec City.² In 1792, Lieutenant-Governor Simcoe organized an agricultural society at Newark, Niagara, which met occasionally to discuss topics pertaining to agriculture.³ Simcoe became

the patron of this society, to which he subscribed ten guineas as an annual premium for the benefit of agriculture, and to which he donated, in April, 1793, a set of books, entitled "Yonge's Annals of Agriculture"⁴. Six years later, the society held a fair at Queenston;⁵ this event must have had an effect on the people of York, as a Gardeners' Club was formed there in 1800. For some years, however, conditions (owing principally to the difficulties of settlement and war with the United States) were not very favourable for the establishment of such organisations. Between 1820 and 1830, perhaps six or seven had been formed. A fair was held at Colborne, October 19, 1828, and £15 in prizes was awarded.⁶

By 1830, the government was beginning to recognise the possibilities of agricultural organisations and fairs, and an act was passed which authorized the governor to grant £100 to any district agricultural society which raised the sum of £50 by subscription of its members, for the purpose of importing valuable live-stock, grain, and useful implements.⁷ As a result of this gesture, agricultural societies increased in number, and farming conditions gradually improved.⁸ In 1832, a state agricultural association was created in New York state, and was attended by a number of Upper Canadian farmers.⁹ The year 1838 witnessed the establishment of the Royal Agricultural Society of England, which held its first annual exhibition at Oxford, in 1839.¹⁰ In July, 1843, the suggestion was advanced in Ontario to form a provincial organisation; accordingly, in December of that year, a meeting of delegates of various district societies was held at York, "for the purpose of forming township societies in connection with the District Agricultural Societies now established", and for proposing "the formation of a Provincial Agricultural Association".¹¹ Similar meetings were held at York (now Toronto) on May 13 and July 15-16, during 1846; on the latter date, rules were drawn up, and

"The Provincial Agricultural Association and Board of Agriculture for Canada West" were created.¹² An annual provincial exhibition was to constitute part of the programme of this body, and the first was to be held at Toronto, in October, 1846.¹³ The Canada Company agreed to become a patron of the association, and to grant an annual award of £50, one-half of which was to help defray the expenses of the group, and the other half was to be awarded as a prize for the best twenty-five bushels of fall wheat grown in Canada West.¹⁴

It should be noted that the Provincial Agricultural Association was a self-created body, "stimulated to action by the ardour and the activity of private individuals": the government of Upper Canada did not organize a Department of Agriculture of its own motion. From this association were to follow all future organisations of a provincial nature, and, forty-two years later (i.e. 1888), the Ontario Department of Agriculture. The provincial association was incorporated by an act of parliament on July 28, 1847.¹⁵ Meantime, the government had been adopting an ever-increasing interest in the district societies; in 1843, annual grants had been increased to £200, and in 1845, to £250.¹⁶ In 1850, Boards of Agriculture, long in demand, were established in both Upper and Lower Canada;¹⁷ the Upper Canadian board, composed of ten members, was to act as the executive of the provincial association.

In 1851 (August 30), a bill provided for the better organisation of agricultural societies in Upper Canada: a county society was to be recognised when it contained fifty members each of whom subscribed five shillings annually.¹⁸ By February, 1852, rumours¹⁹ were current regarding the creation of a Bureau of Agriculture. In December, 1852, an important step was taken in the passage of an act "to provide for the establishment of a Bureau of Agriculture, and to amend and consolidate the laws relating to agriculture".²⁰ The functions of this bureau were to disseminate or publish "useful facts and statistics relating to the agricultural interests of the

province", and to encourage the organisation of societies and the holding of fall fairs. In 1857, still another act was passed, "to make better provision for the encouragement of agriculture". By 1867, there were sixty-three district societies and two hundred and sixty township societies, each receiving a grant not in excess of eight hundred dollars.²¹

The year 1880 witnessed the appointment of the Ontario Agricultural Commission, "to inquire into the agricultural resources of the province of Ontario, the progress and condition of agriculture therewith". The suggestion for a survey of the state of agriculture in Ontario, came in the report of Honourable S.C. Wood, in 1879-80, in which he cited instances in England and in the United States, where valuable results had ensued from such an enquiry. Accordingly, commissioners were appointed to conduct an enquiry by questionnaires and formal sittings; the results were embodied in an admirably written Report, which appeared in five volumes, in 1881.²² Partly because of the influence of this Report, and partly because of the recommendation of Mr. Archibald Blue, the government established, in 1882, the Ontario Bureau of Industries, "for the collection and publication of statistics in connection with agriculture and allied industries".²³ A climax in agricultural history was reached in 1888, with the formation of the Department of Agriculture, and the appointment of Charles Drury as the first Minister of Agriculture.

County Societies.

Among the hand-maidens of progress are competition and co-operation, the spirits of which were early engendered in the pioneers of the Huron Tract. As early as 1831, John Haldane and his son "carried off the prize for wheat",²⁴ and it is to be presumed that local competition such as this proved a major factor in the rapid development of Huron. The first agricultural society in the Tract was organised at Stratford (Perth County), on December 15, 1841.²⁵

The Huron District Agricultural Society was founded at Goderich on February 14, 1842, "pursuant to a notice signed by Dr. William Dunlop and William B. Rich, Esquires, Justices of the Peace, to take into consideration the propriety of forming an agricultural society". A board of fifteen directors was appointed, with Dunlop at the head, but as he was at that time the "M. P." for Huron, presidential duties were fulfilled by Mr. John McDonald, who was later to become the sheriff of the county.²⁶ The remaining officials comprised two vice-presidents, a secretary, and a treasurer. The third minute of the initial meeting was "Moved by J.C.W. Daly, seconded by Mr. A. Brown, that as the Canada Company have a great interest in the agricultural welfare of this district, Thomas Mercer Jones, Esq., as their representative, be solicited to become patron of this society." The Company responded with liberal donations, and established an annual prize of £15 for the best twenty bushels of fall wheat. Moreover, the Company continued for some time to provide the society with samples of new and superior seeds, with which the members might experiment.²⁷

The number of subscribers in 1842 was quite large, but it was difficult to collect subscriptions. This difficulty was not confined to the Huron district alone, but was common throughout the province; notices were constantly published, urging agricultural societies to pay for subscriptions for which they were in arrears. The Huron District Society purchased from Adam Fergusson, a prominent stock-breeder at Woodhill, two thoroughbred bulls, "for the use of the settlement". A premium of £10 was awarded for the erection of a weighing machine in the market square, and £10 was offered as a prize for the best-bred horse.²⁸

The first agricultural show was held at Goderich, October 18, 1842, and was attended by farmers who lived within a radius of forty miles. The value of the premiums totalled only £25. 17s. 6d., but the show was a success. The agricultural produce was excellent, especially root crops and wheat. Mr. Elliott won the fall wheat prize with grain which weighed sixty-four pounds per bushel;

spring wheat which weighed sixty-two pounds per bushel was also exhibited. The livestock shown was of an inferior quality, although Mr. William Gooding won a prize for some fine Berkshire pigs. Beets were awarded as prizes by Mr. Eli Hard, who predicted that out of this first fair might "grow a regular affair which will help to bring the people together". It was suggested that one pair of beets be awarded "for the best saddle-horse, and that was easy, as there was only one there"²⁹.

By February 14, 1843, one year after the inception of the society, the treasury contained £152. 5s. A larger programme was embarked upon, and in July, the society advertised its second fair, to be held at Goderich, on October 17, 1843.³⁰ Only subscribers to the society were eligible to compete for prizes, and rigid rules were adopted concerning exhibits. All livestock was to have been the bonafide property of the exhibitor at least three months before the show, and all other articles must have been produced on the exhibitor's own farm. More than £50 -- twice the amount of the previous year -- was distributed as prizes, the greater portion being awarded for livestock, viz.: cattle: £20. 10s.; horses: £9. 10s.; swine: £4. 15s.; sheep: £4. 8s.; grain and seeds: £13.; butter and cheese: £2. 18s. The second fair had an even greater success than its predecessor. Steers and heifers were the most popular stock exhibited, and crops were well represented. The governor-general granted a charter to Goderich, in 1843, to hold two fairs annually: one on the third Tuesday in June, the other on the third Tuesday in October. In 1843, also, was formed the first agricultural society in Lambton County -- the St. Clair Agricultural Society -- which was superseded by the Lambton³¹ Society ten years later.

During the succeeding years, the Huron District Agricultural Society held fall exhibitions at Goderich; the show of fall wheat was held during the first week of September, to allow farmers an opportunity to change their seed

in time for sowing. Butter and other articles of domestic manufacture were exhibited on a large scale. But it was to the encouragement of stock-breeding that the society directed most of its attention and funds, often to the neglect of other phases of practical farming. The cattle exhibited at the fall fairs were excellent in quality, but they were generally of inferior grades, despite the introduction of thoroughbred animals. The finest herd of cattle was owned by Messrs. Young, of Colborne. The show of horses, which took place in the spring, comprised the best stock exhibited; sheep were generally well-bred, but hogs were decidedly inferior, and were rarely brought forward.

In 1853, the Huron District Society was broken up into three independent societies, each receiving government grants: Perth (£250), Huron (£150), and Bruce (£70³²). At about this time, interest in the society began to lag in Huron. The society was accused of having as its chief object the receipt of the government grant, to divide "sum total, amongst themselves, -- in the name of premiums for animals." This charge, added to the fact that the improvement of the practical side of farming was neglected, had a detrimental effect on the progress of the society, which by 1857, lacked both numbers and funds. The accusations directed against the society were common in other parts of the province. As early as 1845, it had been stated that the grants awarded to societies could be applied best "by distributing a portion in every parish for well-managed farms, good draining, and good produce."³³ Another reason for the slackening of interest in Huron was the discontinuation of ploughing matches³⁴ which had formed an annual event for some years. When they ceased, there also disappeared an inducement to adopt superior methods of cultivation and to plan well-ordered fields and farms.

The district society regained its former vigour chiefly because of the growth and enthusiasm of township or branch societies. The first societies of this nature in Huron were established in 1845 at Harpurhey

and Exeter; by 1857, six more branches had been formed at Clinton, Bayfield, Brucefield, and in Hay, Usborne, and McGillivray townships. These societies submitted annual reports to the secretary of the county society, who in turn forwarded them to the Board of Agriculture.³⁵ Each of the township societies usually held an annual show or fair, modelled on the provincial exhibitions; several societies held annual dinners.³⁶ Enthusiasm in Western Ontario reached such a pitch that the idea of holding a local fair was mooted, in 1868, by prominent London citizens and farmers and stock-breeders of the western counties. Accordingly, the first "Western Fair" was held at London, in September, 1868, and became, thereafter, an annual institution.³⁷ From 1875 to 1878, a wave of construction of elaborate exhibition buildings swept over Huron County; new buildings were built by the following societies: Tuckeramith, Hay, Stephen and Usborne, Turnberry, East Wawanosh, Lucknow, and South Huron.³⁸

In 1867, Huron County was divided into North and South Ridings, each of which contained a district society which received a government grant of \$700.³⁹ North Huron included eight branches: Ashfield and (West) Wawanosh, Colborne, East Wawanosh, Grey, Howick, Hullett, Morris, and Turnberry. South Huron contained five: Hay, Stanley, Stephen and Usborne, Tuckeramith, and the Goderich Horticultural Society. During the succeeding years, more enthusiasm was manifested in South Huron, where private subscriptions (in 1874, for example) totalled nearly \$600. as compared to \$87. in North Huron. In 1875, Huron County was divided into East, West, and South Ridings, which, in 1881, were composed as follows: East Huron: Grey, Howick, Hullett, Morris, Turnberry, Wroxeter, Horticultural Society (founded in 1880); West Huron: Ashfield and Wawanosh, East Wawanosh, Colborne, Goderich Horticultural Society; South Huron: Hay, Stanley, Stephen and Usborne, and Tuckeramith.⁴⁰

Provincial Agricultural Exhibitions.

From 1846 to 1881, thirty-six provincial agricultural exhibitions were held at various cities, namely: Toronto (eight times); Hamilton (eight times); Cobourg (twice); Kingston (six times); Ottawa (twice); London (seven times); and Brantford, Brookville, and Niagara, once each. The exhibitions held at London were in the years 1854, 1861, 1865, 1869, 1873, 1877, and 1881.⁴¹ The prize lists of the first eight exhibitions, from 1846 to 1853, inclusive,⁴² included no awards to Huron County, nor is there any evidence to indicate that any Huron stock or produce were exhibited. From 1854 onward, however, Huron County's representatives became increasingly successful, and it may be readily perceived, after a study of the table of prizes,⁴³ that they carried off a large share of awards, namely two hundred and sixty-three.⁴⁴

In the departments of livestock and implements, Huron was particularly consistent. By 1869, the county was gaining a reputation for its well-bred horses; cattle, hogs, and sheep also received a fair proportion of awards. Dairying was just gaining importance in Huron, around 1860, hence the small number of prizes in that division. The ingenuity of Huron farmers and manufacturers is reflected in the tools and implements which they exhibited. Twelve prize-winning implements were shown by manufacturing concerns, and thirty-seven by individuals. Ploughs of various styles were shown more than any other implements, and one wooden specimen, devised by John Gray, Egmondville, was sent, together with other representative articles of Canada to the Paris (France) Exhibition of 1867, by the provincial agricultural society. Peter Grant, Clinton, exhibited a horse pitchfork and tackle which won awards from 1869 to 1876. Among the prize-winning implements manufactured by Huronites were a meat chopper, a drag saw, and an adjustable jack. Exhibits of fruit did not attain much success until 1868; grapes and plums were extremely successful. The show of grain and vegetables was, on the whole, mediocre.

YEAR.	LOCALE.	NO OF PRIZES	LIVESTOCK.	DAIRY PRODUCTS.	GRAINS & VEGETABLES.	FRUIT.	IMPLEMENTS.	MISCELLANEOUS.
1854	London	3	2	-	-	-	1	-
1855	Cobourg	1	1	-	-	-	-	-
1856	Kingston	2	1	-	-	-	-	1
1857	Brantford	4	3	-	-	-	1	-
1858	Toronto	3	2	-	-	-	1	-
1860	Hamilton	2	1	-	-	-	1	-
1861	London	3	2	-	-	-	1	-
1864	Hamilton	2	-	-	-	-	2	-
1865	London	10	3	-	4	1	1	1
1866	Toronto	6	2	-	-	-	2	2
1868	Hamilton	8	2	-	-	6	-	-
1869	London	16	8	1	-	3	3	1
1870	Toronto	22	4	-	-	5	2	11
1871	Kingston	2	-	-	-	-	2	-
1872	Hamilton	34	19	1	-	4	5	5
1873	London	65	19	1	-	12	7	26
1874	Toronto	27	11	-	-	5	10	1
1875	Ottawa	1	-	-	-	-	1	-
1876	Hamilton	5	1	1	-	-	3	-
1877	London	15	7	-	3	2	3	-
1878	Toronto	4	2	-	-	-	1	1
1880	Hamilton	13	9	4	-	-	-	-
1881	London	15	8	4	1	-	2	-
TOTALS		263	107	12	8	38	49	49

The peak in Huron County's prize-winning was attained in 1873, when sixty-five awards were received. After this date, the tide turned. The reasons for this change are three in number: (1) the long distance to such cities as Ottawa and Kingston, and the expense and time involved in sending exhibits there; (2) it was more profitable, from the farmer's point of view, to exhibit his products at local fairs or at the London "Western Fair"; and (3) the growth of farmers' clubs in the late 'seventies lessened interest in the local agricultural societies. Nevertheless, the provincial agricultural exhibitions exerted a tremendous influence, by creating a sense of rivalry among various localities, and by helping to destroy rural isolationism.

Cattle Fairs.

Monthly fairs for the sale of livestock and other farm produce had long been established institutions in England. Local butchers visited these fairs and competition was thus increased; this method also facilitated the collection of stock by buyers. The practice spread to Canada, by the late 'sixties. At a fair held at Seaforth in 1870, thirty milch cows were sold at from \$30 to \$46.50 each, involving transactions amounting to \$1700. In December, 1875, the Hullett branch society sponsored a fat cattle show at Clinton. Thirty-three head of cattle were exhibited, and several exchanges were effected; the show of sheep, hogs, and poultry was small. Monthly cattle fairs became a common practice at several of the larger towns.⁴⁵

Ploughing Matches.

Ploughing matches, mowing matches, and sheep-shearing contests had played an important part in the agricultural life of Western Ontario, ever since 1843, when they were first begun.⁴⁶ They had received considerable encouragement and donations, and had been productive of a strong local competitive spirit. After 1852, these matches fell in abeyance, but were revived ten years later. Boys as well as men competed in these contests for valuable prizes,

which usually consisted of reapers, fanning mills, and ploughs. At a match held near Clinton, in 1875, over four hundred dollars was distributed in prizes. These matches culminated in substantial dinners which were provided by farmers whose land had been the "scene of operations"⁴⁷. During the 'seventies, turnip- and carrot-growing matches became popular among Huron farmers.⁴⁸

Dairymen's Association.

In July, 1867, the Canadian Dairymen's Association,⁴⁹ modelled on the American Association formed in 1863, was organized at Ingersoll. The occasion of the formation of this body was a picnic, held on the farm of Jonathan Jones, to celebrate the return of militia which had been summoned to suppress the recent Fenian insurrections. C.E. Chadwick was elected president, and Richard Manning, of Exeter, was named as a vice-president;⁵⁰ five years later, William Fowler, of Clinton, became Huron County's representative.⁵¹ In March, 1872, the Ontario Dairymen's Association was organized at Belleville, under the presidency of Ketchum Graham.⁵² For a few months, intense rivalry existed between the two bodies, -- a rivalry which was terminated⁵³ in 1873, by union, to form the Dairymen's Association of Ontario. Cheese boards were established at Ingersoll, and later, at Stratford, Belleville, and London. At annual meetings, various topics were discussed such as the colouring of cheese, the cooling of milk, and the erection of different types of factories. In June, 1878, a group of Howick farmers erected the "People's Cheese and Butter Factory", with a capital stock of \$2,500, on the sixth concession of the township.⁵⁴ By 1881, Huron County contained only one active creamery,⁵⁵ but plans for a "Cooperative Union Creamery Company" were being mooted in Goderich township.⁵⁶

Entomological Society.

In April, 1863, an Entomological Society was formed at Toronto, under the guidance of William Saunders, Charles Bethune, L.B. Reed, and Professor Croft.⁵⁷ The purpose of this organization was to increase the knowledge of Canadian insectivora, by preparing a "central reference" collection of insects, by maintaining a depository for the exchange of duplicate specimens, and by disseminating information concerning measures to check insects successfully. Three branches of the society were organized at London (1864), Quebec City (1864), and Kingston (1870), but development was slow: by 1873, the society comprised only 300 members, including 136 in Ontario, and a number in the United States and England. Agricultural journals constantly published information concerning insects and weeds, and in some instances conducted a column devoted exclusively to these topics. In 1869-70, the society was awarded an annual government grant of \$400 which was shortly increased to \$500. A close inter-relationship gradually developed between this organization and the Ontario Fruit Growers' Association.⁵⁸ In 1872, the Entomological Society established its headquarters at London, and a rapid growth ensued, which was accelerated by the society's success in combatting the potato beetle, the plum curculio, and the cabbage butterfly.⁵⁹ Government legislation was enlisted in the drive against weeds, but did not prove to be eminently successful.

Fruit Growers' Association.

The Ontario Fruit Growers' Association was organized on January 19, 1859, at Hamilton, for the purpose of advancing the interests of fruit culture and of assembling, at regular intervals, those persons who were engaged in this important branch of agriculture, that they might interchange views and profit by each other's experience. In 1863, the society's first report appeared,

containing statistics on fruit culture in the western counties, and lists of fruits which were grown successfully in those counties.⁶⁰ Five years later, the association was incorporated under the act for promoting agriculture, and was entitled to receive an annual grant of \$350., which was increased in 1871 to \$500.⁶¹ The activity, usefulness, and membership of the association steadily increased, as is indicated in the annual reports which were made to the Commissioner of Agriculture.

Horticultural and Other Societies.

The first horticultural society in Ontario was formed at Toronto, in January, 1844; a similar society began to function at Guelph twelve years later. The Goderich Horticultural Society was organized in January, 1869, under the presidency of Mr. A. M. Ross,⁶² who was succeeded by Mr. Alex McGill Allan, in 1878. This body had a profound influence on the state of agriculture in Huron, particularly in fruit culture. Discussions were held at monthly meetings, on such topics as forestry, hedges, injurious insects, and the possibilities of cultivating sorgum in Huron. A library of books and publications dealing with horticulture was established, for the purpose of disseminating information among members. Annual exhibitions were held, often in conjunction with other fairs. By 1874, prizes were being awarded for fruit, flowers and plants, vegetables, and ladies' work, thus indicating the breadth of scope of the organization. Specimens of flower bulbs, fruits, and vegetables were distributed among members. In 1872, the society gained local recognition when the Goderich Council presented a donation of twenty-five dollars. By 1875, fruit (especially plums and grapes) in the Huron district was noticeably improving, chiefly because of the work of the society. The significance of the society in fostering better social relations, and in emphasizing the importance of women in the home, can scarcely be over-estimated.⁶³

In 1880, the Wroxeter Horticultural Society was established, and

in the following year, there was considerable discussion concerning the formation of a similar group at Clinton.⁶⁴ In the May, 1879, issue of the "Canadian Horticulturist", appeared an article by George Mill, of Warwick, dealing with a projected botanical society; among those who declared their interest in such an organisation was G. A. Deedman, of Brussels (Huron).⁶⁵

A poultry organisation had been formed as early as 1866 at Toronto, but no such group had made its appearance in Huron, at least not before 1881.⁶⁶

In April, 1878, a society was formed at Seaforth, for the proper protection of fish, game, insectivorous birds, and fur-bearing animals.⁶⁷ All these societies, varied as they may appear to be, had their beginnings in a genuine desire to create an agricultural "Utopia".

Agricultural Education.

Agricultural education was a necessary prerequisite to the evolution of an aggressive farmer consciousness. The Huron farmer's education was not confined to information gained from contact with agricultural societies and movements.⁶⁸ Nor was it confined to the "school of experience." From 1850 onward, agricultural publications, principally American in origin, were within his reach. Within a few years, specialized texts on the various phases of agriculture, which owed a considerable debt to both America and British example, began to make their appearance. Huronites themselves produced commendable efforts in agricultural literature. Some progress was made in the field of elementary agricultural education as early as 1845, when the first Canadian agricultural reader appeared. The question of supervised agricultural education did not reach a tangible solution, however, until 1874, when an agricultural college was founded at Guelph, although minor advances had been made in 1851 and 1861.

Agricultural Journals.

The first agricultural journal in Upper Canada was the short-lived "Canadian Farmer and Mechanic", which barely survived the summer of 1841, at Kingston. W. F. Edmundson, who had been associated with this publication, became the editor of "The British American Cultivator", published by Eastwood and Company, at Toronto, in 1842. Six years later, the latter journal was combined with "The Canadian Farmer and Family Journal", which had been published for one year (1847) by William McDougall and Charles Lindsay. The title then became "The Agriculturist and Canadian Journal", and the proprietors were Messrs. Edmundson and McDougall.⁶⁹ In 1849, the former ceased his connection with the paper, which was continued by McDougall and George Buckland for eight years, under the title of "The Canadian Agriculturist".⁷⁰ The Board of Agriculture adopted this journal as its official organ, and published therein its transactions. In 1857, following McDougall's retirement, the Board became the proprietors and publishers of the paper; the editors were George Buckland, and Hugh C. Thomson, secretary of the Board. Six years later, George Brown purchased from the Board "the copyright and goodwill" of "The Canadian Agriculturist", and proceeded, in 1864, to publish "a semi-monthly journal in the exclusive interests of agriculture", entitled "The Canada Farmer", under the editorship of Reverend W. F. Clarke.⁷¹ This arrangement enabled the secretary of the Board to devote more time to the preparation of an annual official Report of Transactions. In 1877, "The Canada Farmer" was incorporated into "The Weekly Globe and Canada Farmer", which was published weekly for several years. Meanwhile, "The Farmer's Advocate" had been founded at London, in 1866, by William Weld, who proved to be one of the farmers' most ardent champions.⁷² In 1868, the first issue of "The Canadian Entomologist", a monthly journal, was published, and ten

years later appeared "The Canadian Horticulturist", another monthly paper, devoted to fruit and flower culture.

It is no exaggeration to state that these journals were as manna to the farmers of Upper Canada, providing as they did, a medium whereby information relative to all branches and phases of agriculture was disseminated. The value of agricultural education and the application of scientific methods were particularly emphasized. Much of the bulk of the journals consisted of excerpts borrowed from British and American publications, such as "The New England Farmer", "The Genesee Farmer", "The Albany Cultivator", "The Country Gentleman", and Moore's "Rural New Yorker". This fact helps to explain why Canadian farming methods were so nearly adapted along the lines already traced in Great Britain and the United States. These Canadian journals helped to correlate the agricultural societies, and afforded them encouragement. The editorial boards of these publications allowed societies an ample reduction in the subscription price; in 1843, six copies of the "British American Cultivator" were circulated among members of the Huron District Agricultural Society.⁷³ Many of the societies were constantly behind in their payments,⁷⁴ in the early years, -- a fact which might indicate either lack of money or of interest.

The journals served as a valuable medium of expression and advice. The letters⁷⁵ which composed the "Correspondence" columns help to indicate the growth of agricultural opinion of Ontario, no less than of Huron County itself. Huron farmers were not backward either in seeking information or in yielding important facts with which experience had provided them; their letters, extending over a period of forty years, will attest to this fact. In August, 1877, "A Huron Farmer", a constant reader of "The Weekly Globe and Canada Farmer", pointed out how much the development of agriculture owed to the articles and letters which were published. Some correspondents,

however, criticized the "write-ups" of advice to farmers, whom they urged to educate themselves in a more practical way.⁷⁶

At its inception, the Canadian Grange depended upon editorials and news items in the "Weekly Globe", and in those daily papers which contained a department devoted to agricultural matters. In 1876, W.L. Brown, London, issued a monthly paper named "The Canadian Granger", which came to an end two years later, owing to lack of funds. In 1879, N.B. Colcock, Welland, began to publish "The Canadian Farmer and Grange Record"; in 1885, this monthly was issued in Toronto, under the title: "The Rural Canadian and Grange Record". In 1881, two additional monthly papers appeared: "The Granger Bulletin" (Toronto), and "The Canadian Cooperator and Patron" (Owen Sound).⁷⁷

Books.

Perhaps the most significant of all books⁷⁸ and treatises on agriculture was the "Report of the Agricultural Commission of 1881" -- a volume of six hundred pages, with four volumes of appendices. Throughout its investigation, the leading motive of the commission had been "to make the evidence obtained as useful as possible", and thus "to produce a volume of practical information for the farmers of Ontario."⁷⁹ Topics included fruit-growing, stock-breeding, dairying, farm improvements, and agricultural education; the most notable omission was the subject of societies and exhibitions. For years the "Report" formed the Ontario farmers' library, and even to this day it is a valuable work of reference.

In 1870-71, an Entomological Report was prepared by Reverend C.J.S. Bethune, William Saunders, and Edmund Reed; this work provided a scientific illustrated study of injurious insects which affected apples,

plums, and grapes. In the winter of 1871 appeared "The Canadian Fruit, Flower, and Kitchen Gardener", by D.W. Headle, -- a work of inestimable value to the horticulturist.⁸⁰ "The Canadian Bee-Keepers' Guide", by J.H. Thomas, was published at the same time; concise, practical, and reliable, it sold at twenty-eight cents per copy.⁸¹ Three years later, "The Canadian Farmers' Manual of Agriculture", by Charles H. Witcombe, was published at Toronto. It dealt with the principle of mixed farming as adapted to Canadian soils and climate.⁸²

Five years after the appearance of "The American Herd Book" in 1846, a number of prominent Canadians, among them Adam Fergusson, urged the publication of a similar work on Canadian Shorthorn (Durham) herds. It was not until 1863, however, that the secretary of the Board of Agriculture gave notice that a "Canadian Shorthorn Herd Book", listing pedigrees,⁸³ would be compiled. The undertaking was not completed until 1880-81, at which time the four volumes of the set could be purchased for eighteen dollars.⁸⁴ Following the book's publication, an increasing interest in Shorthorn cattle was evidenced.

Several Huronites wrote comprehensive prize-winning essays, on varying topics. At the Kingston agricultural exhibition of 1856, Thomas McQueen, Goderich, received a prize of £15 for having submitted the best report on Huron County.⁸⁵ In April, 1870, Hugh Love, the secretary of the South Huron Agricultural Association, wrote a prize-winning essay on turnip-culture.⁸⁶ In 1875, A. Hood, Brussels, completed a treatise on "Fruit Exhibitions, and How to Secure from Them the Best Results", which gained an award from the provincial Agricultural Association. In November of the following year, S.B. Smale, Wrexeter, wrote a paper on drainage, which was published by the same association.⁸⁷ N. McQuade, Egnondville, was awarded second prize by

the Agricultural and Arts Association, for his "Essay on Manures"⁸⁸. It may be perceived from this list that Huronites interested themselves deeply in the various phases of husbandry.

Another medium for the dissemination of agricultural knowledge, other than journals, newspapers, and books, was lectures delivered by qualified speakers. Perhaps the most prominent of these was Professor George Buckland, who toured throughout the province over a period of years, lectured in the various counties, and commented upon the state of agriculture in those counties. In 1866, he spent a week in Huron; his own words describe best what the farmer of Huron was interested in at that time:⁸⁹

"I delivered lectures at Harpurhey, Clinton, and Goderich, which were well attended. Afterwards, we discussed: the composition and management of the soil, manures, cultivation, rotation of crops, how to prevent the exhaustion of the soil, and the best means of restoring it."

Other topics included the breeding and management of livestock, improvements in the work of agricultural societies, and so forth. In February, 1868, Professor Buckland again visited Huron County, and was greatly impressed by the swift strides taken in agricultural progress.

Institutions.

The need for agricultural education in Canada was stressed in agricultural journals during the years 1843 to 1850, and farmers expressed the hope that education might qualify their sons "to be the legislators for a purely agricultural community."⁹⁰ References were constantly made to the successful teaching of agricultural subjects at such universities as Edinburgh, Harvard, Yale, and Georgia.⁹¹ In 1847, George Buckland suggested that a Canadian Agricultural College be founded; a meeting was held three years later to discuss this proposal, and the practicability of establishing

an agricultural professorship at the University of Toronto. In January, 1861, Buckland was appointed to this post, and an experimental farm on a small scale was erected on the university grounds.⁹² This project was deemed to failure, principally because of lethargy on the part of the Board of Agriculture. In 1861, a school of veterinary science was opened in Toronto, under the direction of Professor Andrew Smith, of Edinburgh.⁹³ Despite the offer of free instruction, attendance was meagre for several years.⁹⁴ In 1869, Smith, at his own expense, built a school on Temperance Street, Toronto; by 1871, fifty students were in attendance, and the Ontario Veterinary College was now firmly established.⁹⁵

The agitation for an agricultural college continued, with the result that the Ontario government commissioned the Reverend W.F. Clarke, former⁹⁶ editor of "The Canada Farmer", to travel to the United States in order to study agricultural education.⁹⁷ Clarke was particularly impressed by the state agricultural colleges of Massachusetts and Michigan, and urged the founding of a Canadian school, on similar lines. The investigator's report was favourably received, and \$46,000 was ill-advisedly spent on a poorly situated farm at Mimico, seven miles west of Toronto.⁹⁸ In 1874, F.W. Stone's "Moreton Lodge", near Guelph, was deemed a more suitable site, and the first class⁹⁹ in instruction in agricultural science and practice was held there, in that year, under the principalship of William Johnston. Thus was established the Ontario School of Agriculture, later known as the Ontario Agricultural College.

A two years' course was offered to male students, who were at least fifteen years of age; some students were as old as thirty years. The greatest number of students accommodated, until 1880, was ninety-two, but an attempt was made, in 1880-81, to accommodate one hundred and thirty-five.

The tuition fee, for residents of Ontario, was \$25. per year, and for non-residents \$50.; board and washing were furnished at cost (\$2.25 per week). Each student received from five to ten cents per hour for his work, and thus was enabled to help meet his expenses. The total cost for a farmer's son who understood the routine of ordinary farm-work, was estimated to be between \$35. and \$50. per year. ¹⁰⁰ The sons of several Huron farmers were sent to Guelph to lay a foundation for future success in agriculture. The combination of education and experience which the Huron farmer was able to acquire through his contacts with agricultural societies, publications, and institutions, was to prove of utmost importance in his struggle against the economic forces which were assuming such great proportions.

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Chapter IV: Agricultural Societies and Education.

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August, p. 242.
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- 13 *British American Cultivator*, vol. II (new series), 1846, November,
pp. 339-344.
- 14 *Ibid*, p. 347. -- In 1850, the Canada Company's prize of £25 was spread
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pp. 86-7; *cf. ibid.*, October, pp. 219-220; 233.

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- 21 Actually, there were seventy-three electoral divisions; vid. Canada
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Middleton, pp. 467; 475.
- 23 In 1870, Honourable John Carling presented to the Ontario legislature
a report on the work of the various agricultural societies in the
counties and townships. In 1881, Blue presented a valuable report
on the importance of compiling accurate statistics on agriculture.
- 24 Lisars, p. 303.
- 25 Johnston, W., p. 156; *ibid.*, for officers.
- 26 First Minute Book of the Huron Agricultural Society.
McQueen, pp. 195-8.

- 27 British American Cultivator, vol. II, 1843, April, p. 56; vid. letter from N. Brown.
- 28 Can. Agriculturist, vol. II, 1850, September, p. 216.
- 29 Seaforth "News", December 28, 1933.
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- 30 British American Cultivator, vol. II, 1843, July, p. 112; figures derived by actual count; vid. also letter from G. Fraser, in December, p. 188.
- 31 Vid. report of letter; Can. Agric., vol. V, 1853, April, p. 97.
- 32 Journal and Transactions, etc., vol. I, 1855, p. 319; cf. p. 239.
- 33 Can. Agric. Journal, vol. II, 1848, October, p. 154.
- 34 Vid. infra, pp. 75-6.
- 35 McQueen, pp. 195-8.
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- 36 Can. Farmer, vol. III, 1866, April 2, p. 104.
- 37 The second Western Fair was not held until 1870, as the provincial exhibition was held at London, in 1869.
Can. Farmer, vol. V, 1868, October 16, pp. 312-3; vol. II, (new series), 1870, August 15, p. 304; October 15, p. 397; December 15, p. 469.
- 38 In 1875, Tuckersmith borrowed \$1000, in order to make a down payment of \$1400, on its new grounds!
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- 39 Journal and Transactions, etc., vol. II, 1856, pp. 56; 228; 260; vol. III, 1859, p. 225; vol. IV, 1860, p. 345.
- 40 Sess. Papers, vol. IX, 1877, Append. F, p. 382; vol. XV, 1882-3, Append. A, p. 51.
- 41 Middleton, table, p. 479.
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 Ibid., vol. VI, 1849, September 22, p. 346; September 27, p. 351.
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 Ibid., vol. III, 1851, October.
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- 43 Vid. p. 74.
- 44 Details concerning prizes were obtained following a careful study of lists and pertinent items published during the years under consideration.
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- 47 *British American Cultivator*, vol. II, 1843, May, p. 69.
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- 61 Middleton, p. 486.
W.G., vol. XXIII, 1871, March 3, p. 6; December 29, p. 6.
- 62 British American Cultivator, vol. III, 1844, January, p. 2.
Can. Agriculturist, vol. IV, 1852, April, p. 117.
Can. Farmer, vol. I (new series), 1869, January 15, p. 29.
- 63 Agric. Reports, 1870-1880.
Sessional Papers, vols. VIII-XV; 1875-1882.
W.G., vol. XXIII, 1871, December 29.
- 64 Sess. Papers, vol. XII, 1880, Appendix A.
W.G., vol. XXXIII, 1881, January 21.
- 65 Can. Horticulturist, vol. II, 1879, May, p. 66. Warwick is in Lambton-Kent Counties.
- 66 Can. Farmer, vol. III, 1866, November 16, p. 345.
- 67 W.G., vol. XXX, 1878, April 12, p. 235.
- 68 Infra, pp. 95 ff.
- 69 Eastwood and Company began the publication of "The Farmer and Mechanic", in October, 1848. (Vid. p. 37, Merritt, J.H.: Journalism in Upper Canada, 1840-80. University of Toronto Studies, Toronto, 1933).
- 70 From 1857 to 1859, "The Canadian Agriculturist" was published monthly; in 1860, it was printed semi-monthly, each issue consisting in part, of the "Agriculturist", and in part, of the "Transactions of the Board of Agriculture". In 1863, the journal returned to monthly status, owing to "scarcity of news from farmers of Canada, and to the cost of paper". (Can. Agric., vol. XII, 1860, January, p. 1; vol. XV, 1863.).
- 71 In 1869, "The Canada Farmer" began to be issued monthly; in 1873 it was again published as a semi-monthly.
- 72 Vid. Farmer's Advocate, 1867, July, p. 67; 1870, March, p. 33; October, pp. 145-6.
- 73 British American Cultivator, vol. II, 1843, April, p. 56.
- 74 Can. Agric., vol. II, 1850, September, p. 216.
- 75 Letters were often unsigned; in 1870, A.D. Brownson exhorted farmers to add their signatures. (Can. Farmer, vol. II, (new series), April 16, p. 140.).
- 76 W.G., vol. XXIV, 1872, September 6; August 30; August 2.

- 77 Wood, pp. 70-71. -- By 1880, Huron County contained a dozen newspapers, most of which were "weeklies", in which agricultural news was plentiful. Perhaps the most important of these newspapers were the Goderich "Huron Signal", founded in 1848; the Seaforth "Huron Expositor", and the Clinton "New Era". Other newspapers included: "The Goderich Star", "The Wingham Times", "The Wingham Advance", "The Brussels Post", "The Exeter Times", "The Blyth Record", "The Blyth Review", and "The Lucknow Sentinel".
- 78 It is interesting to note that among the books awarded as second prizes at the first provincial agricultural exhibition (Toronto, 1846) were: "The Farmer's Encyclopaedia"; Loudon's "Encyclopaedia"; Howitt's "Rural Life of England"; Downing's "Landscape Gardening"; Youitt on the Horse"; "The American Orchardist"; Boussingault's "Organic Nature"; and "Gardening for Ladies".
- 79 Agric. Report, 1881, vol. I, pp. 3-8.
- 80 W.G., vol. XXIII, 1871, October 27.
- 81 W.G., vol. XXIV, 1872, January 12 -- Five years earlier, James Jewett, Lucknow (Huron), had inquired as to whether "The American Bee Gazette" was being published.
- 82 W.G., vol. XXVI, 1874, July 12.
- 83 Five crosses in the male and four crosses in the female qualified cattle to be registered.
- 84 Can. Farmer, vol. I, 1864, May 16, p. 138.
W.G., vol. XXIII, 1871, December 15.
Ibid., vol. XXVIII, 1881, April 22 (advertisement).
- 85 Journal and Transactions, etc., vol. II, 1868, pp. 125-149.
- 86 Can. Farmer, vol. II, (new series), 1870, April 15, p. 128.
- 87 Sess. Papers, vol. IX, 1877, Append. D, pp. 283-6; 263-4.
- 88 Agric. Report, vol. XV, Part II, No. 3, pp. 63-71.
- 89 Canada Farmer, vol. III, 1866, April 2, p. 104; also vid. Mackland's letter, dated March 4, 1868, *ibid.*, vol. V, 1868, March 16, p. 91, concerning a meeting at Clinton.
- 90 Can. Agric., vol. IV, 1852, June, p. 162.
- 91 British American Cultivator, vol. II, 1843, October, p. 154; *ibid.*, vol. I (new series), 1845, June, p. 177; July, pp. 196-7; October, pp. 307-8.
Can. Agric. Journal, vol. II, 1845, April, pp. 66-7.
The Agric. and Can. Journal, vol. I, 1846, February 1, p. 14; March 15, p. 50; April 1, pp. 62-3.

- 92 In 1858, Professor Buckland was succeeded by Hugh C. Thomson.
British American Cultivator, vol. III, 1847, January, p. 13.
Can. Agric., vol. I, 1849, October, pp. 266-7; vol. II, 1850, January,
pp. 28-30; vol. III, 1851, March, pp. 49-50.
- 93 In 1870, one of the students at this school was W. Sweet, of Exeter.
Can. Farmer, vol. II, (new series), 1870, May 16, p. 177.
James, C.C., p. 567.
Hind, p. 51.
Transactions, 1859, pp. 102; 308; *ibid.*, 1860-63, pp. 208-210.
- 94 *Ibid.*, vol. XIII, 1861, December 16, pp. 737-8.
Can. Farmer, vol. I, 1864, December 15, p. 374; *ibid.*, vol. III,
1866, April 2, p. 106.
- 95 Cf. Transactions, 1860-63, p. 457; *ibid.*, 1869, pp. 302-04; *ibid.*,
1864-68, p. 92.
- 96 In 1869, Clarke founded "The Ontario Farmer".
- 97 Haddon, F.: Western Ontario and the American Frontier. (Toronto, etc.,
1941), p. 273.
- 98 Vid. Report in Appendix to Report of the Minister of Agriculture, *Sess.*
Papers, 1870-71.
Farmer's Advocate, 1872, January, p. 3; December, p. 178; 1875,
January, p. 17.
The Canadian Agriculturists' Annual. (Toronto, 1904), pp. 133-9.
Middleton, p. 47.
- 99 Vid. description in "The Weekly Globe", May 3, 1924.
- 100 Agric. Report, 1881, vol. V, Append. P, p. 5; *vid.* pp. 3-113.

CHAPTER V

Agricultural Movements and the "National Policy".

At the turn of the nineteenth century, the Canadian farmer was beginning to experience a greater consciousness and to evince increasing interest in matters not purely agricultural. Dissatisfaction with the methods of agricultural societies contributed to the growth of independent farmer's clubs, a movement which was sidetracked by an even greater organization -- the Grange. The farmer was caught in a maelstrom of economic forces which threatened to engulf him; the era of railway-building, speculation, lumbering, commerce, and other economic enterprises was in its adolescent stages. Railway-building caused a shortage of farm-labour; speculation, to the farmer, was a share set by business, and was therefore to be abhorred; the lumbering industry had not as yet reached such a high state of development as to evoke a demand for reforestation projects; commerce was to provide a noose for the ills caused by those economic forces which appeared to work at cross-purposes with the farmer's own immediate interests.

Intertwined about the industrial network which was emerging, was the question of the tariff, omnipresent since 1841-49. And linked with the tariff was the demand for reciprocal trade agreements with the United States. The Canadian tariff of 1847 aroused the farmers, who protested vigorously. A decade of prosperity came with the advent of reciprocity in 1854, aided and abetted by the Crimean War and the American Civil War. Canada began to develop a higher tariff in 1859, primarily for revenue, rather than for protection. The first real step towards protection -- the prelude to the National Policy of 1878-79 -- came in 1870. The National Policy was at first strongly supported by the Grange and by numerous farmers, but a revulsion of feeling followed its adoption, when the farmer realized the extent to which ~~agricultural~~ agricultural commodities were dutiable.

All these economic forces had an effect on agricultural life and progress. And this effect was manifested by the emigration of farmers to the American and Canadian west, to found new homesteads free from economic barriers. Thus the turn of the nineteenth century presaged two movements, -- farmers' organizations and farmers' emigration -- the one theoretical, almost political, the other physical, both of which were profoundly influenced by the economic forces which invaded the sphere of agriculture.

Agricultural Movements.

Pioneer cooperation in Huron County, during the years of early settlement, was largely adventitious, and was brought into force in such activities as road-building, barn-raising, stock-slaughtering, sheep-shearing, harvesting,¹ and logging bees. Agricultural societies and farmers' clubs were greater manifestations of this cooperation, and although L.A. Wood, in his study of "Farmers' Movements in Canada" affirms that "it would be an error to assume that agricultural societies have ever borne any close relationship to the development" of farmers' movements, it would appear that societies did influence and stimulate the growth of independent farmers' clubs. Agricultural societies had their real beginning in the 'thirties, increased competition, and sought to arouse interest in more profitable methods of cultivation and stock-breeding, and to direct attention to new labour-saving devices and methods. Farmers' clubs arose in the 'sixties and 'seventies, increased cooperation, and emphasized social and cultural aspects.

What was the connection between these two different manifestations of the cooperative spirit? L.A. Wood states that the origin of farmers' clubs is "wrapped in mystery". It would appear, however, that these groups arose from a dissatisfaction over the work and conduct of agricultural societies during the 'fifties. These societies were accused of being cliques and

of adopting government grants for the use of members only, instead of seeking to further the interests of the community. There was also dissatisfaction over the unnecessary expenses involved in the presentation of too many fall fairs. Criticism was directed against these societies from 1864 to 1881. In 1864, editorials appeared in "The Canada Farmer"⁴, urging the abolition of township fairs, and advocating the presentation of one large county fair. In 1881, the Stratford "Beacon" suggested that township agricultural shows should be abolished, and that fairs should be held alternately at Seaforth and Stratford.⁵ Many persons evinced the opinion that there were too many societies which did not accomplish enough to deserve grants; the principal cause of irritation was that exhibitions were often confined to one locality. The remedy was to alternate these fairs; in Huron County it was suggested that a fair be held in turn at Clinton, Wingham, and Goderich.⁶ George Buckland declared that the whole question of provincial, county, and township societies should be gone into with much care and deliberation.⁷ The Goderich "Huron Signal" urged that the Agricultural and Arts Association "should be wound up", -- and the Guelph "Herald" gravely pronounced "amen!"⁸ The dissatisfaction over the methods of procedure of agricultural societies and organizations was, then, a strong factor in the rise of independent farmers' clubs.

A second factor was the dissemination of the idea of agricultural cooperation via the editorial and correspondence columns of various journals. In 1871, the idea of cooperation among farmers was first enunciated in the "Globe": an editorial entitled "Cooperation among Farmers" urged the formation of farmers' organizations in order to protect themselves against monopolies, "rings", and speculative interests.⁹ Until 1871, the most advanced degree of farmers' cooperation was exemplified in the factory system of cheese-making. Neighbouring farmers were exhorted to form groups, for the purposes of buying seed, fruit-trees, pure-bred live-stock, implements, and fencing material.

The advantages and benefits which accrued were many, -- an improved neighbourly feeling, a community of interest, a material interchange of assistance, and a saving of money, time, and labour. Farmers' clubs would break the monotony of farm life, moreover, especially during the winter, when meetings could be profitably spent in discussion, planning, and relaxation.¹⁰ Letters appeared concerning the position of farmers' wives and daughters, who "should have time for reading, sewing, music, and fancy work", because "without some trace of female refinement no house is a home."¹¹

The 'sixties witnessed an increasing volume of discontent over politics. William Field, in his "Farmer's Advocate", attacked legislation which was detrimental to agriculture, and urged the farmers to demand adequate representation. A typical demand for farmers' representation in parliament is contained in a letter¹² written to the "Globe" in February, 1872, by an Ancaster (Westworth County) farmer, who declared that farmers, by joining hands and interchanging opinions to build up their strength, would thus ensure a fairer proportion of representation in parliament. Early in 1874, a letter¹³ appeared in "The Farmer's Advocate" (London), written by Philip Harding, Cardiff (Haliburton County), urging farmers to develop a greater voice in legislation.

One of the earliest references to farmers' clubs to be found in Canadian agricultural journals concerns a group which was organized in Hamilton township (Northumberland County) early in 1872, to discuss agricultural matters.¹⁴ Other clubs were founded at Avonbank (North County) in 1872, and at Cobourg (Northumberland County) in 1873.¹⁵ Reference is made to the fact that, in 1875, the Tuckersmith and Hullett Farmers' clubs took action to procure the abolition of the Clinton market fees.¹⁶ These clubs in Huron County must have been functioning for some time, to have reached such a stage of close cooperation. The Huron Farmers' Association was formed at about this period, and contributed to the revival of ploughing matches. All in all, these farmers' clubs did much to elevate the tone of Canadian farming. Their two principal weaknesses were that they failed to attain a high degree of florescence, and they were

usually unfederated. The qualities which these clubs lacked were possessed in full by the Grange, and contributed in no small way to the vitality of the latter movement.

The Grange.

The Grange was an extensive farmers' movement which began among the farmers of the western states in 1868, "for purposes of cooperation and of opposition to the evils of groups which were opposed to farmers' rights."¹⁷ The movement was organized on December 4, 1867, at Washington, D.C., as the "National Grange of the Patrons of Husbandry", at the inspiration of Oliver H. Kelley, who had made a survey of the poor agricultural conditions in the southern states, following the debacle of the Civil War.¹⁸ The Grange aimed to preserve the farmer from victimization by middle-men, monopolists, swindlers, corrupt railroad companies, and heavy taxation.¹⁹ The movement not only sought to advance the farmer economically by obtaining reductions on certain goods (e.g., reapers²¹ and sewing machines), but also fulfilled a high purpose through the educative, social, and cultural influences which it brought to bear on agricultural communities.

The Grange aimed to lessen the monotony of the farmer's life, and to form a means of relaxation and diversion for his wife and daughters, thereby inculcating "a proper appreciation of the abilities and sphere of woman". The Grange was a secret²² order which conferred degrees and practised a symbolic ritual which was "pleasing, beautiful, and appropriate". The motto of the Grange, adopted in February, 1874, was: "In essentials, unity; in non-essentials, liberty; in all things, charity." The unit of the order was the subordinate grange (five of which comprised a division grange) which was composed of nine men and four women.

The Grange had a phenomenal growth, and swept eastward with increasing velocity. In 1871, granges were active in nine states; by the end of 1872, there were 1,578 granges; by June, 1873, there were 4,434 granges containing 175,000 members; by November 1, 1873, there were 7,843 granges. The Grange reached its numerical peak in 1875, at which time there were 23,800 granges, with a membership estimated at nearly one million.²³ The chief reason for this extraordinary growth was the financial crisis of 1873, which resulted from an inflated currency, increased credit, gigantic speculative operations, and the increased value of city real estate at the expense of farm lands. Between 1875 and 1880, membership in the Grange fell to 124,420 and did not change considerably until 1890, when a steady increase brought the total to 600,000 in 1927, largely in New England and the north central states.²⁴

The Grange in Canada.

A branch of the Grange was established by Eben Thompson, at Stanstead, Quebec, in August, 1872, five months before the movement was incorporated by charter in the United States. By January, 1874, there were nine granges in Quebec; the first grange in Ontario was formed at L'Original (Prescott County) in that year. By 1875, there were in Canada 247 subordinate and 22 division granges, containing 6,500 members. In September, 1878, the numbers had increased to 695 subordinate granges, 46 division granges, and 25,000 members. The Canadian Grange's numerical peak was attained in 1879, when membership totalled 31,000.²⁵

On June 2, 1874, the Dominion Grange "issued into glorious birth" at London, although it was not officially incorporated until March, 1880. The first orthodox meeting was held at Toronto, September 22-24, 1874, at which the aims of the movement were declared to be: (1) unity of action;

(2) opposition to monopolies; (3) increased attention to the diversification and improvement of crops; (4) determination to sell "less in the bushel and more on hoof and fleece"; (5) cooperation between consumer and producer, in order to combat more successfully the "middle-man". On the whole, the Canadian Grange followed the general lines of procedure, though more temperate in form, of the American Grange.

When the Grange made its appearance in Canada, it was sharply criticized by the "Weekly Globe"²⁶:

"It is exceedingly likely, that in a short time these farmers' granges will have been turned to political use; in that case, they will have their day and die After such societies go beyond the first few rudimentary steps, they necessarily end in forming a class of those very middle-men, whose existence they were created to destroy."

This prophecy failed to reach fruition in Canada, for the Canadian Grange, unlike its American prototype, eschewed partisan politics. The Dominion Grange came to an end in 1907; the Ontario Provincial Grange, born in December, 1880,²⁷ suffered an untimely demise in 1886.

There were at least nine granges in Huron County, most of which were located in the eastern townships, viz.: Usborne (1875), Hullett (Londesboro, 1876), Turnberry (Wingham, 1876), Walton (McKillop, 1876), Morris (1876), Stanley (1876), Howick (Wroster, 1876), and Tuckersmith (Egmondville and Kippen, 1876). These granges were active in numerous spheres: the Londesboro branch built a grange store; the Wingham branch purchased a corner of the town's cemetery, to be set aside especially for members of the order; the Egmondville grange undertook to ship wheat to England.²⁸

The Canadian Grange made valuable contributions to the progress of farming, particularly in the matter of legislation and farm improvements. The Grange was directly responsible for the passage of the Tile Drainage Act (1876) and the Noxious Weeds Act (1884), and founded a mutual fire insurance

company (1877) for the protection of farmers' property.²⁹ Some efforts were also directed towards the presentation of monthly and quarterly cattle-fairs.³⁰ Perhaps the most profound error which the Canadian Grange committed was its support of MacDonald's National Policy at the polls in 1878; this support was short-lived, however, and was replaced by a revulsion of feeling in the 'eighties. The eventual opposition of the Grange to the National Policy strengthened the movement.

Westward Migration.

Opposition to the National Policy also strengthened another movement -- a physical one -- which began in the 'sixties, and gathered momentum in the 'seventies and early 'eighties. This movement was the migration of farmers to the western states and Manitoba. Low wages, increasing cost of food, and unemployment also contributed to the expansion of this movement. Another factor to be reckoned with is the condition of the soil in various parts of Ontario: there is considerable evidence to indicate that, about 1879-1880, land was beginning to "run out" in several parts of Huron County.³¹ In 1871, land in Manitoba sold at from \$1.25 to \$2. per acre; in 1877, the price of government unimproved lands in Manitoba ranged at from 70 cts. to \$1. per acre; improved land could be purchased at from \$2. to \$10. per acre. Half-breeds' scrip, negotiable for 160 acres of government land, was worth from \$115. to \$125.³²

By 1872, emigration to Manitoba assumed large proportions. Most of the new arrivals came from Ontario, but many hailed from Minnesota. It was estimated that during the fall of 1872, 800 persons from Canada, and 2,500 from the states, would make an exodus to the west.³³ In 1876, "The Weekly Globe" contained items concerning 24 land sales in Huron County: 5 in Tuckersmith, 4 in Stanley, 4 in Hullett, and the remainder divided among the other townships.

During 1877, there were 72 land sales referred to: 10 in McKillop, 10 in Stephen, 9 in Stanley, 7 in each of Tuckersmith, Hullett, and Grey, 8 in Wawanosh, and the rest divided. In 1878, there were 81 land sales in Huron; of these, there were 6 sales in each of Stanley, Hay, Morris, and Wawanosh, and 5 sales in each of Goderich, Hullett, and Tuckersmith; the others were fairly evenly distributed. In 1879, reference is made to 26 sales and 3 exchanges; of these, 7 sales were completed in McKillop, 6 in Hullett, and 3 in Goderich. In 1880, there were approximately 34 land sales referred to in the "Globe": 7 in McKillop, 6 in Hullett, 4 in Goderich, and 3 in Stanley. Forty-two sales transpired during 1881: 7 in Hullett, 6 in Morris, 5 in Usborne, and 4 in each of Grey and Goderich.³⁴ From this list it may be readily ascertained that the majority of the sales occurred in McKillop, Hullett, Tuckersmith, Goderich, Grey, and Morris townships -- which form the central and eastern portions of the county. It is possible, though not a conclusive fact, that the soil in this area was becoming "worn out", following a long period of tillage.

Many of the farmers who left Ontario for the west returned home dissatisfied with the conditions which they had found there. In 1868, Mr. David Bean sold his farm in Hay township, and went to Missouri; eight years later, he returned to Canada, and settled in Ratho (Oxford County), convinced that Canada offered better farming opportunities. In his opinion, Missouri was a place of "chills, fevers, and chinch bugs." In 1876, also, Mr. George Middleton returned to Goderich township, after a brief sojourn in Illinois; the American system of cultivation was much inferior to the Canadian method, he stated, adding that "there's no place like Canada."³⁵ Several Wingham men went to California in the spring of 1877, but returned before the end of the year, satisfied that they could "do better" at home. Messrs. Brown and Bauer, two emigrants from Hay, purchased land near Emerson, Manitoba, in 1877, with

the intention of growing flax.³⁶ Another Huron resident, Mr. Joseph Rye, purchased two hundred acres near Muskoka, but later declared that he did not think that the Muskoka area would ever become as good an agricultural district as Huron. Mr. Peter Geiger sold his farm in 1877, and moved to Ohio and Kansas; upon realizing that he had been more prosperous in Canada, he returned to Huron in 1878, and purchased a farm near Zurich. A man named Stewart also returned to Goderich in 1878, disappointed with Manitoban conditions; he brought back samples of wheat and barley.³⁷

The adoption by the government of the National Policy (or "N.P.", as it was called) was responsible, in part, for the exodus from Huron, as well as from other parts of eastern Canada. Huron newspapers denounced the N.P. as "our commercial care-all". In 1879, a group of enterprising citizens left Bullett, and founded the village of Lonsdale in Manitoba.³⁸ Sixteen heads of families in Goderich applied for consular certificates to move to the states in 1880; approximately eighty persons were preparing to leave the township.³⁹ The total emigration from the ports in Huron County to the west, during the year ending July 1, 1880, was 8,705.⁴⁰ The feverish demand for Manitoban lots in western Ontario is indicated by the sale, in two days,⁴¹ of \$15,000. worth of lots, at London. During 1881, the Dakotas began to acquire popularity and to attract immigrants, especially from Lunenburg, Clinton, and Listowel (Perth County). It was claimed by Huron newspapers that every fifth man was preparing to leave Huron, and that "for one who goes to Manitoba, five go to Dakota."⁴²

The exodus was not confined to the Huron district alone, but extended to such points as Windsor (Essex County), Woodstock (Oxford County), and Port Hope (Durham County). Nor was the movement confined to Ontario; there was a great exodus from the province of Quebec to the New England states. During the months of July, August, and September, 1881, six hundred and sixty-two persons left Quebec for New England.⁴³

The Tariff and the "National Policy".

An understanding of the significance of the "National Policy" would be incomplete without a study of the trend of Canadian tariff policy, and its effect on agriculture. Following the adoption by Great Britain of free trade in 1846, Canada suffered a period of depression: unemployment was widespread, business stagnated, and bankruptcies multiplied. The first authentic Canadian tariff was put into effect in 1847; it contained a list of 138 articles under the head of specific duties, and 5 of these were also subject to ad valorem duties. The principal imports came under a duty of 7½ per cent., but the duty on considerable farm machinery was 10 per cent. and in some instances 12 per cent. Vigorous protests on the part of the farmers contributed to the growth of unrest which preceded the Annexation Movement of 1849. With the gradual return of prosperous conditions five years later, this movement subsided. Reciprocity with the United States in 1854 helped to hasten prosperity; provision was made for the free exchange of several articles, chiefly natural products (grain, foodstuffs, meats, hides, etc.). Much of the prosperity in the ensuing decade resulted from the Crimean War, which removed Russia as a source of grain for Great Britain, and the American Civil War, which created an exceptionally brisk demand in the United States for Canadian products. The increase in the value of agricultural produce signalled a similar increase in the value of farm-lands. The Huron farmer was favourably affected by the repercussions of these world-wide events, and was enabled to become the full-fledged owner of his property.⁴⁴ Canadian farmers grew to dislike the treaty, however, because they had wished the free interchange of manufactures, in order to obtain cheaper factory goods from the United States in return for their raw products.

Following a slight economic crisis in 1857, the Canadian tariff underwent periodic increases; the Galt-Gayley tariff of 1859 was inspired primarily

by the need for revenue, and not by the desire for a definite protective policy. The revenue which was collected would help to protect Canadian corporations and municipalities. The United States and Great Britain resented the increase in rates and the change of specific to ad valorem duties; seven years later, the rates were reduced to nearly their former level. Between 1867 and 1870, the tariff fluctuated considerably; maritime opposition to duties on coal, wheat, and food-stuffs helped to maintain a fairly low tariff⁴⁵. In 1874, the government of Mackenzie, an ardent free-trader, succeeded that of MacDonald, almost at the beginning of a six years' depression. No important changes were made, however, and what small alterations there were, continued to be upward.

In 1868 originated a short-lived government known as "Canada First", which in 1874 adopted a definite program containing the clause: "The imposition of duties for revenue so adjusted as to afford every possible encouragement for native industry". This clause contained the germ of the National Policy, although the phrase had already been used by Sir Francis Hincks in 1871. The arguments advanced by MacDonald and Sir Leonard Tilley, the minister of finance, included: (1) a stable home market might be provided for Canada's own farm produce; and (2) the manufacture at home of goods which were formerly imported might be fostered. The National Policy was supported strongly by the Grange, and the farming element generally. As early as 1876, the Seaforth "Expositor" claimed that such a tariff would benefit home producers, and direct increasing supplies of grain to Canadian, instead of to American mills. The Huron "Signal", however, opposed this "protective policy"⁴⁶.

By the National Policy tariff of 1879, almost all dutiable goods were raised to an average of over 25 per cent., and the general level on enumerated goods was raised from 17½ per cent. (the average which had been maintained by the defeated Liberal government) to 20 per cent. Duties were

placed on practically all agricultural products, except wool, hides, broom corn, hemlock, and British salt, which were to be admitted free. Some of the increases were as follows:⁴⁷

Wheat (bu.)	15¢	Wheat flour (bbl.)	50¢ (later 75¢)
Barley "	15¢	Rye flour "	50¢
Beans "	15¢	Apples "	40¢
Oats "	10¢	Butter (lb.)	4¢
Rye "	10¢	Cheese "	3¢
Peas "	10¢	Sugar "	2¢
Indian corn (bu.)	7½¢	Meat (except bacon and	
Timothy seed "	42¢	hams) (lb.)	1¢
Tomatoes "	30¢	Bacon and hams (lb.)	2¢
Potatoes "	10¢		

Live animals were admitted on the payment of 20 per cent. of value; animals for breeding purposes were to be admitted free, but this condition had already existed under the previous tariff. Heavy taxes were placed on steel agricultural implements (30 per cent.), on other agricultural implements (25 per cent.), on wagons (25 per cent.), on drain tiles (20 per cent.), and on seeds (15 per cent.). The tax on all imported agricultural implements was increased to 35 per cent. in 1884. As a result of the advances, the customs receipts rose from \$12,800,000. in 1878 to \$18,500,000. in 1881. The expected favourable trade balance failed to appear, however, and the extent to which Canada's returning prosperity can be attributed to the National Policy is debatable.

The new tariff was assailed by newspapers and farmers within a few months of its inception. The "Globe" estimated (March, 1879) that the average extra expense entailed on the farmer was fifty dollars per year; this computation did not take into consideration the fact that the cost of living⁴⁸ and the consumption of imports would be higher. The St. Mary's "Argus" declared (May, 1879) that farms in Ontario had decreased in value fully ten dollars per acre since August, 1878, despite the fact that "the National Policy was to have been of immense benefit to the farmer"⁴⁹. The N.P. was severely criticized by the London (England) "Times"⁵⁰.

The milling interests in Huron County⁵¹ and elsewhere were greatly perturbed by the new tariff. In February, 1880, it was computed that the tariff caused a loss to the Canadian farmer of ten cents per bushel on every bushel of wheat sent to market since September, 1879.⁵² Mr. Hutchinson, of Goderich, whose flouring business was one of the largest in Canada, wrote in protest to Mr. Cameron, M.P. for South Huron:⁵³

"A duty of ten cents per bushel on wheat would, in my opinion, close our business for several months of the year. It would be impossible for us to find enough of our own wheat to enable us to make a profitable business of it We are not the only millers engaged in grinding American wheat. Take Montreal alone, -- they have a capacity of some 25,000 barrels per day, or say 110,000 bushels of wheat. Such a duty entails on our business here an outlay of \$250. per day, which cannot be counter-balanced by a duty on flour. A duty of 75¢ [per ton] on coal means \$7.50 per day additional."

The Huron "Signal" expressed similar views:

"Should the mill be closed during a portion of each year the people of this town will have reason to regret the change of government This new N.P. experiment is evidently going to be a costly one for Goderich."⁵⁴

In 1880, Sir Richard Cartwright travelled throughout Ontario, attacking the high tariff; in October he addressed meetings at Goderich, Lonsdale, Brussels, and Seaforth, and was warmly received.⁵⁵ He declared that what appeared to be a "revival" of Canadian business under the N.P., in 1879-80, was nothing more than: (1) the increasing American demand for Canadian lumber, and (2) a famine in Europe in 1879, which caused a demand for grain. He also pointed out that during the year ending July 1, 1880, ninety thousand Canadians had emigrated to the United States -- an exodus which owed much to the adoption of the protective tariff. During 1881, numerous meetings were held at various points in Huron (e.g. Lucknow and Brussels), and the National Policy was severely criticised.⁵⁶

Several factors contributed to the revulsion of feeling which followed the adoption of the high tariff. The first was the agricultural

depression which began in the 'eighties: the farmer was constantly besieged by taxes and duties. Justifiable arguments for the abolition of the National Policy, from the farmer's point of view, might have been as follows:⁵⁷

- (1) it depressed the prices received by farmers.
- (2) it increased the cost of transporting their goods to market.
- (3) it increased the cost of transporting home their supplies.
- (4) it increased the cost of transporting every implement of which iron, steel, brass, copper, paint, or varnish formed a part.
- (5) it increased by 40 per cent. the cost of the cotton goods in general use among the farmers; e.g. the tax on the poor quality of cotton used for cheese bandages was 75 per cent.
- (6) it increased by 50 per cent. the cost of woollen goods, of which the farmer was the principal consumer.
- (7) it increased the cost of all staple groceries, except tea.
- (8) it generally decreased the price of almost everything the farmer sold, and increased the cost of everything he had to buy.

A second factor was the failure of the N.P. to provide the Canadian farmer and manufacturer with an enlarged home market -- the very reasons advanced by the MacDonalld government⁵⁸ for the adoption of a protective tariff! The exportation of Canadian farm products increased during 1879 and 1880 -- 25 per cent. more in 1880 than in 1879, in fact. The importation of foreign manufactured goods also increased -- 6 per cent. more in 1880 than in 1879.⁵⁹ The exodus of farmers and labourers to western Canada and to the United States, which was given an impetus by the National Policy, was also a cause for grievance. The general depression caused a drift towards the cities during the 'eighties, and inasmuch as immigration was at a low ebb, farm labour became scarce. The rise of combines and monopolies, implemented by the bounty system which was applied to the iron and steel industries in 1885, also proved a source of irritation to the farmer who considered this concession disadvantageous to his own interests.

The slight waves of prosperity which rippled the sea of depression during the 'eighties were "altogether unconnected with legislation" according to a contemporary historian.⁶⁹ Bounteous harvests at home, improved markets abroad, the revival of the lumbering trade with the United States, and a "boom" in the Canadian west undoubtedly had a large share in producing an improved state of affairs. Few changes in the tariff were made until the 'nineties, when the peak of protection was reached.

With the growth of economic forces, agriculture also grew its importance as an industry began to surpass its importance as a livelihood. The farmer, moreover, underwent a complete metamorphosis: from the sphere of local agricultural interests he emerged to the larger one of continental enterprise. His physical and spiritual horizons were enlarging; the growth of allied industries and the exigencies which resulted from an increasing world commerce provided a richer goal than had the local markets of yesteryear. And what was probably more significant, the farmer was beginning to assume a greater rôle in the drama of everyday life. It is perhaps no exaggeration to state that of all the members of the industrial social order in Canada during the period 1850 to 1880, the farmer was the best-informed, principally because he was in constant contact with, and was continually affected by so many diversified activities and forces. That he mastered the lessons which the "school of experience" taught him is evidenced by the successful battle which he waged against the changing economic world in order to preserve himself and his livelihood.

* * * * *

Chapter V: Agricultural Movements and the "National Policy".

References:

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- 5 W.G., vol. XXXIII, 1881, October 7.
- 6 Agric. Report, 1881, vol. III, p. 90.
- 7 Ibid., vol. IV, pp. 155-165.
- 8 W.G., vol. XXXIII, 1881, January 7.
- 9 Ibid., vol. XXIII, 1871, July 7; September 15.
- 10 Ibid., December 22; also vol. XXV, 1873, November 14; November 21. For an excellent description of Farmers' clubs, vid. Canada Farmer, vol. V, 1868, January 1, p. 10; of. ibid., vol. II, 1874, p. 52, concerning the Elzaira (New York) Farmers' Club.
- 11 Ibid., vol. XXIV, 1872, April 12; May 17.
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- 13 Wood, pp. 9-10; letter dated December 3, 1873.
- 14 W.G., vol. XXIV, 1872, June 14; August 30.
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Wood, pp. 23; 67; cf. Foster, p. 103.
- 24 Hirsch, p. 495.
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48. An interesting outline of a day in the farmer's life, as influenced by the high tariff may be found in the "Weekly Globe", vol. XXXI, 1879, April 4, p. 213.
49. Ibid, May 2, p. 287.
50. Ibid, April 25, p. 265.
51. Ogilvie and Hutchinson, Gederich millers, were accused by correspondents to the "Globe", of entering into an agreement with the government in order to evade paying duty on imported American wheat. (W.G., vol. XXXI, 1879, September 5, p. 568).
52. Ibid, vol. XXXII, 1880, February 6.

- 53 Ibid, vol. XXXI, 1879, April 18, p. 245.
- 54 Quoted, *ibid.*
- 55 Ibid, October 29. -- Cartwright (1838-1912) was a loyal supporter of MacDonald until 1870, when he drifted towards the Mackenzie administration, under which he served (1873) as Minister of Finance. He represented Centre Huron from 1878-1882, and South Huron from 1882-1887.
- 56 Ibid, vol. XXXIII, 1881, November 25; October 21.
- 57 Vid. *ibid.*, December 16. -- It is interesting to note that the output of oil in southern Ontario decreased sharply in 1870-75; this necessitated an increased importation from the United States (700,000 gallons in 1875). The selling price of oil in Ontario, after the duty of 20 cts. per gallon was added, was 30 cts. to 40 cts. per gallon; in the United States the total cost was 15 cts. per gallon. This tax on oil was a sore grievance on the part of the manufacturers and railway companies. (Wood, p. 95).
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CHAPTER VI

The Progress of the Farm, 1850-1880.

(Part I)

During the period 1850 to 1880, the Huron farm underwent a complete metamorphosis. Neat, well-groomed farms, comprised of orderly buildings, and equipped with improved methods of fencing, fertilising, and drainage, had begun to replace the crude log and frame dwellings which had characterised the earlier period of settlement. The evolution of the farm owed much to the adaptability of the farmer, and the genius of the inventor. The improvements in agricultural machinery during this period greatly increased the value and extent of agriculture, and simultaneously lessened drudgery and expense. Ploughs were constructed to dig deeper furrows, with the same, if not greater, ease of draught; reapers and binders enabled the farmer to harvest earlier; and grain, instead of being laboriously beaten with a flail, now gushed from the threshing machine.

The increasing use of machinery was accompanied not only by general improvements in other aspects of farming, but also by effects on the farmer's social life. The farmer and his family could well utilise additional time and energy to devote to other interests, whether fraternal, political, economic, or educational in nature, and to deal with problems which the development of "the farm" brought in its wake, e.g. labour shortage, and marketing. Moreover, the farmer was enabled to direct energies into such fields as fruit-growing, stock-raising, and dairying. Thus the development of the appurtenances of farming helped to herald the advent of mixed farming in Huron.

FARMS.

Farm-houses in the Huron Tract, during the 'thirties and 'forties, were mostly of the "log-cabin" variety, although several of the more prosperous farmers erected frame dwellings. Wooden buildings were made possible by the vast acreage of forest-land and the existence of numerous saw-mills¹ within the boundaries of the Tract. In the "older" districts of the province, farms appeared to be well-equipped, if the descriptions of properties for sale, in local newspapers, may be credited, and many farms were built of stone and brick.² Huron County's bountiful supplies of building stone and clay³ enabled farmers to build stone and brick homesteads, which began to dot the countryside during the late 'fifties. It was not an uncommon sight to witness a farmer "with the aid of gun-powder and a heavy hammer", construct a stone house.⁴ Some farmers gathered boulders on their farms, and carted them to neighbouring towns, where they were readily disposed of, at one dollar per load.⁵

In 1871, the "Globe"⁶ urged farmers to pay more attention to farm architecture, and to abandon a haphazard method of construction whereby buildings were not located as conveniently or as "sightly" as they might be. Neat, well-groomed farms, with ample room for the introduction of machinery on a greater or lesser scale, should be the goal of every farmer. Moreover, attention should be paid to the building of adequate root-cellars, for storing fruit and vegetables. A second article⁷ in the "Globe", two years later, urged farmers to beautify their homes, by planting trees, building hedges and fences, painting buildings, and maintaining clean yards.

An elucidating letter⁸ appeared in 1872, concerning the progress of farming in the district about Goderich:

"I saw some things that struck me very forcibly. These were the greatly improved conditions of those farmers with whose circumstances I had been previously well acquainted. Formerly, and at my last visit [1867], these men, in very many cases, had 'poor conveyances, or none, poor horse teams, and, often, only oxen, almost old log houses', and log barns, and, with few exceptions, very poor fences. Now [1872], the case is most materially altered for the better, and I am pleased to be able to record, that in a vast number of cases, these men have good and even handsome bugies, and occasionally good double-seated wagons, drawn by fine horses, with good substantial, and even ornamental harness. These have replaced the old team, and the log barns are gradually ceasing to exist as such, but are degraded into cattle sheds.

Good substantial frame houses are now seen in every direction. There are still occasionally seen some old log houses that are inhabited, a memento of former 'raisings' and beginnings in the bush. But very often these stand close by good frame or brick edifices that are well and comfortably furnished.

There is, however, still a great want of the orderly, tidy dooryard, neat and well cultivated garden, whose well fenced condition in town localities adds so much to the appearance of the homestead. There are, it is true, some ornamental trees planted, but unfortunately 'their name is (not) legion', nor are they, as a rule, well taken care of. Still, great amendment in general appearance, in comparison as they were five years since, is very apparent."

By 1880, thirty per cent. of the farm-houses in Huron County were reported to be built of stone, brick, concrete, or first-class frame; the remainder were composed of inferior frame, or of logs. (Vid. table, p. 119). Of the out-buildings, forty-two per cent. were first-class, and the remainder were inferior. First-class farms, comprising dwellings and out-buildings, brought from \$50. to \$60. per acre; second-class farms from \$30. to \$45. per acre; and third-class farms, from \$15. to \$20. per acre. The accompanying table (p. 120) indicates the average prices obtainable for farms of the respective classes in the various townships, in 1880. Farms could be leased for five years at a rental of from \$2. to \$3. per acre; "taking into consideration the value of the land and the high rate of interest paid for money, farms [were] rented very low indeed."

A study of the illustrations of farms owned by leading Huron agriculturists during the 'seventies serves to provide a fair estimate

of the general appearance of farm-houses, -- if one discounts certain touches lent by the artist's imagination. These illustrations may be found in the "Illustrated Historical Atlas of the County of Huron", which was published in 1879. Most of the houses are two storeys in height, and usually constructed of brick or stone, although a few frame dwellings are represented. Several houses have gabled porches, along one or more sides, and ornamental turrets and carvings on the upper part of the buildings seem to have been quite popular. Each house possessed from two to five chimneys, a weather-vane, and, in several instances, lightning rods. Well-kept lawns, in the centres of which were small bowers, are everywhere in evidence; circular ornamental hedges border some of the lawns, and small flower gardens are planted nearby. Wooden side-walks lead from the front gate (often embellished with ornamental posts) to both the front and back doors of the house, in a few instances.

Near the main dwelling are usually from two to four barns, often connected with each other. During the late 'sixties and early 'seventies, "scores and scores of barns", many of which were still intact sixty years later, were erected in Huron County by John Deig, of Kippen^{ll}. In some of the barnyards, -- which appear to be tidy and free from débris, -- are large pools of water, for the consumption of stock. The omnipresent pump is usually at the rear or at one side of the house. Several kinds of fencing are in evidence: wire, picket, board, rail, and "sig-sag". The better types are usually erected in front of and around the house, sometimes on brick foundations, while the "sig-sag" fences separate the fields at the rear of the farm. Occasionally, various combinations of different types of fencing (e.g. picket and rail) are to be seen.

TABLE: Statistics concerning the condition of farms in Huron County, in 1880.

	A	B	C	D	E	F	G	H
Ashfield	33%	67%	50%	50%	50%	3%	5%	25%
Celborne	50	50	50	50	75	50	25	25
Goderich	60	40	16	84	75	5	8	None
Grey	25	75	33	67	67	50	15	2
Hay	50	50	75	25	Nearly all	10	50	None
Howick	1	99	2	98	40	Very few	10	10
Hullett	25	75	10	90	100	8	50	30
McKillop	33	67	50	50	75	53	40	16
Morris	8	92	25	75	50	25	7	25
Stanley	25	75	25	75	Nearly all	20	25	25
Tuckersmith	40	60	80	20	All	80	None thor apply	60
Tarnberry	40	60	60	40	50	Many used salt	50	20
Usborne	30	70	60	40	Nearly all	50	25	40
Wamesh	22	78	45	55	72	12	12	15
[Biddulph	25	75	10	90	85	25	25	scarcely any
[McGillivray	50	50	75	25	75	Very little	12	50
Average (excluding Biddulph and McGillivray)	30	70	40	60	71	25	21.6	20

- A - Proportion of dwellings which were brick, stone, or first-class frame.
 B - Proportion of dwellings which were log or inferior frame.
 C - Proportion of out-buildings which were first-class.
 D - Proportion of out-buildings which were inferior.
 E - Proportion of farmers who used improved farm machinery.
 F - Proportion of farmers who used artificial fertilizers.
 G - Proportion of farms which were under-drained.
 H - Proportion of farms which were equipped with first-class fencing.

PROGRESS IN FARMING:TABLE: average prices obtainable for farms (per 100 acres)
in Huron County, in 1880.

Townships	1st class	2nd class	3rd class
Ashfield	\$5000.	\$3000.	\$1400.
Colborne	5000.	3500.	2500.
Goderich	5000.	3750.	2500.
Grey	5000.	2700.	1000.
Hay	5000.	3000.	1500.
Howick	4000.	3000.	2000.
Hullett	6000.	4500.	3000.
McKillop	6000.	3500.	500.
Morris	[4500. ?]	3000.	1200.
Stanley	6000.	4000.	2000.
Stephen	6000.	4500.	2000.
Tuckersmith	5750.	4500.	[3500. ?]
Turnberry	4000.	[3000. ?]	1000.
Usborne	7000.	5500.	4000.
Wawanosh	4000.	3100.	1750.
[Biddulph	5000.	4000.	3000.]
[McGillivray	6000.	4000.	2000.]
Average (excluding Biddulph and McGillivray).	e. \$5200.	e. \$3800.	e. \$2000.

Along the narrow dirt-roads are occasionally planted trees, protected by wooden structures -- another evidence of the farmers' desire to build beautiful farms. Other trees grow in the vicinity of the house, and behind the distant well-ordered fields, stand wind-rows of virgin forest.¹² Every farm appears to have had its quota of stock, and wagons, reapers and carriages are such in evidence.

The propriety and value of the keeping of farming accounts, in connection with such matters as interest on invested capital, receipts for products sold, the cost of repairing buildings and fences, the deterioration of the soil, the increase in stock, and so forth, were stressed in the "Globe" as early as 1871.¹³

Until the 'seventies, few farmers carried fire insurance policies, and on numerous occasions uninsured property was destroyed. In 1875, the Dominion Grange appointed a committee to investigate conditions concerning insurance; in 1877, the Dominion Grange Mutual Fire Insurance Company was formed at Sarawak (Grey County).¹⁴ Several farms, during the succeeding years, benefitted from this project. The earliest references in the "Globe" to the burning of insured farms in Huron County occurred in June, 1876, following the destruction of property owned by a farmer in Tuckersmith, and in August, 1876, when a Goderich farmer's barn and stable were burned; in each instance, the loss sustained was double the amount of the insurance.¹⁵ Mention was again made in October, 1879, when farm property in Morris and in Stephen townships was destroyed; loss was again double the amount insured.¹⁶ It was not until the 'eighties that farmers generally began to insure their farms against loss by fire.¹⁷

In March, 1880, the Council of the Agriculture and Arts Association of Ontario decided to offer prizes -- in the form of gold, silver, and bronze medals -- for the best-managed farms in various parts of the province.¹⁸

In order to be eligible, farms had to be at least one hundred acres in extent, and two-thirds under cultivation.¹⁹ The condition of buildings, roads, fences, implements, machinery, drainage, fertilizing, livestock, and orchards, was to be given careful consideration by appointed judges. The prize-winners in Huron County, which competed in Group No. 103, in 1882, were Mr. James Dickson, (Tuskersmith), who received the gold medal, and Mr. Varcoe, (Colborne), who was awarded the bronze medal; the farms of Messrs. Salkeld, Attrell, and Blake (all three in Gederich township) received honourable mention.

A description of these farms may serve to indicate to some extent the state of agriculture among the best farms of Huron County in the early 'eighties:

Mr. Dickson's farm²⁰ (Castlemount) contained 200 acres, 185 of which were cleared. The dwelling-house was two storeys in height, was constructed of brick, and was surrounded by splendid lawns, flower plots, cedar hedges, ornamental trees, a well-kept orchard, and gravel walks. All ordinary rail fences had been supplanted by straight rail fences. The barn and stables were very large, and contained numerous stalls. Mr. Dickson owned 41 cattle, 23 of which were prize-winning pedigree Shorthorns. He also had 37 sheep, including Shropshire, Cotswold, and cross-bred species. Five of the Shropshire sheep were imported; the ram, a consistent prize-winner, had been owned formerly by H.H. Spencer, of Brecklin (Ontario County). An excellent feeding system was employed, whereby feed was manufactured by horse-power, from cut fodder, pulped roots, bran, and meal, and passed into troughs, via a tramway. The front of the feeding troughs folded down, allowing for facility in cleaning the troughs and inserting the feed. Fresh water was conveyed from nearby springs by means of long troughs.

Crops grown at Castermount included 20 acres of fall wheat (equal amounts of Clawson and Reliable), 13 acres of spring wheat, 24 acres of hay (clover and timothy), 48 acres of pasture, 5 acres of orchard and lawn, and 10 acres of summer fallow. Mr. Dickson generally resorted to summer fallowing prior to sowing fall wheat, oats, or peas. He advocated the liberal use of salt as a fertilizer in the growing of all cereals, with the exception of fall wheat. Two years before, he had applied a top dressing of leached ashes (fifteen loads per acre), and the soil and grass bore evidence of improvement. The forty-five acres of timber on the farm consisted chiefly of birch, maple, cedar, and black ash. Thirty acres were watered by the Bayfield River, which flowed through the southern section of the farm.

Mr. Varese's farm (Pensance)²¹ contained 200 acres, 166 of which were cleared; 50 acres were devoted to wheat, 30 to hay, 22 to oats, 14 to barley, and several to clover, which served in lieu of summer fallow. The stock included 35 head of cattle (chiefly Durham grades), some work-horses, 28 sheep (Cotswold, Leicester, and Southdown grades), and 37 pigs. Three acres of orchard contained one hundred peach-trees, apples, pears, plums, nectarines, guinees, cherries, and forty grape-vines. Mr. Varese had planted several shade and ornamental trees, including black walnut, horse chestnut, maple, elm, willow, and evergreens. Fences were either board or barbed wire; over one thousand rods of under-drains, built of wood, of different sizes to conform to the flow of water, had been constructed. Mr. Varese's farm was the first on which the judges in that district discovered a self-binder in use: it has been in use since 1877.

Mr. Salkeld's farm consisted of 110 acres, 90 of which were cleared and well drained. Mixed crops were cultivated, although Mr. Salkeld specialized in root-crops, with a high degree of success. Mr. Attrell owned one of the most valuable herds of Shorthorn cattle in the country; some years

earlier he had purchased a herd owned by a stock-breeder, and since then had imported several pure-bred animals, paying as much as \$5000. each. He also grew large quantities of hay on the flats on both sides of the Waiatland River. Mr. Blake's property was an average farm of one hundred acres.

ADDITIONAL BUILDINGS.

In addition to the main dwellings, barns, and stables, farms were equipped with certain other buildings, such as milk-houses, fruit-cellars, ice-houses, poultry houses, and bee-houses. Each of these buildings was developed to a high degree of efficiency, by 1880.

Milk-houses. The pioneer settlers in the Huron Tract usually milked their cows out-of-doors, or in a small "lean-to" at one side of the house, and manufactured their butter in the kitchen. Some farmers went a step further, and constructed milk-houses, in "dug-out" fashion, beside a knoll. This crude shelter usually contained shelves and a gravel floor, and, more rarely, a spring of fresh water.²² The equipment of a milk-house comprised a churn, a cheese-press, and utensils. The first churns, supplied with an up-and-down "dasher", were wooden. Patent churns, in 1847, cost from \$1 to \$1.10. In 1853, a dog-churn, of American origin, was marketed at \$12. This device was driven by a treadmill which utilized dog-power; collies and Newfoundland dogs were favourites for this purpose.²³ Later, box-churns appeared, in which a "dasher" was operated by turning a crank. Dun and Jones, a firm in Huron, began to manufacture churns before 1862.²⁴ The earliest cheese-presses were wooden receptacles, in which pressure was applied by means of a board used as a lever with a stone at the end; this type of press remained in use for several years. Wooden milk-pans were gradually supplanted by earthenware utensils, and later, by tinware. The development of dairying concerns during the 'seventies eliminated, in many instances, the incentive and need for a farmer to maintain an up-to-date milk-house.

Fruit-cellars. Fruits and root-crops were usually preserved in a dark room, preferably a dry, cool cellar, and shallow shelves or drawers of open lattice were built on which fruit was spread. Lime, which absorbed moisture and prevented decay, was usually sprinkled over apples and potatoes before they were placed in storage. Apples were often preserved in a lime-cask.²⁵

Ice-houses. No well-appointed farm was complete without an ice-house, for with the aid of one, the profits of the dairy would be increased during a period of warm weather. The three essentials²⁶ of an ice-house were: (1) a closely-packed, non-conducting substance, such as dry sawdust, chopped straw, swamp moss, or dry tan-bark; (2) adequate drainage; (3) free circulation of air. Instructions²⁷ in the manufacture of an ice-house appeared in the "Globe" in 1871. The house should be twelve feet square, eight feet in height on the inside, and covered by a board roof. The surface earth should be dug to a depth of six inches. The ice was packed nine feet square and six feet high, leaving between the ice and the boards an eighteen-inch space, which was packed with sawdust, or a similar substance. The topic of ice-house construction was discussed by the Elmira (New York) Farmers' Club, in December, 1872; it was agreed that an ice-house fourteen feet square, built at a cost of from twenty-five to fifty dollars, was the most suitable.²⁸ It was not essential that ice should be stored underground, as it kept quite well above the surface;²⁹ it was the practice of some farmers to provide a floor of rough wood, laid upon the earth. The larger the body of ice was, the better it would keep. By 1875, ice-houses could be constructed at a cost of only five dollars. It was declared that one way by which ice-houses paid for themselves, besides the preservation of fruits, vegetables, and dairy products, was in the increase of the efficiency of labourers. No longer were there so "many visits made..... to the cool grey jug in the hollow stump"³⁰, because farm-labourers were now enabled to go "to the field daily with a pail of ice-water, [where] as in the olden time they would have gone with the whiskey jug."³¹

Bee-houses. Bee-keeping³² was rarely practised by the early Huron settlers, owing to the ample supply of maple sugar and maple syrup, which decreased the demand for honey. With the depletion of the maple-forests, however, this auxiliary branch of farming began to receive attention. In September, 1866, John Jewett, Lucknow, forwarded to the "Canada Farmer" plans³³ for a movable bee-house, which he invented in 1840, and which he had successfully used during the ensuing period. By 1880, most Huron bee-keepers adopted a type of shelter known as the "Fisher hive", because it protected the bees well in winter, and was generally suitable.³⁴

WELLS AND WATER SUPPLIES.

Huron County is well-watered by innumerable creeks, springs, and wells; water could be reached by digging, at depths ranging from 6 to 80 feet, but generally at from 10 to 25 feet.³⁵ The proximity of springs of fresh water was a factor³⁶ which contributed to determine the site of the homes of many of the early settlers. Later settlers found it necessary to dig wells, and in the course of time to resort to the use of the divining-rod, or "dowsner", to locate hidden springs. The first wells were merely holes in the ground of various depths and sizes, and were covered with logs to prevent animals from tumbling in. The sides of these wells often collapsed, owing to lack of support; this deficiency was remedied by the use of a curbed framework. Well-curbing was at first made of oak or black ash, measured two by four inches, or larger, in width, and was as long as the well was deep; it was held in position by iron bands. Stone gradually supplanted wood as curbing material, and proved to be so popular that scarcely a farm lacked a stone well. These wells ranged in depth from 20 to 80 feet, and in width from 2 to 6 feet. They were usually covered with oak planks, often with an enclosure of fence rails around them.³⁷ Brick and cement wells began to replace many of the stone

wells during the 'eighties. Water was usually brought to the surface by means of a home-made wooden bucket, which was lowered by means of a pole (known as a "well-sweep") or a windlass. Practically every farm contained one well, and often a second one (known as a "bush-side" well) near pasture-land.³⁸

During the 'sixties, wooden pumps and wooden wind-mills began to be introduced. Wooden pumps operated on the same principle as the metal ones of the present time. Pump-logs, made of pine or cedar, were sawn into lengths varying from five to twenty feet, and were usually eight inches in diameter, with a four-inch hole bored through the centre. They were constructed in such a way that the top of one log fitted into the bottom of the one above it. These pumps were manufactured by several factories in western Ontario.³⁹ Wind-mills made entirely of pine-wood, except for the metal gear, lent an air of quaintness and charm to the countryside.⁴⁰ In 1872, "a new device of a wind-mill adapted to pumping water" attracted considerable attention.⁴¹ At about the same time, O.T. Springer, of Wellington Square, Ontario, patented the "Excelsior" self-regulating wind-mill, to be sold at \$150.⁴² The manufacture of steel mills was not begun in Ontario until 1892.

The earliest stock-troughs were made by hollowing out large basswood logs. By 1871, farmers were devising various contrivances for watering stock. One ingenious farmer built a series of water-pipes to supply the barnyard and dairy. He used a two and one-quarter inch auger, which bored one inch per minute, or eighty feet per day, in tamarac logs; after the logs were bored, they were jointed and banded with rings of three-inch hoop iron, welded by a blacksmith. A trench was then dug between the barnyard and a spring which lay one-quarter of a mile distant. The cost of

the undertaking, which furnished water for the cattle and for cooling butter, was estimated at six and one-half cents per foot, or approximately eighty-five dollars.⁴³

Simultaneous with the appearance of wooden pumps was the use of wooden (pine) tanks for watering stock; these tanks were of various sizes and were supported by iron bands. This type of trough was later supplanted by a "water-bowl", the water for which was provided by a large storage tank. Hydraulic rams, which were usually installed near springs which supplied a considerable amount of pressure, appeared during the 'eighties. By means of them, water was pumped through metal pipes to farm buildings over a long distance.

AGRICULTURAL MACHINERY, TOOLS, AND IMPLEMENTS.

From 1840 to 1860 there was a continual development in the invention and manufacture of agricultural machinery, which was so vital to the farmer in his efforts to wrest a livelihood from the soil, and to contribute to the economic progress of his country. The principal factors which provided an incentive to the rapid adaptation of farm implements included: the opening-up of virgin territory, the gradual clearing and levelling of the older districts, the increase in the price of wheat during the 'fifties,⁴⁴ the construction of railroads,⁴⁵ general improvement in additional transportation facilities,⁴⁶ the expansion of industry, and the resultant scarcity of farm-labourers.⁴⁷ Provincial agricultural exhibitions, ploughing matches, and other competitive trials of implements served to advertise new machinery.

Prior to 1860, most of the implements sold were of English or Scottish manufacture, but after that date,⁴⁸ manufactories were established in several localities in Upper Canada. American firms began to form branches⁴⁹ in Canada, or to send agents to market their products. Consequently, a⁵⁰

veritable deluge of tools and implements of American manufacture began to pour into Canada. By 1875, however, the sale of Canadian implements began to increase, while American goods suffered a proportionate decrease. A further blight on American trade -- and one which, in a measure, retarded the development of agricultural implements -- was the National Policy tariff of 1879. This tariff imposed a tax of 30 per cent. on steel agricultural implements, 25 per cent. on other agricultural implements, and 25 per cent. on wagons; the tax on all agricultural implements was increased to 35 per cent. ⁵¹ in 1884.

Probably the most important agricultural manufactory in Huron County, prior to 1880, at least, was the one established at Clinton in 1862 by Glasgow, Macpherson, and Company. ⁵² This concern was a branch of the Fingal works which had been built twenty years before in Elgin County, and which specialised in "Climax" steam- and horse-power separators. These devices supplanted others of a similar nature in western Ontario, and were shipped to many points in the Dominion and abroad.

After 1872, the Brussels Steam Engine and Agricultural Works, valued at more than \$30,000., was founded by J.D. Ronald, Chatham, the inventor of the "vibrator" type of the separator engine. This firm specialised in the manufacture of the heavier class of agricultural ⁵³ implements. Other manufactories and firms in Huron County included; Harris and Merrill (Clinton); Martin and Passmore (Goderich); Malcolm McTaggart (Clinton); O.C. Willson (Seaforth) who sold Massey's products; ⁵⁴ D. McTavish (Clinton); ⁵⁵ Abell, Morley, Wilkinson, and Williamson (Seaforth); Dignan Brothers (Exeter); ⁵⁶ Siegaller, Carbine, and Company (Seaforth). There were also manufactories at Wingham and Blyth. ⁵⁷ Practically all of these firms were active during the 'seventies.

The provincial agricultural exhibitions afforded the most important medium for the dissemination of knowledge of agricultural implements and machinery. The prizes which were awarded in these departments provided an incentive, moreover, for the construction of better tools and for the evolution of more systematic methods. Huronites received forty-nine prizes for agricultural implements, between 1846 and 1831.⁵⁸ Competitive matches were another means whereby implements were advertised; a variety of implements usually constituted the prize-list of these gatherings. For example, prizes awarded at a ploughing match held in Tuckersmith, in 1866, included a reaper, a fanning mill, a cultivator, and two ploughs.⁵⁹ The Agriculture and Arts Association conducted two competitive trials of implements, -- the first near Hamilton, in 1864, and the second at Paris, in 1871. The most striking difference between these trials was the decrease in the number of American implements presented at the second trial.⁶⁰

The types of machinery and implements which appeared in use in Huron County before 1860 may be divided into four main groups: (1) land clearance: axes, saws, log-loading machines; (2) tillage: ploughs, harrows, rollers, seed-drills, cultivators; (3) harvesting: reapers, mowers, self-binders, horse-rakes, hay-forks, hay-loaders, implements for harvesting peas; (4) preparation of products for use: threshing machines, fanning mills, straw cutters, grain crushers, sewing-machines, wringers, etc.

Land clearance. Axes always formed an essential part of the equipment of the farm; various kinds of this implement were included at most of the provincial exhibitions. Cross-cut saws did not come into general use in Huron County until about 1855; William Elder, Tuckersmith, was one of the first men to own a cross-cut saw, which he obtained in 1855-56.⁶¹ A circular saw,

driven by horse-power, cost forty dollars.⁶² In 1873, the firm of Glasgow, Macpherson, and Company produced a prize-winning drag saw. The farmer's next concern, after felling trees, was to haul away logs, and to improvise some kind of a machine to pull out stumps, and thus hasten a process in which fire and erosion were relatively slow. Log-loading machines appeared in Upper Canada as early as 1845,⁶³ and stump extractors as early as 1843.⁶⁴ In 1847, stump extracting machines could be bought for £17. 10s. Improvements were added gradually in order to overcome the resistance of pine and similar species. In 1857, a Huron farmer devised a harrow which could be operated successfully on stumpy ground even when stumps were two feet apart.⁶⁵ In 1865, a Toronto agent for a Scottish manufactory advertised the sale of lawn-mowers, but these did not offer serious competition to the scythe for several years.⁶⁶

Fillage. During the late 'forties, ploughs of improved patterns began to be manufactured, and by 1860 there was a great variety of this particular implement, e.g. shovel ploughs and gang ploughs. Most of the early ploughs were of Scottish, English, or Dutch origin. The plough clevis, a Canadian invention, appeared in 1850. A double-furrow plough, already in use in England, made its appearance in 1852, as did a new subsoil plough (B4), with which four horses could plough a furrow twenty inches deep in ordinary soil.⁶⁷ With this implement, one man and two horses could accomplish in one day as much as was formerly done by two men, two ploughs, and four horses. The farmer's saving, in the cost of labour alone, was computed at seventy dollars annually.⁶⁸ From 1846 to 1881, Huronites entered twenty-two prize-winning ploughs at the provincial exhibitions. In 1867, Mr. O.C. Willson, who began to sell implements at Seaforth, sold seven ploughs; within a few years he was selling two hundred per year,⁶⁹ including such popular models as the Port Perry gang plough and Massey's "No. 18 Thistle Cutter".

The most popular of the early harrows was the "diamond Scottish harrow", equipped with forty teeth, and Share's American harrow. By 1850, a new type of self-cleaning harrow appeared on the market; two years later, a Norwegian harrow, which had proved to be popular in England, could be purchased in Canada for about £4. In 1864, a farmer in Hay township, Huron, submitted to the "Canada Farmer" the plan of a harrow which he had devised and used successfully for seven years, "even when stumps [were] two feet apart". This harrow cost ten dollars to build, and its use spread rapidly over Huron and Bruce Counties. In 1881, L. Elliot, Goderich, received a prize for a pair of iron harrows.

Rollers, known variously as land-pressers, clod-crushers, and presser-rollers, were chiefly of British manufacture. They could be purchased as early as 1852, at from £15 to £25 -- a price which was considered extremely high in Canada. The use of rollers was limited, as wooden ones were too perishable, and iron ones were too expensive.

Machines for drilling in grain or broadcasting were generally scarce in Upper Canada, and in Huron County. In 1852, a horse-hoe, of English manufacture, could be purchased for £2. 5s.; a seed-sower or drill, made of Rochester (New York) sold at \$14. Grain-drills and cultivators were exhibited at Hamilton in 1853. Prize-winning single-horse cultivators were shown at provincial agricultural exhibitions by A. Harris, Clinton, in 1858; R. Hunsiman, Goderich, in 1865; and T. Tippling, Clinton, in 1877. Two-horse cultivators began to appear in the early 'seventies. In 1877, P.N. Barterheimer, Clinton, received a provincial award for his cylinder cultivator. Root-seed planters were marketed by 1874; a turnip sower was invented by W. MacNicol, Cromarty (Perth County). The demand for a potato-planter was unfulfilled, although Mr. MacNicol attempted unsuccessfully to devise a potato-digger.

Harvesting and hay-making. For several years, the Huron farmer made extensive use of grain-cradles,⁷⁵ of which there were several types, known variously as "grape-vines", "turkey wings", and "muleys".⁷⁶ An improved reaping machine⁷⁷ appeared in Canada in 1847,⁷⁸ and three years later, a mowing machine, which was capable of cutting from ten to twelve acres of heavy grass per day could be purchased for £25. In 1852, Smith's "double-action hay-maker" was selling at £12 to £14.⁷⁹ H.A. Massey began to manufacture reapers and mowers in 1852, and sold them at from £20 to £25 each. The first machine reaper was an awkward contraption operated by two men; grain was deposited on a platform via a reel, which was later supplanted by one arm, and still later, by four arms, which speeded up the process of gathering grain.⁸⁰ In 1856, Massey produced combined reapers and mowers. In several localities in Huron County, where "many of the latest inventions and improvements in agricultural implements had already been introduced,"⁸¹ much of the grain in 1856 was harvested by McCormick's mower and reaper, which had appeared in 1834.

At a mowing match in Stanley township, in July, 1867, eight combined reapers and mowers competed; the first three prizes went to "Wood's Patent", from Flora (Wellington County), to Waterous and Company, Brantford, and to "Ball's Ohio", from Lucas.⁸² In 1867, Mr. O.C. Willson began to sell Massey's products at Seaforth, including the self-rake reaper, which had appeared⁸³ in 1863. During the ensuing decade, he sold more than one thousand of Wood's reapers and mowers, and several similar machines manufactured by Maxwell and Company, Paris. A firm at Oshawa (Ontario County), which manufactured "Champion" reapers and mowers, sold 250 in 1874, but planned to produce 2500 in the following year, owing to an increased demand.⁸⁴ This demand was an expression of the general optimism and prosperity which preceded the depression of the late 'seventies.⁸⁵

Many farmers could not afford to purchase machines, but rented them from the more fortunate agriculturists in the neighbourhood, during harvest-time. In the early 'seventies, Mr. William Elder, a Seeforth farmer, contracted a similar deal: the machine broke down, and before the necessary parts could be procured, Mr. Elder had completed, on foot, a journey which took him to Harpurhey, Brucefield, Kippen and home again.⁸⁶ After 1875, single- and two-horse reaping machines became fairly common.

During the early 'seventies, a self-binder which used straw to tie the sheaves, was invented by Walter MacNicol, of Cromarty (Perth County). This was the first machine of its kind in western Ontario, and MacNicol declined to sell it until he had perfected it. Meanwhile, binders which used wire or twine were introduced, causing his invention to become obsolete.⁸⁷ Self-binders were scarce in Huron County for several years. The first self-binder encountered in the district by the judges of the farm competition in 1882, was owned by Mr. Varcoe, of Colborne.⁸⁸ Many Huron farmers expressed their desire to purchase a self-binder for the harvest of that year. In 1883, Archie McGregor, Kippen, however, displayed great dissatisfaction with a similar machine obtained at London.⁸⁹

Revolving horse-rakes were advertised for sale by a Toronto firm in 1845.⁹⁰ An American horse-rake, an ingenious and labour-saving device, was marketed at E4.⁹¹ Sulky horse-rakes appeared in the 'sixties, and were manufactured by a Canadian firm. O.C. Willson was the first to introduce this implement into Huron, after 1867.⁹² From 1867 to 1870, a considerable number of hay-forks appeared, including grab-forks, screw-forks, tine-forks, and harpoon-forks. Peter Grant, Clinton, invented the "Excelsior" horse hay-fork, which gained prizes at the provincial exhibitions, from 1869 to 1876, and awards in the United States, France, and Australia.⁹³ A testimony to the excellence of this

implement is to be found in a letter⁹⁴ written by a farmer to "The Farmer's Advocate": "Having used four kinds of hay-forks, I prefer Grant's hay-fork to any. It will take a good load of even fine hay; it is light and strong, and easily handled." Hay-loaders and hay-tedders did not appear in Huron until the 'eighties; William Eldon, Seaforth, was one of the first farmers in his district to obtain them, at about 1886.⁹⁵ Messrs. G. McLean and Mills, Rogerville, won provincial awards in 1872 for an implement for harvesting peas; in 1873, Mr. George McLean, Hay, and in 1874 and 1877, Mr. G. McLeod, received awards for a similar contrivance.

Preparation of Products for Use. The first portable threshing machine was introduced into Upper Canada at about 1835-36.⁹⁶ In 1845, a Toronto dealer advertised for sale two-horse portable threshing machines which were guaranteed to thresh one hundred bushels per day;⁹⁷ the cost was about £35.⁹⁸ Before 1850, a thresher operated by horses on a tread-mill appeared. In 1852, several agents were sent to Upper Canada by an American firm owned by Paige, who had invented a two-horse power threshing machine, which sold for \$275. The sale of threshing machines in Huron County expanded considerably after 1874, as is indicated by the increased output of the firm of Glasgow, Macpherson, and Company, at Clinton.⁹⁹ Machines operated by horse-power, or "sweep-power", as it was often designated, were common throughout the county.¹⁰⁰ The Clinton firm exhibited, in 1874, a "Climax" vibrator thresher, later adapted for either steam or horse-power,¹⁰¹ a "Climax" separator, and a combined separator, which had carriers attached in such a way as to direct straw straight out, or to either side.¹⁰² By 1876, the same firm began to manufacture the "Monitor" agricultural steam engine, and by 1880, an "end-shake" thresher, replete with numerous improvements.¹⁰³ In 1885, Jack and Miles McMillan, Tuckersmith, purchased a steam threshing outfit of the upright boiler type.¹⁰⁴

Fanning mills became fairly common in Huron County in the early 'sixties, chiefly because Malcolm McTaggart, Clinton, whose mill merited an award at the London exhibition in 1854, had begun to manufacture them.¹⁰⁵ A patent duplex fan-mill had appeared in 1850,¹⁰⁶ and a grain cracker was exhibited at Hamilton in 1853. On November 29, 1861, a patent was issued to Mr. Henry Dodd, of Goderich township, for "improved sieves or screens for fanning mills."¹⁰⁷ A good fanning mill cost approximately twenty-five dollars.¹⁰⁸

In 1847, a hand- and horse-power straw-utter appeared, which sold at from £8 to £7.¹⁰⁹ In 1874, Glasgow, Macpherson, and Company exhibited a straw-utter which was operated by horse-power; it was capable of cutting more than one ton of hay, straw, or corn-stalks per hour.¹¹⁰ At the Toronto exhibition in 1852, the Canada Company displayed a machine which aroused considerable comment; this was the Donlan Flax Machine, which the Company had purchased in England.¹¹¹ In 1857, Harris and Merrill, Clinton, received a provincial award for a clover-cleaning machine. Corn-shellers could be purchased as early as 1847, for £2. 10s., and mangles, for £4. 10s. Turnip-slicing machines¹¹² appeared in 1847, and root-pullers in 1851.¹¹³ In June, 1852, James Wright, of the Wellington Agricultural Society, invented a machine for cutting off the tops of turnips and turning out the roots.¹¹⁴ In 1871, an "apple-parer", of American origin, appeared on the market.¹¹⁵ W. MacNicol (Perth County) invented, during the 'seventies, a potato-digger, which was eventually discarded, because it failed to separate stones from the potatoes.¹¹⁶

In the midst of all these improved implements, the farmer's wife was not forgotten: from 1860 onward, various household machines appeared, to help her in her daily tasks. "Singer" sewing-machines were manufactured during

the early 'sixties at Woodstock, Hamilton, and Newmarket, and sold at from \$75. to \$100., a price which was considered extremely high at that time.¹¹⁷

In 1864, a hand-operated sewing-machine, which sold for \$12. was manufactured by Charles Raymond, of Guelph.¹¹⁸ This machine proved to be so popular, that additional manufactories were established at Hamilton and Toronto. By 1871, "lock stitch" machines were on the market at from \$15. to \$35. and "Lamb's" knitting machine could be obtained for about \$50.¹¹⁹ Washing-machines and wringers also became increasingly available during the 'sixties. In 1869, Thomas Porfar, of Waterdown, advertised for sale, at \$8.50, the "Ontario Double-Geared Clothes Wringer".¹²⁰ Large mangles, equipped with three rollers, about four inches in diameter,¹²¹ were commonly used on most farms.

WAGONS.

In November, 1850, the "Huron Signal" advertised that "an excellent opening for a good wagon-maker [would] be found in the rising village of Clinton."¹²² In 1852, an "improved" Scotch cart, for carrying grain and hay, could be obtained for from \$12 to \$15; ordinary wagons cost \$15.¹²³ Before 1860, Martin and Passmore began to manufacture two-horse wagons at Goderich. One of the first buggies in the Seaforth area was owned by William Alder, in the early 'seventies.¹²⁴ In 1877, James and John Dignan, Exeter, began to manufacture wagons, buggies, cutters and bob-sleighs; they built about twenty-five wagons annually, until 1897, when the competition of larger factories forced them to lessen the scope of their business.¹²⁵ In 1870, James Wilson established a harness-making concern at Seaforth, and six years later, G.E. Henderson did likewise. Single harnesses, in 1878, cost from \$14. to \$40.; double harnesses were priced from \$25. upward.¹²⁶

In 1880, the requirements of an average farm of one hundred acres in Huron County, and indeed in most of the other counties of Ontario, included¹²⁷

two or more large ploughs, a small plough, a shovel-plough, a subsoiler, one or more harrows, a roller, a grain drill, a root-seed planter, a single- or two-horse cultivator, a fanning mill, straw-cutter, root-cutter, shovels, spades, hoes, scythes, cradles, grain shovels, pick-axes, mauls, wedges, wood-saws, a hay-knife, hay-forks, manure-forks, hand- and horse-rakes, a ladder, wheel-barrow, sleigh, an ox-cart, a horse-cart, and a substantial wagon equipped with a hay-rack.

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Agricultural improvement did not cease with the gradual perfection of tools and implements with which to cultivate the soil, to harvest the resulting crops, and to transport them to market. The ingenuity of the inventor and the adaptability of the farmer were taxed in other phases ¹²⁹ of farming, which were no less important in the consistent progress of agriculture, viz., improved methods in fencing, fertilization, and drainage.

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Chapter VI: The Progress of the Farm, 1850-1890. (Part I):

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- 33 Can. Farmer, vol. III, 1866, September 15, p. 279; letter dated August 30.
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- 38 Wood, A.C., pp. 235-239.
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- 40 One of the most popular wooden wind-mills was the "IXL" mill, manufactured at London by J. Taylor.
- 41 Farmer's Advocate, 1872, November, p. 162.
- 42 Can. Farmer, vol. I, 1873, April 15, p. 132.
During the 'seventies, also, the United States Wind Engine and Pump Company, at Chicago, began to build wind-mills on a large scale, for use in the arid west. (Vid. Toon, C.C.: Some Aspects of the History of Agriculture in Canada West and Ontario between 1850 and 1870. (U. of W.O. Studies, London, 1938), p. 198).
- 43 W.G., vol. XXIII, 1871, September 22, p. 6.
- 44 Vid. supra, pp. 32-33; 105.
- 45 Vid. infra, pp. 311-314.
- 46 Ibid., pp. 308-310.
- 47 Innis, H.A., and Lower, A.R.M.: Select Documents in Canadian Economic History, 1783-1885. (Toronto, 1933), vol. II, p. 541.
- 48 For general prices of the more important machines, vid. Can. Farmer, vol. II, 1874, May 15, p. 185.
- 49 For the price of agricultural implements in 1851, vid. Taché, J.C.: Sketch of Canada: its industrial conditions and resources. (Paris, 1855)
- 50 E.g., agents for Paige's threshing machine, in 1852.
- 51 Vid. supra, p. 107.
W.G., vol. XXXI, 1879, March 28, p. 196.
- 52 Hist. sketch of Huron, p. vii.
Can. Farmer, vol. II, 1865, June 1, p. 176.
W.G., vol. XXVI, 1874, October 2.
- 53 In 1876, the firm received a grant of \$5000. from the municipality; the machine was later purchased by the town of Paris.
Hist. sketch of Huron, p. x.
W.G., vol. XXVIII, 1876, January 21, p. 8.
London "Free Press", March 20, 1937.
- 54 "Business Men of the Seventies", article in Seaforth "Huron Expositor", January 29, 1932; vid. infra, pp. 131; 133-4; 142; 144.
- 55 Middleton, p. 642.
- 56 Exeter "Times-Advocate", October 14, 1937; vid. infra, p. 137.
- 57 Hist. sketch of Huron, pp. x; xiii.
- 58 Vid. supra, p. 74.

- 59 Letter from Hugh Love, senior, Hill's Green, in *Canada Farmer*, vol. II, 1865, December 1, p. 367; of. the mowing match held by the Huron Farmers' Association in July, 1867, in Stanley township; *ibid.*, vol. IV, 1867, August 1, p. 235.
- 60 *W.G.*, vol. XXIII, 1871, June 2, p. 6; July 28, p. 6.
- 61 Elder, J.: *Tuckersmith Pioneers*, 1938, March 8, No. 4.
- 62 Innis and Lower, vol. II, p. 544.
- 63 *British American Cultivator*, vol. I, 1845, new series, September, p. 274.
- 64 *Ibid.*, vol. II, 1845, November, p. 169; vol. III, 1844, February, p. 27; vol. III, 1847, new series, July, p. 210.
Can. Agric., vol. V, 1853, November, pp. 322-328; vol. XIV, 1862, July 16, p. 420.
 Geikie, J.C., ed.: *George Stanley, or Life in the Woods*. (London, 1864), p. 400.
- 65 *Can. Farmer*, vol. I, 1864, November 14; December 15; *vid. infra*, p. 132.
- 66 *Teen*, p. 187.
- 67 *Can. Agric.*, vol. IV, 1852, May, p. 147.
- 68 *W.G.*, vol. XXIII, 1871, June 2, p. 6; July 28, p. 6.
- 69 Seaforth "*Huron Expositor*", January 29, 1932. — Mr. Willson also stocked the well-known "Florence" sewing-machine which appeared by 1869.
- 70 *Can. Farmer*, vol. I, 1864, December 1, p. 369; letter from "L", dated November 14.
- 71 Innis and Lower, vol. II, p. 542.
- 72 *Can. Agric.*, vol. IV, 1852, May, p. 147.
- 73 *W.G.*, vol. XXIV, 1872, March 15.
- 74 *Vid. infra*, p. 136.
Can. Agric., vol. IV, 1852, March, pp. 73-74.
 London "*Free Press*", August 21, 1937.
- 75 *Vid. supra*, pp. 48-9.
- 76 Wood, *A.C.*, p. 110.
- 77 For a history of reaping and mowing machines in Canada, from 1812 to 1850, *vid. Can. Agric.*, vol. XIII, 1861, March 1, pp. 137-141.
- 78 *British American Cultivator*, vol. III, 1847, new series, May, p. 138.

- 79 Can. Agric., vol. IV, 1862, August, pp. 235-6.
- 80 Wood, A.C., p. 111.
Walkerton "Telescope", September 7, 1933.
- 81 McQueen, p. 196.
- 82 Can. Farmer, vol. IV, 1867, August 1, p. 236.
- 83 Seaforth "Huron Expositor", January 29, 1932.
Innis and Lower, vol. II, p. 543.
- 84 W.G., vol. XXVII, 1875, June 11.
Sess. Papers, vol. VIII, Part I, pp. 385-386.
- 85 Vid. supra, p. 106.
- 86 Elder, J., March 8, 1935, No. 4.
- 87 London "Free Press", August 21, 1937. -- MacNicol also invented a device
for "gunning out" saws, a machine for gathering potato bugs,
a potato-digger, and a turnip-sower.
- 88 Sess. Papers, vol. XV, 1862, Part II, No. 3, p. 45.
- 89 Elder, J., May 10, 1935, No. 13.
- 90 British American Cultivator, 1845, vol. I, (new series), July 1, p. 223.
- 91 Innis and Lower, vol. II, p. 544.
- 92 Seaforth "Huron Expositor", January 29, 1932.
- 93 Vid. supra, p. 73.
Hist. sketch of Huron, p. vii. -- It was stated in 1879 that Mr. Grant
sold the right to manufacture his hay-fork in the New England
states alone, for \$50,000.
- 94 Farmer's Advocate, 1870, September, p. 134.
- 95 Elder, J., March 8, 1935, No. 4.
- 96 Supra, p. 49; contemporary writers noted the existence of threshing
machines at Sandwich (Essex County) and in Dundas County, at that
time.
- 97 British American Cultivator, 1845, vol. I, (new series), July, p. 223;
March, p. 81.
- 98 Innis and Lower, vol. II, p. 543.
- 99 W.G., vol. XXVII, 1875, July 23.

- 100 Elder, J., February 22, 1935, No. 2.
- 101 W.G., vol. XXIX, 1877, August 11, p. 521.
- 102 Ibid., vol. XXVI, 1874, October 2.
- 103 Ibid., vol. XXXII, 1880, September 17.
- 104 Elder, J., April 19, 1935, No. 10.
- 105 Can. Agric., vol. VI, 1854, December, p. 339.
- 106 Ibid., vol. II, 1850, August, pp. 182-3.
- 107 Ibid., vol. XIV, 1862, January 16, p. 40.
- 108 Innis and Lower, vol. II, p. 543.
- 109 British American Cultivator, vol. III, 1847, January, p. 16.
Agric. and Can. Journal, vol. I, 1848, February 1, p. 13.
Can. Agric., vol. VI, 1854, March, p. 73.
- 110 W.G., vol. XXVI, 1874, October 2. -- O.C. Willson, Seaforth, a dealer
in implements, sold straw-cutters and threshers manufactured by
Maxwell and Company, of Paris.
- 111 Can. Agric., vol. IV, 1852, September, pp. 268-9; October, p. 292.
- 112 Ibid., vol. III, 1851, January, p. 11.
British American Cultivator, vol. III, 1847, February, p. 67.
- 113 Can. Agric., vol. III, 1851, January, p. 11.
- 114 Ibid., vol. IV, 1852, June, p. 163.
- 115 Can. Farmer, vol. III, 1871, September, p. 360.
- 116 London "Free Press", August 21, 1937.
- 117 Can. Agric., vol. XIV, 1862, October 1, p. 584.
- 118 Can. Farmer, vol. I, 1864, June 15, p. 174.
- 119 Vid. Farmer's Advocate, 1871, September.
- 120 Can. Farmer, vol. I, 1869, October, p. 400.
- 121 Hisset, C.V.: "Domestic Help in the 'Sixties"; article in Sarnia
"Canadian Observer", June 19, 1937.
- 122 London "Free Press", October 5, 1935.

- 123 Innis and Lower, vol. II, p. 545.
- 124 Elder, J., March 8, 1935, No. 4.
- 125 Exeter "Times-Advocate", October 14, 1937.
- 126 Seaforth "Huron Examiner", January 29, 1932.
- 127 Cf. Walter, W.H.: The Development of Agricultural Productivity in the Province of Ontario. (University of Toronto Studies, Toronto, 1916), pp. 76-83.
- 128 Vid. Sess. Papers, vol. IX, Part II, 1877, No. 4, p. 190.
W.C., vol. XXVI, 1874, August 28.
Copleston, Mrs. Edward: Canada, why we live in it and why we like it. (London, 1861), pp. 116-117.
- 129 Several Huronites received awards at provincial exhibitions for miscellaneous devices, such as horse-shoes, a meat-chopper, and an adjustable jack.

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CHAPTER VII

The Progress of the Farm, 1850-1880.

(Part II)

The development of methods of fencing, fertilizing, and drainage was a corollary of the axioms of agricultural progress. It is significant that these three important aspects of farming developed in a parallel fashion. The main reasons for this condition are: (1) the increased use of machinery, which preceded and accentuated general improvements in all farming equipment; (2) the desire of the Huron farmer to create a "model" farm; and (3) the availability of various materials in Huron County for progress in these matters, e.g. cedar and salt.

FENCING.

Fencing formed an integral part of the equipment of a well-managed farm. For many years, the "zig-zag" rail fence, made of split rails, was the most common type used; it was economical, durable, and could be quickly and easily constructed.¹ The problem of fencing did not attain a signal importance until the 'seventies, when several types of fences made their appearance. The growing scarcity of timber, the increased number of stock-raising farmers, and a general desire² to build well-ordered farms increased the significance of fencing. The supply of cedar and black-ash -- the most popular woods for manufacturing rails, was dwindling in several sections of the province (e.g. Dorchester, Middlesex County), where pine and white oak began to be used as fencing material. Huron County, however, was supplied with several large cedar swamps. Andrew Wood, Tuckersmith, had a fine cedar swamp on his farm, and during the early 'seventies he supplied considerable

timber for fence posts, which proved a great convenience to neighbouring farmers.³

Board and picket fences, which were more economical, more lightly, and stronger than "zig-sag" fences, appeared as early as 1856.⁴ Ten years later, H. Treffry, of Gorrie, received a prize at the provincial exhibition for his wooden farm-fence.⁵ In Quebec, rail and picket fences were not in general use until 1871. Rails were usually cut in lengths of eleven or twelve feet, and pickets in lengths of seven feet. The cost of various types of fence, per foot, was: rail fences, six cents; picket fences, five cents; board fences, ten cents; bar fences, seven cents; cedar posts cost from five to fifteen cents each.⁶ The feasibility of building wire fences, which were more durable and less expensive than rail fences, did not invoke much discussion until 1871-72. Portable fences, which could be erected and pulled down at a moment's notice, appeared in the late 'sixties. Alex Weir manufactured a portable fence, at a cost of sixty-five cents per rod, which received a prize at the provincial exhibition in 1870. The general view regarding most portable fences was that they were too expensive; often, they were designated as so much "humbug".⁷ The type of fence necessary for construction depended chiefly on the kind of stock which pastured within the enclosure.⁸ A method used to preserve fence rails and posts was to administer a compound, made by stirring pulverised charcoal in boiled linseed to the consistency of paint: "put a coat of this over timber, and there is not a man who will live to see it rot."⁹

¹⁰
An interesting letter written in 1872, by "W.M.", Dunganmon, Huron, throws considerable light on the condition of fencing in that part of the country:

"I will describe two kinds of rail fence that are used in this section. The first is the ordinary snake fence, put up five rails high; then two upright stakes are placed at the corners on each side of the fence; a cap bored with large four-inch holes is slipped over the stakes across the fence, thus binding the whole firmly together; two more rails are put in, and the stakes are then driven into the ground. This makes a very strong fence. It is not liable to be blown down, and it is impossible for horses or cattle to get a rail out. It is, moreover, free from any large gaps for cattle to get their heads through.

The other kind is somewhat similar to [the fences built in Quebec at this time, as noted above]. It is as follows: bottom blocks of cedar, pine, oak, or any kind of timber that will not rot easily, are bored with two large four-inch holes, four or five inches apart. These blocks are placed on the ground, the length of the rails apart, allowing the rails to overlap six or eight inches. Stakes are then put through the holes in the blocks, and driven into the ground fifteen or eighteen inches; the fence is then laid up, four rails high; a cap, twenty inches long, bored with the same sized auger, is slipped over the stakes, thus binding the stakes and rails firmly together; two more rails are then placed on the top, which makes the fence sufficiently high, being equal to eight rails in height. The greatest difficulty in building these fences is to get the boring done, as a three-inch auger [is] too small, and a four-inch auger [is] too large to turn by hand.

But a machine has been invented and patented for turning them by horse-power. The machine is said to bore about two thousand blocks per day. Any horse-power will run it; consequently it is not much trouble to put up a lot of straight fence. The machine is also adapted for boring posts for making post and rail fences."

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In 1874, despite the criticism levelled against "zig-zag" rail fences, many farmers agreed that this type was the best for all purposes. The principal objection to rail fences was that animals and fruit-pilfering school-boys made easy access through them.

As early as 1857, suggestions had been advanced for the planting of crab and plum hedges, which would afford the owner also "the novelty of picking fruit." It was not, however, until the early 'seventies, that live hedges, which "no wind could blow down and no thief break through", became

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popular among Ontario farmers. Experiments were made with the native thorn, sweetbriar, honey-locust, hawthorn, buckthorn, osage orange, and barberry.

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In the spring of 1876, a number of Zurich farmers removed the "zig-zag" fences

then in use, and planted honey-locust hedges in their stead.¹⁴ Three years later, Mr. Allan, of Goderich, stated that the barberry made an excellent hedge, and moreover, provided berries, which when cooked with apples, produced a delectable jelly.¹⁵ In 1880, a Brucefield reader of the "Globe" was informed that neither Canadian thorn nor English thorn was suitable for a hedge, because both were attacked by numerous insect enemies.¹⁶ Sweetbriar was said to pull wool from the backs of sheep, and for this reason was unpopular.¹⁷

By 1880, most of the hedges in Huron were of the buckthorn variety; many of the buckthorn hedges, for want of proper training when young, were not properly formed. Mr. W.C. Gordon, Goderich township, was one of the first Huronites to plant esage orange; this type of hedge formed a complete barrier against stock, but it required frequent trimming, and tended to spread from broken roots. The barberry grew into thickened stools, but did not spread from cut roots, thereby permitting land to be cultivated close to the hedge. It could be easily transplanted, and was considered, in 1880, to be the best roadway and division fence that the farmer was able to build.¹⁸

Galvanized wire was used by several farmers prior to 1880, as support for grape-vines.¹⁹ Barbed wire fences appeared as early as 1880;²⁰ James Stewart, Tuckersmith, built one which "was still good" forty-five years later.²¹ The farm²² of Mr. Varese, Colborne, who received a bronze medal in 1882, contained (in addition to 680 rods of board and picket fence), 500 rods of barbed wire fencing: four wires stretched above a base-board one foot high, and posts were placed at intervals of eight feet. In general, by 1880, twenty per cent. of the fences in Huron County were rated as first-class.²³ (Vid. table, p. 119.)

FERTILIZERS.

The Condition of the Soil. Soil exhaustion was in evidence in several of the older counties of Ontario at about 1860.²⁴ Indications of soil exhaustion did not become greatly apparent in Huron County, however, until the late 'seventies. The chief reasons for this condition include: (1) an inadequate use of a "system" of crop-rotation; (2) a tendency to crop too much grain, especially wheat; (3) the failure of certain crops which were important in rotation, e.g. clover; (4) lack of good fertilizers; (5) ignorance and mismanagement on the part of the farmer.

Crop rotation was not practised generally in Huron until the 'seventies. Two of the best-known "systems"²⁵ then in use in Ontario were as follows: (a) For rich soils: (1) summer fallow, manured; (2) wheat; (3) corn or potatoes, no manure; (4) barley or peas; (5) oats; (6) summer fallow, manured; (7) wheat, seeded to grass; and (b) For light soils: (1) summer fallow, manured; (2) corn or potatoes; (3) barley, seeded to grass; (4) grass cut, three years; (5) pasture, two years; (6) peas; (7) fallow. In Huron County, clover and grass were important components of practically all "systems" of crop rotation.

In 1879, the following letter from "A.M...", Huron, appeared in the "Globe": "I have a field of eight acres of poor soil, that is because it has run out, and I would like to get something out of it this season. How would it do to sow some kind of grain in it, and seed it down with clover and timothy [for pasture]?" The advice rendered was to plant peas, then timothy or clover. Two months later, another letter²⁷ appeared, signed by "Young Farmer", Huron: "I have 10 acres of high land, which I intend to sow with peas, and seed down with red clover for pasture, at about ten pounds per acre. The land is run out; would you advise to put a little timothy with it?" The answer was: Clover will succeed best if sown alone; peas should not be sown with it,

but timothy may be added. In March, 1880, a letter from a farmer in Stanley township appeared: "I have a piece of land which is badly run out, which I intend to summer fallow. It has been cropped with wheat for the last six or seven years. What would be the best manure for it? Lime can be got cheap. Would it be good? If so, how many bushels to the acre, unslaked?" The writer was advised to apply 300 to 400 pounds per acre of superphosphate or bone meal, and to add barnyard manure.

In 1879-80, Huron farmers expressed great concern over the exhaustion of soil and the failure of attempts to cope with it. In 1880, the report of the South Huron Agricultural Society stated:²⁹

"It is a serious matter for our farmers to know how to get over clover being winter-killed. And, moreover, more than that, grass seed sown in spring for the last three years, has been a doubtful affair. We know of fields which have been seeded down three years in succession, and all proved a failure, thus completely upsetting everything like a calculation of rotation of crops. We have no known equivalent for meadow and pasture for a complete rotation of crops and rest for the land. Sowing grass seed in the fall has been tried to a considerable extent, but not enough of experience has yet been gained to enable us to speak definitely as to results."

In the same year, a Huron farmer declared:³⁰

"Some of the farms are getting impoverished through bad management. Ploughing under some green crop would perhaps restore such farms to fertility as anything else. In our district, some try to carry out the rotation of crops, but it is rather difficult, owing to the failure of the clover crop occasionally."

Manures. A manure is a substance which, through its fertilizing properties, enriches the soil, and thereby enters into the composition of a growing plant. There are two classes of manures: (1) those which are provided through natural agencies; and (2) artificial manures. Under the second group may be included bones, bone dust, bone meal; lime, alkali and phosphate compounds; gypsum; limestone and marl; soda and potash; plaster of Paris; ashes (leached and unleached); charcoal; and common salt. All these fertilizers were

experimented with by Huron farmers before 1880, in varying quantities and mixtures, but usually with a high degree of success. The general procedure adopted by Huron farmers, by 1880, was to apply barnyard manure to which had been added various quantities of artificial manure; thus the most beneficial results were obtained. About thirty per cent. of the farmers in Huron County, by 1880, were using artificial fertilizers.³¹

Instructions for manuring appeared in Canadian agricultural journals as early as June, 1845,³² but farmers did not awaken to the proper and beneficial uses of manure until the early 'sixties.³³ In 1865, a "subscriber and constant reader from Goderich" wrote to the "Canada Farmer"³⁴: "A large portion of a most valuable fertilizer (I mean liquid manure) is totally lost to our agricultural community." He thereupon proceeded to point out the successful application of liquid manure in Great Britain. As late as 1880, it was not customary among farmers in several parts of Huron (e.g. Tuckersmith),³⁵ to take particular care of their barnyard manure; no pains were taken to save liquid manure or to rot solid manure. George Buckland stated³⁶ (1880) that about twenty-five per cent. of barnyard manure was wasted or lost by farmers in Ontario. When manure was used, it was too often illiberally applied; as a rule, ten or twelve loads, applied to a six or seven years' system of rotation, was deemed sufficient. In 1878, Mr. Allan of Goderich stated³⁷ that manure on undrained land was usually productive of more harm than good, for it produced rust in wheat, and rot and mildew in fruits. In November, 1877, a letter of enquiry, written by "R.S.", Huron County, appeared in the "Globe":³⁸ "Would you let me know how many pounds of hen manure are equivalent to one pound Peruvian guano for garden vegetables?" The writer was informed that hen manure was the better fertilizer, because much guano was adulterated. Hen manure, in a dry state, was worth from \$15. to \$45. per ton.

Ashes and potash were considered good fertilizers, even until 1881.³⁹

Best results were obtained from ashes on sandy soil, then on dry clays, and least of all, on land containing much lime, as for example, in Huron County. Bones, bone meal, and bone dust were used as fertilizers in Great Britain as early as 1821;⁴⁰ their use as a manure was discussed in Canadian agricultural journals as early as 1852.⁴¹ Lime was described as an excellent fertilizer by A. Johnson, Stanley township, in a letter⁴² to the "Canada Farmer", in 1867.

Mr. George Woodriff, also of Huron County, testified in a letter⁴³ to the firm of Daniel Lamb, Toronto, in 1866, to the good fertilizing properties of superphosphate:

"I applied your article [bone superphosphate] to clover, but not to the entire field, and the hay crop trebled where it was top-dressed with your manure. The rest of the field carried but a poor crop."

The richest deposits of phosphate of lime in Ontario were to be found in the townships of Crosby and Elizabethtown (Leeds County), and Burgess (Leeds and Lanark Counties), as well as in the area about Kingston (Frontenac County).⁴⁴ Thousands of tons of phosphate were shipped to England, Scotland, and Germany in 1871.⁴⁵ This amount was greatly increased at about 1883, at which time "the great guano beds of Peru and Chile [were] approaching exhaustion."⁴⁶ The general opinion of Huron farmers, who obtained phosphate from a concern in Brookville, was that barnyard manure was a superior fertilizer.⁴⁷

The use of plaster as a fertilizer in Huron County is first mentioned in 1877, when "A.P.S.", of Lucknow, was advised⁴⁸ by the "Globe" to mix plaster with black muck from swamp-land, and to apply it in the amount of 25 to 30 loads per acre. It was deemed⁴⁹ by M. McQuade, of Egmondville, who wrote a prize essay⁵⁰ on manures in 1881, that on land which contained lime and sulphur (for example, the southern and eastern portions of Huron), plaster would not improve the land, which already contained the elements of plaster sufficiently

for all practical purposes. On lighter soil, towards the lake, however, it might be used to advantage. The market for plaster in Ontario was controlled by Nova Scotia until at least 1890.⁵¹

Most of the gypsum which was used for fertilizing in Huron County came from the mines of Paris (Brant County), although mines at Caledonia and Cayuga (Haldimand County), provided a small amount; much of the soil in Huron contained some gypsum. The cost of gypsum at Goderich was \$6.50 per ton, including freight charges.⁵²

Salt.

The Salt Industry. In 1866, rich salt mines were discovered by Samuel Platt,⁵³ near Goderich and Clinton, in the geological area known as the Onondaga formation.⁵⁴ Two years later, eight salt wells were under construction; two of these, the "Huron Well", and the "Victoria Bell", reached a depth of one thousand feet and encountered strata of salt, fifteen to twenty feet thick.⁵⁵ The most prominent salt concerns in Clinton were the McGarva Salt Works, and the Stapleton Salt Works, owned by Richard and Hugh Ranceford.

Seaforth began to succeed Goderich and Clinton in the salt-manufacturing field during the early 'seventies, owing to the comparative abundance and cheapness of fuel at Seaforth, and to the shorter distance to market: the Seaforth "salt-blocks" were in the immediate vicinity of the Grand Trunk Railway.⁵⁶ Three large concerns operated in Seaforth, at the same time, namely: the Seaforth Salt Works, owned by Coleman and Govenlock;⁵⁷ the Eclipse Salt Works, owned by Grey, Young, and Sparling; and the Merchants' Salt Company, managed by A. Armitage.⁵⁸ The combined production of these three concerns was one thousand barrels daily; one hundred and twenty-five men, working on shifts, were employed.

A salt well was constructed, after great difficulty, by Joseph Kidd⁵⁹ and Son between Carronbrook⁶⁰ and Seaforth; the capacity of this well was

two hundred barrels per day. By 1872, several small towns had a salt well or were planning to build one, e.g. Blyth, Wingham, Ainsleyville, and Mitchell (Perth County). During the summer of 1873, several buyers came to Goderich from Chicago, Milwaukee, and other American cities. At this time, an English and Canadian company, with a capital of \$130,000., purchased a farm south of Goderich for \$9,000., with the intention of manufacturing salt. The demand for salt in the western states had increased so greatly that the thirteen wells in operation were not able to satisfy it. In March, 1876, H. Y. Attrill, of New York, sank a shaft eleven hundred feet deep, near Goderich. Three years later, the richest salt bed located in Canada up to this time, was struck near Blyth. In March, 1880, the Exeter Council discussed the advisability of building a salt-works at Exeter. A well was drilled near Hansall in 1881, which penetrated a salt bed thirty feet thicker than the one discovered at Blyth two years before.⁶¹ During the early 'eighties, the salt manufacturing business began to decline⁶² in Huron, owing to (1) the competition offered by a few wealthier concerns, which adopted improved and more economical methods; and (2) the inception of the National Policy of 1878, which was instrumental in increasing the price of Canadian salt,⁶³ by placing a higher tariff on materials essential to the manufacture of salt (e.g. coal), and by allowing English salt to enter duty-free. The salt-works at Seaforth gradually lost prestige, and became obsolete; an explosion destroyed the works at Carronbrook (Dublin).

The discovery of salt proved to be extremely important in the development of Huron County. The salt wells at Goderich and Seaforth gave considerable impetus to pork-packing and lake-shore fishing; large shipments of pork and fish were forwarded to the United States and to other points.⁶⁴

An incentive was provided for the local manufacture of butter and cheese. At both Seaforth and Lublin, the salt industry was directly responsible for the erection of barrel and stave factories.⁶⁵ Salt was used in killing harmful weeds and insects, with beneficial results.⁶⁶ The visits of American salt-buyers to Goderich presaged an influx of American tourists and pleasure-seekers, as early as 1873, from such points as Baltimore, St. Louis, Chicago, New Orleans, and Cincinnati, who were "delighted with the town and the surrounding country."⁶⁷ The increase in business and trade with American cities, resulting from the discovery of salt in the Huron area, led to the appointment of an American consul at Goderich, in the early 'seventies.⁶⁸

Marketing of Salt. In 1869, Goderich salt was sold at \$1.30 per barrel, and Clinton salt at \$1.20 per barrel.⁶⁹ At first, the market for salt was a local one. In 1871, Samuel Platt, attempting to create a market in Chicago, despatched a schooner laden with a full cargo.⁷⁰ By 1873, Goderich was sending several shipments of salt to Chicago,⁷¹ to be used largely in pork-packing, and buyers from other American cities began to arrive. Much salt was shipped to Buffalo.

The chief reason for the comparatively small amount of salt sold in Canada before 1880, for purposes of preserving meats, was the prevalence of a scum which the salt was said to produce on the surface of the meat.⁷² Most of the salt sold in Canada was for fertilizing purposes; during three months of 1880, Coleman and Govenlock sold 63,000 tons for fertilizing. The cost of common refuse salt, in 1880, ranged from \$2. to \$2.50 per ton, at the works of Goderich, Clinton, Seaforth, or Kincoardine (Bruce County);⁷³ the cost of shipping salt from any of these points to Toronto amounted to \$20. per car-load of twelve tons.⁷⁴

Use of Salt as Fertilizer. In 1845, salt was discussed in agricultural journals as potential fertilizing material.⁷⁵ By 1869, this use of salt was rapidly increasing in England. Refuse salt at the Goderich salt wells also began to be extensively applied, with good results, to worn-out lands.⁷⁶ During the succeeding years, Huron manufacturers sold immense quantities of salt to farmers, who gradually learned "how useful it [was] for their land."⁷⁷ In 1880, great amounts of salt were teamed from Seaforth for fertilizing purposes.⁷⁸

Salt had a beneficial effect on the soil and on all kinds of crops.⁷⁹ It purified the soil and brought its elements into activity; it increased the quantity of the straw of grain, brightened and stiffened it,⁸⁰ lessened the possibilities of rust, and brought the crop in, eight days to two weeks earlier; it caused vegetables and fruit to assume deeper and richer colouring. Wherever salt was applied, it was found that the yield of turnips,⁸¹ mangolds, carrots, and potatoes,⁸² was extraordinary. The prize turnips which were shown at the South Huron exhibition in 1875 had been top-dressed with plaster of Paris and salt, in the amount of one-half bushel of each per acre.⁸³ In the summer of 1879, John Ranceford, Clinton, experimented with salt, applying one and one-half tons per acre; he discovered that thistles were destroyed, and that grass remained unharmed.⁸⁴ Thomas E. Hays, McKillop, after having applied salt, was enabled to thin his turnips one week earlier, and thereby to frustrate somewhat the ravages of the turnip-fly.⁸⁵ By 1882, salt was very largely used in Huron County for grain and root-crops; in most of the townships, fifty per cent., and in two townships (Hullett and Tuskeremith) eighty per cent. of the farmers used salt or plaster.⁸⁶ The quantity of salt applied per acre varied between two hundred and four hundred pounds.

DRAINAGE.

The extent to which drainage was practised on a farm was a valuable indication of the increasing value of land and the increasing importance of capital, as well as of the general progress of agriculture. The effects of drainage included: (1) it dried the soil; (2) it increased the fertility of the soil, by allowing air to circulate more freely in it; (3) it warmed the soil; deep drainage tends to equalize the temperature of the earth; (4) it added to the length of the growing season: e.g., it helped to prepare the land for growth; (5) drainage resulted in sanitary improvement in the district in which it was carried out;⁸⁷ (6) it overcame difficulties occasioned by drought; (7) drainage enabled manuring to be of beneficial rather than harmful use: Mr. Allan, of Goderich, claimed that manure, on undrained low land, produced rust in wheat, and rot and mildew in fruits.⁸⁸

The value of drainage to a farm depended much upon the capability of the soil and its marketable value. Good soils, which were damp, repaid expenditure for drainage much more rapidly than moderate or poor soils in a similar condition.⁸⁹ In a district such as Huron County, where considerable damp land, swamps, "clay-bottomed" soil, and severe thunder-storms prevailed, beneficial results were almost certain to follow the adoption of systems of drainage.⁹⁰

In the early days of the settlement of the Tract, drainage had, for the most part, been left to nature. One reason for this procedure was the fact that the incoming pioneers usually selected dry sites for their homes and fields; later settlers had to content themselves with farms which were not as well located. Other reasons were a lack of knowledge of proper methods of underdraining, and a dearth of suitable and economical equipment for building drains. Instructions for underdraining appeared in agricultural journals as early as 1845.⁹¹

The cost of draining depended upon (1) the extent of the plans on which it was undertaken; (2) the material used; (3) natural facilities in the neighbourhood which the farmer might use to advantage.⁹² At first, wherever drains were built in Huron, cedar, hemlock, and pine wood, and later, stones, were used.⁹³ In 1848, the use of Seragg's tile machine, manufactured in England, was adopted in Geneva, New York; the machine itself cost \$250, and produced three thousand two-inch tiles daily, thereby reducing the cost from \$25. to \$9. per thousand.⁹⁴ By means of this type of machine, and similar models imported from the United States, Upper Canadians were enabled to manufacture their own tiles, at one-half the current American prices. In 1861, the following prices prevailed in Upper Canada, per thousand tiles: 1½ inch tiles: \$4.50; 2 inch tiles: \$5.; 3 inch tiles: \$10; 4 inch tiles: \$15.; 5 inch tiles: \$30.; 6 inch tiles: \$50.⁹⁵ The first Canadian-made drain-tile machines were manufactured at Toronto, in 1862, by the St. Lawrence Foundry.⁹⁶ One year later, "Chase's American Tile Ditcher" was being constructed at Oshawa,⁹⁷ and by 1869 a firm at Aylmer⁹⁸ was producing ditching machines, which were also extensively used in sub-soiling and road-grading.⁹⁹

Meanwhile, Huron farmers noted the advantages which tile had over wood and stone. In a letter to the "Canada Farmer", James Torrance, Goderich,¹⁰⁰ urged the establishment of tile-works in the various counties, in order to assist farmers to build drains. "I know of several farmers", he wrote, "who have been able to sow little, due to the damp, flooded conditions of the land." In October of the same year, a Hay farmer also wrote a letter, pointing out that the land was so damp that farmers looked forward to winter, when the ground would be frozen over; if a tile-maker established a business in Hay township, the writer intimated, his success would be assured. In 1866,¹⁰¹ Professor George Buckland spent a week in Huron County, and noted the progress¹⁰²

of drainage there, and the fact that the manufacture of drain-tiles had been successfully begun at Harpurhey:

"Much of this district would be greatly improved by judicious draining, and it is pleasing to observe that this important means of ameliorating the soil is beginning to attract the attention of many farmers The specimens [of tile] that came under my observation were well made, and burnt from a white clay that abounds in the neighbourhood. Pipes of two inches diameter and thirteen inches long can be purchased for the moderate charge of eight dollars a thousand."

In November, 1876, S. B. Male, Worcester, wrote an essay on drainage which was published by the Ontario Agricultural Association. ¹⁰³

By 1871, David Darvill, London, was manufacturing a drain-tile machine with a daily productive capacity of from five to twenty thousand tiles. ¹⁰⁴ Inexpensive drainage systems now appeared to be within the reach of every farmer. The National Policy tariff's imposition of a tax of twenty per cent. ¹⁰⁵ on the cost of drain tiles, however, resulted in a reversion to wood, stone, and brick as materials for the construction of drains. ¹⁰⁶ There were numerous cedar swamps and stones in many sections of Huron, so the farmer did not lack materials with which to replace expensive tile. In 1881, a brick machine was set up at Woodstock (Oxford County), which produced 12,000 bricks in ten hours, or 750,000 bricks annually, at a cost of from five to eight dollars per thousand. Professor Buckland did not consider brick drains to be as durable as tile drains, however. ¹⁰⁷

In 1880, Mr. James Dickson, Tuckersmith, made the following statement concerning drainage in Huron, to the Agricultural Commission: ¹⁰⁸

"I have used both tile and hemlock drains. I have one large drain made out of hemlock plank a foot in width, which has been used for fifteen years, and will stand ten years yet. Latterly, I have been draining entirely with one and a quarter, and one and a half inch plank; I usually make my drains with two sides and the top, and merely put strips across the bottom to keep the sides in place. The most economical depth for drainage is, I think, three feet. My drainage has produced excellent results; the wet land which has been drained is the finest on the farm. Cedar drains,

I think, will last longer than any other wooden drain.
There are considerable quantities of land in my district
that ought to be drained."

Legislation concerning drainage was rather scanty in Ontario,
prior to 1865, except for the passage of four or five acts which somewhat
ameliorated conditions. In 1859, the Municipal Institutions Act of Upper
Canada enacted that the majority of resident owners of land might petition
the township councils to drain a section of land; the councils might make
provision for such drainage by collecting a proportionate payment from the
owners. The government, however, did not offer to grant aid to private
individuals in draining their own lands. By the Ontario Drainage Act, 1869,
an amount not exceeding \$200,000. might be expended by the government in
draining swamp and flooded lands, under the supervision of the Commissioner
of Agriculture and Public Works. The government reimbursed itself for the
cost of drainage by imposing an annual rent charge for twenty-two years on
the land so improved. The former act left the work of drainage to local
effort and to local superintendence, chiefly; the latter act centralized
everything in the provincial government, and "left nothing for the parties
concerned but to pay the amount which the authorities might say was due."

It was extremely difficult for farmers to undertake drainage,
because they could not afford to pay high rates of interest; moreover,
this phase of farm improvement would not bring profitable returns until a
number of years had elapsed. In 1871, the "Globe" outlined a plan whereby
the government would set aside a loan fund for farmers who could not afford
to borrow money from business firms, which demanded from eight to ten per cent.
interest. In 1872, a scheme which met with the "Globe's" approval was
advanced by a government official. By this proposal, the government was to
be permitted to purchase municipal debentures, not in excess of \$20,000. for

any one municipality, and to charge five per cent. interest.

In March, 1878, two acts relating to drainage were passed in the Ontario legislature: (1) the Ontario Drainage Act,¹¹⁵ which authorized "further expenditure of public money for drainage works"; and (2) the Municipal Drainage Aid Act,¹¹⁶ which authorized "the investment of certain monies in debentures to be issued for the construction of drainage works by municipalities." By the second act, municipal councils might receive petitions for draining a particular area, might borrow funds on the credit of the municipality, and might determine the amount owners of benefitted lands should be required to pay. A later act in the same year empowered municipal councils to pass by-laws¹¹⁷ for the construction or improvement of drains, sewers, or watercourses within the jurisdiction of the council.¹¹⁸

The Dominion Grange sought to assist farmers who were in financial straits during the depression of the 'seventies, and advocated a plan by which Ontario farmers might secure money to drain their lands.¹¹⁹ The Grange appointed a committee which approached the government on this matter. Accordingly, in 1878, the Ontario Tile Drainage Act¹²⁰ was passed, by which municipalities might borrow from the government on twenty years' debentures sums ranging from \$2000. to \$10,000., to be loaned for purposes of tile draining.

By an act¹²¹ passed in the following year, benefits were extended to persons desirous of constructing stone or timber drains. These acts (1878-79) did not have an immediate noticeable effect on the improvement of drainage, however, and during the next few years, only a small number of loans¹²² were contracted by the municipalities. The beneficial results of this legislation¹²³ did not become apparent until the middle 'eighties. The general opinion in several sections of Huron County was that these loans involved too much "red tape." Consequently, many Huron farmers preferred to contract private loans, even at a higher rate of interest, and it was not uncommon for several

Huronites to mortgage their farms in order to obtain money for purposes of drainage.¹²⁴

Surveys of swamp lands were conducted in Grey township, in February and April, 1870, preparatory to improvement, but government loans were not forthcoming until 1879. Similar surveys were made in Hay, from July to September, 1870, but Hay did not receive governmental assistance until 1875.¹²⁵ In June, 1870, the Stephen township council evidenced its desire to obtain government assistance in a general scheme of drainage, but nothing resulted.¹²⁶ In August, 1875, the farmers about Seaforth petitioned the town council to improve the waste lands around Silver Creek, by draining the channel of the creek;¹²⁷ again, nothing appears to have resulted from this petition. In 1875, also, a drain was dug near Zurich, with the assistance of government loans totalling \$3400. By 1876, the benefits of this drainage became evident, and the Zurich Council began to take steps to drain "the big marsh."¹²⁸ Between 1878 and 1882,¹²⁹ Turnberry borrowed eight loans from the government, totalling more than \$10,000., for drainage improvements. Howick also negotiated two loans, amounting to \$4000., in 1878 and 1880. In December, 1881, the West Wawanosh Council contracted for the construction of a large drain through barren land, from the sixth concession of the township to Colborne, at a cost of \$3000.; this drain was to be nearly five miles long, five feet deep, eight feet wide at the top, and three feet wide at the bottom.¹³⁰ In order to make this project possible, West Wawanosh borrowed \$3434. from the government. A study of the accompanying table (page 164) will indicate that five townships in Huron County negotiated, during the period 1875 to 1883, fifteen loans, totalling more than \$25,000.¹³¹ Yet a greater number of farmers, individually, adopted drainage in the townships of Goderich and Colborne, from 1878 to 1880.¹³² The farmers preferred to deal with private concerns rather than with the government, partly because of the "red tape" involved in negotiations

Table re Drainage in Huron County: (Vid. Sessional Papers,
vol. XVI, Part VIII, 1884, No. 102, pp. 4-7).

Township	Amount Borrowed	Date of Loan	Terms of Payment	Amount Paid	Amount Unpaid
Grey	\$1500.00	Aug. 1/79	1 to 15 yrs.	\$ 670.00	\$1430.00
"	1100.00	Oct. 1/83	1 to 11 yrs.	—	1600.00
Hay	2000.00	Jan. 1/75	1 to 10 yrs.	2340.00	210.00
"	1400.00	Dec. 1/75	1 to 7 yrs.	1680.00	—
Howick	1477.20	May. 1/78	1 to 14 yrs.	893.16	1246.94
"	2064.90	May. 1/80	1 to 15 yrs.	1190.70	2541.00
Turnberry	600.00	Jan. 21/78	3 to 15 yrs.	375.00	510.00
"	3818.00	Feb. 15/79	1 to 15 yrs.	2067.00	3302.00
"	1668.00	Mar. 14/79	1 to 15 yrs.	802.00	1539.50
"	411.00	Feb. 18/79	4 to 15 yrs.	292.20	322.00
"	1359.00	Jan. 1/79	3 to 15 yrs.	723.75	1238.50
"	965.00	Aug. 9/79	2 to 15 yrs.	483.38	866.25
"	628.00	Aug. 9/79	2 to 15 yrs.	324.00	549.50
"	1187.00	Apr. 26/82	1 to 13 yrs.	55.00	1531.05
W. Wawanosh	3434.00	Oct. 1/82	1 to 10 yrs.	884.33	3371.32

for government loans, partly as a result of bitterness at the increase of twenty per cent. tax on drain tiles. One of the most important drainage projects in Huron County was undertaken during the 'eighties, when a canal was cut through the sand-hills at the "Grand Bend" of the Sable River, in order to permit the river to enter the lake at that point; the whole area was benefitted enormously.¹⁸³

LABOUR.

The increased manufacture of agricultural machinery owed itself, in part, to the scarcity of farm-labourers which became apparent in the late 'sixties and 'seventies. This scarcity was caused by: (1) the opening-up of new lands; (2) the demands of the lumbering industry; (3) the construction of railroads;¹⁸⁴ (4) the growth of industrial plants and factories: the day of skilled labour was approaching, and, moreover, it was claimed, the government's policy of "protection" directed all manual labour into the hands of the manufacturers;¹⁸⁵ (5) the growth of the livestock industries in the older settled areas; (6) farmers were accused of working their servants to the last extremity, with long hours, low wages, and little time for rest and recreation: an idea of the stringency of measures concerning farm labour may be gained from the fact that two young labourers who quit the employment of Mr. A. Watt, Hullett, in August, 1878, were fined more than \$15. each;¹³⁷ (7) the attraction of young persons to the professional and commercial fields.

The opening-up of new areas by the railroads was followed by increased demands for labour and capital, which in turn stimulated industry and immigration. The cost of transporting agricultural products and potential farm-labourers decreased after 1858, owing to the lowering of steamship rates, caused by¹⁸⁸ (1) the grant of government subsidies to steamship companies; (2) faster ocean crossings: in 1873, the time necessary to cross the Atlantic was less

then two weeks; (3) healthier conditions aboard ship; (4) an increased number of immigrants.¹³⁹ The government was severely criticised for pursuing an "unreluctant policy" of immigration during the 'sixties. A considerable number of immigrants continued on to the western states, attracted by the American Homestead Act and the report of huge wheat harvests; these immigrants were accompanied by increasing numbers of young Ontarians.¹⁴⁰

In 1860, the usual rate of wages for farm-labourers, per month, was as follows: for summer, \$12. to \$14.; for winter, \$7. to \$10.; and for the whole year, \$10. to \$12. Daily labourers received 50 cts. to \$1., during the summer, and 50 cts. in winter; expert cradlers earned \$1.25 per day. All these wages were in addition to board.¹⁴¹ Married men together with their families could be hired annually at \$8. per month, wages generally being in the form of produce.¹⁴² In Lambton County, during the 'sixties, a general servant girl's wages amounted to \$5. or \$6. per month; a housemaid or "second girl" received \$4. or \$5.; and a wash-woman was paid 75 cts. per day.¹⁴³ The "letter of instructions" issued to emigrant agents abroad (dated Quebec, April, 1862), stated that: "Skilled agricultural labourers can always find ready employment, and female domestic servants are always sure of good wages and certain employment."

In 1870, there was a moderate demand for labour in some of the Huron townships, as follows: the number of labourers who could expect to find permanent employment was: Goderich 20, Tuckersmith 50, Grey 15; the number who could expect seasonal employment was: Goderich 20, Grey 15, Stephen 20; the number of female servants needed was: Goderich 30, Tuckersmith 50, Grey 20; 35 mechanics were required in Goderich township.¹⁴⁴ In 1871, there was apparent in several parts of Ontario "a general disposition on the part of youth to abandon farming and overcrowd the learned professions and commercial avocations."¹⁴⁵ This trend was first noted in the neighbourhood of Clinton

at about May, 1876: stores, schools, work-shops, and agencies were draining the farms of young men. Labourers were so scarce in Huron that harvest wages rose to \$1.75 per day. By July, 1877, \$25. per month was being paid to farm labourers in several sections of Huron. In November, 1878, it was claimed that farm wages had not fallen in proportion to the price of produce, and further, that \$3.78 had the same purchasing power, in 1878, as had \$10. fifteen years previously. In 1880, farm labourers were in demand in Huron for eight months of the year, at \$16. to \$17. per month, and board; female servants were in constant demand, at \$5. to \$6. per month, and board; there was no demand for mechanics or clerks. Huron farmers generally preferred an "old country man [to] a native Canadian for real, steady work." After 1870, suggestions were advanced for the improvement of conditions of farm labour: (1) working hours should be improved and regulated, allowing time for recreation; (2) farmers should build cottages on their farms, and hire married men; (3) wages should be increased.

During the early years of settlement in the Huron Tract, the self-sufficing "family farm" was everywhere in evidence. At about 1860, there was a return to this condition, in numerous parts of the province, although Huron County was not similarly affected until a decade later. An important reason for this "return" was the attitude towards farm labour, expressed thus in 1876:

"Farm labour for hire is in Canada only a transient avocation, there being no large body of men who expect to devote their lives to working for wages, as every healthy and sober man can easily become a land-holder."

Another reason was the widening of the social sphere in which the farmer "moved and had his being." The position of each member of the family had altered visibly since the pioneer days, especially with respect to the feminine members of the household. And although the family farm, in 1860, appeared to be, structurally, but a counterpart of the pioneer family settlement, yet its foundations were erected on a higher plane.

Chapter VII: The Progress of the Farm, 1850-1880. (Part II)

References:

- 1 Vid. supra, p. 46.
For additional information concerning fencing, vid.: Can. Agric., vol. III, 1861, March, p. 52; Ontario Farmer, vol. I, 1869, April, p. 115; Farmer's Advocate, 1875, June, p. 112; Walter, L.M., pp. 79-83.
- 2 Vid. infra, p. 223.
- 3 Elder, J., July 5, 1935, No. 17.
- 4 Can. Agric., vol. IX, 1857, April, pp. 100-102.
- 5 Vid. prize list, Can. Farmer, vol. III, 1866, November 15, pp. 336-43.
- 6 W.G., vol. XXIII, 1871, November 17, 24; December 29; January 5, 19; vol. XXIV, 1872, February 9, 23; March 1, 8.
- 7 Cf. Can. Farmer, vol. III, 1866, April 16, p. 120; vol. IV, 1872, March 15, p. 84.
- 8 Ibid., vol. XXIII, 1871, January 12; vol. XXIV, 1872, April 5.
- 9 Ibid., vol. XXVI, 1874, December 11.
- 10 Ibid., vol. XXIV, 1872, March 15.
- 11 In the words of one pioneer, the rail-fence had "served its time, and its time was the wooden age in this fair Dominion". (A.C. Wood, p. 103).
- 12 Can. Agric., vol. IX, 1857, September, p. 245.
- 13 W.G., vol. XXVI, 1874, July 24.
- 14 Ibid., vol. XXVIII, 1876, May 12, p. 11.
- 15 Ibid., vol. XXXI, 1879, February 14, p. 107.
- 16 Ibid., vol. XXXII, 1880, March 5.
- 17 Wood, L.A., p. 18.
- 18 Sess. Papers, vol. XIV, Part II, 1862, p. 19.
- 19 Vid. infra, p. 217.
- 20 Sess. Papers, vol. XIII, Part III, No. 12.
- 21 Elder, J., May 24, 1935, No. 15.
- 22 Vid. supra, p. 123.

- 23 Agric. Report, 1881, vol. II, p. 203.
- 24 Landon, Fred: "The 1860's -- a Period of Transition in Upper Canada Agriculture." (O.A.C. Review, Guelph, April-May, 1937), p. 5.
- 25 Croil, pp. 192-215.
- 26 W.G., vol. XXXI, 1879, March 14, p. 170.
- 27 Ibid., May 2, p. 282.
- 28 Ibid., vol. XXXII, 1880, March 12.
- 29 Sess. Papers, vol. VIII, 1875-76, Part I, No. 1, Append. A, pp. 54-55.
- 30 Agric. Report, 1881, vol. IV, Append. G, p. 40.
- 31 Ibid., 1881, vol. II, p. 210.
- 32 British American Cultivator, vol. I, (new series), 1845, June, pp. 161-163.
- 33 At about this time, the noted agricultural chemist, Baron Liebig, who recommended the use of guano as fertiliser, was conducting his experiments.
- 34 Can. Farmer, vol. II, 1865, May 15, p. 153.
- 35 Agric. Report, 1881, vol. IV, Append. G, p. 40.
- 36 Ibid., pp. 155-165.
- 37 Sess. Papers, vol. XII, 1880, Part I, pp. 63-70.
- 38 W.G., vol. XXIX, 1877, November 30, p. 778.
- 39 Ibid., vol. XXIII, 1871, January 20, p. 6; *ibid.*, vol. XXXIII, 1881, May 27.
- 40 Can. Agric., vol. VI, 1884, March, p. 73.
- 41 Ibid., vol. IV, 1882, November, pp. 326-7.
- 42 Can. Farmer, vol. IV, 1867, May 1, pp. 130-1. -- In January, 1880, the "Globe" published a letter written by a Goderich subscriber, who inquired about the use of phosphates as a good fertilizer. (W.G., vol. XXXII, 1880, January 23; *cf. ibid.*, March 12.)
- 43 Agric. Report, 1881, vol. I, p. 514; *ibid.*, vol. V, Append. N, pp. 19-20. *Cf. Can. Farmer*, vol. II, 1874, January 1, p. 18.
- 44 Innis and Lower, vol. II, pp. 575-6.
- 45 W.G., vol. XXIV, 1872, December 20.
- 46 Sess. Papers, vol. XXI, 1889, Part I, No. 5, quoted by Innis and Lower, vol. II, p. 576.

- 47 Agric. Report, 1881, vol. III, p. 91.
- 48 W.G., vol. XXIX, 1877, August 10, p. 519.
- 49 Seas. Papers, vol. XV, Part II, 1882-83, No. 5, pp. 68-69.
- 50 Vid. supra, pp. 8-4.
- 51 Innis and Lower, vol. II, p. 575.
- 52 Agric. Report, 1881, vol. I, p. 504; *ibid.*, vol. III, Appendix B, p. 29.
- 53 Canada Farmer, vol. V, 1868, March 15, p. 91.
London "Free Press", November 21, 1936.
- 54 Vid. supra, pp. 1-5.
- 55 Can. Farmer, vol. V, 1868, June 1, p. 187.
W.G., vol. XXIX, 1877, January 19, p. 46.
- 56 Seaforth "News", November 21, 1936.
- 57 Also spelled Gowanlock, Gouinlock, or Gomenlock.
- 58 Seaforth "News", February 20, 1936.
- 59 London "Free Press", November 2, 1935; *ibid.*, September 11, 1937.
- 60 Carronbrook was renamed Dublin, in 1878. (London "Free Press", February 26, 1938.)
- 61 W.G., vol. XXIX, 1877, January 19, p. 46; vol. XXXI, 1879, June 27, p. 406;
July 11, p. 444; vol. XXXII, 1880, March 12.; vol. XXXIII, 1881,
December 2.
- 62 Innis and Lower, vol. II, pp. 574-5.
- 63 Agric. Report, 1881, vol. V, p. 3.
- 64 *Ibid.*, vol. II, p. 211.
- 65 Seaforth "News", February 20, 1936.
- 66 For example, in 1877 W.J. Hayden, Ashfield, experimented with a top-dressing of salt and unleached ash in his orchards; this procedure destroyed many noxious insects. (Seas. Papers, vol. XII, 1880, Part I, pp. 3-70).
- 67 W.G., vol. XXV, 1875, July 11.
- 68 Goderich "Signal", September 24, 1936.
- 69 Can. Farmer, vol. V, 1868, July 15, p. 219; vol. I, n.s., 1869, April 15, p. 187; October 15, p. 382.

- 70 W.G., vol. XXIII, 1871, May 5; May 12.
- 71 Ibid., vol. XXV, 1873, May 23.
Agric. Report, 1881, vol. III, p. 91.
- 72 W.G., vol. XXXII, 1880, August 20, pp. 536-7.
- 73 Agric. Report, 1881, vol. I, p. 800.
- 74 Ibid., vol. V, p. 7.
- 75 British American Cultivator, vol. I, n.s., 1845, June, p. 180.
Can. Agric. Journal, vol. II, 1845, April, p. 68.
- 76 Can. Farmer, vol. I, n.s., 1869, February 15, p. 44.
Agric. Report, 1881, vol. I, p. 496.
- 77 W.G., vol. XXXI, 1879, June 27, p. 411; *ibid.*, vol. XXXII, 1880, August 20,
pp. 536-7.
- 78 Ibid., vol. XXXII, 1880, June 4.
- 79 Agric. Report, 1881, vol. III, p. 91.
- 80 Cf. *ibid.*, vol. I, p. 364.
- 81 Ibid., p. 497.
Sess. Papers, vol. XIV, Part II, 1882, pp. 20 ff.
- 82 Ibid., vol. XV, Part II, 1882-83, No. 3, p. 71.
- 83 Ibid., vol. VIII, Part I, 1875-76, p. 55.
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- 85 Agric. Report, 1881, vol. I, p. 497.
- 86 Ibid., p. 210.
- 87 Sess. Papers, vol. IX, 1877, Append. D, pp. 263-4.
- 88 Ibid., vol. XII, Part I, 1880, pp. 63-70.
- 89 Agric. Report, 1881, vol. I, p. 394.
- 90 Cf. *ibid.*, vol. IV, Append. G, p. 42.
- 91 Brit. Amer. Cult., vol. I, n.s., 1845, June, pp. 161-3.
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- 92 Agric. Report, 1881, vol. I, pp. 394-399.
- 93 Croil, pp. 208-210.
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- 94 Innis and Lower, vol. II, p. 544.
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pp. 186-7; November, pp. 243-4.
- 95 Ibid., vol. XIII, 1861, February 1, p. 99; May 10, pp. 292-3.
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pp. 457-8.
- 96 Can. Agric., vol. XIV, 1862, October 1, p. 531.
- 97 Ibid., vol. XV, 1863, October, p. 374.
- 98 Can. Farmer, vol. I, 1869, June, p. 240.
- 99 Ibid., vol. III, 1871, September, p. 358.
Farmer's Advocate, 1872, July, p. 110.
- 100 Can. Farmer, vol. I, 1864, June 15, p. 175; letter dated May 23.
- 101 Ibid., October 1, p. 318; letter signed by "L".
- 102 Ibid., vol. III, 1866, April 2, p. 104; letter dated March 13.
- 103 Vid. supra, p. 63.
Sess. Papers, vol. IX, 1877, Appand. D, pp. 263-4.
- 104 Can. Farmer, vol. III, 1871, March, p. 120.
- 105 Vid. supra, p. 107.
W.G., vol. XXII, 1879, May 28, p. 196.
- 106 Agric. Report, 1881, vol. II, p. 210.
- 107 Ibid., vol. IV, pp. 155-165.
- 108 Ibid., Appand. G, p. 42; vol. I, p. 393. -- Mr. Varcoe, of Colborne,
had over one thousand rods of wooden under-drains on his farm. --
Vid. supra, p. 123; also Sess. Papers, vol. XV, Part II, 1862-63,
No. 3, p. 45.
- 109 22 Vic., cap. 54; Consolidated Statutes of Upper Canada, p. 593.
- 110 W.G., vol. XXIII, 1871, November 12, p. 6; vid. also "The Farmers'
Journal, and Transactions of the Board of Agriculture of Lower
Canada". (Montreal, 1858-59), vol. XI, p. 243.
- 111 33 Vic., cap. 2; this act was amended in 1871, 1873, 1874, 1877, and
1881. (Vid. Sess. Papers, vol. III, Part II, 1870-71, No. 39;
vol. VIII, Part II, 1875-76, No. 29).
- 112 W.G., vol. XXIV, 1872, February 16, p. 6.

- 113 Ibid., November 24, p. 6; also vid. article on house-drains and cess-pools, vol. XXV, 1873, January 3.
- 114 Archibald McKellar (1816-1894), member from Kent, 1857 to 1875; from 1871 to 1875, he served as minister of agriculture, commissioner of public works, etc.
- 115 36 Vic., cap. 38.
- 116 36 Vic., cap. 48. -- All municipalities were expected to preserve, maintain, and repair all drainage projects begun in accordance with this act.
- 117 The Municipal Institutions Act (36 Vic., cap. 48), which repeated the provisions of the two acts enacted in March, 1873.
- 118 Reports of the Supreme Court of Canada (Ottawa, 1900); vid. "Sutherland - Innes versus the Township of Romney", vol. XXX, pp. 495-535.
- 119 Wood, L.A., p. 100; vid. supra, p. 101.
Cf. Easterbrook, ...: Agricultural Credit in Canada, 1867-1917. (University of Toronto Studies, Toronto, 1936), Part III, pp. 18-19.
- 120 41 Vic., cap. 9.
Agric. Report, 1881, vol. I, p. 401; vol. III, p. 90.
The debentures bore five per cent. interest, and were payable, with sinking fund, representing eight per cent. altogether, within twenty years.
- 121 42 Vic., cap. 8.
- 122 Sess. Papers, vol. XI, Part V, 1879, No. 35; vol. XIII, Part III, 1881, No. 29; vol. XVI, Part VIII, 1884, No. 102.
- 123 Other pertinent legislation, prior to 1878, included: 36 Vic., cap. 26, 1872, (repealed by 36 Vic., caps. 38 and 48 (1873)); sections 1 to 18, 27, 28, of 36 Vic., cap. 38 were repealed by 37 Vic., cap. 20 (1874); 39 Vic., cap. 34, amended the act of 1873. (vid. Proctor, F.R.: "The Drainage Acts, Ontario". (Toronto, 1908), p. 7.).
- 124 Agric. Report, 1881, vol. III, p. 90; cf. vol. IV, Append. G, p. 42.
- 125 Ibid., 1871, Append. B, pp. 24-5; 37-8.
- 126 Sess. Papers, vol. V, Part III, 1873, No. 46.
- 127 W.G., vol. XXVII, 1875, August 20.
- 128 Ibid., vol. XXVIII, 1876, May 12, p. 11.
- 129 Cf. ibid., vol. XXX, 1878, July 19, p. 459.
- 130 Ibid., vol. XXXIII, 1881, December 9.
- 131 Sess. Papers, vol. XVI, Part VIII, 1884, No. 102.

- 132 Agric. Report, 1881, vol. III, p. 90.
- 133 London "Free Press", May 28, 1878. -- In April, 1878, eleven families, "squatters" on Canada Company's land near Grand Bond, were ordered "to git"; many of them were old residents, who had built barns, and planted orchards. (W.G., vol. XX, 1878, April 19, p. 251).
- 134 Can. Agric., vol. XIII, 1861, p. 502.
Vid. infra, pp. 311-314.
- 135 W.G., vol. XXIV, 1872, July 5; July 26.
- 136 An interesting item concerning the attitude towards farm labourers is to be found in the "Bathurst Courier", September 5, 1834: Among the prizes listed at the fair of the Bathurst Agricultural Society, October, 1834, was: "A premium of five pounds to the farm servant who has resided the longest time with one master and can produce the best testimonials as to character."
- 137 W.G., vol. XX, 1878, August 30, p. 555.
- 138 Innis and Lower, vol. II, pp. 536-8.
- 139 Agricultural prospects for 1872 appeared to be somewhat brightened by an increased immigration during 1871, "in spite of the supineness of the government." (W.G., vol. XXIII, 1871, December 29).
- 140 Can. Farmer, vol. I, 1869, February, p. 61; March, pp. 103-4; May, p. 198.
Cf. Easterbrook, Part II, pp. 11-12.
- 141 Croil, p. 211.
- 142 Copleston, pp. 114-6.
- 143 Nisbet, C.V.: "Domestic Help in the 'Sixties", in *Sarnia "Canadian Observer"*, June 19, 1937.
- 144 Can. Farmer, vol. II, n.s., 1870, May 16, p. 199.
- 145 Sess. Papers, 1872, quoted by Innis and Lower, p. 536.
- 146 W.G., vol. XXVIII, 1876, May 12, p. 11.
- 147 Agric. Report, 1875, pp. 429-430; *ibid.*, 1874, pp. 362-3.
Vid. also: Elder, J., March 1, March 8, 1935, Nos. 2 to 4.
Wages for threshing, in Huron, at about 1885, was \$1 per hour. (*Ibid.*, April 10, No. 10).
- 148 W.G., vol. XXIX, 1877, July 6, p. 439.
- 149 *Ibid.*, vol. XXX, 1878, November 29, p. 762.
The average wages of farm labourers per month, excluding board, increased from \$10.43 in 1879, to \$14.07 in 1899. (Walter, p. 88).
- 150 Agric. Report, 1881, vol. II, p. 211.

- 151 Ibid., vol. IV, Append. G, p. 42.
- 152 W.G., vol. XXIV, 1872, July 6.
- 153 Report of Mr. A. Spencer Jones, delegate representing the English Labourers' Union. (Sess. Papers, No. 8, 1876; quoted by Innis and Lower, p. 555).

* * * * *

CHAPTER VIII

The Cultivation of Crops.

While the Huron farmer was enlarging his social sphere, and while the Huron farm was undergoing a complete metamorphosis in its various aspects, developments were constantly taking place in other fields, namely, the cultivation of crops, fruit-growing and reforestation, stock-raising, dairying and marketing. One might well apply Herbert Spencer's famous dictum concerning life to the farm, and submit that the farm also proceeds "from homogeneity to heterogeneity, from the simple to the complex." Whereas, in pioneer days, the Huron farmer's activities revolved within a small orbit, by the latter half of the nineteenth century, this orbit had widened immensely. Specialisation was tried and was found wanting, by a majority of farmers, who began to resort to a system of mixed farming.

Each phase of mixed farming must be studied in its individual entirety, in order to be clearly understood, yet these phases, it must be remembered, developed in a somewhat parallel fashion. The growth of root-crops had a profound influence upon stock-raising; reforestation affected wheat-growing; dairying gave an impetus to hog-raising; and the advent of street-railways caused a revolutionary change in horse-breeding. There were sinister influences at work, too: swindling salesmen preyed on the farmer, while the midge and the potato bug preyed on his crops. All these forces, both good and evil, contributed to create the environment in which the Huron farm grew and matured, like a living organism.

During the 'seventies, many Huron farmers were turning their attention increasingly to mixed farming, because, where one branch of agriculture might be unproductive, others might be successful. The opinions of numerous Huronites were voiced by Hugh Love, Sr., in the report¹ of the South Huron Agricultural

Society for 1874:

"Let us cultivate every interest and neglect none. Thus secure from failures and sudden financial crises, the county of Huron may soon become celebrated throughout the Dominion for fine farms, good stock, intelligent and wealthy farmers."

A study of the accompanying tables (pp. 185-188) will be useful in indicating the development and extent of the cultivation of various crops, from 1850 to 1880. The salient features of these tables might be said to be the importance of wheat and the enormous extent of its cultivation, and the gradual increase in the production of such crops as oats, barley, peas, potatoes, turnips, and other root crops. Practically every township in the county was well adapted for mixed farming, by 1880.

In 1842, out of 240,000 acres of occupied land in the Huron district (excluding Bruce County)², 24,000 acres were cultivated; 5,000 of these acres lay in Goderich township.³ The average yield of crops in the Huron Tract for the period 1840 to 1850 was as follows: wheat, 25 bus.; oats, 40 bus.; barley, 30 bus.; rye, 30 bus.; potatoes, 250 bus.⁴ The township acreage of Huron County in 1880 was more than 700,000; the cleared acreage was 440,338, of which 15 per cent. was devoted to pasturage, 1 per cent. to orchards, 900 acres to flax culture, and 82 per cent. was free from stumps; of the stumps remaining, only a small percentage was pine. Of the cleared acreage, the amounts devoted to particular crops, and the yield per acre in each instance, were as follows:⁵ fall wheat, 13%, 20 bus.; spring wheat, 12½%, 11 bus.; oats, 18%, 36 bus.; barley, 5%, 23 bus.; rye, 20 acres in Goderich, 12 bus.; peas, 4½%, 16 bus.; corn, limited cultivation, 35 bus.; buckwheat, limited cultivation, 30 bus.; potatoes, 1%, 150 bus.; turnips, 2%, 450 bus.; other root crops, nearly 1%, 550 bus.; hay, 11½%, 1½ tons.

The crops grown in Huron County may be grouped under four headings:

(1) Grains: wheat, oats, barley, rye, corn, etc.; (2) Root crops: potatoes, turnips, mangolds, sugar-beets, etc.; (3) Green (or leguminous) crops: peas, beans, timothy, clover, alsike, orchard grass, etc.; (4) Miscellaneous: sorghum, tobacco, hemp, flax.

GRAINS.

Wheat: The importance of the rôle shared by wheat in the agricultural and economic development of Canada cannot be minimized: the wheat situation came to be considered "the best index of economic well-being."⁶ For decades wheat was regarded as the most important single farm enterprise, chiefly because of its "cash return" value: it was the ideal "frontier" product. During 1840-42, for example, wheat was practically the only crop which brought the Canadian farmer anything approaching a remunerative price.⁷ Wheat was indeed, wrote an observer,⁸ in the middle 'forties, "the only crop upon which the farmer [calculated] as a means of bringing in cash; a farm incapable of producing grain, is almost valueless." The average price of fall wheat, at Toronto, from 1832 to 1847, was approximately 4s. 6d. per bushel; the average price of spring wheat was 6d. less per bushel.⁹ There were other reasons, however, for the predominant position given to wheat-growing: (1) the productive area could be (and was) readily extended; (2) the grain was not too expensive to produce; (3) it was a lazy system of farming -- it became almost an agricultural habit, -- and was therefore accepted by the majority; (4) the product had always been in demand.

The cultivation of wheat alone brought with it several evils as well as benefits, e.g. soil exhaustion,¹⁰ which became evident in most of the older settled counties in 1850-52; a veritable train of entomological and fungous enemies;¹¹ a neglect of other crops and a resultant state of agricultural apathy; and, conversely, too much dependence upon the success or failure of

one crop. The success of wheat production hinged upon several factors, any one of which would have been (and was) sufficient to throw the whole agricultural set-up out of gear, during the 'fifties and 'sixties. Some of these factors included: (1) economic fluctuations brought about by wars, famines, and crop failures; (2) natural agencies: (a) changes in climate: blight, frost, heat, rain; (b) depredations of insects, fungi, etc.; (3) the progress and practice of scientific methods of cultivation: crop rotations, fertilizers, drainage, and machinery; (4) relatively low-priced land: the difficulty in this respect is that land values rise in proportion to the increase in population in a given area, and to the resultant increased demands for land; (5) the more favourable production of wheat in other areas, i.e. the competitive elements: the development of wheat-growing in western Canada in later years was to stress the significance of this factor; (6) the comparative returns from new crops, e.g. flax, root crops, barley, etc. It is quite apparent that the maximum point of wheat production is eventually reached, at which time it is deemed expedient and more profitable to turn to other agricultural enterprises such as fruit-growing, stock-raising, or dairying.

As early as 1852, farmers in Upper Canada were beginning to ponder about the feasibility of sowing other crops in addition to wheat,¹² but the farmers continued to sow "wheat and more wheat" throughout the 'fifties and 'sixties.¹³ The increase in wheat production in Upper Canada from 1842 to 1860 is revealed by the following statistics:¹⁴ in 1842, 3,221,991 bushels; in 1848, 7,558,773 bushels; in 1851, 12,674,603 bushels; and in 1860, 24,620,425 bushels. It is noteworthy that more than one-quarter of the total acreage under cultivation in the Huron district in 1851, was sown in wheat.¹⁵

Until 1855-56, the largest quantity of wheat exported from Huron, in any one year, was less than 3,000 bushels. During 1855 and 1856, more wheat was sown than ever before, and 100,000 bushels, principally the growth

of Stanley and Tucker¹⁶Smith, were shipped from the village of Ba Field. It was estimated that a similar quantity was ready for export in the remaining townships. The expansion in wheat-growing at this time may be traced to external forces, which increased the demand exceedingly. In 1853, the discovery of gold in California and Australia,¹⁷ and in 1854 the crop failures in the United States and Europe caused the price of wheat to rise to 7s. per bushel. Reciprocity with the United States brought increased markets, and furnished an incentive to the opening-up of new areas.

During 1855-56, while the Crimean War was in progress, the price of wheat reached a high mark of 11s. 3d. In 1856, Canadian wheat exports increased nearly 46% over those of 1855. The years 1858-59 were lean years, and were responsible for maintaining the price of wheat at well over the dollar mark. In 1858, no rain fell between June 23 and August 11, and there was much distress in several parts of Huron and in Bruce,¹⁸ as well as throughout the province. The failure of crops that year was a factor in the promotion of the Galt-Cayley tariff of 1859.¹⁹ From 1860 to 1864, wheat crops and markets were mediocre; the American Civil War did not bring as great a demand for Canadian wheat as had been expected, because the North produced considerable quantities during the struggle. In 1864, more fall wheat was sown in the eastern and southern sections of Huron than had been planted in several years: nearly every farmer in the county sowed from five to twenty acres of fall wheat.²⁰ The grain crop in Canada West in 1865 was not generally heavy, except in the area west of Stratford, but the crop of 1866 was excellent. There was an active demand in England for both fall and spring wheat, in Michigan for fall wheat, and in the maritimes and the United States generally for spring wheat.²¹

The enormous production of wheat in the western part of the province, together with the expansion of the railroad,²² resulted in the increased growth of flour-mills²³ in that area. The clearing of forests was held responsible for

the disappearance of streams and the increasing difficulties of the lesser mills. With relatively small requirements of power and capital, mills tended to follow settlement; considerable skill migrated from the United States. Steam gradually replaced water-power, in several instances, by 1864.²⁴

The abrogation of reciprocity in 1866, and crop failures in various sections of the United States sent wheat prices soaring in Toronto: fall wheat sold at from 90 cts. to \$1.56 per bushel, and spring wheat at from 80 cts. to \$1.15. Prices kept advancing to such an extent that it was deemed profitable to import wheat from Milwaukee.²⁵ In 1870, the wheat market indicated an increase in prices, which was harmonious with a general rise in world prices, owing to "railroad building in the United States, Central Europe, and Russia, the opening of the Suez Canal, and the Franco-Prussian war," and did not begin to recede in any marked degree until 1874.²⁶

There were significant developments which accompanied wheat-growing during the 'sixties and 'seventies. The first was the importance gradually accorded to fall wheat. During the 'sixties, spring wheat had been of prime importance in Upper Canada and Huron County, but before 1880 it was displaced by fall wheat.²⁷ Disastrous failures of spring wheat led farmers to plant more fall wheat, for example, in 1879: the result was a fine crop of fall wheat.²⁸ In 1880, about 4,800 acres of fall wheat were sown in Goderich township, an increase over former years.²⁹ The damage wrought by the midge, especially in 1863-64, was largely responsible for the displacement of spring wheat.³⁰ The depredations of this and other insect pests were hailed by some farmers as "blessings in disguise", for, partly because of them, farmers were forced to adopt mixed husbandry.³¹ With the increase of wheat-growing in the western section of the province, Goderich became one of the most important points on the Great Lakes for the trans-shipment of grain. The first grain elevator there was built in 1860 by the Buffalo and Lake Huron Railway, to handle grain

from the schooners.³² But as small villages arose in the interior, following the construction of railways, Goderich declined as a wheat-buying centre,³³ and its place was taken by Clinton, and later, by Seaforth. A fourth development was the attention which was being directed increasingly toward other crops, e.g., forage crops, barley, and flax. In 1866, it was stated that "the failure of the wheat crop has shown the folly of pursuing the cultivation of a single kind of crop, and relying upon it as the staple agricultural production of the country."³⁴ A later observer³⁵ pointed significantly to "the disposition manifested by wheat-growers to depend less on that single and not always certain crop."

Along the border of Lake Huron was an extremely fertile spring wheat-growing belt. By 1867, such spring varieties as Fife, Soule's, Deihl, and Treadwell appeared to be favourites in Ontario; by the early 'seventies, at least, Fife, Club, and Red Wheat (also spring) were being grown in Huron.³⁶ In 1874, in South Huron, Fife did not yield as well as in former years; Club turned out well, but was liable to rust; and Red Wheat, while yielding well, brought from 25 cts. to 30 cts. per bushel less than Fife or Club. By 1875, Red Chaff wheat was becoming increasingly popular in Huron: it produced 39½ pounds of flour per bushel for James Landesbore of Tuckersmith.³⁷ In March, 1878, a letter³⁸ written by "W.B." of Brussels, to the "Globe", indicated that Red Chaff (or Farrow) wheat was rapidly degenerating in that district; information was sought concerning the growing qualities of Manitoba hard spring wheat, which was "selling around here for \$2.50 per bushel." The response was that this wheat was properly Fife, as there was as yet no original Manitoba wheat.

In 1877, Frank Govenlock, of McKillop, exhibited a splendid sample of Clawson wheat, which had yielded fifty bushels per acre.³⁹ A year later,

John Ranceford, a farmer near Clinton, revealed that he had been experimenting with Golden Drop wheat.⁴⁰ In April, 1879, Joseph Harvey, Brucefield, sent to the "Globe" some samples of wheat of which he wished to learn the identity; they proved to be Arnautka, Rice, or Wild-geese wheat.⁴¹ Robert Brook praised⁴² Arnautka wheat, in the Huron "Expositor", one month later:

"I this spring purchased sixteen bushels of this now celebrated Arnautka wheat for spring sowing. Seeing in your paper a letter from Mr. James Pringle that this wheat would not make good flour, I experimented, however. The flour turned out to be excellent."

In 1879, also, fall wheat of the Scott variety, measuring twenty inches in height,⁴³ was grown by a farmer in Stanley.

The average yield in Ontario in 1880 for spring wheat was twelve bushels per acre, and for fall wheat, twenty bushels per acre.⁴⁴ Yet Huron farmers often received greater returns than these. The evidence⁴⁵ of Mr. Dickson before the Agricultural Commission concerning wheat in Tuskersmith is very enlightening:

"We grow both spring and fall wheat; but latterly there has been more fall wheat raised than spring wheat.⁴⁶ The spring wheat has failed from a variety of causes, such as blight, midge, and so forth. The fall wheat has done exceedingly well for the last 2 or 3 years, and this year [1880] a very large acreage of it has been sown in the county of Huron. I cannot give the reason why fall wheat is more productive and a surer crop now than it was a few years ago. The varieties of spring wheat grown now are principally the Lost Nation, which some people call the White Russian, and the White Fyfe Last year my Lost Nation wheat crop was injured a good deal by the midge. Yet it yielded 23½ bushels to the acre of clean seed wheat, all of which was sold to the farmers. My White Fyfe last year did not yield more than 17 bushels to the acre of clean seed wheat Both sorts were grown after a turnip crop on clean rich soil. About 3 years ago, we used to raise from 28 to 33 bushels per acre of the Red Chaff spring wheat on such land; but we can't raise it now"

We generally sow [fall wheat] on land which has been some time in pasture. We plough in the spring, sometimes as late as June, work it well with the cultivator or the gang plough during the summer, and then supply manure I think fall wheat stands the winter best by being sown with a tube drill; the seed is at a greater and more uniform depth, and is not so likely to be injured by the frost. A smaller quantity of seed will do with the seed drill than when sown broadcast."

Between 1878 and 1890, the chief varieties of fall wheat sown in Huron were Treadwell, Clawson,⁴⁷ and Scott, each of which averaged twenty-five bushels per acre. Spring wheat was a partial failure, yielding only eight bushels per acre; the chief varieties were Fife and Red Fern.⁴⁸ The cost of raising an acre of wheat (spring or fall) in Huron County in 1890 was about \$14.86, or \$2.70 more than the average of the figures submitted by Ontario farmers to the Agricultural Commission.⁴⁹ In 1882, large crops of grain in Great Britain, and in Europe generally, and an increased supply from India, were responsible for a decline in the price of bread-stuffs.⁵⁰ An increase in "heavy crops including cereals and roots in Canada" served to offset the effects of this decline.

The expansion of the livestock and the dairying industries during the 'sixties and 'seventies, together with the resultant demands for pasture in summer, and forage in winter, revolutionized agricultural rotations by necessitating an increase⁵¹ in the cultivation of grains, maize, hay, and roots, to the detriment of wheat. In 1875, farmers were urged to plant corn, Hungarian grass, sugar-beets, and rutabagas, -- all of which could be converted into excellent stock-feed.⁵² The appearance of several useful implements facilitated the preparation of fodder; these included straw-cutters, corn-shellers, clover-cleaning machines, turnip-slicers, and root-pullers.⁵³ A study of the accompanying tables(pp. 185-188) will indicate the extent of the cultivation of grain crops between 1880 and 1890. The greatest gains were made in the production of Indian corn, oats, peas, and barley. Rye and buckwheat were never grown to any great extent in Huron County.

Oats: ⁵⁴ Oats began to record a great gain during the 'sixties, especially as a stock-food. Oat-meal mills, moreover, began to be erected in Huron County during the 'seventies.⁵⁵ In 1890, the cost of raising oats in Huron was about \$8.50 to \$10.00 per acre; the average selling price was 35 cts. per bushel.

Table: Crop Production, 1848-70¹

Product	1848 ²	1850	1870 ³
	No. of bus.	No. of bus.	No. of bus.
Wheat	305,725	292,949	618,452
Barley	13,143	13,013	362,462
Oats	174,736	215,415	1,209,830
Peas	-	54,657	542,228
Indian corn	7,113	5,322	8,591
Rye	1,073	2,181	1,453
Buckwheat	451	673	1,455
Beans	-	-	1,571
Potatoes	-	210,913	608,322
Turnips	-	143,725	1,106,738
Other root crops	-	297	242,142
Hay	-	12,823 (tons)	83,719 (tons)
Flax	300 lbs.	7,359 lbs. (including hemp)	18,059 lbs. (home-dressed)
Tobacco	Small amount	-	1,012 lbs.
Maple sugar	194,223 lbs.	351,721 lbs.	375,607 lbs.

1 Figures for 1848 (vid. Brown, J. L., p. 301) and for 1850 (vid. Can. Agric., vol. IV, 1852, pp. 135-6; and Strickland, vol. I, p. 259) are for the Huron district, excluding Bruce County. Figures for 1870 (vid. Hist. sketch of Huron, p. v) are for Huron County proper.

2 The acreage devoted to particular products in 1848 was as follows; wheat, 22,054 acs.; barley, 724 acs.; oats, 7,468 acs.; Indian corn, 406 acs.; rye, 72 acs.; buckwheat, 20 acs.

3 In 1870, Huron produced 7,121 lbs. of hops.

TABLE: Production of Crops in Huron, 1850:

* TOWNSHIP	Popula- tion	Acres Under Crop	Acres Under Pasture	Wheat (bu.)	Barley	Oats	Rye	Buck- wheat	Peas	Indian Corn	Po- tatoes	Turn- ips	Hay (tons)	Butter (lbs)	Ch- ese (lbs.)	
Ashfield	682	64164	876	218	2719	122	1955	-	-	330	33	9160	1162	192	358	-
Biddulph	1621	39154	1280	260	6301	243	5361	-	-	1183	58	2290	3709	288	27	15
Colborne	847	33513	2460	364	8236	288	5693	770	30	1726	411	12067	2396	587	3896	2225
Goderich	3693	51777	6571	2063	28363	667	17206	778	72	3727	1089	22964	4894	1405	10637	310
Hay	764	52886	783	290	4190	142	2089	-	59	597	352	2545	2240	744	900	230
Hullett	524	53432	845	78	4135	185	3229	4	-	1039	12	3016	521	79	566	30
McGillivray	1328	66506	3501	412	13346	100	12555	-	-	3660	118	9820	1064	617	-	-
McKillop	696	52140	1495	313	7407	216	5967	-	10	2116	15	5577	888	301	2311	290
Stanley	1489	44800	3988	232	19654	268	9282	81	126	1918	980	12979	465	1019	3408	-
Stephen	498	54725	1126	369	3872	159	2998	10	-	1260	20	3220	2670	289	412	-
Tuckersmith	1400	41000	3845	990	18373	389	14589	-	-	4442	44	9682	2574	966	5176	3257
Usborne	874	42751	1271	856	4903	217	4032	-	10	1166	232	4027	5547	432	1124	-
Wawanosh	422	83593	411	49	2766	-	1300	19	-	196	10	4841	500	71	-	-

Production of man el wurzels - 100 bus. in Goderich, and 2 bus. in Colborne.

*No figures available for Grey, Howick, Morris and Turnberry,
which were not settled until after 1850.

Table: Production of Crops in Huron, 1880:

TOWNSHIP	Fall Wheat		Spring Wheat		Barley		Oats		Peas		Corn		Hay		Potatoes		Turnips		Other root crops	
	A	Y	A	Y	A	Y	A	Y	A	Y	A	Y	A	Y	A	Y	A	Y	A	Y
Ashfield	12%	25	20%	12	2%	30	8%	40	8%	20	-	-	10%	1	1%	150	1%	400	1%	400
[Biddulph	16%	-	8%	-	16%	-	16%	-	8%	-	-	-	8%	1	1%	-	1%	-	.5%	-
Colborne	10%	25	15%	15	5%	25	15%	40	10%	20	-	-	15%	1	1%	200	5%	500	1%	600
Goderich	7%	25	4%	10	2%	25	6%	35	1%	20	1%	30	14%	1	.5%	150	1%	400	.5%	500
* Grey	10%	15	5%	8	1%	20	6%	25	5%	15	None	10%	-	1%	100	1%	300	-	-	
Hay	7%	15	3%	10	3%	30	5%	35	1%	20	1%	40	4%	1.5	.8%	70	1%	500	1%	500
Howick	15%	-	13%	-	4%	-	20%	-	10%	-	-	-	20%	-	1%	-	2%	-	1%	-
Bullett	15%	20	10%	10	5%	25	8%	40	5%	20	None	10%	1.5	1%	150	2%	500	.25%	800	
[McGillivray	9%	20	-	8	6%	20	7%	30	-	-	5%	35	10%	1	.6%	100	.2%	500	.2%	500
* McKillop	10%	18	5%	12	5%	30	10%	40	8%	20	None	15%	1.5	1%	150	2%	-	-	-	
Morris	10%	15	5%	8	2%	30	10%	30	5%	20	-	-	10%	1	.5%	100	2%	200	.5%	600
Stanley	15%	20	10%	12	10%	30	10%	40	None	Very little	10%	1	.5%	200	1%	500	.5%	500		
Stephen	-	15	-	6	-	15	-	30	None	None	-	1	-	80	-	600	-	-		
* Tuckersmith	14%	22	8%	12	8%	35	10%	40	5%	30	-	-	12%	1.5	1%	150	1.5%	500	1.5%	500
Turnberry	15%	20	8%	10	3%	25	10%	40	5%	25	-	-	10%	1.5	1%	100	2%	400	-	-
Usborne	15%	25	10%	10	8%	25	10%	40	-	20	-	-	10%	1.5	1%	200	3%	450	-	-
Wawanosh	10%	19	4%	9	1.5%	20	8%	38	6%	20	.5%	30	10%	1.25	.5%	100	1.5%	600	None	

A - Proportion of acreage devoted to a particular crop.

Y - Average yield in bushels per acre (in the case of hay, yield is in tons per acre).

* - Carrots and mangolds grow well in these townships.

Cultivation of flax: Goderich, 200 acres, McKillop, 400 acres, McGillivray, 100 acres, Hay, 500 acres, (yield - 12 bus. per acre); of buckwheat: Goderich, 20 acres, (yield - 30 bus. per acre); of rye: Goderich, 20 acres, (yield - 12 bus. per acre).

Table: The condition of the land in Huron County in 1880:

TOWNSHIP	Popula- tion in 1880	Acreage of Township	Number of cleared acres	A	B	C	D	Chief products of township and what it is best adapted for.
Ashfield	3628	64184	33143	25%	25%	10%	2%	Grain-growing, and stock-raising.
[Biddulph	2662	39154	24039	16%	50%	16%	1%	Wheat, barley, oats, peas; grain-growing; a part good for stock-raising and dairying.
Colborne	1875	33513	21547	16%	50%	10%	1%	Grain; grain-growing.
Goderich	2952	51777	27634	12%	75%	15%	2%	Wheat, barley, oats; stock-raising or dairying.
Grey	4047	63935	29002	-	33%	10%	1%	Wheat. Mixed farming.
Hay	3296	52886	25584	30%	65%	9%	1%	Wheat, oats, barley, corn. Best adapted for grain-growing.
Howick	5193	67228	36651	50%	50%	15%	1%	Equal for grain, stock-raising, and dairying.
Hullett	3378	53432	33015	25%	95%	15%	1%	Grain, cattle, horses, sheep, swine, and dairy produce; best adapted for mixed farming.
[McGillivray	3763	66506	44310	32%	60%	22%	.8%	Wheat, barley, and oats; adapted for grain-growing, stock-raising, or dairying.
McKillop	3682	52140	27000	-	40%	15%	1%	Mixed farming and dairying.
Morris	3372	55244	29903.5	39%	25%	10%	1%	Grain and stock.
Stanley	3223	44800	31860	10%	All	30%	1%	Well adapted for all grain generally.
Stephen	3644	54725	18071	66%	-	-	-	Wheat, oats, barley, stock-raising.
Tuckersmith	3411	41000	28814	20%	80%	20%	1%	Wheat, barley, oats; mixed farming and dairying.
Turnberry	2469	34800	22000	-	30%	10%	1%	Mixed farming.
Usborne	2740	42751	30624	15%	70%	12%	1%	Wheat, barley, oats, some fruit. Exports: horses, cattle, sheep. Adapted for mixed farming.
Wawanosh	4687	83593	45490	35%	35%	18%	.6%	Wheat, cattle, Grain-growing, stock-raising, and dairying.

A - Per cent. of standing timber.
B - Prop. of land cleared of stumps.

C - Per cent. of pasture lands.
D - Per cent. of orchards.

Corn: Indian corn, or maize, was cultivated only on a small scale, prior to 1856.⁵⁶ From 1860 to 1870 its growth in Ontario increased by half, especially in the southern part of the south-western peninsula (e.g. the counties of Essex and Kent). With the decline in the production of peas, as a result of the damage caused by the pea-weevil in Huron County⁵⁷ from 1874 to 1880, corn began to be planted extensively, and American corn began to be imported in large quantities.⁵⁸ For some time, American corn-fed cattle had been considered inferior to Canadian cattle, which were fed on roots and straw.⁵⁹ By 1874, many South Huron farmers were beginning to perceive the merits of planting horse-tooth corn for fodder; one and one-half acres, sown broadcast, would yield enough to feed seven cows, twice daily, for six weeks.⁶⁰ The cost of raising corn in Huron, in 1880, was about \$15 per acre; the average selling price was from 40 to 50 cts. per bushel.

Barley: From 1864 to 1875, Canadian-grown barley found extreme favour with American brewers; in 1864, it was considered by many farmers as a more profitable crop than wheat.⁶¹ In 1865, in the rush before the abrogation of reciprocity, four-fifths of Ontario's crop of barley was sold to American buyers for nearly five million dollars. After 1866, exportations decreased, but by 1869, more barley was sent to the United States than ever before.⁶² By 1875, barley grown in Canada West was selling in New York for from 25 to 30 cts. more than barley grown in New York state. The cost of cultivating barley in Huron, in 1880, was \$16. per acre; the average selling price was 67 cts. per bushel.

ROOT CROPS: Ever since the early 'thirties Huron County was considered to be an excellent area for the cultivation of root crops.⁶³ Root crops not only provided excellent stock feed, but also supplied a hoe crop which helped to clean the land of weeds, and to permit more extensive crop rotations, thus helping to retard the exhaustion of the soil. Ontario farmers began to sow roots on an increasing acreage by the 'sixties.⁶⁴

Potatoes: Potatoes formed an important part of the crops of most farmers, and their production increased steadily, subject to climatic conditions,⁶⁶ although the output was somewhat disrupted by the advent of the potato beetle⁶⁶ during the 'seventies.⁶⁷ In 1871, the Gederich Horticultural Society⁶⁸ distributed samples of two new varieties of potatoes (Breeze's Peerless, and King of Earlies) to members. In 1876, Mr. A.M. McGill Allan, Gederich, displayed a new variety of potato hybridised by himself, known as Allan's Hybrid. During the next three years, Mr. Allan successfully grew sweet potatoes in the open air; some of his specimens weighed six pounds. Favourite potatoes cultivated in Huron included Early Rose, Late Rose, and Early Vermont; Brownell's Superior ripened late, and inclined to become watery, thereby losing its popularity. Many varieties of potatoes were still being experimented with, around 1881. Until this time the Roses were considered the best for general cultivation, but many claimed that they were "running out"; the Beauty of Hebron was well-liked for early use, but it could not be depended upon to produce a full crop.⁶⁹

Turnips, mangolds, carrots: Turnip- and carrot-growing matches were sponsored by a few agricultural societies (e.g. Etowahoke, and York) in the early 'sixties, but evidence indicates that similar matches were not held in Huron until a decade later. Such competitions had extremely beneficial results, for they lessened the farmers' aversion to the cultivation of roots.⁷⁰ The dependence of Huron farmers generally upon turnips for stock-feed received a rude jolt in 1866, when the failure of turnips throughout the county attracted attention to the need for an additional forage crop.⁷¹

An idea of the attitude towards turnip cultivation, at about 1868, may be gained from the following letter,⁷² written by a Huronite:

"My turnips this year were a fairly good crop; had they been much larger, they could not have got into the turnip cutter I put them in drills thirty inches apart, and thinned them to twenty inches in the drill. Turnips are sown, not with the idea of any immediate profit, but for two other reasons: (1) to clean the land of weeds; and (2) to provide a stock of green feed for cattle I should like to state that I sow rape, and find it useful for turning cattle on, to give the grass a chance [to grow]."

The banner root-growing township in Huron, until 1860, at least, was Tuckersmith, which had the greatest yield per acre in turnips (1,104 bus.), mangolds, (1,140 bus.), and carrots (1,120 bus.)⁷³. In 1874, the winner of the Huron County competition in turnips produced 847 bushels per acre, and the winner in mangolds produced 1099 bushels; the average yield for the county was 500 and 700 bushels, respectively.⁷⁴ The champion mangold grower in Huron, during the 'seventies, was John Sheppard, of Tuckersmith, who produced specimens "as large as a man's leg."⁷⁵

Sugar beets: During the 'sixties, determined but unsuccessful efforts were made to introduce the growth of the sugar beet into Ontario. From February, 1869, until June, 1872, sporadic articles on beet-root sugar, written by "Vectis", appeared in the "Canada Farmer." The sugar beet was editorially recommended as a "cash crop,"⁷⁶ and in 1871, an incipient "Canadian Beet-Root Sugar Company," with strong English backing, attempted to secure governmental recognition.⁷⁷ It became the practice of agricultural societies, during the 'seventies, to offer prizes for beet-root culture; eventually municipal grants were made for the same purpose.

GREEN CROPS: Green (or leguminous) crops included peas, beans, timothy, clover, trefoil, alsike, and orchard grass, the last five of which, along with grain-straw, were used in making hay. Peas were a highly popular crop, and provided suitable fodder; the ravages of the pea-bug caused great concern about the problems of stock-feeding and crop-rotation. Beans were not grown to any great extent in Huron, prior to 1880, at least.

Hay: The production of hay increased considerably between 1850 and 1880, especially after alsike, trefoil, and other clovers gained a foothold, and were distributed by county societies.⁷⁸ By 1880, permanent pastures were best obtained by Huronites by sowing a mixture of red and white clover, timothy, alsike, and orchard grass. In 1844, a Toronto seed-merchant advertised, among other imported English seeds, orchard grass, which by 1875 was being sown as a valuable addition to the hay crop.⁷⁹ During the season of 1876, John Stinson, Usborne, raised \$150 worth of hay and 100 worth of clover seed, on five acres, averaging \$50 per acre.⁸⁰ Two years later, Robert Fergusson, McKillop, delivered in Seaforth a mammoth load of hay which weighed more than three tons.⁸¹ In January, 1879, a Huron subscriber wrote⁸² to the "Globe," concerning the price of clover seed in Great Britain: "There are large fields of clover seed grown in this county, and the above information will be useful to a large number of subscribers as well as myself." The answer to this letter was to the effect that in 1877, clover seed in England was worth \$9.00 per sixty pounds, and in 1878 was valued at only half that amount; according to English dealers, however, the price was expected to rise again shortly.

MISCELLANEOUS CROPS:

Sorghum: In 1877, the planting of sorghum or sugar cane by Huron farmers was advocated, in order to remedy the shortage of sugar caused by the gradual depletion of maple forests: "the manufacture of syrup from the maple tree [had] become almost a thing of the past." Moreover, the farmer no longer had time to devote to the preparation of maple syrup. Thus it developed that during the late 'seventies, several farmers along the shore of Lake Huron procured sorghum seed, for testing purposes. At first, owing to a crude method of refining, the project did not appear to be advantageous. But following the adoption of better refining, the syrup found a ready sale

in the local markets, at about sixty cents per gallon. "Early Amber" was the most popular variety of sorghum, both as a crop, and for the quantity and quality of syrup produced from it. The average yield reported by Huron farmers was from 100 to 165 gallons of syrup per acre. It was suggested that the growth of sorghum should be encouraged by the awarding of prizes by agricultural societies, and by municipal grants, similar to those offered for the manufacture of beet-sugar.⁸³

Tobacco: Tobacco-growing was carried on only on a small scale⁸⁴ in Huron, prior to 1880, and was usually grown for domestic use; in fact, the tobacco industry, generally, in Canada, was largely dependent upon imports of the raw material. In 1864, A.B. Brownson, of Bayfield, wrote to the "Canada Farmer", for information on curing and manufacturing home-grown tobacco. In a second letter, in 1865, he stated that he had acted on the advice received, and now made his own tobacco, which he sold at six cents per pound.⁸⁵ During the fall of 1877, John Carrick, of Exeter, had on his farm a stalk of tobacco, of the Roanoke variety, which contained 514 seed bulbs, and which was nearly seven feet in height, and four and one-half inches in circumference at the base.⁸⁶

The consumption of tobacco per capita in Canada, from 1861 to 1871, increased only ten per cent., that is, from 1.804 pounds to 1.985 pounds. An increase in the tariff-rate in 1870 was followed by a marked, though fluctuating, increase in the consumption of Canadian-grown tobacco, especially after 1880. There were a number of cigar factories scattered throughout western Ontario: one of these, at Guelph, in 1878, employed thirty persons who manufactured more than 25,000 cigars weekly.⁸⁷ Only a small percentage of Huron's tobacco reached these manufactories, however.

Hemlock Bark: Hemlock bark, although not strictly a crop, was considered a remunerative product, because of its use in the tanning industry. Under the

National Policy tariff of 1879, it was to be admitted to Canada duty-free.⁸⁸

In October, 1881, W.G. Smith, of Goderich, wrote a letter⁸⁹ to the "Globe", urging the imposition of an export duty tax on hemlock bark, thus keeping Canada's supply intact, and preventing unscrupulous people from stripping the trees and leaving them as fuel for forest fires, -- as had happened in Michigan and was even then occurring "along the shores of Lake Huron."

Hemp: As early as 1794, attempts had been made in Canada to encourage the cultivation of hemp;⁹⁰ in 1802, a governmental bounty of £1200 was established for hemp-growing, but nothing resulted from this gesture.⁹¹ The growth of hemp was not carried on to any great extent in Huron County, except as an adjunct to flax-growing. In 1848, George Leverage advertised⁹² in the Huron "Signal" the manufacture of ropes made from hemp which he himself had grown; he had "sold large quantities in Stratford and [the] neighbourhood."

Flax: The course of agriculture was profoundly disturbed, between 1858 and 1866 by the growth of a product which had a short-lived popularity, and which declined almost as rapidly as it had come to the fore. This product was flax. During 1844, the "British American Cultivator" had sought to stimulate interest in flax-growing, but little resulted from its crusade.⁹³ In 1846, W.G. Edmundson, of Whitehurch (York County), grew 600 bushels of flax seed,⁹⁴ and five years later, at the suggestion of Adam Fergusson, the Board of Agriculture set aside a small plot for flax, on its ill fated experimental farm.⁹⁵ The Huron district produced 3000 lbs. of flax in 1848,⁹⁶ and 7,359 lbs. of flax and hemp in 1850.⁹⁷ During 1851 and 1852, the "Canadian Agriculturist" championed the cause of flax, because of the prospective market in Great Britain.⁹⁸ Interest in the product was increased by the act of Fred Widder, on behalf of the Canada Company, in showing

the Donlan Flax Machine, of English manufacture, at the Toronto provincial exhibition in 1852; this machine was later presented to the Board of Agriculture.⁹⁹

The production of flax in Upper Canada expanded from 59,680 lbs. in 1852 to 1,275,937 lbs. in 1862.¹⁰⁰ Factors which contributed to this great expansion included: (1) the American Civil War,¹⁰¹ which halted the flow of cotton from the South (flax was the only known substitute for cotton); (2) the search for a profitable crop which would necessitate the abandonment of single-cropping methods, such as wheat-growing; (3) the suitability of certain districts for flax-rowing, whether because of soil, climate, or labour, or a combination of any of these minor factors: a clay loam on a subsoil of clay, a humid climate, and a supply of German labour contributed to the success of flax cultivation; and (4) the activities of certain individuals, such as W.D. Perine and J. A. Donaldson.

Two scutching mills were established by W.D. Perine in Waterloo County, one at Doon (1854) and the other at Comestoga (1861). The success of Perine's enterprise¹⁰² was accelerated by the German element in that district, and by the readiness of farmers to cultivate from fifteen to twenty acres of flax regularly. By 1861, a third mill, owned by Messrs. Blaikie and Alexander, was in operation at Nerval (Halton County). J.A. Donaldson, the Canadian emigration agent at Londonderry, Ireland, might well be called "the emissary of flax culture" in Canada during the 'sixties. As a result of his efforts, Upper and Lower Canada each ordered three flax machines, manufactured by Rowan and Brothers, of Belfast. The machines in Upper Canada were distributed as follows: one at London, one at Kingston, and the third "as the Board of Agriculture saw fit."¹⁰³

From 1863 to 1867, there was great activity among farmers and manufacturers, with respect to flax cultivation. In 1864, the western part of Upper Canada contained forty scutching mills and two linen manufactories;

by 1866, there were one hundred mills in the province, three linen manufactories,¹⁰⁴ and factories which manufactured linseed oil, oil cake, and flax machinery. In 1865, the government imported large quantities of Riga flax seed, which was distributed to farmers. The crop of 1866 was harvested from nearly 12,000 acres, grown principally in Wellington and Waterloo Counties.¹⁰⁵

By 1868, the flax "furor" began to abate, and manufacturing firms began to close their doors. The conclusion of the Civil War brought about a decline in the price of cotton, and automatically decreased the value of flax. Moreover, wheat, oats, and barley began to bring in high prices, and farmers turned once again to the familiar grain crops.¹⁰⁶ By 1871, there were only twenty-four scutching mills in operation in Ontario, and ten of these were located in the Perth-Wellington-Waterloo district.¹⁰⁷ It is significant that while flax-growing declined generally in the province, after 1868, it began to thrive in Huron County, which produced 18,059 pounds of home-dressed flax in 1870.¹⁰⁸

The soil of Huron County, especially in the south, was considered ideal for flax-growing. Flax was deemed an excellent crop to rot the sod and to make grass grow; thus it helped to produce good hay crops.¹⁰⁹ The cultivation of flax was an expensive undertaking, in that the average cost per acre was nearly \$19; it was arduous, in that hand-labour was almost exclusively required. These two difficulties were surmounted by the policy adopted by several mills of supplying the farmers with seeds and paying them \$12 per acre for their flax, and by the existence of the German settlements in Hay township, whence came many capable flax-pullers. In order to make flax-growing profitable, it was advisable to sow not more than 10 or 15 acres on a 100-acre farm.¹¹⁰ A fair yield of flax, per acre, was 250 pounds, dressed, which sold for \$30; 15 bushels of linseed per acre were also considered a fair yield. In 1862, Canadian flax sold in England at from £20 to £30 sterling,

per ton, -- or from 16 to 20 ets. per lb. In 1877-78, flax sold at 7¹/₂ ets. per lb., but two years later it brought 12 to 12¹/₂ ets. per lb. Flax was usually manufactured during the winter, and sold in the spring, as it was not profitable to retain it until summer. The market for flax, during the 'seventies, was chiefly Boston and New York, although much of Huron's flax went to Paterson, New Jersey.

During the 'seventies, at least five flax mills were functioning in the southern part of Huron County, -- at Seaforth, Zurich, Exeter, Clinton, and Crediton. The Seaforth mill, owned and operated by Armitage, Beattie, and Company, supplied seed to farmers, whom it paid to sow the crop. From seventy-five to one hundred and fifty labourers were hired by the firm to harvest the flax, which was dressed, the various forms being known as "dressed flax", "coarse tow", and "fine tow". An incentive to the production of flax in the Zurich area was provided by an annual competition for a prize offered by the Zurich mill to the farmer who drew the largest load of flax to the mill. In 1877, nine teams contested at the drawing, which was held at the farm of John Wilson, on the London Road; William Bradley, who drew 9,450 pounds, was adjudged the winner. The expense involved in the "working-up" of flax in that district, in 1877, was estimated at nearly \$20,000. In December of the same year, a large quantity of tow was shipped from the Exeter flax mills. The flax crop in Huron in 1878 provided the best harvest up to that time; labour was so scarce that the Exeter firm had to employ Indians from the Sarnia district, to pull its flax. At Clinton, operations were suspended by the owner, Mr. Forester, during 1879, but in the spring of 1880, he planned to sow 400 acres of flax. The mill at Crediton employed about one hundred workers.

At provincial agricultural exhibitions, Huron County did not achieve as great success in its presentation of grains and vegetables as it

did in other phases of agriculture, e.g. fruit-growing, and stock-raising. Prior to 1862, only eight awards were received by Huronites for crop exhibits. In 1865, prizes were received for spring wheat, white marrow-fat peas, and carrots; in 1877, for field peas, onions, and timothy seed; and in 1881, for field peas and White Russian wheat. The primary reason for this deficiency is that Huronites confined their exhibition of crops chiefly to local fairs.

By the late 'seventies, it was becoming ¹¹⁸evident that the Ontario farmer was producing, on an equal area of land, more than the Quebec farmer, of wheat, barley, peas, corn, turnips, and other roots. The Quebec farmer, on the other hand, was producing more of oats, rye, beans, buckwheat, potatoes, hay, and clover seed. It is evident, as a result of this study of the cultivation of crops in Huron, that the Huron farmer's produce approximated to that of the average Ontario farmer. In the realm of fruit-growing, however, Huron's production surpassed the provincial average.

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Chapter VIII: The Cultivation of Crops.

References:

- 1 Sess. Papers, vol. VIII, Part. I, No. 1, 1875-76, p. 55.
- 2 Including Bruce County, 365,975 acres were occupied, and 62,694 were cultivated (i.e. 46,000 acres under tillage, and the rest in pasture).
- 3 Brown, J.B., pp. 301-305.
- 4 Strickland, vol. I, pp. 286-7. -- The market prices of various products, at Toronto, in January, 1843, were as follows, per bushel: wheat, 5s.; oats, 2s.; barley, 2s. 6d.; rye, 2s. 10d.; peas, 2s. 9d.; timothy, 4s. 6d.; and potatoes, 2s. 8d. Prices were somewhat cheaper in the rural districts. (Bonnycastle, pp. 211-213).
- 5 Agric. Report, 1881, vol. II, pp. 209-210.
- 6 Drummond, W.M.: Problems of the Canadian Dairy Industry, p. 128; in Innis, H.A., ed.: The Dairy Industry in Canada. (Toronto, 1937).
- 7 Brit. Amer. Cult., vol. I, May, 1842, p. 65.
Cf. supra, p. 51.
- 8 Warr, Rev. G.W.: "Canada as it is; or, the emigrant's friend and guide to Upper Canada." (London, 1847), p. 60.
- 9 Haw, p. 69; cf. Brown, J.B., pp. 79-80; and Smith, W.L., p. 229.
- 10 Landon, F.: "The 1860's -- a Period of Transition in Upper Canada Agriculture" (O.A.C. Review, Guelph, April-May, 1937), p. 5.
Vid. also Sess. Papers, vol. IV, 1872, No. 29; vol. XI, 1879, No. 9.
- 11 Vid. infra, pp. 228-238.
- 12 Can. Agric., vol. IV, 1852, February, p. 39; March, p. 77.
Cf. Landon, F.: "The 1860's", etc., p. 10.
Transactions, etc., 1860-63, p. 87.
- 13 Toon, C.C.: Some Aspects of the History of Agriculture in Canada West and Ontario between 1850 and 1870. (U. of W.O. Studies, London, Ont., 1938), p. v.
- 14 Can. Agric., vol. XIV, 1862, Sept. 16, p. 552.
- 15 Ibid, vol. V, 1853, Jan., p. 6.
- 16 McQueen, p. 199.
- 17 Vid. supra, p. 32.
- 18 For details concerning the suffering in Bruce County in 1858-59, vid.: London "Free Press", Feb. 19, 1938.

- 19 Goderich "Signal", July 11, 1936.
Supra, p. 105.
- 20 Can. Farmer, vol. I, 1864, October 1, p. 287; letter from "L", May.
- 21 Ibid, vol. IV, 1867, February 15, pp. 58-59.
- 22 Infra, pp. 311-314.
- 23 Infra, pp. 318-320.
- 24 Day, S.P.: English America: or pictures of Canadian places and people.
(London, 1864), vol. I, pp. 186-7.
- 25 Can. Farmer, vol. III, 1866, February 1, p. 41.
- 26 Teon, C.C., p. 232.
- 27 Vid. Can. Farmer, vol. V, 1868, February 15, p. 60. -- In 1866, the figures for the production of wheat in Upper Canada were: for fall wheat, 534,272 bus.; for spring wheat, 493,197 bus. In 1867, the corresponding figures were 726,685 bus., and 603,554 bus., indicating a decrease in fall wheat of 257,583 bus., and an increase in spring wheat of 110,357 bus.
- 28 Sess. Papers, vol. XIII, Part I, 1881, pp. 19-20.
- 29 W.G., vol. XXXII, 1880, January 9.
- 30 Innis and Lower, vol. II, p. 548.
- 31 Can. Agric., vol. XIII, 1861, October, p. 637.
- 32 Goderich "Signal", September 24, 1936.
- 33 Cf. supra, p. 34 ; infra, pp. 313-315.
- 34 Can. Farmer, vol. III, 1866, May 1, p. 131.
- 35 Sess. Papers, vol. XVI, 1884, No. 14.
- 36 In 1874, where fall wheat was not winter-killed in Huron, it yielded 35 to 40 bus. per acre; spring wheat was above average, and yielded 25 bus. per acre. The only remedy for the winter-killing of fall wheat appeared to be the planting of tree belts.
- 37 W.G., vol. XXVII, 1876, April 16.
- 38 Ibid, vol. XXX, 1878, March 15, p. 170.

- 39 Ibid, vol. XXIX, 1877, August 3, p. 503.
- 40 Ibid, vol. XXX, 1878, August 9, p. 507.
- 41 Ibid, vol. XXXI, 1879, April 18, p. 250.
- 42 Ibid, May 16.
- 43 Ibid, June 18, p. 329. -- In the same year, four stalks of wheat measuring nearly six feet in height were submitted to the "Globe" by a Hibbert farmer. (Ibid, July 11, p. 443).
- 44 Agric. Report, 1881, vol. I, p. 339.
- 45 Ibid, vol. IV, Appendix G, p. 39.
- 46 Mr. Dickson's case was considered by the Agricultural Commission as not sufficient enough to warrant that spring wheat might not improve with the introduction of new varieties. (Ibid, vol. I, p. 364).
- 47 In 1878, Mr. Dickson's Clawson yielded forty bushels per acre.
- 48 Sess. Papers, vol. XII, Part I, 1880, pp. 71-73.
- 49 Agric. Report, 1881, vol. I, p. 350.
- 50 It is interesting to note that the price of bread, for a 4-lb. loaf, in the fall of 1877, was as follows: at Ingersoll, 6 $\frac{1}{2}$ ¢; at Prescott, 8¢; at Welland, 8¢ (had been 12 $\frac{1}{2}$ ¢) and at Goderich, 14¢. (W.G., vol. XXIX, 1877, October 5, p. 648).
- 51 Innis, H.A., ed.: "The Dairy Industry in Canada". (Toronto, 1937), p. 6.
-- But cf. Agric. Report, 1881, vol. I, p. 379.
- 52 W.G., vol. XXV, 1873, May 16.
- 53 Vid. supra, p. 136.
- 54 In 1878, Thomas Linton, Howick, obtained 101 bushels of oats from less than one acre, having sown three pecks broadcast by hand! (W.G., vol. XXX, 1878, March 29, p. 203).
- 55 Vid. infra, pp. 320-321.
- 56 McQueen, pp. 194-195.
- 57 Sess. Papers, vol. VIII, Part I, No. 1, 1875-76, p. 55.
- 58 W.G., vol. XXXII, 1880, July 2.
- 59 Innis and Lower, vol. II, p. 564.
- 60 Sess. Papers, vol. VIII, Part I, No. 1, 1875-76, p. 55.
- 61 Transactions, etc., 1864-68, pp. 208-209.

- 62 *Can. Farmer*, vol. III, 1866, April 16, p. 122; vol. V, 1868, February 15, pp. 60-61; vol. II, n.s., 1870, February 15, p. 74.
- 63 *Supra*, p. 50.
- 64 *Can. Agric.*, vol. XV, 1865, February, p. 58.
- 65 Potatoes were sometimes so scarce, owing to damages caused by blight and frost, that persons often took great pains in contracting for their delivery. The following item concerning the purchase of potatoes is to be found in the unprinted documents of George McLeod (Letter dated January 8, 1844, at Half-way House, London Road, Huron Tract):
- "Three months after date I promise to pay Dougald McViear or order the sum of Fifty shillings currency for forty bushels of good sound potatoes now in pits, which potatoes is to be delivered to me in good order & condition, & should there be more than forty bushels, I am to take them, purchase price being one shilling and three pence currency per bushel"
- Mr. McLeod received only 26½ bushels of potatoes, however, and was required to pay 2s. 6d. for the labour involved in gathering and hauling them.
- 66 *Infra*, pp. 231-2.
- 67 In 1876, potatoes were sold at Hensall by William Elder for 60 cts. per bushel; he stored some in his cellar until spring, sold them at \$1.00 per bushel, and was highly pleased over this "venture". (Elder, J., March 8, 1935, No.4).
- 68 Cf. *supra*, p. 78.
- 69 *Sess. Papers*, vol. XIII, Part I, 1881, pp. 20-25; vol. XIV, Part II, 1882, p. 19.
- 70 *Can. Agric.*, vol. XIII, 1861, January 1, pp. 7-8. *Transactions, etc.*, 1860-65, pp. 109-110; 133.
- 71 McQueen, pp. 194-5.
- 72 *Can. Farmer*, vol. I, n.s., 1869; from "Green Crop", Grey P.O., Huron; slightly revised.
- 73 *W.G.*, vol. XXII, 1880, November 12.
Vid. also *Agric. Report*, 1881, vol. I, p. 380; vol. IV, Append. G., p. 40.
Cf. *Sess. Papers*, vol. VIII, Part I, 1875-76, p. 55.
- 74 *Agric. Report*, 1876, pp. 429-430.
- 75 Elder, J., March 29, 1935, No. 7.
- 76 *Can. Farmer*, vol. III, n.s., 1871, May, p. 182; vol. II, n.s., 1874, February 16, p. 71.

- 77 Toom, C.C., p. 241.
Can. Farmer, vol. III, n.s., 1871, June, p. 233.
- 78 Can. Agric., vol. XV, 1868, September, p. 334.
- 79 Brit. Amer. Cult., vol. III, 1844, March, p. 48; August, p. 125.
Farmer's Advocate, 1875, March, p. 41.
- 80 W.G., vol. XXIX, 1877, February 23, p. 134. --- The price of hay,
in 1866, ranged between \$14 and \$16 per acre. (McQueen, pp. 194-5).
- 81 W.G., vol. XXX, 1878, March 8, p. 155.
- 82 Ibid, vol. XXXI, 1879, January 31, p. 74.
- 83 Sess. Papers, vol. XIV, Part II, 1882, p. 20.
- 84 A small amount was grown in the Huron district as early as 1848
(Brown, J.B., p. 301); in 1870, 1,012 lbs. were produced.
(Hist. sketch of Huron, p. v).
- 85 Can. Farmer, vol. I, 1864, p. 264; vol. II, 1865, November 1, p. 328.
- 86 W.G., vol. XXIX, 1877, October 5, p. 648.
- 87 Innis and Lower, vol. II, pp. 614-5.
- 88 W.G., vol. XXXI, 1879, March 28, p. 196.
Supra, p. 107.
- 89 W.G., vol. XXXIII, 1881, October 28.
Infra, p. 222.
- 90 Cruikshank, E.A.: "Simcoe Papers, volume III, 1794-95". (Toronto, 1925),
pp. 226-7.
- 91 Transactions, etc., 1858, pp. 221-2.
- 92 Huron "Signal", vol. I, April 14, 1848.
Merritt, J.H., p. 74.
- 93 Brit. Amer. Cult., vol. III, 1844, January, p. 5; April, p. 52.
- 94 Ibid, vol. II, n.s., 1848, September, pp. 287-8.
- 95 Can. Agric., vol. III, 1851, November, p. 246.
Vid. supra, p. 85.
- 96 Brown, J.B., p. 301.
- 97 Can. Agric., vol. IV, 1852, pp. 135-6.
- 98 Ibid, August, pp. 231-4.

- 99 Ibid, September, pp. 288-9; October, p. 292; vol. V, 1863, July, p. 194.
Cf. supra, p. 136.
- 100 Day, S.P., vol. II, p. 72.
- 101 Innis and Lower, vol. II, p. 865.
Concerning the influence of the war on flax-growing, vid. speech by W.D. Perine in: Canada Farmer, vol. I, 1864, December 1, p. 362.
- 102 Can. Farmer, vol. I, 1864, January 15, p. 1; December 1, p. 362; vol. IV, 1867, February 15, p. 89.
Can. Agric., vol. XIII, 1861, April 1, pp. 197-8; November 16, p. 679.
- 103 The third machine was rented to Henry Stickler of Waterloo in 1863.
Can. Agric., vol. XIV, 1862, April 1, p. 204; May 16, p. 291; vol. XV, 1863, August, p. 304.
- 104 Can. Farmer, vol. I, 1864, p. 275. -- The linen mills, each of which employed about 200 men, were located at Doon, Streetsville (Peel County), and Preston (Waterloo County).
- 105 Can. Agric., vol. XIV, 1862, February 1, p. 69; June 1, pp. 334-7; March 16, pp. 167-8; vol. XV, 1863, April, p. 154.
Can. Farmer, vol. I, 1864, August 1, p. 219; December 1, p. 362; July 15, p. 201; September 1, p. 245; October 1, p. 283; vol. II, 1865, June 1, pp. 162-3; vol. III, 1866, April 16, p. 120; vol. IV, 1867, February 15, p. 49.
- 106 Farmer's Advocate, May, 1876, p. 84.
Vid. supra, e.g., pp. 184; 189.
- 107 Two of these mills were located at Listowel and Stratford.
W.G., vol. XXIII, 1871, July 21; August 18.
Can. Farmer, vol. V, 1868, July 1, p. 195; August 15, p. 253; vol. I, n.s., 1869, January 15, p. 3.
Vid. also Census of Canada, 1870-71, vol. III, p. 451.
- 108 Hist. sketch of Huron, p. v.
- 109 Agric. Report, 1891, vol. I, p. 522; vol. V, Appendix O, pp. 7-9.
- 110 On August 12, 1880, John Beattie, mayor of Seaforth, stated to the Agricultural Commission: "I have a hundred acre farm and am now engaged chiefly in flax raising." (Ibid, vol. IV, Appendix H, pp. 94-5).
- 111 Canadian Illustrated News, Hamilton, 1862, April 16, p. 266; May 16, p. 11; June 6, p. 47.
- 112 Hist. sketch of Huron, p. ix.
- 113 Agric. Report, 1874, pp. 362-3.
W.G., vol. XXIX, 1877, June 15, p. 391; vol. XXIV, 1872, June 28.

- 114 Ibid., September 21, p. 615; November 16, p. 747. — Residents of Hensall urged Mr. Ernest, the owner of the Zurich mill, to move to Hensall, and offered to contribute \$300 of the \$800 necessary to pay the moving expenses. Ernest appeared to be agreeable to this plan, but there is no indication that he accepted the offer.
- 115 Ibid., vol. XXX, 1878, August 9, p. 507; August 30, p. 555.
- 116 Ibid., vol. XXXII, 1880, May 7.
- 117 Ibid., vol. XXIX, 1877, June 15, p. 391.
- 118 Vid. tables of production, in W. P., vol. XXXI, 1879, April 11, p. 234.

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CHAPTER IX

Fruit-Growing and Reforestation.

FRUIT-GROWING.

Fruit-growing was essentially among the later pursuits of the settler in a new region; where every foot of ground had to be cleared before the spade could enter in, the necessities of life had to be considered first. During the first two decades of Huron County's history, little was accomplished in the way of fruit-growing for foreign consumption. By 1850, however, much of the land had been cleared, and when Huronites realized that their county was an excellent fruit-growing area, several growers began to plant trees. The increased interest in planting fruit-trees during the late 'forties is indicated by an item which appeared in the Toronto "Weekly Globe", September 23, 1848, advertising 40,000 apple trees, and many other fruit-trees, for sale.¹ As early as 1852, a fruit-tree nursery existed near Goderich.² An interesting note concerning fruit-growing in Huron in 1855 is to be found in Moore's "Rural New Yorker":³

"Many a one, on his humble farm far away toward Lake Huron is familiar with the best apples, pears, plums, and other fruit, and not a few have obtained the best trees of the celebrated nurseries of Monroe County. From Buffalo, too, they have drawn a liberal supply."

By 1866, Goderich and the immediate neighbourhood had become well-known in the realm of fruit-growing. Professor George Buckland was warm in his praise of Huron:⁴

"Peaches, grapes, and the finer kinds of apples, pears, and stone fruits come to great perfection, as do all the cultivated crops of the garden, -- as provincial, as well as local exhibitions, have demonstrated. It was gratifying to find in this remote part of the province that the beautiful art of horticulture is so successfully cultivated. A well-managed nursery, of nearly one hundred acres, exists in the vicinity, which I had not an opportunity of seeing. I was certainly surprised to find agriculture in so advanced a state in this fine section. One is apt to associate with what was a few years since known by the term, 'Huron Tract', primitive

settlements and extensive forests. Now, upon enquiry, I found that in the more advanced townships, fully three-fourths of the land has already been cleared, and as the trees are nearly all hard-wood, the stumps in many places have entirely disappeared."

In 1872, a committee on fruit in Huron County, appointed by the Ontario Agricultural Association, had this statement to make, following a tour of Goderich and Stanley townships:⁵

"We would class the County of Huron as equal to any section of Canada for apples, pears, and plums; for grapes, peaches, and the more tender varieties of fruit, the belt along the shore of Lake Huron is almost if not fully equal to the Niagara district. In all sections of the county, fruit-growing is and can be made profitable. Young orchards are being planted largely, and in a few years this county will be one of the best fruit-producing sections of Canada."

Fruit-growing in Huron grew by leaps and bounds, and by 1880, 6,540 acres were under orchard and garden. Of this amount, 4,870 acres consisted of apples; 330 of plums; 100 of grapes; 90 of pears; 52 of peaches; 50 of strawberries; and about 80 acres of other small fruits, including cherries, apricots, nectarines, quinces, raspberries, blackberries, and currants.⁶ The fine quality of Huron fruit is attested by the large number of prizes won in this division of agricultural produce at the annual provincial exhibitions. (Vid. table, p. 74).

Apples. Apple orchards began to be cultivated generally in Huron County about 1856-58, and by 1874 were bearing heavily; by 1880, apples were the most widely-grown fruit, constituting 4,870 acres, out of 6,540 acres devoted to fruit-growing.⁷ Until 1866, Canada had imported American apples, but in that year, the tide began to turn. By 1874, attention was being paid to the selection of the best paying varieties, especially those suited to the European market. Canadian apples were beginning to find considerable favour in England.⁸ By 1880, Huron farmers agreed on three points concerning apple-growing:

- (1) that winter apples were preferred to summer and fall varieties;
- (2) that too many species of apples were already grown, and that, accordingly, no more new species should be added;
- (3) that hitherto, size and quantity had been stressed at the expense of actual merit and quality.

When orchards were young, and the apple market was locally confined, growers vied for the production of the largest number of varieties. Agricultural and horticultural societies encouraged this emulation by offering premiums for the largest display; by 1880, however, the tendency was to award prizes for choice quality and actual merit. In 1881, Huron produced a harvest of 435,000 barrels.

The simultaneous appearance of pears, plums, and other fruits, rendered the summer apple, relatively, of less importance than the later varieties. The supply of summer apples often far exceeded the demand, and the surplus was frequently fed to livestock, or left to rot on the ground.⁹ Cider-manufacturing was conducted only to a limited extent, by amateurs. Many farmers shipped dried apples in large quantities. The most popular summer apple was the Red Astrachan, a fine dessert and cooking apple. Other favourite dessert or eating apples were Early Strawberry, Summer Pearman, Primate, Early Joe, and Summer Rose. The best cooking varieties were Keswick Codlin, Early Harvest, Benoni, Pomme Royale, and Indian Rare Ripe. The average price for summer apples was from 60 cents to 80 cents per bushel; in 1880, the average price sank to an average of 35 cents per bushel.

By 1880, the Huron district was also overstocked with many varieties of fall apples. The Waitland, a prolific and regular bearer, was highly esteemed, as was the Alexander. The best cooking apples were Alexander, Beauty of Kent, Hawthornden, and Taylor Fish, the last-named being an English variety, green in colour. The favourite fall dessert apples were Fameuse (or Snow), Gravenstein, St. Lawrence, Porter, and Melon. Other varieties

were Cayuga Red Streak, Duchess of Oldenburg, Maiden's Blush, and Blenheim Orange. The average price for fall apples was from 70 cents to 80 cents.

Practically all growers in Huron were turning their attention to cultivating winter varieties; in fact, several farmers were top-grafting summer and fall varieties with winter varieties. The most popular winter apples were Northern Spy, Baldwin, Rhode Island Greening, Wagener, and Mann. Others which were widely grown were: American Golden Russet, Aesopus Spitzenberg, King of Tompkins County, Ribston Pippin, Green Newton Pippin, Swaysie Pomme Grise, Roxbury Russet, Twenty Ounce Pippin, Hubbardson Nonsuch, and Swaar.¹⁰ The Fameuse (or Snow) was considered by some growers as a winter, rather than a fall variety. The average price of winter apples was from \$1. to \$1.50 per bushel.¹¹

Several farmers experimented with seedlings. Mr. W.J. Hayden, Ashfield, cultivated two seedlings of his own raising: the Bourassa and Pomme d'Api.¹² Mr. Latouzel, of Cherrydale Farm, Colborne, experimented with English apples, such as Taylor Fish and Lord Suffield, and concluded that English varieties, on the whole, did not compare favourably with Canadian apples.¹³ Other varieties were Cabashaw, Yellow Bellflower, and Gilliflower. Crab-apples were cultivated freely over all the district, mainly for home consumption; Montreal Beauty, Hyslop, and Transcendant were preferred for preserving whole, and Yellow Siberian for preparing fine jelly.

In shipping, the fruit was carefully selected, clean and free from worms, and wrapped individually in tissue or manila paper. Wheat and oat chaff, well dried, also provided a good packing medium. The fruit was usually packed in barrels, which were lined with durable paper.¹⁴ Several exporters recommended the Tomlinson barrel which was cylindrical in shape, lacking a bulge in the centre. In packing, two layers of fruit were first set down carefully, stem-ends downward, and the barrel was filled. The top layers

were arranged similarly to the bottom ones, and then pressed down. The bottom of the barrel was branded, so that when the container was opened, the apples on the bottom would appear on top, in a pleasing and regular arrangement. In 1892, the Dominion government established grades for apples, and nine years later the Dominion Fruit Marks Act provided for marking the identity of the packer, and the variety and grade of the fruit.¹⁵

Most of the fall and summer apples were shipped to Toronto and intermediate points; Toronto agents shipped purchases to the maritime provinces and to Europe.¹⁶ It did not pay to ship to Toronto or eastern markets, as the supply there was usually larger than the demand. The apple market in Montreal fell between 1878 (\$6. per bushel) and 1879 (\$1.50 per bushel).¹⁷ Sault Ste. Marie and other lake ports proved to be good customers. Apples grown in Huron sold in Ontario at from 50 cents to \$1. more than American apples, which averaged about 20 cents to 25 cents per bushel.¹⁸ It was hoped that Manitoba and the Canadian north-west would improve as a market. The long distance, lack of customers, and high freight rates precluded this as a possibility. In 1880, it cost \$2.07 to send a barrel of apples from Goderich to Winnipeg. In order to reach Winnipeg in good condition, apples had to be picked before they were fully ripened; where the barrels were handled much in transit, the loss from shrinkage and mashing was great, so that early varieties were rarely shipped long distances. Winnipeg buyers appreciated quality better than did American and English purchasers. St. Lawrence, Cayuga Red Streak, Gravenstein, and Blenheim Orange were esteemed in Winnipeg. Early Strawberry and Tetofsky shipped well, but were too small to attract western buyers.

In the main, fall apples went to the United States, and winter varieties to England.¹⁹ In Chicago and St. Paul, apples were bought by "heft": the quality did not matter so much as a large amount for the money. Crab-apples

were first exported to Chicago in 1879, and brought good prices. Alexander was popular in Chicago, Maiden's Blush in Michigan, and Duchess of Oldenburg in all American markets.

In October, 1866, some Oxford fruit-growers sent 210 barrels of apples to England "as an experiment". Huron's attention was directed towards Great Britain as a market in the 'seventies, when several exporters sent assortments to Liverpool and Glasgow. In 1876, 3,500 barrels were exported to England; in 1879, 10,000 barrels, out of a harvest of 435,000 barrels, went overseas. ²⁰ Greater attention was now being paid by Huron growers to cultivating long-keeping apples for shipment abroad. British rating of Canadian apples did not depend upon actual merit, as much as on appearance: the demand was for a medium-sized, high-coloured, well-formed fruit. Thus it was considered unprofitable to ship large apples. An obstacle in the path of British trade was the high cost entailed by middle-men's commissions and other fees; in order to profit, the shipper found it necessary to accompany his own shipment. The most popular apples in the English market were Baldwin, Rhode Island Greening, Ribston Pippin, and Green Newton Pippin. Prices at which Huron apples sold in England, in 1880, are as follows (per barrel): G.N. Pippin: \$10.63; S.P. Grise: \$9.42 and \$10.11; Baldwin: \$4.07; R.I. Greening: \$3.86 and \$4.00; Northern Spy: \$5.17 and \$8.10; Mann: \$5.54; A.G. Russet: \$4.94 and \$5.30; King of Tompkins County: \$4.56.

Pears. Pears were not generally cultivated in Huron County until after 1867; by 1879, there were about 90 acres, or 1,000 full-bearing pear-trees in the county, which produced a crop of 2,460 bushels during the season of 1878. ²¹ Pear culture rapidly gained ground, as soon as it was discovered that the clay sub-soil to be found in all parts of Huron offered excellent nourishment.

The three natural homes of the Canadian pear might be said to be the
 Niagara peninsula, Prince Edward County, and the Huron fruit belt.²²

Standard varieties were preferred to those grown on quince roots.

The most popular summer varieties were Bartlett, Clapp's Favorites, and Osband's Summer; then followed Tyson, Ananas d'Eté, Beurre Gifford, and Souvenir du Congrès, in order of preference.²³ The fall favourites were Flemish Beauty, Louise Bonne de Jersey, Duchesse d'Angoulême, Sheldon, Beurre Boss, Beurre Hardy, and White Doyenne; others included Belle Lucrative, Beurre Superfin, and Seckel.²⁴ The choicest winter varieties were Beurre Clairgeau, Beurre d'Anjou, Beurre Diel, Lawrence, Oswego Beurre, and Vicar of Winkfield. Winter pears, on the whole, were not very profitable, as they were susceptible to blight.²⁵ Other varieties cultivated included Doyenne d'Eté, Howell, Stevens' Genesee, Beurre de l'Assomption, Dearborn Seedling, and Onondaga. Of all those named, the Souvenir du Congrès, Seckel, and Vicar of Winkfield were the least preferred, as they lacked quality and consistency.

Very few pears were shipped from Huron until about 1878, when farmers began to realize the potential marketing value of the fruit. Pears which were gathered for shipping were usually gathered before they reached full maturity. After the home demands were satisfied, surplus crops were shipped to Canadian cities. Early varieties, selling for \$1. to \$2. per bushel, were sent to London and Toronto; later varieties, priced at from \$9. to \$15. per bushel, went to Montreal. In home markets, Bartlett and Flemish Beauty sold at \$2. and \$2.50 per bushel.

Plums. By 1866, Canadian plums were rapidly improving in quality, and Huron County, four years later, became celebrated for its fine specimens.²⁶

The townships of Howick and Turnberry were especially good districts.²⁷

Several species were grown, but seedlings were preferred to the cultivated varieties.²⁸ The Common Blue plum, which was grown by nearly all fruit-farmers in 1870, was looked upon as a native; by 1880, however, only one-quarter of the amount of Common Blue grown in 1870 was cultivated. Another local seedling, known as Bingham's Favourite, or Goderich Plum, was developed by a Mr. Bingham, a Huronite, and was considered the best plum in the district. It was dark purple in colour, with extremely firm flesh, and was an excellent shipping fruit. It was difficult to grow in the nursery row, but when properly trained was a prolific bearer. Messrs. George Leslie and Son, of the Toronto nurseries, were propagating largely from this seedling, by 1880.²⁹ Another local seedling, a mottled red and yellow plum, was looked upon as a future good market prospect, in the same year. For home consumption and for canning purposes, all the green and yellow plums were preferred, such as the Lombard, Gee's Golden Drop, Pond's Seedling, the Gages, and Fellenberg.³⁰ The most profitable plums for marketing were Lombard and Common Blue, because of their shipping qualities. Other popular specimens were: Smith's Orleans (a regular and heavy bearer), Washington, Bleeker's Gage, Lawrence's Favourite, Glass' Seedling, Jefferson, Peach, Yellow Egg, German Prune, Pentland, General Hand, and McLaughlin. The two last named were not adjudged very good bearers, and the chief objection to the Pentland was the size of the pit.

All the standard varieties found a ready market, although considerable loss was experienced in shipping most varieties any great distance. Many shippers preferred green and yellow to red and blue varieties. The plums were usually packed, while quite hard, in lath boxes which were divided into sections; each box averaged twenty-three pounds in weight. Huron plums were shipped to Toronto, Buffalo, Port Huron, Detroit, and occasionally to Toledo and Saginaw. Huronites did not place much reliance on the Toronto market, because it was liable to become glutted on short notice. In 1879, 2,273 bushels

were shipped, mostly to the United States.³¹ For shipping purposes, the Common Blue brought from \$1.75 to \$2.25 per bushel, and others ranged widely from \$2. to \$4., and some sold at even higher prices in the states. Good specimens of the Common Blue brought \$3.20 in Saginaw in 1879. At home, the average price for Common Blue was from \$1. to \$1.50; small plums sold at 25 cents to 50 cents, and larger varieties at from \$1.50 to \$2.25, per bushel.³²

Peaches. Peaches were cultivated in Huron as early as 1845, but peach-growing was still in its infancy thirty years later, by which time numerous growers were cultivating the leading varieties, especially in the area nearest the lake shore. By 1866, peaches which had not succeeded in many parts of Ontario were flourishing in the neighbourhood of Goderich. The light, warm soil was suitable, and the absence of severe early and late frosts generally ensured a harvest. Following the bumper crop of 1880, peach-growing began to be looked upon as a prosperous undertaking.

It was discovered by Huron growers that peaches thrive best on plum stocks. The ripening of the wood was hastened by breaking the tips early in the season, and by trimming the broken points with a knife. The best results in peach-growing were attained by planting orchards of standard varieties. Farmers who were successful with Early Crawford planted their trees where they were shaded from the south, and placed a heavy mulch around the trees, in order to keep the ground frozen as late as possible, and thus retard the growth of buds and blossoms.³³ An important reason for Huronites' success in peach culture was the fact that "yellows", a destructive peach disease, which was prevalent in the Niagara district, had not invaded the Huron area, -- by 1880, at any rate.³⁴

The varieties of peaches most cultivated were: Alexander, Hale's Early, Early Crawford, Ansdon's June, Old Nixon, Mountain Rose, Beatrice, Early Rivers, Early Canada, Louise, Foster, and a number of seedlings.³⁵ Mr. George Cox,

of Goderich township, produced four fine seedlings -- three free-stoned and one cling -- after experimenting for several years. The most popular peaches were Alexander and Beatrice, but the latter was too small to be a valuable market fruit.

Peaches were not grown for marketing purposes to any great extent except in the region about Goderich. The home demand was usually sufficient to consume the whole crop, although the finest varieties were shipped to Toronto and intermediate points. Prices ranged at from \$1.50 to \$3.50 per bushel at these places, and 60 cents a home. In 1880, growers were beginning to look towards Chicago and the western states as prospective markets.

Grimsby was the main source of peaches, which had been planted as a commercial venture in 1856. By 1875, a shipping station was erected at Grimsby to handle surplus production, and five years later, a company was formed by Grimsby peach-growers. In 1880, 70,000 baskets of peaches were shipped from Grimsby, mostly to Ontario cities.

Apricots, Nectarines, and Quinces. Apricots, nectarines, and quinces were not largely cultivated, being grown chiefly by amateurs for home consumption. The best nectarines were Moorpark, Barton, Stanwick, Early Golden, Breda, Kluge, and various seedlings. Most of these were grown along the lake shore, near Goderich. A seedling had been growing for several years inside the prison wall at Goderich. The apricot ripened in July or August, and was considered a fine fruit for preserving.

The most popular varieties of quince were the Orange and Angiers, which yielded regular crops. Not many growers were interested in the cultivation of the quince, however. In the words of one Huron farmer, the quince was a veritable "outcast": "The wayfaring cow is not shunted off for browsing on

the quince, nor the school-boy checked for whittling it up into switches."³⁷

Quinces succeeded best in clay loam which was thoroughly drained and fertilized with salt.

Melons. Water-melons were grown by amateurs for home use, although there was a ready sale caused by local demand. The most popular varieties were Black Spanish, Goodwin's Imperial, and Mountain Sweet. Musk-melons were also grown by amateurs; the best variety was Nutmeg.³⁸

Grapes. In February, 1870, Mr. Peter Adamson, secretary of the Goderich Horticultural Society, declared that all varieties of grapes, whose period of ripening was not later than that of the Concord, grew well in that vicinity. In 1871, two interesting letters,³⁹ attesting to the excellence of the area about Goderich for grape-growing, appeared in the "Weekly Globe". The first letter was from "B", Grand Island:

"All along the coast, from Goderich to Lyell Island, on the east coast of Lake Huron, are to be found the proper conditions for grape- and fruit-growing, and wine-making. I am an American, and have some knowledge of grape-growing, and it is my opinion that this strip from Goderich to Lyell Island is the best section in the whole lake region, or for that matter, on the continent, for growing grapes; every acre there is worth thousands of dollars to the prospective fruit-grower So far, for this district, the best grapes are: Ivo's Seedling, Delaware, and Catawba."

In the second letter, J. Keller, of Lancaster (Erie County, New York) stated that he had been informed by a German friend, a Mr. Schaffer, that the east coast of Lake Huron, from Goderich to Southampton, was the best region in the continent for growing grapes for wine-making. (Mr. Schaffer, at that time, was engaged in planting vineyards on the east coast of Lake Michigan.)

By 1878, grapes were grown extensively in Huron, but farmers were slow to realize the value of this fruit, and therefore often slackened in pruning and cultivating their vines. There were no very large vineyards:

three acres constituted the largest area of any Huron vineyard. In cultivating, the vines were either grown in rows eight feet apart, on trellises, or on poles with pins driven through, so that they projected about fifteen to eighteen inches on either side of the pole. Many farmers grew them along fences, on galvanized wire. At Goderich, the weather was so mild that vines were left on the trellis all winter without danger of being killed. Two methods of cultivation were advocated by successful growers: (1) alternative method: the growing of canes which the following year would bear fruit; (2) renewal method: the growing of one or two main or lateral canes, from which canes were trained or tied up on wires or slats: these were cut back every fall to one or two buds, which were to form next year's canes.⁴⁰ Various methods of pruning were employed. Some cultivators grew two arms and some three, so that one could be cut out, and while two were bearing, a third was in the process of growing out. Other cultivators grew arms, and followed the renewal system by canes grown from these arms.⁴¹ Some pruned in fall, others in March. The best fertilizers for grape-growing were stable manure and wood ashes.

Delaware and Concord grapes were considered the most profitable for market purposes. Mr. Stewart, of Goderich, cultivated these varieties on a large scale as early as 1869. Dr. Smale, of Wrexeter, experimented with the Salem grape in 1874. Five years later, the Ontario Fruit Growers' Association distributed specimens of Burnet grape vines, which were found to succeed in Huron.⁴² Other varieties grown included Hamelan, Hartford Prolific, Creveling, Catawba, Niagara, Brighton, Wilder, Clinton, Allan's Hybrid, Isabella, Rogers' Nos. 3, 4, 15, 19; Ives' Seedling, and Arnold's Brant. The best white grape was Niagara.⁴³

The local markets consumed most of the grapes grown, although quantities were shipped to Toronto, London, and other Ontario points. The average price ranged from six to ten cents per pound, wholesale. Not much wine

was manufactured, except that made by amateurs for home use. Clinton and Creveling grapes were often mixed together in wine-making.

Cherries. Cherries succeeded very well in Huron, and numerous varieties were grown. The most popular were Elton, May Duke, Early Richmond, Black Tartarian, Kentish, No Plus Ultra, Elkhorn, Yellow Spanish, Cleveland, Napoleon (the last four are of the Bigarreau species), and several seedlings. The best cherries for market and preserving purposes were No Plus Ultra, a bright crimson and yellow Huron seedling, the Early Richmond, and May Duke; Kentish cherries, which had been cultivated as early as 1869, were especially favoured for preserving.⁴⁴ In 1880, Mr. Charles Arnold, Paris, tested a seedling which had been growing for some years along the banks of the Maitland River, near Goderich. This cherry grew all along the branches of the twig, and not on spurs as did most cherries; it proved to be an excellent fruit for shipping.⁴⁵ Huron exported cherries to eastern counties, particularly Perth County. The home market consumed most of the crop, at from six to ten cents per quart. The profitability of shipping to England had not been examined by 1880.

Strawberries. Strawberries were grown over the whole Huron district by regular growers for market, and in small garden plots for private consumption. The most popular varieties were Wilson's Albany, Triomphe de Gand, Monarch of the West, Sharpless, Green Prolific, Colonel Cheney, Charles Downing, Arnold's Nos. 3 and 23, Crescent Seedling, Russell's Prolific, New Dominion, Cumberland Triumph, and Jacunda.⁴⁶ For several years, Wilson's Albany was grown exclusively, but Arnold's No. 23, Crescent Seedling, and Colonel Cheney also proved to be excellent "shippers". Sharpless was not grown much before 1878, but it rapidly became a favourite. The principal cultivators of strawberries in Huron County were Mr. Fred Seegmiller, of Goderich township, who had eight acres, and

Mr. John Stewart, Banniller, who had three acres. In 1880, they reported an average yield of 2,500 quarts per acre.⁴⁷ Mr. Latouzel, Cherrydale Farm, imported plants of the Alton Pine from the Island of Jersey, but these did not thrive. Another Huron grower planted an acre of Triomphe de Gand, and sold the crop locally, with gratifying results.⁴⁸

In cultivating strawberries, the grower planted vines in the spring, in rows fifteen to twenty inches apart, or potted them from runners during August. The bed had to be frequently changed, as strawberries feed from the surface soil only. The "row" system of strawberry culture was adjudged by Huron growers as more profitable than the "hill" system. After two full crops, the vines were usually renewed.

Strawberries found a ready sale in local towns and villages, although shipments were made to Toronto, Stratford, and Mitchell. In fact, one Huron grower supplied most of the dealers in Stratford. Prices ranged from six to ten cents per quart wholesale, and from ten to twelve cents retail; sometimes, for extra early fruit, twenty-five cents was obtained.⁴⁹ Oakville was regarded as the most prolific strawberry-growing area, and, by 1880, boasted annual shipments of 120,000 quarts.

Raspberries. Raspberries were not cultivated to any large extent in Huron County, owing to the prevalence of large quantities of the wild fruit. Growers in 1880 believed, however, that within a few years there would be a great demand for them, and consequently, several cultivators were planting the best varieties.⁵⁰ Those which were tested in Huron included: Philadelphia, Antwerp,⁵¹ Franconia, Turner, Brinkle's Orange, Herstine, Highland Hardy, Brandywine, Arnold's Diadem, Clark, Kirtland, Cuthbert (red varieties); and Gregg, Doolittle, Davison's Thornless, and Ontario (black varieties). Philadelphia and Gregg

were the best in their particular groups. All these specimens proved to be hardy growers along the lake-shore region. The Mammoth Cluster was also a prolific bearer. One grower near Seaforth planted a variety sent out by the Ontario Fruit Growers' Association, about 1875, but it spread too rapidly by suckering, and had to be rooted out. Not much of the cultivated fruit found its way to market, because wild raspberries sold so cheaply -- at about sixty cents to one dollar per patent pail, which contained about twelve quarts. The cultivation of raspberries on a large commercial scale was precluded by the exportation of plants to the United States, and by excessive clearing of bush-land and shrubbery.

Blackberries. Blackberries were grown mainly by amateurs, who experimented with several cultivated varieties, including New Rochelle, Lawton, Wilson's Early, and Kittatinny, all of which proved to be hardy in the Huron district.⁵² Of these, the most popular was the Kittatinny, which bore well and regularly. The supply was not equal to the demand, and sold at ten and twelve cents per quart readily. Wild berries were largely sold on the home market. A wild black berry, known as the thimble-berry, was highly esteemed, both for eating, preserving, and shipping.⁵³

Gooseberries. Gooseberries were grown in large quantities, both for domestic use and for the local market. Several varieties, both domestic and foreign, were tested, with varied results; the main objection to imported varieties, e.g. English specimens, was that they tended to mildew badly. The favourite varieties were Houghton's Seedling, Smith's Improved, and Downing's Seedling, which was tested by Dr. Scales, of Wroxeter, in 1874, on the advice of the Fruit Growers' Association.⁵⁴ Other varieties grown were Smith's White, Hedgehog, and Crown Bob.⁵⁵ The local market generally bought all crops, at a price of

from six to eight cents per quart.

Cranberries. A large supply of wild cranberries was grown on marsh-lands in Huron, but in 1880, with the prospects of increased drainage operations throughout the county, the market would now demand a supply of fruit by regular cultivation. It was suggested that the Maitland Flats near Goderich would prove excellent for this purpose. ⁵⁶

Currants. Red and white currants were grown largely by amateurs; black currants, which were not a native of the district, were cultivated for the local market, as there was a great demand for them. The most popular red and white currants were the Cherry and the White Grape, which sold at seven and six cents per quart, respectively. Black Naples and Lee's Prolific, highly esteemed black currants, brought from ten to twelve cents per quart. ⁵⁷

REFORESTATION.

Reforestation did not become seriously considered in Huron County until about 1877, when the Goderich town council inaugurated the movement by offering twenty-five cents for every shade tree planted and successfully grown for three years. ⁵⁸ Ontario farmers had been urged by the "Weekly Globe", as early as 1872, to plant ornamental shade trees, in the interests of improving the desolate appearance of the countryside. ⁵⁹ The question of tree planting was rapidly coming to the fore in the United States, in 1872. The province of Quebec had begun to consider it two years earlier, and even studied an act to foster and regulate the planting of forest trees, but nothing was accomplished in this respect. Tree planting was very brisk in Guelph, in ⁶⁰ 1876.

Several factors directed the attention of Huronites to the importance of planting fruit- and forest-trees, during the late 'seventies. In the first

place, the depletion of forests was becoming serious: less than 30 per cent. of the area of the county, or 369,519 acres, was covered with bush-land. (Consult table, p. 188). This area was covered largely by maples, beech, elm, hemlock, basswood, birch, cherry, ironwood, butternut, willow, and sumach, with occasional specimens of oak, hickory, and ash; cedar and pine were scarce. Several forest fires, in 1879 and 1880, destroyed much timber. The shortage of firewood was becoming acute in some sections; in 1878, Huronites paid \$3. per cord for wood which, thirty years before, would not have brought \$1.25. There was an increasing demand for wood for the manufacturing of ships, furniture, implements, railway ties, and fences. Moreover, maple syrup and resin were becoming more difficult to procure.

In the second place, western Ontario was being surpassed as a grain-growing area by the Canadian western prairies: if this continued, it was apparent that the Ontario farmer would have to direct his efforts into new channels, in order to depend upon agriculture for a livelihood.⁶¹ The most logical channels were fruit-growing, forestry, and dairying. Canadian fruit -- hardy and luscious -- was becoming increasingly popular in Great Britain and the United States.

Numerous trees were killed by cattle, which rubbed their necks against the bark, and which trampled vegetation and the soil at the base of the trees, thereby packing the soil and preventing access of sunlight and moisture.⁶² The fact that animals, especially cows, were allowed to run at large, was one reason why the offer of the Goderich council to pay bonuses to tree-planters failed to accomplish a great deal. No one took decided steps to remedy the situation with respect to vagrant cattle, as the cry of "the poor man's milk" was at once raised!⁶³ Three large-scale planting enterprises were undertaken during 1877-78, by Mr. J.M. Allan, Goderich, who planted

four hundred trees, a Wroxbster farmer, who set out more than three hundred evergreens, and Mr. H.Y. Attrill, Goderich, who planted five hundred grapevines in front of his residence.⁶⁴

It was urged in Huron County that the agricultural societies offer prizes to induce farmers to protect their farms by planting shelter belts; another suggestion was to educate the younger generation properly, in this respect. Still another suggestion was that municipalities should accept, in lieu of taxes, a certain amount of roadside tree-planting by property-owners.⁶⁵ Universal experience indicated that grain-crops were protected and benefitted by a proper screen of forest trees; if this screen was too wide or dense to allow a free passage for air and sunlight, however, the crop was apt to be injured. Tree screens or belts not only broke the force of winds and frost, but offered nesting-places for birds, and shade for livestock. Norway spruce, maple, and elm, provide the best forest screens.

The subject of forestry appealed to the aesthetic, as well as to the material, sense. Forests enhanced the appearance of the farm, and presented more beautiful scenery than did barren landscapes. Orchards began to be planted on a large scale, about 1878, and the inexperience of farmers in this phase of husbandry was indicated early. When the majority of orchards were set out, the tendency was to plant the trees in rows too close together.⁶⁶ In several instances, orchards were often neglected, and pruning was done at random. Large limbs were cut out to admit sunlight and air, whereas if the tree was trimmed regularly from youth, this system of "butchering" would be obviated. Huron farmers gradually gained in experience, however. One Goderich farmer, following the procedure of Maine farmers, planted peach trees on the north side of a fence, where they thrive; previously, he reported, trees planted

on the south side were killed by frost.⁶⁷ Most Huron farmers were of the opinion that the proper treatment of bearing orchards was to seed down the orchard in grass, and to mulch liberally with barnyard manure;⁶⁸ this treatment did not apply to very young trees, as grass choked them. Grafting became quite common in the late 'seventies, and letters from Huron farmers seeking information on grafting appeared in the "Weekly Globe".⁶⁹ On the whole, by 1881, Huronites were taking better care of their orchards and trees, and, when cutting firewood, made use of fallen timber as much as possible.

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CHAPTER X

Interlude: a Chapter on Pests.

Throughout his days, the Huron farmer was constantly pitted against numerous enemies, ranging from the microscopic wheat midge to the dapper, loquacious tree-salesman. The weather with its over-doses of drought, heat, frost, and blight, also had a profound effect on the economic welfare of the agriculturist. A letter¹ written by a Huron farmer in 1868 conveys an idea of the typical problems which the farmer was called upon to solve:

"We have had a terrible drought and heat, up to August first, when we got some showers. The early sown spring wheat will scarcely be worth cutting, being completely eaten out by the midge Peas are shrivelled up with the heat How can I guard against wild oats?"

Huron farmers were ever anxious to learn the identity of various insects, in order to combat them successfully, and often forwarded specimens to the offices of agricultural publications. In 1869, a Bayfield farmer² submitted four specimens of harmful insects: a white grub, which destroyed potatoes, corn, and strawberries; a "woolly bear" caterpillar, which preyed on several plants; a saw-fly, which attacked currants and gooseberries; and a turnip-fly, which was as destructive as it was common. The pests³ which caused great concern among Huron farmers, prior to the 'eighties, may be classified generally as those which were injurious to grain, root, and vegetable crops; those which harmed fruit; weeds; birds; and fruit-tree peddlers.

From 1840 onward, wheat was afflicted by several enemies, including rust, mildew, the midge, Hessian fly, grub, weevil, and grain aphid. The fall wheat crop in Canada West in 1842 suffered considerably from rust and mildew, to the extent of one-third the entire harvest.⁴ Rust was especially destructive in Huron during the 'forties⁵ and the late 'seventies.⁶

The midge was an insect smaller than the mosquito, with an orange-coloured body, slender legs, and transparent wings, which deposited its eggs in the soft ear of wheat during the few days when the plant was in blossom. It arrived in the province of Quebec at about 1828, in some unthreshed wheat, spread rapidly over the northern⁷ and eastern states, and by the middle 'fifties reached the American west.⁸ By 1852, it had reached Belleville, and was held responsible for a decline in yield of from twenty-two to six bushels per acre in several counties of Upper Canada.⁹ From 1856 to 1858, the midge was so disastrous in Kent, Lambton, and Middlesex Counties,¹⁰ that farmers began to consider seriously the cultivation of hemp instead of wheat.¹¹ In 1856, the damage to wheat in Upper Canada was estimated at more than two million dollars. During the next four years, many farmers gave up wheat cultivation entirely. Huron County was seriously afflicted in 1863-65,¹² as was most of the province, and in 1868, spring wheat was "completely eaten out by the midge":¹³ in South Huron, fifty per cent. of the wheat, and in North Huron, thirty-three per cent. of the wheat, was destroyed.¹⁴ The midge attacked fall wheat principally, and the most effective remedy was to sow the grain early or late enough to avoid the brief period of the insect's depredations. For the most part, during the 'seventies, the wheat midge's activities in Huron County were not noticeably great.¹⁵

The Hessian fly, which attacked the stem of wheat,¹⁶ became a scourge in New York state and in several sections of Upper Canada during the early 'forties. The insect first made its appearance in Black Sea or Odessa wheat, and for some years Canadian farmers were warned to refrain from planting this variety of wheat.¹⁷ The most effective remedies included the preparation of the seed with a lime wash, and the ploughing under or burning, of stubble.¹⁸

As early as 1842, grub- or cut-worms were noted in wheat-fields in the Huron district.¹⁹ Excerpts from letters written by "Inquirer," of Turnberry, in 1867-68, describe the ravages of these insects. In his first letter,²⁰ he wrote:

"In this county, and in two neighbouring counties, in 1865, spring wheat was an excellent crop, averaging twenty-five to thirty-five bushels per acre, with no appearance of grub But in 1866, spring wheat was a failure: every crop was affected."

In his next letter,²¹ "Inquirer" described the grub, and sought to learn its identity:

"When the wheat reached four or five inches in height, it began to wither and die A little under the surface the grub was found it was about an inch long, with a dark brown head."

The grub was believed to be a species of cut-worm. "Inquirer's" third letter²² indicated that the cut-worm did not appear at all in 1867.

A species of weevil was often confused with the midge, but was not known in Upper Canada until a later date, at least not before 1858.²³ This weevil was destructive to spring wheat in 1879, in the vicinity of Seaforth.²⁴ In 1862, the grain aphid, hitherto unknown, appeared²⁵ "in almost every part of the province [and] multiplied with extraordinary rapidity, till every standing stalk of grain was thickly studded with hundreds of insects,"²⁶ thereby causing serious losses. During the fall of 1881, farmers near Brussels reported their discovery of a strange insect which ate the stalks of red wheat, and caused the grain to present a red and unhealthy appearance.²⁷ The depredation of these "enemies" of wheat were hailed by many farmers as "blessings in disguise", for, partly because of them, farmers were compelled to adopt mixed husbandry.

Corn suffered from the attacks of a species of grub, as early as 1869, at least.²⁸ The pea-bug, or pea-weevil, which appeared to have begun its ravages in the southern counties and gradually penetrated north, did not cause serious damage in Huron County until 1874.²⁹ In 1877, Mr. Dickson of Tuckersmith, received a prize for the best black-eyed Marrowfat peas at the provincial exhibition, but the pea-weevil caused his crop to fail so completely in 1879, that he did not sow one bushel of peas in 1880.³⁰ The weevil caused so much damage throughout the county, that steps were urged to devise a means of extermination, as peas were considered a valuable stock-feed, and essential in a successful system of crop rotation.³¹ Many farmers in Tuckersmith and Bullett began to plant corn and artichokes extensively for stock-feed, instead of the customary peas.³²

A species of potato beetle was noted, in 1869, in the district about Eramosa (Wellington County).³³ In April, 1870, warnings began to be sounded of the eastern march of the Colorado potato beetle, which was gradually approaching the Great Lakes region. Three months later, the advance guard of this insect invaded Canada at two points, -- near Windsor, and at Point Edward, near the southern extremity of Lake Huron.³⁴ An editorial in a May, 1871, issue of the "Globe" describes the advance of the beetle into Essex, Kent, and Lambton Counties. By June, the beetle was found in many sections of western Ontario;³⁵ two years later it had reached Prince Edward County.³⁶ In 1872, in London, "the beetles literally swarmed, and thousands were daily trodden down on the sidewalks and streets."³⁷ The potato bug ravaged Huron County, as it did other areas, especially during 1872-74, but by 1875, it had somewhat abated.³⁸ G.H. Green, who spent several years of his boyhood in Ashfield, humorously describes his first sight of the pest: "Father tried to kill it with tobacco smoke, but the bug just rolled on its back and played 'possum.'" Despite the

depredations of the insect in Huron in 1876, Clinton farmers gathered the most bountiful harvest of potatoes since the time of "the great rot."⁴¹ In 1878, it was stated that potato bugs did not appear to be as numerous about Seaforth as they had formerly been.⁴² Meanwhile, the bug had reached the Ottawa valley, b. 1876, and eventually arrived in New Brunswick by 1882-83.⁴³

Potato crops were so severely afflicted that remedies were desperately sought by thousands of farmers.⁴⁴ In 1871, the "Canada Farmer" advocated the planting of only a few potatoes, in a field thickly surrounded by rows of Indian corn, -- possibly in the hope that potato beetles were indolent creatures which disdained to search for their lunch.⁴⁵ Another method⁴⁶ entailed hand-picking and destroying the insects every day, -- a process which was universally adopted, with a fair measure of success.⁴⁷ In August, 1871, the "Canada Farmer" published an article⁴⁸ entitled: "The Potato Pest and Paris Green", written by William Saunders and E.B. Reed, who urged the use of Paris green in combatting the scourge. Paris green was used successfully in Huron County, during the following years.⁴⁹

The considerable number of unsuccessful methods used in combatting this pest prompted one witty farmer to submit an original formula:⁵⁰

"Mix one gallon of prussic acid with three ounces of dynamite; stir well, and administer a tablespoonful every hour and a half till the bug shows signs of weakening. Then stamp on him."

During 1876-77, swindling salesmen travelled throughout Huron County, selling a "sure-cure" for potato bugs: in a sealed package, which was not to be opened for a certain period of time, were two blocks of wood, each of which contained separate inscriptions, viz.: "Place the beetle on this block," and "Swab him with this one!" By 1880, the potato bug was "no longer looked upon as a formidable enemy, in the face of more destructive ones," in Huron's fruit orchards. Several farmers claimed that benefit was derived from the insect,

which provided food for poultry.⁵¹

The cabbage butterfly, European in origin, was first noted in America in the neighbourhood of Quebec City, at about 1857.⁵² It spread south and west, reaching New Hampshire, by 1866, New York State, by 1869, Virginia, by 1873, and Port Hope (Durham County), by 1873-74.⁵³ A letter written from⁵⁴ Goderich, in 1878, described the depredations of the cabbage worm, which had destroyed much of the crop in that district during the previous year. Two years later, the insect was not as harmful as it had been. The most effective remedy was to pour hot water over the cabbage-heads.

The turnip-fly was common in Huron during the 'sixties, and was destructive for several years; it was discovered that early-sown turnips were most susceptible to the fly's attack.⁵⁵ Ants were occasionally destructive in Huron: in 1872, Peter Cooper settled in Tuckeramith, near the eleventh concession; his log-house became so overrun by ants that he and his family were compelled to build another home elsewhere.⁵⁶ In 1873, grasshoppers were exceedingly numerous in the county, damaging hay-crops,⁵⁷ but the terrible locust plague of 1874 in the Canadian and American west did not reach Ontario.⁵⁸ In 1880, onions were severely afflicted by grubs, but applications of lime and salt were effective in destroying them.

The ravages of insects and fungi were also felt to a considerable extent in Huron's orchards. Various species of grubs, caterpillars, and flies troubled the county's fruit-growers from 1840 onward.⁵⁹ In 1870, fruit-trees suffered from the ravages of mice, and farmers lost from fifty to seventy-five per cent. of their trees. A remedy submitted by "J.L.", of Rogerville, was to erect a cone of earth above the snow, as the mice committed their damage by burrowing under the snow.⁶⁰ In 1871, a species of small, red-shelled, black-spotted beetle was found to infest many of the fruit-trees in the Huron

district.⁶¹ At Goderich, in 1871, a Mr. Van Wagener demonstrated an insect-destroying instrument, in which a rotary fan created a wind, which dusted sulphur, hellebore, and other powders on afflicted trees.⁶² The invention of an apple-worm trap, at about this time, by Thomas Weir, of Lacon, Illinois, indicates how American farmers were similarly taxed to seek remedies to protect fruit.⁶³ In 1877-78, a mixture of salt and ashes was used successfully in Huron orchards to destroy noxious insects.⁶⁴ In June, 1877, caterpillars were unusually harmful around Exeter, and it was feared that the fruit crop would be a total loss.⁶⁵ At this time, a Mr. Searle, of Clinton, invented a contrivance for removing caterpillars' eggs.⁶⁶ During the summer of 1878,

"a gentleman in Clinton offered some children a cent a piece for caterpillars picked off his trees; they quickly secured six hundred, when he told them he would have to reduce the premium to half a cent, and they struck work."⁶⁷

The chief enemies of the apple were the codlin worm, tent caterpillar, and blight. While the codlin worm became more and more prevalent every year, the tent caterpillar was troublesome only during the years 1877-78. There were two remedies for the worm: many growers preferred to build fires under the trees during blossom-time, thus attracting the moths into the flames; other growers tied strips of cloth around the trees in order to collect the larvae. The remedy for the caterpillar was to destroy the tents early in the season. In 1878, there appeared in the vicinity of Seaforth an insect which threatened to destroy the apple buds: this insect was believed to be the leaf-roller, which had already proved to be destructive around Toronto.⁶⁸ Twig blight attacked the Keswick Codlin, Rhode Island Greening, and Transcendent Crab, more than any other varieties, and was not considered a serious impediment to successful apple-growing.⁶⁹

Pear blight appeared in Huron at about 1872, and by 1880 it was quite common, in many instances destroying the whole tree.⁷⁰ The two most effective remedies were pruning and the application of linseed oil as a wash; the oil loosened the bark, and permitted the unrestricted circulation of the sap. At Goderich, growers who tried the latter remedy reported that their efforts were successful. Several farmers mulched their trees lightly in summer and heavily in winter, to prevent the frost from harming the roots; orchards in which this method was practised were seldom affected by blight. The bark of some varieties of pear-trees (e.g., Flemish Beauty) was subject to spotting and cracking. Borers were not common in Huron by 1880, although slugs caused some damage. The slug was successfully combatted by dusting the trees with common dust, plaster, lime, or dry ashes.

The cultivation of the plum was not considered profitable in Huron after 1873, owing to the ravages of the curculio, black knot, and rot. Many growers were so discouraged at the lack of effectual remedies to control the curculio -- "the little Turk" of Huron orchards -- which first appeared at about 1874, that they were cutting their plum-trees to the ground, in 1881.⁷¹ During the first years of its appearance, the curculio was regarded more as a benefit than a drawback, because, formerly, the crops were so heavy that they caused the branches to break. The curculio, by its ravages, relieved this "difficulty", but by 1880, "he took the whole crop".

Numerous remedies were applied in order to subdue this pest, notably the tedious one of "jarring the trees", from blossom-time until two or three weeks later, and catching the insects on cloth which had been spread on the ground. A Hamilton fruit-grower, in his efforts to combat the insect, arose at dawn, "for then his [the curculio's] wings and joints are stiff", and by dint of striking each tree with a mallet brought down the beetles and diseased fruit, which were caught in sheets and destroyed.⁷²

"Under the power of such a storm, after the first few mornings, the enemies' numbers grow small and by degrees beautifully less, until at length the war cry of the last 'Mohegan' sounds a solemn dirge in the dewy morn."

A more ingenious farmer, after draping sheets beneath his trees, placed among the branches saucers containing lime and sulphuric acid, "the fumes of which brought down all kinds of creeping things, among which were some curculio".⁷³

In 1869, a device appeared on the market in the form of a "catcher", shaped like a modern life-net,⁷⁴ which proved more effective than sheets. A similar form of curculio-catcher was devised in 1872 by Dr. Hull, of the Alton (Peel County) Horticultural Society.⁷⁵ By this method, 275 trees could be gone over within one hour. Another remedy was to inject solutions of corrosive sublimate into the trunks of the trees.⁷⁶ Salt, when used in large quantities, had some effect on the curculio, but lime had no effect whatever. Many farmers allowed their swine to run about in the orchards and eat the diseased and fallen fruit,⁷⁷ -- a practice which contributed somewhat towards holding the pest in check.

In 1870, the Ontario Fruit Growers' Association established a bounty of ten dollars per thousand on curculios, which were to be forwarded for examination to William Saunders at London.⁷⁸

Black knot, propagated largely via Huron seedlings, was quite common after 1874, but it was not regarded as formidable, as it could be reasonably controlled by cutting. There was considerable agitation in some parts of the province for legislation to deal with black knot, which was becoming a serious menace in several localities. In this connection, it should be mentioned, both black knot and the curculio had been serious problems in Lambton County as early as 1869, five years before they made their appearance in Huron County. In 1869-70, rot appeared in plums in the Goderich district, and threatened to spread. Mr. A.M. Ross, of Goderich, who was a director of the Fruit Growers'

Association, took up the matter at the annual meeting in October, 1870, but
⁷⁹
 nothing was done. From 1876 to 1880, the rot was very destructive in Huron,
 chiefly because no successful remedy was found. Some persons contended that
 rot was an atmospheric fungus, others that it resulted from the sting of the
⁸⁰
 curculio!

In 1867-68, the "Canada Farmer" listed twenty-one insects which were
 injurious to grapes, but until 1871, there were only a few of these pests
 which engendered great alarm. The most destructive enemy of the grape was
 mildew, which prevailed in areas where drainage and cultivation were deficient.
 Applications of powdered sulphur, by means of Van Wagener's patented "sulphur
 blower", proved to be the best remedy. In combatting thrips or grape-vine
 "tree-hoppers", the only effective remedy was to carry a torch near the vines,
 at night: the thrips flew into the flame and were destroyed.⁸¹ The grape-vine
 louse, already considered a serious pest in Europe, made its appearance in
 Ontario in 1874.⁸² Frost harmed several varieties of the fruit, such as Delaware,
 and improved others, such as Arnold's Brant. Grape rot made its first appear-
 ance in Huron County in 1879, when it attacked Rogers' Hybrids.⁸³ White grapes
 were affected by boring worms.

One of the most destructive enemies of currants was the currant-
 worm. In May, 1869, a Clinton farmer described, in a letter to the "Canada
⁸⁴
 Farmer", how he dealt with the currant-bush caterpillar: "I dig out the earth
 around the bushes to a depth of two or three inches I have tried
 hellebore; but I find that this destroys only those [caterpillars] on the
 bush, and doesn't touch the eggs in the earth." The "Canada Farmer", however,
 asserted that this method was not very effective, as the caterpillar's eggs
 were not laid in the earth; what the Clinton farmer had thought were eggs were

the pupae of the saw-fly caterpillar. Thus the saw-fly made its first appearance in Huron, in 1869, and proved to be even more damaging than the currant-worm.⁸⁵ The most effective remedies were white hellebore, dry ashes, and lime.

The remaining varieties of Huron County's fruit were affected in a lesser degree by the ravages of insects and other "children of nature". Peaches, as late as 1880, were free from "yellows", a destructive peach disease, which had been particularly harmful in the Niagara district.⁸⁶ The curculio and borer were not very destructive to Huron's peaches, but the curculio affected both apricots and nectarines, while the apricot's most serious enemy was the borer.⁸⁷ The chief enemies of the cherry were robins, blue-flies, fungus rot, leaf-slugs, and grubs; the curculio was not very destructive. Gooseberries, especially imported varieties, tended to mildew badly. The most effective remedies for mildew were applications of sulphur, a mulch of soft hay, or boards placed under the bushes to decrease dampness.

Several agencies combined to wage successful opposition against the depredations of these pests. First and foremost were the farmer's own initiative, ingenuity, and perseverance; and closely linked with the operations of the farmer was the work of the Entomological Society, which was formed at Toronto in 1863. Information concerning remedial measures against insects and weeds was constantly disseminated via agricultural journals and the "Canadian Entomologist", which first appeared in 1868.

Weeds were described by one Huronite as "eminently prolific species of spontaneous productions that appear with a degree of certainty and regularity in many sections of the province". In 1880, the principal weeds in Huron County included the Canada thistle, fox-tail, couch-grass, ox-eye daisy, wild mustard, and rag-weed. The thistle was little known in Upper Canada, even

by 1852,⁸⁹ and the first mention of it in Huron County occurs in 1866, when Buckland stated,⁹⁰ in reference to his visit to that district: "I heard many complaints of the recent introduction and spread of the Canada thistle." Thistles were reported in 1868 to have infected many of the townships neighbouring on Howick, and had proved so destructive in other parts of the province that legislation had been passed to curb it. In 1865, the Canada Thistle Bill provided for the appointment of highway overseers to destroy the weed,⁹¹ and subsequently a second statute was passed, whereby farmers who allowed thistles to run to seed on their property were to be fined four dollars and costs.⁹² Frequently, farmers turned out "en masse", -- for example, in Tuckersmith, in August, 1876, -- in order to cut the thistles and weeds which infested the roadsides.⁹³ Four years later, it was complained that the Canada Thistle Act was a "dead letter", in Goderich, Hullett, and Tuckersmith townships, which contained prolific crops of the weed.⁹⁴ Many farmers held the opinion expressed by one Huronite to the Agricultural Commission⁹⁵ "I don't think the law for their destruction is particularly efficacious."

Canada wild oats, which appeared in Huron at about 1868, also presented a difficult problem. This plant was first noted near Stratford, and was believed to have been brought into Ontario by German settlers.⁹⁶ From 1868 to 1880, there was a rapid propagation of other weeds in various sections of the province, and chess,⁹⁷ sow-thistles, docks, mustardweed, ragweed, ox-eye daisies, and mulleins reigned supreme in deserted fields and along roadsides.⁹⁸ The Ontario Grange advised the government to make an effort to combat them, with the result that, in 1884, the Noxious Weeds Act was passed. This act listed noxious weeds and plant diseases (e.g. black knot and "yellows") to be destroyed, and advised township councils, following application by fifty

or more ratepayers, to appoint an inspector of noxious weeds.⁹⁹

Blackbirds and robins were destructive to fruit crops, even as they had been in the early days of settlement. During the 'sixties, an additional "bird of prey" appeared on the scene: Colonel Rhodes of Quebec City, introduced a colony of English sparrows for the purpose of destroying insects. In 1870, two Ontarians followed his example, but the sparrow was easily acclimatized, and "by 1874, the wails of the suffering farmers were already ascending in increasing volume."¹⁰⁰ English sparrows appeared in the area about Toronto in 1875,¹⁰¹ and near Goderich in 1877.¹⁰² A society was formed at Sarnia in 1878 to promote the proper protection of insectivorous birds.¹⁰³

From the date of the first agricultural fair, at which "vendors and whiskey sellers had their stalls,"¹⁰⁴ the Huron farmer was constantly victimized by other "enemies," to wit, swindlers, dupes, and "fakers." The county bumpkin was looked upon as the ideal patron "of all wheels of fortune."¹⁰⁵ Throughout the remainder of the century, nefarious schemes were devised to defraud the farmer in practically every branch of agriculture. Perhaps the worst enemy encountered by farmers was the swindling fruit-tree peddler, whose influence was a major factor in the retardation of the development of horticulture in several parts of Canada. The outbreak of the Civil War removed the southern states as a potential market for the "artificially forced shrubs and cast-offs of established nurseries" in the northern states, which had sold in good faith to southern farmers. Tree salesmen accordingly began to direct their efforts towards Canada,¹⁰⁶ during the early 'sixties, and by means of their "picture books" and "high pressure sales talks" were easily able to take advantage of gullible farmers. These peddlers have been aptly described by Mr. Allan, of the Goderich Horticultural Society:

"[The fruit-tree peddler is] the genuine walking vocabulary, who carries a plate book or jar of fruit, as well as a winning smile, a glib tongue, and usually represents some bogus nursery or tree brokers advertising themselves as nursery men. We have frequent visits from these gentry in Huron So far as I have been able to discover, these swindles are all perpetrated by agents who represent American firms¹⁰⁷ [which] in Rochester are called 'one horse nurseries' These 'small fry' generally change the name of their nursery and proprietors every two or three years."¹⁰⁸

The distrust in fruit-growing that followed the influx of these peddlers caused many Canadian farmers to become reluctant to forsake wheat-growing; for instance, there were no orchards, nor any interest in them, to be found in Glengarry County, as late as 1872.¹⁰⁹ It was noticed by the Committee on Fruit at the fall shows in Huron County, in 1872, that the names of numerous specimens had been erroneously appended -- a condition which was rightfully attributed to the misrepresentations of nursery-men.¹¹⁰ Five years later, a local tree-agent at Goderich became incensed at the Goderich Horticultural Society, which he accused of being an agent for nurseries. The society admitted that it advertised for both Canadian and American nurseries, but declared that it forwarded orders only at the request of farmers.

Apple-trees sold by swindlers were invariably root-grafted; in August, 1879, the Goderich "Signal" reported that "the latest sell is from two tree agents, who are selling apple-trees at forty cents each, said to be free of every insect that afflicts the apple."¹¹¹ Pear-trees, budded on the stock, were entirely unsuited to the Canadian climate. Plum-trees were usually budded on the peach stock, because this was the cheapest and easiest method to nurse them to small trees; in this way, trees would be ready for sale within two years. It was declared in 1861 that "all the imported plums [were] dying all over the country," but this state of affairs did not affect Huron

County, which was in the early stages of plum cultivation. Ornamental trees, such as arbores vitae and balsam firs, were often taken from Canada to the United States, nursed, and resold to Canadians. Tulip trees, procurable at local Canadian nurseries at from 25 to 50 cents, were sold by peddlers at \$2. Rose-bushes which the agent of the firm of Stone and Wellington sold at \$1 each, at Goderich, could be purchased from Alex Watson, a local dealer, at one-half that price.¹¹² During 1879, salesmen sold grape-vines at \$1.50 and \$2 each, which the Goderich Horticultural Society was capable of supplying for 30 and 50 cents respectively.¹¹³ The cherry-trees which were sold were chiefly of the Bigarreux variety, and were not entirely suited to the Canadian climate,¹¹⁴ although they succeeded in the Huron area. Peddlers sold Lawton blackberries at from 50 cents to \$1 per specimen, which could be obtained from Canadian nurserymen at an average cost of \$8 per hundred. A gooseberry bush, named "Highland Lassie," for which one Huronite paid \$3, turned out to be a Downing, which could be purchased for 5 to 10 cents. Another notable example of swindlers' activities is the receipt by an agent in Huron County of several orders for Beauty of Hebron potatoes, at \$1 per pound, which the Goderich market could have supplied at \$1 per bushel!

Swindling was not confined to the realms of fruit- and vegetable-growing.¹¹⁵ It was stated by a Huronite that in 1875 there were "more sleek horse traders lurking about the country than there were milch cows feeding from the meadows." During the fall of 1876, agents offered to purchase all the butter that farmers could supply, at fifty cents per pound, according to contracts to be completed within a fortnight. A few days later, a drove of milch cows would appear in the vicinity, and farmers would vie with one another in purchasing them, usually at ridiculously high prices. Following this enterprise, nothing more would be seen or heard of the agents and the proposed

"contracts." ¹¹⁶ In December, 1877, a Wingham farmer, who was apprehended in the act of selling "bogus honey" was severely admonished. ¹¹⁷ Two months later, several swindling agents in Huron were engaged in selling new farming mills at exorbitant prices, on the pretext of purchasing the farmers' old mills on generous terms. ¹¹⁸ In March, 1879, a North Huronite was tricked by an agent into buying a non-existent lot for forty dollars. ¹¹⁹ Several months later, cattle thieves were active in Stephen township. ¹²⁰ In February, 1880, the "latest dodge" consisted of the sale to farmers of a "receipt," for \$1, by which they could manufacture their own coal oil at a cost of eight cents per ¹²¹ gallon.

During the ensuing decade, fraudulent practices multiplied, and included the extraction from farmers of promissory notes for seeds, agricultural implements, lightning rods, and other necessary farm equipment. The practices of fruit-tree swindlers were nullified, to a great extent, by the influence of the Ontario Fruit Growers' Association, which, by the distribution of acclimated trees and plants dispelled the notion that all good fruit trees were "fated to die young," and thus served to overcome the disillusion occasioned by the invasion of the "Yankee tree peddlers." Agricultural journals constantly published warnings against every type of swindle, and contributed to the maintenance of alertness on the part of the farmers.

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Chapter X: Interlude: a Chapter on Pests.References:

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- 2 J. McD., vid. *ibid.*, vol. I, n.s., 1869, July 15, pp. 286-7.
- 3 Cf. list in Sess. Papers, vol. XII, 1880, Append. A, pp. 63-70.
- 4 Brit. Amer. Cult., vol. I, 1842, Nov., p. 163.
- 5 Cf. *supra*, p. 57.
- 6 Cf. W.G., vol. XXI, 1879, Aug. 15, p. 523.
- 7 Landon, F., The 1860's, etc., p. 4.
- 8 Can. Agric., vol. VIII, 1856, Sept., pp. 206; 248-251; vol. I, 1849, Nov. 1, pp. 302-303.
Can. Farmer, vol. V, 1868, May 1, pp. 134-5; vol. I, n.s., 1869, March, pp. 96-7; vol. III, n.s., 1871, April, p. 142.
- 9 Innis and Lower, vol. II, p. 547.
- 10 Can. Agric., vol. VIII, 1856, Aug., p. 205; vol. IX, 1857, Aug., p. 199.
- 11 *Ibid.*, vol. XI, 1859, Feb., p. 36.
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- 13 Can. Farmer, vol. V, 1868, Sept. 1, p. 249.
- 14 *Ibid.*, vol. I, n.s., 1869, March 15, p. 97.
- 15 W.G., vol. XXIII, 1871, March 24, p. 6; vol. XXI, 1879, Aug. 15, p. 523.
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- 16 Vid. essay by Mr. Cull, in Can. Agric., vol. X, 1856, April, pp. 75-80.
- 17 Brit. Amer. Cult., vol. I, n.s., 1845, April, p. 126.
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- 19 Brit. Amer. Cult., vol. I, 1842, Nov., p. 163; vid. letter from J.E. Linton, Stratford.
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- 21 *Ibid.*, April 5, p. 123.
- 22 *Ibid.*, vol. V, 1868, Jan. 15, p. 28.

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- 24 W.G., vol. XXXI, 1879, Aug. 22, p. 559.
- 25 Can. Agric., vol. XIV, 1862, July 16, pp. 417-418; Sept. 16, p. 552.
- 26 Sess. Papers, No. 4, 1863.
- 27 W.G., vol. XXXIII, 1881, Nov. 25.
- 28 Can. Farmer, vol. I, n.s., 1869, July 15, pp. 256-7.
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New York; was this the deadly corn borer? (W.G., vol. XXIV, 1872,
Sept. 13).
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- 31 Ibid., 1882, p. 20.
- 32 W.G., vol. XXXII, 1880, July 2.
Agric. Report, 1881, vol. I, pp. 373-4.
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- 33 Can. Farmer, vol. II, n.s., 1870, April 15, pp. 138-9.
- 34 Ibid., Oct. 15, p. 359.
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- 35 W.G., vol. XXIII, 1871, May 5, p. 6.
- 36 Ibid., June 9, p. 6.
- 37 Ibid., vol. XXV, 1873, June 6.
- 38 Agric. Report, 1872, p. 416.
- 39 W.G., vol. XXVII, 1875, July 2; July 9.
- 40 Green, G.R.: The Old Log School and Huron Old Boys in Pioneer Days.
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- 41 W.G., vol. XXVIII, 1876, June 9, p. 10.
- 42 Ibid., vol. XXX, 1878, May 24, p. 351.
- 43 The beetle reached Harvey (Albert County) in 1882, and South Tilley
(Victoria County) in 1883. (Innis and Lower, vol. II, p. 694).
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- 72 Can. Farmer, vol. V, 1868, June 1, pp. 173-4.
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- 74 Ibid., vol. I, n.s., 1869, Sept. 15, p. 351.
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- 78 Ibid., vol. III, n.s., 1871, pp. 95-96; 101.
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- 107 *Vid. Can. Agric.*, vol. XIII, 1861, March 1, pp. 148-9, for one of the best accounts of swindlers.
- 108 *Sess. Papers*, vol. XII, Part I, 1880, pp. 63-70; see speech by Mr. Allan.
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- 117 Ibid., vol. XXIX, 1877, Dec. 21, p. 827.
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CHAPTER XI

The Development of Livestock.

Stock-raising did not form one of the vital industries among the farmers of Upper Canada until the late 'sixties, although there was a considerable number of importers and breeders¹ prior to that time. Efforts were made in the early 'fifties to launch a crusade in the direction of general stock-raising, but these attempts were precluded by concentration on wheat-growing, and by excessive import rates. The following figures, culled from an advertisement² of November, 1855, indicate the costs entailed in the importation of a single animal, exclusive of the actual purchase price: the commission charge was, on the sale of a horse, \$80; of a bull or cow, \$60; and of a ram, ewe, or pig, \$30; the expense of keep, from the time of purchase until the time of embarkation, was, for a horse, \$165; for a bull or cow, \$130; and for a ram, ewe, or pig, \$40; the expense of keep and travel across the Atlantic Ocean (for an estimated forty days) was, for a horse, \$170; for a bull or cow, \$130; and for a ram, ewe, or pig, \$53; the duty on animals (in 1868) was, for a horse, \$15; for a bull or cow, \$10; for a ram or ewe, \$1; and for a pig, \$2.³

It is evident, from a study of these exorbitant costs, that the small farmer was practically prohibited from obtaining pure-bred stock. The solution was to be found either in the agricultural societies,⁴ which introduced pedigreed animals, or in private groups of individuals, who clubbed together and bought pure-bred animals, or in the purchase of the services of stock owned by private breeders.⁵ The third method was expensive, entailing as it did the costs of transportation, and special feed, but it contributed more to the success of stock-breeding than did the other two methods.⁶

Factors which contributed to the rapid development of the livestock industry after 1855 included the reciprocity treaty, the American Civil War, the increasing demands of urban centres in Canada (as late as 1857, the cities of Upper Canada had been largely dependent upon the western states for their supplies of beef and mutton), the growing use of agricultural machinery, the westward movement of wheat production, the problem of soil exhaustion, and the development of dairying.

CATTLE. During the first half of the century, cattle supported a wave of settlement, by facilitating the working of the land, and by yielding a valuable supply of food to the pioneers. Cattle were able to subsist in virgin grass areas, were useful for purposes of transportation, and could be easily driven to market. After the turn of the century, the need for cattle was increased by various demands: (1) for fat, or beef, cattle, preferably Durham Shorthorn; (2) for dairy cattle, preferably Ayreshire and Shorthorn; (3) for cows to suit private families and creameries, e.g., Jerseys; and (4) for cattle to satisfy the American and Canadian demand for extensive ranch grazing, e.g., Hereford, Aberdeen Poll, and Galloway.

The factors which contributed to the development of cattle-raising in Upper Canada included: the activity of prominent local breeders; government encouragement, via fairs,⁷ agricultural societies, and the dissemination of information; the growth of dairying and cheese factories, which among other contributions, brought about improved methods of housing, by recommending warm, dry, ventilated stables; improvement in fodder: root crops and clovers began to be sown on an increased acreage,⁸ and new mechanical aids, such as straw-cutters and steamers, were being used in the preparation of feed; the ingress of American buyers, after 1870; the imposition, in 1878, of a British embargo on American cattle, which provided a great stimulus to Canadian trade; the

development of methods of transportation; and the increasing⁹ urban demand for beef.

Prior to the development of the livestock industry, a low grade of cattle had proved satisfactory to the farmers: the breed of cattle which was most commonly found in Upper Canada was known as "Canada cattle," and was evidently the degenerated offspring of the earliest cattle which had been brought into the country. Many of these cattle survived the severe winters "with hips a man might hang his hat upon, the ribs bare, and the deep furrow of poverty down the thigh," and as a result, often yielded "only the skin to the owner."¹⁰ The cattle which gradually attracted the attention of Canadian farmers included Durham Shorthorn, Galloway, Ayrshire, Guernsey, Jersey, Holstein Friesian, Hereford, Devon, Aberdeen, and Polled Angus. Durham Shorthorns were first imported into Canada in 1825-26, by the Board of Agriculture of New Brunswick,¹¹ which considered them to be an excellent "dual-purpose" cattle. A number of independent farmers in Upper Canada imported pure-bred specimens at about this time, but the first significant importation was not made until 1833, when an Englishman brought six heifers and two bulls to Guelph, and sold them to John Howitt. After 1835, importations gradually increased,¹² and Durhams became fairly common in various parts of the province. Adam Fergusson, of Woodhill (Peel County), was perhaps the foremost breeder of Durham stock at the turn of the century.¹³ The first Durham cattle in Huron County were introduced in 1842, while the first Durhams in Perth County were brought in by William Laing, in 1859. Galloway cattle were introduced into Canada at about 1852-54: W. R. Graham, of Vaughan (Lincoln County), is believed to have been the first importer of them from Great Britain.¹⁴ Galloway, as well as Devon, cattle became fairly common in Huron by the 'sixties. Although Ayrshires had been imported since the eighteenth century, there were few of them in Canada before 1850; they were

not extensively imported until the 'seventies.¹⁵ Guernsey and Jersey cattle were gaining increased favour in Canada and the United States, by 1872,¹⁶ although limited importations were made until the 'eighties, at which time Holstein Friesians began to appear. In 1861, the Agricultural Commission, following its investigations, concluded that the most suitable breeds for Ontario were the Hereford and Polled Angus, followed by Devon, Galloway, Ayrshire, Holstein,¹⁷ and Shorthorn.

In 1842, there were 563,200 neat cattle in Upper Canada; six years later, there were 565,800, of which 21,463 were in the Huron Districts; of these, Goderich township contained 140 yoke of oxen, 500 cows, and 1000 young cattle.¹⁸ In 1850, Huron County contained 12,796 head of cattle;¹⁹ at this time, the price of oxen was about £10 to £15 per yoke, and of cows, £2, 10s. to £5 per head.²⁰ During the early 'fifties, there was a decline in the production of fat cattle in Huron, owing to the failure of the turnip-crop, and the resultant high cost of stock-feed.²¹ Several Huronites²² began to purchase pure-bred animals, however, and to sell their services. Evidence of the large scale of breeding conducted in a small area is indicated in an advertisement (May, 1871) of R.H. Carnochan, of Seaforth, who wished to sell a Durham thoroughbred bull, aged three years, because it was "too near a kin to his own and other stock in the community."²³

During 1874-75, there was an apparent laxity of interest in the production of Durhams in Huron. It was expressed in South Huron, in 1875, that dairying interests warranted the introduction of a few thoroughbred Ayrshire bulls, as there was "little doubt that the Ayrshire [was] ahead of the Durham for milking purposes, as the Durham [was] superior for beef."²⁴ A number of Huronites, accordingly, obtained Ayrshires, by 1877, although certain prominent breeders, for example, James Dickson, of Tuckersmith, believed that the Durham was the best animal to raise, and that it was "a mistake to give a large amount of prizes, at exhibitions, for Devons, Herefords, and Galloways."²⁵ Dickson pointed

Table: Livestock Production in Huron, 1850-1880:

TOWNSHIP	Cattle		Horses		Hogs		Sheep		* Wool (lbs.)
	1850	1880	1850	1880	1850	1880	1850	1880	1850
Ashfield	515	3801	11	1206	170	1504	341	3995	923
[Biddulph	494	1814	66	815	346	889	632	2494	1666]
Colborne	938	2325	50	783	324	712	642	2199	1803
Goderich	2462	3384	389	1328	1669	913	2262	4364	6857
Gray	-	5210	-	1538	-	1223	-	4205	-
Hay	490	3712	51	1392	191	845	245	2963	740
Howick	-	4731	-	1646	-	1665	-	4734	-
Hullett	502	4010	40	1579	250	1253	335	3650	825
[McGillivray	997	4416	131	1809	710	1433	1218	4316	3223]
McKillop	802	4483	85	1493	446	1080	568	3421	1536
Morris	-	3586	-	1201	-	1007	-	4164	-
Stanley	1708	2637	169	1211	800	955	1323	3997	3831
Stephen	599	1683	43	1149	318	965	439	2776	960
Tuckersmith	1913	4373	219	1414	768	814	1175	3506	3857
Turnberry	-	2483	-	2453	-	717	-	694	-
Usborne	960	2740	70	1324	458	535	636	3537	2050
Wawanosh	394	5852	5	1724	157	1805	160	5338	366
TOTALS:	12,796	55,625	1,352	21,441	6,327	15,998	9,966	53,633	28,639

Note: Totals for 1850 include figures for Biddulph and McGillivray; totals for 1880 exclude figures for these two townships.

* - Figures for wool production, 1880, unavailable.

out that Durhams were preferable to Herefords, because they surpassed Herefords, until the age of three years, and early maturity was desired by most farmers. Dickson, however, had not tested Ayrshires for milking purposes, although he had in his herd of Shorthorns (which were partly Bates, partly Booths, and partly a mixture of both) three thoroughbreds which were "deep milkers." In his opinion, the first cross from a good native cow would produce an animal which would be highly popular in the English market.²⁶

The improvement of cattle-breeding was hastened by the activities of cattle fairs, county livestock associations, local and provincial exhibitions, and improved methods of caring for stock. During the early 'fifties, the provincial Board of Agriculture contributed to the lowering of freight and steam-ship rates for the importation of purebred livestock.²⁷ Cattle fairs²⁸ were held as early as 1870 in Huron County, in several of the larger towns, including Seaforth,²⁹ Clinton, and Wingham. In March, 1878, the Huron County Livestock Association sponsored its first spring sale of livestock, a sale confined strictly to thoroughbred and improved stock. Enough entries were submitted at this sale to warrant the issuing by the association of a catalogue, which would advertise Huron cattle extensively in Canada and in the northern and western states.³⁰ At the South Huron agricultural fair, held at Brucefield in 1878, twelve thoroughbred bulls and two Ayrshires of merit were exhibited.³¹ At London's Western Fair, in October, 1879, many thoroughbred specimens were shown; W. Snell and sons, of Clinton, were the foremost exhibitors, while W.J. Biggins, also of Clinton, and R. Hawley, of Goderich, showed some fine animals.³²

By 1880, the housing and care of livestock had vastly improved in Huron County, although other sections of the province remained backward in this respect.³³ Large warm, ventilated barns were in evidence in Huron, although very few farmers conducted large farms for experimental purposes. During the

'seventies, several towns and villages (e.g. Clinton, in June, 1878) passed by-laws to prevent horses, sheep, and pigs from roaming at large. Little or no restraint was placed upon cattle, however, which were allowed to wander about unmolested, even as late as 1880.³⁴ The practice of dehorning cattle was introduced into Canada from Illinois in 1888.

In feeding cattle, many Huron farmers employed the soiling system, or the feeding of cattle in the barn, with food out during the summer. The advantages accruing from this system, which was adapted to localities where land was expensive and labour was cheap, were two-fold: there was an immense saving in land, fencing, and food; and the cattle yielded a better quality of milk and manure.³⁵ In February, 1870, a Bayfield farmer described³⁶ a method of steaming food for stock. Oil-cake was manufactured at Preston, Woodstock, Toronto, and Montreal, during the 'sixties, and was marketed at \$32 per ton,³⁷ but was shipped mostly to England, because "Canadian farmers [would] not take advantage of its fattening qualities."³⁸ James Dickson, of Tuckersmith, fed his cattle with oil-cake, peas, corn meal,³⁹ and root crops. In the summer-time, he preferred a mixture of oats and peas; during the winter, he prepared stock-feed twice weekly, by adding a quantity of dried meal to a mixture of straw, hay, pulped turnips, and bran, which had been allowed to ferment. Dickson fed his grade calves from a pail, with milk and boiled linseed; thoroughbred calves were allowed to suck, and received a mixture of corn, oats, and barley meal thrice daily, together with a plentiful supply of clover and green corn in summer, and hay and roots in winter.⁴⁰ Thomas Covenlock, also of Tuckersmith, allowed each bullock three acres of grass, in pasturing.

The market for cattle was at first a purely local one, but following the increased interest in stock-raising during the 'fifties, Huron cattle were among the finest animals displayed in the London and Hamilton markets.⁴¹ The reciprocity agreement with the United States provided a large market, and

stimulated cattle-raising, particularly during and immediately after, the Civil War.⁴² During the two years before the abrogation of reciprocity, increased American imports caused a serious inroad on Canadian stock.⁴³ In addition to the loss of the American market in 1863, the industry received a further setback in the form of a government quarantine⁴⁴ which prohibited Canadian importation of stock from European countries whose animals were afflicted with steppe murrain. In 1871, the announcement that Canadian livestock for breeding purposes might be imported into the United States free of duty was followed by a rush of buyers from Colorado, Oregon, and other western states to Ontario, in order to purchase supplies of cattle and sheep.⁴⁵ Canadian and American trading relations improved, and in November, 1872, the first annual convention of Shorthorn breeders met at Indianapolis: one hundred and fifty breeders from both countries were in attendance.⁴⁶ Meanwhile, however, the growth of railways in the American West, by providing a means of transit for American cattle to the eastern states, impaired Canadian trade and compelled Canadian producers to seek an overseas market.

The period 1875 to 1900 witnessed determined Canadian efforts to gain markets in both Great Britain and the United States.⁴⁷ The exportation of live cattle to Great Britain had been begun as an experiment, in June, 1873, by a New York exporter, who shipped two live animals to Glasgow; shipments of thirty to fifty head were being made four months later.⁴⁸ During 1873, Canada shipped no livestock of any description to Europe, but in 1874, numerous shipments were made to the British Isles, and the St. Lawrence route became conspicuously successful in transporting livestock. A great expansion in trade followed, from 1877 to 1884, justifying the optimism⁴⁹ which was generally displayed by farmers who were engaged in stock-raising. In 1877, it was declared in England that the prejudice against Canadian fresh meat had entirely disappeared, and that it was now considered "quite equal in every respect to the best classes

of Scotch and English meat." Meanwhile, the British meat-producing farmer, in the face of a continuous stream of livestock from overseas, had to submit, as early as 1877-78, to a reduction of from ten to fifteen shillings sterling per hundredweight for his cattle, a condition which caused him to "feel the shoe pinch severely."⁵⁰

From 1878 to 1892, the Canadian cattle industry was accorded preferential treatment by Great Britain. In April, 1878, when Britain ordered the slaughtering of American cattle at the ports of entry, Canadian cattle received free entry, a privilege which was confirmed in the following October.⁵¹ Two months later, an outbreak of pleuro-pneumonia among American herds brought about the imposition of an embargo by Britain. In February, 1879, Canada banned the importation or transit of American cattle;⁵² only animals which were intended for the improvement of stock were to be admitted duty free, -- a principle which was continued in accordance with the "National Policy" tariff.⁵³ The high prices offered in the British market greatly stimulated cattle production in Canada, especially in Ontario. In 1879, 20,587 head of cattle, valued at \$1,577,211., were shipped overseas. An interesting sidelight on the period was the formation at Montreal, in 1880, of a shippers' "ring", which sought to corner space on all ships leaving that port, and to increase the rate of shipment to \$30. per head, as compared to \$12. demanded at Boston. Canadian farmers refused to be victimised, and shipped 17,985 cattle via American ports.⁵⁴

Three features are noteworthy during the late 'eighties: the revival of cattle trade with the United States; the first shipments of cattle from the Canadian West; and a steady British market which declined after 1892.⁵⁵ In 1883, the American government imposed a tariff⁵⁶ of 20% ad valorem on imported cattle. Despite this obstacle, Canadian trade with the United States revived, and in 1885, 67,758 head of cattle were sold to American buyers. The first shipments of cattle from the ranches which were established in Alberta, following the

building of the Canadian Pacific Railway, were made in 1887-88; in 1888, 4,500 head were shipped overseas.⁵⁷ From 1883 to 1890, the average price paid for Canadian cattle in Britain was approximately \$84.04 per head, -- an increase of 13 per cent. over the average which prevailed during 1877 to 1882. An outbreak of pleuro-pneumonia among Canadian cattle in 1892 was advanced as the reason for the British government's order for the slaughtering of cattle within ten days of arrival at a British port. This ten-day ruling tended to glut the market, and also forced the slaughter of bruised and fatigued animals.

The exportation of livestock was implemented by improved methods of transportation and care. Improvement came first in the lake boats and railways, and latterly in respect to ocean shipments. At first, animals were crowded into rude stables and shelters, constructed "in a very slight and flimsy manner, fastened to the deck by cut nails"; sheep and swine were usually herded at the rate of ten per bullock's space of two feet, nine inches. Excessive heat and fatigue, long fasts, and scarcity of water, caused the death, enroute, of many animals. Moreover, there was always danger to be feared from fire and storms: in 1879, for example, one steamer lost 186 sheep, which were washed overboard. In 1878, insurance rates on livestock were lowered, so that five guineas per hundredweight carried all risks. In 1878-79, the ratio of losses in the shipment of Canadian cattle was approximately 1 per cent. in cattle, 2½ per cent. in sheep, 4½ per cent. in swine, and ½ per cent. in horses and mules. By 1884, deaths during the ocean passage amounted to less than 1 per cent. of the total shipments.⁵⁸ The development of refrigeration eliminated much of the expense and care involved in shipping live animals. As early as 1873, a Massachusetts exporter advanced a proposal whereby slaughtered cattle could be shipped via vessels which were equipped with refrigerating tanks.⁵⁹ The first shipment of frozen meat across the equator was made in 1877, from Buenos Aires to Havre.

In February, 1880, a similar shipment arrived in England from Australia,⁶⁰ and by May, 1882, additional cargoes were sent from both Australia and New Zealand. In 1894, the first cold storage warehouse to be equipped with mechanical refrigeration (namely, the Montreal Cold Storage and Freezing Company), was erected. Refrigeration did not become generally accepted in ocean shipment by Canada, however, until the close of the century.

Although live cattle were shipped to England from the neighbourhood of Clinton prior to the spring of 1876,⁶¹ Huron County's overseas trade in cattle did not develop to any great extent until 1878.⁶² At the spring sale of the Huron County Livestock Association, in that year, Messrs. Watson, Spooner, Hearn, and Mooney, of Clinton, purchased 70 head of cattle and 500 sheep which they planned to ship to England during the second week of April.⁶³ During the summer, Messrs. Mooney, Watson, and Rattenbury embarked for England, taking with them a shipment of 150 head of cattle and 3 horses.⁶⁴ During 1878-79, cattle were selling at a comparatively low price, in Huron: in Hullett, yearling steers sold at \$18 and cows at \$33;⁶⁵ James Pickard, of Exeter, sold a prize yoke of oxen to a Toronto buyer for \$125;⁶⁶ and Robert Winters, of Seaforth, purchased a pair of steers, weighing 3,000 pounds, for \$110.⁶⁷

From 1877 to 1880, farmers in the Seaforth area began to feed an increased number of cattle for the British market, after having raised stock principally for dairying purposes.⁶⁸ During the year following the ban on American cattle, Canada, principally Ontario, shipped 32,680 head of cattle to Great Britain. Meanwhile, Huronites sought to discover a market for cattle in Manitoba: three years earlier, James Watt, a cattle buyer in Hullett, travelled to Manitoba, in order to study the possibilities of raising cattle there.⁶⁹ In 1880, Messrs. Parker and Clegg, of Morris, also went to Manitoba with a shipment of cattle and horses: when they learned that Manitoba was a poor shipping point, they returned to Huron with their livestock.⁷⁰

Two of the foremost cattle exporters in Huron County in 1880 were James Dickson and Thomas Govenlock, both of Tuckersmith. Dickson exported five or six head of fat grade cattle annually, receiving approximately seven cents per pound; in 1880, he sold five young thoroughbred bulls at an average price of more than \$100 each. Govenlock grazed about 150 head, but often purchased a greater number, which were sent to Buffalo and "fed up"; he preferred to purchase steers weighing 900 pounds in spring and to fatten them to 1300 pounds by fall. For the English market, grade cattle of two years and three months of age were favoured; Govenlock paid from \$3 to \$3.50 per hundredweight for his cattle, which sold in England at from 7d. to 9d. per pound, or from \$14.50 to \$18 per hundredweight. Govenlock generally shipped from Montreal, during the spring and midsummer, in order to avoid the competition offered by Irish, Scotch, German, and other grass-fed cattle.

By 1880, it was believed that "the dawn of a better day was come", as experiments had conclusively shown that Huron's surplus of cattle, and live-stock generally, found ready sale in Britain. It was predicted that if the English demand continued, Huron, within a few years, would "rival Wellington and other famous stock-raising districts in Ontario." Indeed, Huron had come to the fore in prize-winning cattle ranks only in 1880 and 1881, when H. Snell (Clinton), and James Dickson (Tuckersmith), carried off ten of the nineteen prizes which Huronites won since the inauguration of the provincial exhibitions.⁷¹ By 1880, the majority of the townships of Huron were producing Durham grade cattle; Gederich, McKillop, and Wawanosh appear to have produced the greatest number of thoroughbred Durhams, although Wawanosh and Grey led in total production. Of Hallett's cattle, 75 per cent. were thoroughbred or imported. The county contained 55,625 head of cattle in 1880, or nearly five times the number listed in 1850.

HORSES: The Canadian horse was not very highly esteemed by the early farmers of Upper Canada,⁷² because the work of strong oxen afforded greater satisfaction. Horses were more expensive than oxen, in matters of rigging, currying, stabling, and feeding; besides, oxen, when past service, could be eaten, while horses, when old, were deemed a feast only "for bussards."⁷³ Agricultural societies sought to establish a higher standard in horse-breeding during the early 'fifties, but farmers were generally averse to purchasing the services of expensive stallions. When D. McDonald, of Goderich, inquired of the "Canada Farmer" about thoroughbred horses, he was informed (1865) that of four such animals in Upper Canada, three were in Toronto.⁷⁴

Horse-breeding was stimulated by the improvement of roads and the increase in teaming, the expansion of the lumbering industry, the demands of the iron and steel industry in Pennsylvania, and the demand in several American cities for horses to be used on street-railways. Light general horses were preferred for light wagons and for street-car service, while heavy draught horses were required for hauling lumber, iron, and steel. The increasing importance of horses contributed to the decline of oxen and to greater dependence upon cattle as a source of meat and dairy products. In 1842, Upper Canada contained 114,700 horses; in 1848, 154,400; in 1860, 277,258; and in 1870, 368,885; the number of oxen in the province decreased from 99,605 in 1850, to 47,941 in 1870.⁷⁵ Huron County contained 1,352 horses in 1850,⁷⁶ at which time the cost of farm-horses ranged from £15 to £20 per head, which was slightly more than the cost of a yoke of oxen.⁷⁷

In November, 1866, a general order-in-council removed restrictions on the importation of horses,⁷⁸ but despite a considerable amount of livestock breeding in various sections of the province⁷⁹ during the next few years, Canada, in 1868, imported only 26 horses, while exporting 7,005.⁸⁰ Markets were widening

in Germany, France, Belgium, Australia, the United States and Great Britain. From 1867 to 1873, Germany imported 14,000 mares, in order to bolster the strength of cavalry units during the Franco-Prussian war, and thereby contributed to a shortage of horses in other parts of Europe. Belgium expressed concern over the decline in horse-breeding, following an epidemic of murrain among its stock, and France, too, was deficient in horses.⁸¹ In 1870, it was announced that Clydesdale horses had become favoured in Australia.⁸² In 1872, there was so great a scarcity of horses in New York state, that it was common for yokes of oxen to be seen on the streets, Broadway not excepted, of New York city. The existence of a good market in England, where work-horses, in the fall of 1872, brought \$336 per head, was a factor in stimulating horse-breeding in Canada.⁸³ In 1874, horses were in great demand in the western states, and were imported from Europe and Canada; the two classes most in demand were heavy draught and carriage horses.⁸⁴

Meanwhile, there was a continued improvement in the breeds of horses in Huron County.⁸⁵ During the 'sixties, George Houghton, of Seaforth, conducted an agency, through which two hundred horses, chiefly Clydesdale,⁸⁶ passed each year. In March, 1873, William Peck, of Stanley, sold two heavy draught and general purpose stallions for \$3600, to a Hibbert farmer, who proposed to travel with these horses throughout a section of Huron County during the approaching breeding season.⁸⁷ In October, 1873, Hugh Love, of May, imported a one-year-old filly, and a pair of two-year-old Clydesdale stallions from Scotland; these horses were regarded as a source of future benefit to the community.⁸⁸ Two years later, John Mason, of Hullett, purchased for \$2250 an imported stallion, named "Crown Prince," which he planned to sell to an Ohio buyer.⁸⁹ W. Hodgson, of Exeter, sold an imported stallion, named "Bank of England," to Mr. Mason, for \$2200.⁹⁰

By 1874-75, Huron was acquiring a reputation for its production of heavy draught horses; in South Huron alone, the services of fourteen imported stallions were available in 1875.⁹¹ At the Western Fair, held at London during that year, the majority of the best horses came from Huron and Middlesex. Huron led particularly with its draught and general purpose horses. James McDonagh (Colborne), James Leadman (Exeter), James Swinnerton (Exeter), and Hugh Love (Hay) exhibited several fine stallions and mares. William Herbison (Goderich) displayed a home-bred general purpose stallion, which had already won ten prizes, including first prize at the Western Fair of 1874.⁹²

The period from 1876 to 1881 witnessed an increased activity in the sale and breeding of horses. The Philadelphia Centennial (1876) served to advertise Canadian livestock, particularly horses. Twelve horses from Huron County were entered in competition, and created a favourable impression.⁹³ Canadian horses, fed on hay and oats, were regarded as stronger-boned than corn-fed American horses, and for this reason were deemed superior. It was generally stated that the former were preferred because they "were not fed up so high" as American horses, -- which were fed on corn "like so many pigs", -- and would accordingly "wear better."⁹⁴ After 1876, American dealers regularly visited Huron County and other sections of the province, offering from \$120 to \$200 for sound, heavily-built animals. English buyers preferred a lower grade of horse, and would pay only \$80 to \$120 per head.⁹⁵ During the fall of 1876, eighteen heavy draught horses, purchased in the neighbourhood of Goderich, were shipped to Michigan, for the purpose of hauling lumber.⁹⁶

One of the foremost importers of heavy draught horses in Huron was Charles Mason, Brucefield, who sold draught horses at prices ranging from \$1000 upward.⁹⁷ In 1878, William Kitt, Clinton, sold a span of carriage-horses to a Hamilton farm for \$285; John Stewart, Stanley, sold a span of colts for \$250;⁹⁸ Thomas Patterson, East Wawanosh, sold a span of horses for \$400;⁹⁹ and Messrs.

Mooney, Watson, and Rattenbury shipped three horses to England, along with some
¹⁰⁰
 cattle.

At the spring show of stallions held in South Huron, in 1877, there were thirty entries, eleven of which were imported and "of great excellence." The exhibition in the succeeding year comprised thirty-seven entries, including one Percheron, the first of its kind to enter the county. It was declared at the latter exhibition that "the farmers of Huron stand in the foremost ranks as producers of horses, especially of the heavy class."¹⁰¹ At London's Western Fair, in 1879, several Huron horse-dealers displayed thoroughbred specimens, most of which were imported Clydes. The chief exhibitors were J. Wilson, J. Oak, and J. Loadman, of Exeter; T. Case, of Rogerville; and A. Innes, of
¹⁰²
 Clinton.

From 1877 to 1879, there was a slight increase in the British demand for roadster horses, but this demand was short-lived, to be supplanted in the following year by increased importations by Huron and other counties, of British Clydesdales. In the winter of 1879-80, a considerable number of heavy draught horses, purchased in the townships about Goderich, were shipped from Goderich
¹⁰³
 to the United States. It was a common practice for Huronites to sell their horses through an agent, who paid, for ordinary horses \$90 to \$100, and for good Clydes, \$125 to \$200. Buyers from New York and Boston preferred Canadian horses to those raised in the western states, and paid \$25 to \$50 per head more for the former. Numerous Ontario horses, principally from the Seaforth district, and Carleton County, were exported to Pennsylvania, where Dutch buyers fed them for a year or two, prior to shipping them to eastern American cities. Thus Ontario farmers, by failing to negotiate directly with these markets, lost what the middlemen gained. During the spring of 1880, American buyers were active in purchasing, on generous terms, horses in the neighbourhood of Seaforth.¹⁰⁴

Between February and August, 1880, Agent George Houghton shipped 250 horses from that area. Independent farmers also sold directly to American buyers; for example, J.J. Fischer, of Colborne, sold a prize-winning imported Clydesdale stallion to J.S. Busey, of Champagn, Illinois, for \$3,100.¹⁰⁵ On November 10, 1881, at a meeting of the American Clydesdale Association, at Chicago, attempts were made to curtail the importation of Canadian grade horses, unless their genealogy was recorded in the Clydesdale stud-book¹⁰⁶ of Great Britain and Ireland. These attempts failed,¹⁰⁷ however, and by 1885, the American market for horses had expanded so rapidly that Canada was temporarily unable to supply it.¹⁰⁸

As early as 1878, Ontario horses were exported to Manitoba,¹⁰⁹ but the demand did not reach sizable proportions until 1882. In 1880, Messrs. Park and Clegg, of Morris, went to Manitoba, with a car-load of horses; when they discovered that Manitoba was not a suitable shipping-point, they returned home with their stock.¹¹⁰ Two years later, the judges of the prize farms in Huron sailed north from Goderich on the steamer "Ontario", and noted a shipment of horses bound for the Canadian west: at Goderich, sixteen horses were taken aboard, and at Kincardine, thirty-four more, which were "jammed into a space hardly sufficient for half the number."¹¹¹ During the early 'eighties, Essex County was the leading exporter of horses to Manitoba.¹¹²

The rapid strides taken by Huron County in the department of horse-raising are attested by the success of the county's entries at provincial and local agricultural exhibitions. Of one hundred and seven prizes received by Huronites at the provincial shows,¹¹³ sixty-five were for agricultural, carriage, and heavy draught horses. The years 1869 to 1874 indicate a peak in the production of fine animals, as forty-five of the sixty-five awards were received during that period. Outstanding horse-breeders were Charles Mason, of Tuckersmith, J.J. Fischer, of Colborne, and R. McGregor, of Brucefield.

In 1880, Huron County contained 21,441 horses, nearly sixteen times the number listed thirty years previously. The majority of the townships produced general purpose horses, chiefly grade from Clydesdale stock. Clydesdale horses were preferred because they were able to accomplish heavy work when only two or two and one-half years of age. A few Percherons were in evidence in Huron, after 1878, and the Royal George and Clear Grit, two Canadian breeds, were fairly common. Goderich, McKillop, Tuckersmith, Usborne, Hullett, and Hay were paying increasing attention to breeding from imported horses. Turnberry led in production, but Goderich, in the main, produced the best heavy draught horses and a number of fine coach horses.

SHEEP: Sheep-raising always held a position of some importance in frontier areas because it was a profitable source of material for food and clothing. Moreover, sheep, by their habit of mechanical treading, and by their production of manure, had a beneficial effect in preparing land for grain-growing.¹¹⁴ The adaptability of Upper Canada to sheep-raising was perceived during the 'forties, and English breeds, for example, Leicesters, Cotswolds, Southdowns, Lincolns, Cheviots, and Teeswaters, were imported on a gradually increasing scale, during the ensuing decade.¹¹⁵ Long wool, especially of the Leicester variety, was produced almost wholly in the western part of the province, owing to the mild short winters, whereas in the eastern section, short brittle wool was produced.¹¹⁶

In 1842, there were 575,700 sheep in Upper Canada, and in 1848, there were 833,800, of which 17,341 were in the Huron District.¹¹⁷ Huron County proper, in 1850, contained 9,986 sheep, which produced 28,639 pounds of wool. Goderich township, which contained only 600 sheep in 1848, now led in production with 2,282 head, and 8,657 pounds of wool. The cost of sheep, at about 1850, was from 10s. to \$1 per head.¹¹⁸ Increased interest in sheep-raising was manifested

by Huronites during the 'sixties, so that by 1860, George Buckland, following a sojourn in Huron, was able to pay special tribute to sheep-raising in that locality:

"The livestock of the district may be considered generally above par, a pretty fair use having of late years been made of pure bred males, both in cattle and in sheep. The latter consist exclusively of long wools, many of them a result of a cross with the Leicester and Cotswold. When well fattened, many of these animals attain to great weights, both in carcass and fleece, and sheep are reckoned as the most paying part of livestock."

Other sections of the province evidenced their interest by forming organisations to promote wool-growing: the "Brant Wool Growers' Association" was formed at Paris (Brant County) in March, 1865, to attain this purpose. Sheep-shearing exhibitions contributed to the growth of a cooperative spirit in various communities: at a contest held at Hamilton, in May, 1868, John Gill, of Exeter, was adjudged the best shearer.

Sheep were inexpensive to feed, as they usually consumed pea-straw, to which cattle were not partial. A Wroxeter farmer, in 1864, evinced satisfaction from the use of turnips as feed:

"I have some very fine specimens of native breeds of sheep, which winter with and share the same as my Leicester sheep The difference in quality is remarkable A flock of sheep fed on turnips all winter, pastured well during the following summer, and fed with turnips the second winter, should weigh eighty to one hundred pounds, and bring in a good profit."

Four years later, a Grey township farmer stated that he found rape a valuable stock-feed for "the man who wants early lambs." The principal difficulty in sheep-raising was the matter of shelter and protection: not only were warm, dry sheds essential, but dogs, wolves, and lynxes had to be warded off. In 1879, a Huronite inquired of the "Weekly Globe" as to the size of a sheep-house for from sixty to seventy-five ewes; the answer revealed that a shed forty feet square would provide ample space. The threat of wild animals gradually decreased,

but during the 'seventies, there were several instances of sheep-killing; by
 do.¹²⁷ In fact, in February, 1876, the Huron County Council determined not to
 grant any compensation to farmers whose sheep had suffered death in this manner.¹²⁸
 While sheep-raising demanded protective measures, it did not, however, require
 a considerable amount of the costly commodity of labour.¹²⁹

Prior to 1870, most of Upper Canada's mutton had come from the
 western states, but after that date, Canadian sheep trade expanded, and assumed
 two forms: (1) thoroughbred long-woolled sheep to the United States for breeding
 purposes; and (2) mutton sheep to the United States and Great Britain. Canadian
 wool found a ready market in the United States, and following the conclusion
 of reciprocity, American manufacturers agitated against the imposition of
 duties, declaring that without the long wool of Canadian herds, they would have
 to close their mills.¹³⁰ Canadian exports in wool and mutton to the United States
 continued at a fairly even tempo,¹³¹ however, during the next few years. In October,
 1876, William McClain, of Goderich, and a Mr. Whaley, of Stratford, shipped to
 the Albany and New York markets twenty-four car-loads of sheep and lambs, --
 4,560 head in all, -- at a return of \$24,450.¹³² The American demand was light
 in 1880, as evidenced by poor returns from a sale of two hundred lambs in
 Buffalo by William Elder of Tuckersmith.¹³³

The trade in sheep between Ontario and Great Britain was as follows:
 in 1876, none; in 1877, 3,137 head; in 1878, 11,985; in 1879, 54,721; and in
 1880, 109,506 head,¹³⁴ out of a total of 110, 143 head from the whole of Canada.
 The English demand increased still more in 1881, when there were two million
 less sheep in England than there had been in 1876.¹³⁵ The preference in the
 English market, which paid better prices for mutton than for beef, was for
 the meat of the Southdown. The best weight for shipment overseas was about
 150 pounds live weight, which was equivalent to 75 or 80 pounds dressed. The
 tendency of many farmers in Canada was, -- as Thomas Gevenlock, of Seaforth,

expressed it, in 1880, -- for farmers to "sell off their lambs too much," and thereby cause a deficiency in wethers, which were in demand in the British market. In shipping sheep to England, many farmers adopted the expediency of forming a group, in order to share expenses and thereby lessen the cost of shipment. In the spring of 1878, Messrs. Watson, Spooner, Hearn, and Mooney, of Clinton, purchased five hundred head of sheep for immediate shipment to England.¹³⁶ Independent farmers also shipped sheep overseas: two of the most prominent sheep-breeders in Huron were Thomas Govenlock, of Seaforth, who shipped as many as one thousand sheep in one season, and Hugh Love, of Hay township. The former raised Leicester sheep, but was of the opinion that a cross of the Leicester and Southdown would produce a fine animal, although he had not yet experimented in this wise. Mr. Love had begun sheep-raising seriously in 1873, when he purchased five shearling Cotswold rams from four of the outstanding breeders in the Cotswold hills.¹³⁷

Wool enjoyed an excellent market during the 'seventies, especially during and immediately after, the Franco-Prussian war. In 1871, the product sold at Chatham at 34 cts. to 37½ cts. per pound, while at Brockville it commanded 28 cts. to 30 cts. per pound, -- a fact indicative of the supremacy of western Ontario's wool, at that date.¹³⁸ So great an interest was exhibited in the possibilities of wool production on the part of one resident of Goderich, that, in 1878, he imported a pair of Angora goats for breeding purposes.¹³⁹

Despite the gradual disappearance of the frontier, a decline in the price of wool, increased competition from Australian producers, and the rise of the dairying industry, sheep-raising retained a prominent position in Huron County, which contained 53,633 sheep in 1880. The majority of the townships were producing Leicester and Cotswold sheep, and their grades; every township, except Turnberry, appears to have been well-adapted for sheep-raising.

Huron, which had trailed in production in 1850, with 180 head, led in 1880 with 5,338 animals. At the provincial exhibitions, prior to 1880, Huron gained nine awards for sheep, chiefly of the Leicester variety: four prizes were won by James Petty, of Brucefield, during 1855-57, and four were received by Hugh Love, of Hay, during 1870-77.

HOGS: Hog-raising developed slowly in Huron County, and indeed, throughout the province, because wheat-growing and cattle-raising tended to restrict the production of hogs. In 1850, Huron contained only 6,327 hogs, more than one-fourth of which were in Goderich township. During the 'fifties, individual breeders began to import hogs, chiefly of the Berkshire, Suffolk, and Yorkshire varieties; but swine, in the main, were ugly, wiry creatures, "of an ordinary or inferior character," owing to inadequate fencing and "roaming boards."¹⁴⁰ The production of pork in Upper Canada increased from 317,010 barrels in 1851 to 336,744 barrels in ¹⁴¹1861, and most of it was marketed in the lumber camps along the Ottawa River.

Several factors influenced the development of the hog industry during the 'sixties and 'seventies. While the Civil War was in progress, the United States prohibited the exportation of live hogs to Upper Canada, thereby diminishing the amount of pork packed in Canada for sale in the British market.¹⁴² A concerted drive was forthwith begun by Canadian farmers to raise "Canadian pea-fed pork," which became more highly esteemed than "American corn-fed pork." This movement was aided and abetted by Samuel Haskin and William Davies, who conducted, (via the "Canada Farmer," 1864-69), a thorough course of instructions in hog-breeding; farmers were advised to raise Berkshire, Essex, and smaller breeds, to grind stock-feed, and to keep hogs securely penned.¹⁴³ The high price of peas and coarse grains, owing to the depredations of the pea-weevil and other insects, caused hog-raising to become costly and disfavoured in several sections of the province.¹⁴⁴ Huron County was not seriously affected by the pea-weevil

until the middle 'seventies, however. Hog-raising received its greatest stimulus from the dairyin; industry, which militated against sheep-raising and favoured the production of hogs as a "side-line" to the manufacture of butter and cheese. The number of hogs in the province increased from 778,001 in 1860 to 874,664 in 1870.¹⁴⁵

From 1867 to 1870, much of Huron County's pork was sold to packing houses in Toronto, Hamilton, and Buffalo.¹⁴⁶ The Toronto and Hamilton concerns preferred pigs which weighed from 180 to 250 pounds, alive; and paid as high as ten dollars per hundredweight.¹⁴⁷ A considerable number of Huron farmers along the Buffalo and Lake Huron Railway, shipped their hogs to Buffalo firms, which packed more Canadian hogs than did firms at Toronto.¹⁴⁸ During the 'seventies, hogs (dressed) sold at approximately \$3 per hundredweight. At about 1870, William Elder, Tuckersmith, owned 22 hogs, each of which weighed 300 pounds, alive: these hogs were sold at Exeter at three cents per pound, which was higher than the price offered in London at that time.¹⁴⁹

During the late 'seventies, Huron County contained at least four pork-packing establishments, which purchased a large proportion of the hogs raised in the surrounding district. James Petty, one of the first importers of thoroughbred stock in the county, owned a concern at Hensall, where 2,000 hogs were packed annually.¹⁵⁰ During the winters of 1876 and 1877, W.S. Robertson,¹⁵¹ Seaforth, packed from 600 to 700 hogs per season, and was completely sold out by mid-summer. Hugh Rebb, also of Seaforth, was active in the pork-packing business for four years, accepting from 400 to 500 hogs per season.¹⁵² In 1878-79, John Beattie engaged in business at Seaforth. He favoured the raising of smaller hogs which weighed from 150 to 200 pounds when dressed, rather than the production of heavier ones: for each order he received for hams weighing 14 to 16 pounds, ten orders were received for hams of from 8 to 12 pounds.

Lean ham and bacon were preferred in the British market, while coarse, fat meat was favoured in lumber-camps.¹⁵³ In preserving pork, Mr. Beattie used boron salt which had been thoroughly dried, and reported that no meat had been spoiled during the two seasons he had been in business.¹⁵⁴ By 1883, there were several pork-packing establishments in western Ontario, but they were all eclipsed by the Davies Packing Plant, at Toronto, which handled 50,000 hogs annually.

By 1880, hog-raising was carried on only to a limited extent in most of the counties of Ontario, and was confined to a subsidiary rôle in connection with butter and cheese factories. The south-western counties, Essex and Kent, proved to be exceptions, and continued to produce corn-fed bacon on a large scale. Huron County exhibited less progress in hog-raising than in the other departments of livestock production, and contained only 15,998 hogs, in 1880. Most of the townships favoured Berkshire and Suffolk hogs and their crosses. Ashfield, which had been in last place in hog production in 1850, was now the leading township, while Goderich, which had been far in advance thirty years before, fell to ninth place. At provincial exhibitions Huronites were successful in gaining eleven awards for swine; seven of these prizes went to John Cummings, who was an outstanding breeder of hogs during the early 'seventies.

POULTRY: Poultry-breeding did not attain very great proportions in Huron County until the late 'sixties, prior to which fowl were kept to provide meat and eggs for home consumption. Progress in this branch of farming was stimulated by the provincial exhibitions, by poultry associations, and by the appearance of local dealers, who made the marketing of eggs both profitable and practicable. Various breeds of poultry were awarded provincial prizes from 1850 onward, but exhibits were usually confined to a small group of bird fanciers,¹⁵⁵ few of whom came from Huron. In 1858, G.E. Cresswell, Tuckersmith, received a prize for a pair of game fowl, and three years later, a pair of guinea fowl¹⁵⁶ merited an

award for Samuel Tye, of Stanley. In 1866, the Canada West Poultry Association was organized at Toronto,¹⁵⁷ and two years later it was transformed into the Ontario Poultry Association. Annual exhibitions were sponsored, but the fowl shown were usually "show birds," such as Cochins, Dorkings, Hamburgs, and Brahma-¹⁵⁸putras, Aylesbury and Rouen ducks, and a limited number of geese and turkeys. These fowl commanded such exorbitant prices, however, that they were beyond the reach of the average farmer;¹⁵⁹ indeed, fowl for breeding purposes were not considered important enough to be included in the enumerated free list of the Canadian tariff of 1867.¹⁶⁰

During the 'seventies, owing largely to the efforts of the Ontario Poultry Association, many persons were making poultry-breeding¹⁶¹ the subject of intelligent study, and increasing attention was paid to the matters of housing and feeding. Warm, well-ventilated hen-houses were advocated, together with substantial food, such as beef and pork scraps, cabbage, corn-meal, and wheat-bran. In 1874, a firm at Brighton, Massachusetts, manufactured hen-feed from dried meat and bones, and sold the compound at \$40 per ton; when corn-meal and wheat-bran were added, an excellent egg-producing food resulted.¹⁶² Poultry-keeping in Huron County increased considerably after 1867, the year in which D.D. Wilson established his "Egg Emporium" at Seaforth. Improved methods in packing, storing, and transporting eggs also furnished stimuli for their production.

The majority of Huron farmers deemed it profitable to maintain about fifty or sixty fowl on a one-hundred-acre farm. Breeds kept by Huronites included Plymouth Rock, Brahma, Game, Black Spanish, and White Leghorn.¹⁶³ Plymouth Rock was considered the best breed: it produced a large hard-shelled egg, was a good table fowl, and matured at an early age. Brahma and Game furnished an excellent cross-breed.¹⁶⁴ Black Spanish was a prolific layer, but the shell of its eggs was too fragile, thus necessitating greater care in packing. Geese were kept by

most Huron farmers, and became so numerous and unrestrained in Goderich in 1878, that demands arose to have these feathery wanderers securely penned; the Goderich Council was lax in its treatment of this situation, and for some time was dubbed with the "euphonious cognomen of 'Goose'".¹⁶⁵ In 1879, efforts were made in Clinton to organise a poultry association, in order to arouse greater interest in this branch of livestock raising, to bring breeders together, and to discuss matters pertaining to poultry.¹⁶⁶ On the whole, by 1880, the poultry in Huron consisted chiefly of the common varieties of hens, geese, ducks, and turkeys. Goderich was the only township which recorded a noticeable improvement in poultry-breeding.

BEES: Honey-bees are not natives of Canada, but were imported originally from Europe. Although provincial prizes were awarded for comb and jar honey as early as 1856, -- a native of Colborne township received first prize for clear honey in 1878, -- bee culture did not attain much importance in Upper Canada until the 'sixties. It was during this period that J.H. and E.M. Thomas, of Brocklin (Ontario County), continually submitted articles on bees and bee-keeping to the "Canada Farmer." The former, who became apiary editor of this journal, was responsible for the formation of the Ontario Bee-Keepers' Association,¹⁶⁷ which provided an impetus to the expansion of bee-culture. Other factors included the growth of horticulture and dairy pasturing, and the gradual adoption of clovers as hay crops throughout the province. By 1870, Ontario was reported to contain 94,604 bee-hives.

In June, 1864, a letter¹⁶⁸ appeared in the "Canada Farmer", written by a Hay township farmer, who sought information relative to bee-keeping, in order "to get up a stock of bees." Two years later, another letter¹⁶⁹ appeared from John Jewett, of Lucknow, who described bee-hives which he had manufactured twenty-six years before. The same writer later discussed how he had wintered¹⁷⁰

his bees for the past three seasons, and submitted directions for building a board shelter for hives. During the 'seventies, bee-keeping became increasingly popular among Huron farmers and gardeners, although it was practised largely by amateurs. In March, 1878, "A.S.", of Lucknow, declared ¹⁷¹ that he and others in his neighbourhood thought that they should be encouraged in their efforts to improve their stocks of bees, by not having to pay 17½ per cent. ad valorem duty on Italian bees imported from the United States. The "Globe" stated that bees were included in the category of "animals imported for the improvement of stock", and were therefore exempt from duty. Still another Huron farmer, of Ashfield, ¹⁷² wrote to the "Globe", inquiring about a book on bee-keeping.

In 1880, it was stated that this department of agriculture could be made very profitable in Huron County, because of the considerable extent of land devoted to clover. A good stock was capable of casting one swarm and of producing forty pounds of honey. Artificial combs, and Fisher hives, which protected bees in winter, were widely used. One apiary in Huron in 1880, contained between sixty and one hundred colonies. The owner, who believed that white clover and basswood blossoms were the best honey-flowers, used Italian bees exclusively. The greater part of his honey was sold in the local market, at 20 cts. per pound for extracted honey, and 25 cts. per pound for comb; he had, moreover, shipped bees to several centres, including Charlottetown, Prince Edward Island. ¹⁷³

According to the returns of the townships of Ontario which were submitted to the Agricultural Commission in 1880, only 53 of the 409 townships contained no improved stock at all. This absence of improvement, it was stated, could be attributed to penurious habits, rather than to lack of intelligence in matters of breeding. Huron County, by 1880, was among the foremost counties in the production of livestock, and every township contained evidence of improved stock. In fact, one township -- Hullett -- boasted that seventy-five per cent. of its stock was pure-bred, while still another township -- Colborne -- contained \$25,000 worth of imported livestock.

Chapter XI: The Development of Livestock.References:

- 1 E.g., F.L. Stone, Guelph; John Snell, Edmonton; George Brown, near Brentford; Captain T.E. Robson, of Middlesex; Hon. David Christie, Brantford; James Davidson, Balsam; the Watts of Salem; and the Millers of Markham.
- 2 Can. Agric., vol. VI, 1855, November, p. 351.
- 3 Can. Farmer, vol. II, n.s., 1870, April 15, p. 142.
- 4 Cf. Journal and Transactions, 1864-68, p. 494.
- 5 In some parts of Upper Canada, cattle had improved to such an extent, by 1863, that it was not uncommon for prizes to be carried off at American exhibitions.
- 6 Journal and Transactions, 1864-68, p. 368.
Can. Agric., vol. XIII, 1861, May 1, p. 281.
- 7 Day, S.P., vol. II, pp. 16-17.
- 8 Can. Agric., vol. XV, 1863, February, p. 58.
- 9 Can. Farmer, vol. II, 1874, November 2, p. 417.
- 10 Can. Agric., vol. IV, 1852, September, pp. 269-270.
Can. Farmer, vol. I, 1864, January 15, p. 4.
- 11 James, C.C., p. 358.
- 12 The Dairy Industry in Canada, pp. 18-20.
- 13 Can. Agric., vol. IV, 1852, February, pp. 47-49.
Cf. supra, p. 69.
- 14 Can. Farmer, vol. I, 1864, December 1, p. 357.
- 15 Can. Agric., vol. IV, 1852, March, p. 76.
Cf. Brit. Amer. Cult., vol. I, n.s., 1845, Feb., p. 36.
- 16 W.G., vol. XXIV, 1872, April 5.
- 17 Vid. Agric. Report, 1881, vol. I, pp. 231-246.
- 18 Brown, J.B., pp. 72; 302-303.
- 19 Vid. table, p. 254.
- 20 Haw, p. 74.
- 21 Cf. McQueen, pp. 194-5.

- 22 In 1855-56, Mr. Alex Young, Colborne, purchased a Durham bull for \$325; in 1857, Mr. Francis Fowler, Jr., purchased a thoroughbred cow for \$280, and Mr. James Dickson obtained a Durham bull at the provincial exhibition at Brantford.
- 23 W.G., vol. XIII, 1871, May 26, p. 8.
- 24 Sess. Papers, vol. VIII, Part I, 1875-76, p. 55.
- 25 Agric. Report, 1861, vol. I, p. 246; vol. IV, Append. G, pp. 40-42. On the other hand, Dickson believed that agricultural societies should award prizes for steer calves.
- 26 W.G., vol. XXII, 1880, July 2.
- 27 Can. Agric., vol. V, 1855, December, p. 354.
- 28 Cf. W.G., vol. XXIV, 1872, March 15.
Vid. supra, p. 75.
- 29 Can. Farmer, vol. II, n.s., 1870, July 15, p. 278.
- 30 W.G., vol. XX, 1878, January 25, p. 59.
- 31 Sess. Papers, vol. XII, Part I, 1880, pp. 71-73.
- 32 W.G., vol. XXI, 1879, October 10, pp. 658-9; also vol. XXII, 1880, October 15.
- 33 Cf. Can. Farmer, vol. III, 1871, December, p. 455.
- 34 W.G., vol. XX, 1878, May 31, p. 347.
Ibid., vol. XVII, 1875, October 15. -- Protests against the allowance of cattle to wander at random were voiced in the London area, in the fall of 1875.
- 35 Ibid., vol. XXVI, 1874, November 13.
- 36 Can. Farmer, vol. II, n.s., 1870, February 15, p. 52.
- 37 Agric. Report, 1861, vol. I, pp. 286-293.
- 38 Teen, p. 74.
- 39 After 1875, many Huron farmers planted horse-tooth corn for fodder. In 1880, Mr. Dickson paid 60 cts. (including 7 cts. duty) per bushel, for corn delivered at Seaforth.
- 40 Agric. Report, 1861, vol. IV, Appendix G, p. 39.
- 41 McQueen, p. 199.
Journal and Transactions, etc., vol. II, 1858, pp. 72-73.
- 42 Cf. Landon, F.: The 1860's, etc., p. 7.
The production of beef in Upper Canada in 1851 was 113,445 barrels, and in 1861, only 67,508 barrels. (Can. Agric., vol. XIV, 1862, October 16,

- 43 In 1868, Canada imported two head of cattle, and exported 40,660 head!
(*Can. Farmer*, vol. II, n.s., 1870, April 15, p. 142.).
- 44 *Teon*, pp. 210-211.
Can. Farmer, vol. IV, 1867, May 15, p. 154.
- 45 *Ibid.*, vol. III, n.s., 1871, May, p. 183; June, p. 234; September, p. 329.
Cf. W.G., vol. XXIII, 1871, December 29.
- 46 *Ibid.*, vol. X IV, 1872, December 6; *vid.* December 13, for the constitution
of the association.
- 47 *Vid.* Abbott, H.J.E.: *The Marketing of Livestock in Canada*. (University
of Toronto Studies, Toronto, 1923), p. 4 $\frac{1}{2}$, for table of figures
concerning the exportation of Canadian cattle to the United States
and Great Britain, from 1867 onward.
- 48 *W.G.*, vol. XXV, 1873, November 7.
- 49 *Sess. Papers*, vol. X, Part I, No. 1, Append. A, 1878, pp. 64-65.
- 50 *Ibid.*, No. 9.
- 51 *Ibid.*, vol. XIII, 1881, No. 7; No. 9, p. vii.
- 52 *W.G.*, vol. XXXI, 1879, February 7, p. 9 $\frac{1}{2}$.
- 53 *Ibid.*, March 21, pp. 184-5.
- 54 *Sess. Papers*, vol. XV, 1882-3, No. 7; No. 11, p. 129.
- 55 *Vid.* Abbott, pp. 17-18, for a discussion of the causes of the decline,
following 1892, in the exportation of cattle to Great Britain.
(Also *vid.* *ibid.*, pp. 4 $\frac{1}{2}$; 22).
- 56 *Ibid.*, pp. 5; 23.
- 57 *Ibid.*, p. 3.
- 58 *Sess. Papers*, vol. X, 1878, No. 10; 1880-81, No. 11.
Immis and Lower, vol. II, pp. 554-555.
- 59 *W.G.*, vol. XXV, 1873, November 21.
- 60 *Darling*, p. 16.
- 61 *W.G.*, vol. XXVIII, 1876, March 3, p. 11. -- The first shipment of live
cattle from Perth to Liverpool was made in 1876.
- 62 *Ibid.*, vol. XXXII, 1880, July 2.
- 63 *Ibid.*, vol. XXX, 1878, April 12, p. 235.
- 64 *Ibid.*, July 26, p. 475.

- 65 Ibid., November 8, p. 715.
Cf. Fordwich "Record", February 12, 1936.
- 66 W.G., vol. XXX, 1878, May 10, p. 299.
- 67 Ibid., March 22, p. 187; cf. vol. XXXI, 1879, January 24, p. 58. -- It is noteworthy that the value of cattle increased from \$24 to \$65 per head, before 1885, owing to improved methods of breeding and decreased shrinkage.
- 68 Agric. Report, 1881, vol. IV, Append. J, p. 35.
- 69 W.G., vol. XXIX, 1877, July 6, p. 439.
- 70 Ibid., vol. XXXII, 1880, May 28.
- 71 These nineteen awards were for cattle, as distinct from other livestock.
- 72 Brit. Amer. Cult., vol. II, 1843, December, p. 185.
- 73 W.G., vol. XXIV, 1872, November 22.
Cf. supra, p. 52.
- 74 Can. Farmer, vol. II, 1866, June 1, p. 168.
- 75 Transactions, etc., 1857, pp. 63; 244; 257; 1864-68, p. 90.
Brown, J.B., pp. 72; 302-303.
- 76 In 1848, there were 2,004 horses in the Huron District, including 130 in Goderich township.
- 77 Haw, p. 74.
- 78 Can. Farmer, vol. IV, 1867, May 15, p. 154; quoted from the "Canada Gazette."
- 79 W.G., vol. XXIII, 1871, December 29.
- 80 Can. Farmer, vol. II, n.s., 1870, April 15, p. 142.
- 81 W.G., vol. XXIII, 1871, November 3.
- 82 Ibid., February 3.
- 83 Ibid., vol. XXIV, 1872, November 15.
- 84 Ibid., vol. XXVI, 1874, December 25.
- 85 Huron farmers were constantly concerned over diseases which affected their stock. In July, 1871, a strange horse disease caused much alarm among Goderich farmers, who sent their horses out of town. The Ontario government sent Professor Smith to investigate into the disease, for which preventive measures were prescribed. (W.G., vol. XXIII, 1871, July 21, p. 5; July 28, p. 6). During 1880-81, a disease of the mouth attacked sheep, in the vicinity of Exeter. (Ibid., vol. XXXII, 1880, Dec. 24).

- 86 *Agric. Report*, 1881, vol. V, Append. K, pp. 64-65. -- In 1867, Thomas Evans was responsible for bringing the first imported Clyde horse into Perth County.
- 87 *W.G.*, vol. XIV, 1873, March 14.
- 88 *Ibid.*, November 7.
- 89 *Ibid.*, vol. XXVII, 1875, March 26.
- 90 *Ibid.*, vol. XXVIII, 1876, March 3, p. 11.
- 91 *Sess. Papers*, vol. VIII, Part I, 1875-76, p. 55.
- 92 *W.G.*, vol. XXVII, 1875, October 1.
- 93 *Ibid.*, vol. XXVIII, 1876, May 5, p. 11.
Sess. Papers, vol. X, Part I, 1878, No. 1, Append. A, pp. 64-65.
- 94 *Agric. Report*, 1881, vol. I, p. 437.
- 95 *W.G.*, vol. XXVIII, 1876, July 21, p. 12.
- 96 *Ibid.*, October 20, p. 10
- 97 *Ibid.*; also, March 31, p. 11.
- 98 *Ibid.*, vol. XXX, 1878, June 7, p. 363.
- 99 *Ibid.*, April 12, p. 235.
- 100 *Ibid.*, July 26, p. 475.
Cf. *supra*, p. 260.
- 101 *Sess. Papers*, vol. XII, Part I, 1880, pp. 71-73.
- 102 *W.G.*, vol. XXXI, 1879, October 10, pp. 658-9; vol. XXXII, 1880, October 15.
- 103 *Ibid.*, February 13.
- 104 *Ibid.*, March 12.
- 105 *Ibid.*, vol. XXXIII, 1881, September 2.
- 106 *Vid. Agric. Report*, 1881, vol. I, p. 550. -- By 1881, there was no Ontario or Canadian stud-book or register for horses; imported thoroughbreds were usually registered in Great Britain.
- 107 *W.G.*, vol. XXXIII, 1881, December 2.
- 108 *Vid. Johnston, W.*, pp. 168-9.
- 109 *W.G.*, vol. XXX, 1878, August 2, p. 491.
- 110 *Ibid.*, vol. XXXII, 1880, May 28.
- 111 ~~*Sess. Papers*, vol. XV, Part II, 1882-83, No. 3, Append. B, p. 45.~~

- 112 Innis and Lower, vol. II, pp. 551-2.
- 113 Vid. prize list, supra, p. 74.
- 114 Can. Agric., vol. I, 1849, January, p. 11.
- 115 Ibid., vol. IV, 1852, January, p. 16.
Journal and Transactions, 1857, pp. 74; 88; 101; 233.
Can. Farmer, vol. III, 1871, June, p. 234.
The first Leicester sheep were brought into Perth County by William Laing
in 1853.
- 116 Journal and Transactions, 1857, pp. 88; 233.
- 117 Brown, J.B., pp. 72; 302-303.
- 118 Haw, p. 74.
- 119 Can. Farmer, vol. III, 1863, April 2, p. 104.
- 120 Can. Farmer, vol. II, 1865, April 15, p. 124.
- 121 Ibid., vol. V, 1868, June 1, p. 171.
- 122 Ibid., vol. I, 1864, December 15, p. 373.
- 123 Ibid., vol. I, n.s., 1869, January 15, p. 4.
- 124 Can. Agric., vol. IV, 1852, April, pp. 103-107.
- 125 W.G., vol. XXXI, 1879, October 24, p. 698.
- 126 Journal and Transactions, 1864-68, p. 221.
- 127 W.G., vol. XXV, 1873, May 23; vol. XXX, 1878, April 12, p. 236; vol. XXXI,
1879, July 11, p. 443.
- 128 Ibid., vol. XXVIII, 1876, February 25, p. 11.
- 129 Can. Agric., vol. IV, 1852, January, pp. 13-17.
- 130 Journal and Transactions, 1864-68, p. 497.
- 131 Can. Farmer, vol. II, n.s., 1870, April 10, p. 142. -- In 1868, Canada
exported 97,406 sheep, and imported only 54 sheep.
- 132 W.G., vol. XXVIII, 1876, October 27, p. 11.
- 133 Elder, J., July 19, 1935, No. 9.
- 134 Agric. Report, 1881, vol. I, pp. 299-304.
- 135 W.G., vol. XXXIII, 1881, October 14.
- 136 Ibid., vol. XXX, 1878, April 12, p. 236.
- 137 ~~Ibid., vol. XXV, 1873, November 7.~~

- 138 Can. Farmer, vol. III, n.s., 1871, July, pp. 261-2.
- 139 W.G., vol. XXX, 1878, April 19, p. 261.
- 140 Can. Agric., vol. II, 1860, March, p. 56.
Journal and Transactions, 1867, pp. 80; 242; 270; *ibid.*, 1864-68, pp. 214; 235.
Cf. *supra*, pp. 52; 54.
- 141 Can. Agric., vol. XIV, 1862, October 16, p. 627.
- 142 Can. Farmer, vol. I, 1864, March 1, p. 57.
- 143 *Teon*, pp. 220-1.
For a description of a pigery, *vid.* Can. Agric., vol. I, 1849, February, p. 40.
- 144 Journal and Transactions, 1864-68, p. 235.
- 145 Can. Farmer, vol. V, 1868, January 1, p. 5; vol. I, n.s., 1869, February, p. 47; vol. II, 1874, February 16, p. 69; *cf.* vol. III, 1871, May, p. 171.
- 146 In 1868, Canada exported 10,710 hogs, and imported only seven. (Can. Farmer, vol. II, n.s., 1870, April 15, p. 142).
- 147 *Ibid.*, vol. I, 1864, March 1, p. 64; March 15, p. 72.
- 148 *Ibid.*, vol. IV, 1867, February 15, p. 59.
- 149 Elder, J., March 8, 1935, No. 4.
Cf. *Fordwich "Record"*, February 12, 1936.
- 150 *Hist. Sketch of Huron*, pp. ix, xv.
- 151 In 1878, Robertson was engaged in buying butter and cheese.
- 152 Agric. Report, 1881, vol. V, pp. 22-26.
- 153 *Ibid.*, vol. I, pp. 332-336.
- 154 *Ibid.*, vol. IV, Append. H, pp. 94-96.
- 155 *E.g.*, Joseph Lamb, John Bogue, and Samuel Peters, of London; John Ker, of Stamford; and T. McLean, of Toronto.
- 156 In April, 1881, the "Globe" contained a letter written by a Bayfield farmer, who inquired about the merits of guinea fowl. (W.G., vol. XXXIII, 1881, April 8).
- 157 Can. Farmer, vol. III, 1866, November 18, p. 345.
- 158 *Ibid.*, vol. V, 1868, May 15, p. 151.
- 159 *Ibid.*, November 16, p. 352.
- 160 *Ibid.*, November 2, p. 327.
- 161 *Vid.* Agric. Report, 1881 vol. II, p. 212.

- 162 W.G., vol. XXVI, 1874, December 4.
- 163 Vid. Sess. Papers, vol. XIV, Part II, 1882, p. 20.
- 164 W.G., vol. XXXII, 1880, August 20.
- 165 Ibid., vol. XXX, 1878, September 13, p. 585.
- 166 Ibid., vol. XXXI, 1879, October 31, p. 714.
- 167 Can. Farmer, vol. V, 1868, October 1, p. 292; vol. I, n.s., 1869, July, p. 275; August, p. 299; October, p. 392.
- 168 Ibid., vol. I, 1864, June 15, p. 175.
- 169 Ibid., vol. III, 1866, September 15, p. 279; vol. IV, 1867, February 1, p. 41.
- 170 Ibid., November 15, p. 358.
- 171 W.G., vol. LXX, 1878, March 8, p. 154.
- 172 Ibid., vol. XXXI, 1879, March 28, p. 202.
- 173 Agric. Report, 1881, vol. III, pp. 87-88.

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CHAPTER XII

Dairying

Dairying did not assume a major position in agriculture in Huron County until the 'sixties, although butter and cheese had been considered products of potential value as early as 1848.¹ The manufacture of butter and cheese had been the task of the farmer's wife, and involved an art which was easily acquired and universally practised.² The establishment of the factory system of cheese- and butter-making transferred manual labour from the farm to the factory, and substituted male for female labour. Attention was also drawn to the possible shortage of cattle,³ a situation which the factory system sought to remedy: for example, it became a common practice for factories to maintain a herd of swine which were fed on left-over whey.

Various factors contributed to the rapid development of dairying in Huron County and in Upper Canada generally. The advent of the factory system, introduced from New York state, was the most important single factor, and was further reinforced by the migration of technique, machinery, and methods from New York state and European countries, and the successful application of them in Canada. The introduction of the factory system made possible the great increase in production which provided the basis for a considerable export trade in butter and cheese. The formation of dairy associations, after 1867, and their influence via annual discussions and cheese fairs also provided a stimulus, which was strengthened by government grants. The repeal of the reciprocal agreement with the United States and the resultant American tariff of 20 per cent. ad valorem on live cattle, and duties on butter and cheese, directed Canadians towards the British market. The loss of the American market for grains, such as barley, brought about an increased use by Canadian farmers

of these grains for stock-feed. Many farmers, at the prospect of falling wheat crops and prices, and the growing rivalry of other wheat-producing areas, turned to dairying as a more profitable undertaking. Live stock and dairying had reciprocal influences on each other, and both industries owed much of their growth to the development of transportation facilities, including cold storage, and to the demands of concentrated urban centres.

BUTTER: The manufacture of butter emerged in response to local demand, but as a product of domestic economy it varied greatly in quality and was unsatisfactory for purposes of exportation.⁴ Until the 'eighties, Canadian butter was poor in quality, and lacked uniformity and cleanliness, despite journalistic criticism and instruction⁵ concerning its manufacture. Many farmers attempted to make butter from too few cows, tended to keep the cream too long, and to include too many churnings in one package of butter. Farmers' wives had poor conveniences for manufacturing and preserving butter, and stale and fresh cream were often mixed together. The earliest utensils used in farm dairies were wooden, but they were gradually replaced by earthenware, and later, by tinware. For many years, the most popular churn was the type operated by an up-and-down "dasher", but this churn was supplanted by the box-churn. The latter consisted of an oblong solid box, equipped with one or two covers each twenty inches in diameter, in which a "dasher" was operated by turning a crank. Dun and Jones, a Huron firm, exhibited a number of churns at the provincial exhibition in 1861. Thirty years later, a new type of churn appeared, known as the "trunk churn".⁶ Ice-houses, dairy-cellars, or spring-houses helped to remedy the lack of adequate refrigeration, and preservation was further assisted by the addition of salt-brine, which was drained from the butter before it was marketed.⁷ There was no standardisation of butter (at least, not before 1880), although suggestions for a system of inspection were made in 1872,⁸ and in 1880, Mr. W.S. Robertson, of Seaforth, urged the adoption of such a system.

By 1874, a number of farmers were rolling and stamping their own butter,⁹ but store-keepers and dealers continued to sell "store-packed butter,"

which was decidedly inferior in grade, colour, and uniformity. At Toronto, Joseph Flavelle noted¹⁰ that butter was packed "in every kind of package, from tubs and gunny sacks to boot-cases and sugar barrels." Other containers included dish-pans, nail-kegs, tin pails, wooden pails, crocks, and firkins, which were used over and over again, often without being cleaned. Firkins, or white tubs, containing from twenty-five to one hundred pounds, were preferred until about 1874, when twenty-pound containers became popular. It was a common procedure for store-keepers to mix, re-salt, and re-pack various grades of butter which was stored in cellars until the fall of the year. Butter was frequently adulterated by the addition of lard.

The following quotation¹¹ from a journal of 1870 indicates the attitude held towards "store-butter":

"[Butter] remains in his [the dealer's] store for several days, exposed to light, heat, and dust, until the accumulation warns him that it is time to do something with it, and after a second manipulation and a considerable addition of salt, saltpetre, and sometimes sugar, it is consigned to the firkin The richest and poorest [grades] are thrown indiscriminately together, and pounded up [to form a] composition of rancid, pasty, variegated coloured grease certainly unworthy of the very name of butter."

It was stated in South Huron in 1878 that considerable butter reached consumers in an unsalable condition, and that Huronites were becoming apprehensive of market reports describing Canadian butter as "chiefly for wagon grease, fourpence a pound."¹²

Contingencies which affected the manufacture of butter included the kind of salt used, the methods, machinery, and equipment involved in production, and the proper treatment of stock in the matters of adequate shelter and food.¹³ Prior to the discovery of salt in Huron County, Huron manufacturers of butter made use of American (Osewego) salt. After 1866, Huron salt, which was highly recommended by the Canadian Dairymen's Association,¹⁴ was widely used. For several years, however, Huron salt was

criticized as being inferior to Oswego salt and British (Liverpool) salt. In 1880, Huron salt was declared, following experiments conducted by Cornell University, to be "absolutely pure";¹⁵ an investigation¹⁶ conducted at the same time, by the Agricultural Commission, was unproductive of results. On the whole, by 1880, Huronites were using Huron salt in the manufacture of butter.¹⁷

By 1870, it was a common practice for farmers to maintain a small dairy of ten cows, and to conduct a churning once every twenty-four hours. Huron cows generally provided enough milk to manufacture less than twenty pounds of butter, although there were instances of greater yields.¹⁸ Within a few years, butter factories, later known as cream-gathering factories or creameries, began to appear, and gradually displaced domestic manufacture, except for home purposes. The transfer of butter-making to the factory came more slowly than did that of cheese-making; the first Canadian butter-factories were begun in the province of Quebec in 1873, and in the province of Ontario, at Teeswater (Bruce County), in 1876.¹⁹ Three years later, similar factories were erected at Wingham,²⁰ and Lucknow,²¹ while plans for the establishment of a factory at Wrenster²² failed to materialize. In June, 1878, a group of Howick farmers erected the "People's Cheese and Butter Factory," with a capital stock of \$2,500, on the sixth concession of the township.²³ By 1881, Huron County contained only one active creamery,²⁴ but plans for a "Cooperative Union Creamery Company" were being mooted in Goderich township.²⁵

The first creameries were operated on the Schwartz system, by which milk was prepared for creaming by the principle of gravitation. Subsequently, the Cooley system of separating cream was introduced, whereby milk was placed in specially constructed cans. The first continuous separator was developed in Denmark, by Neilsen, in 1878, one year before the appearance of the De Laval separator, and four years before the introduction of the centrifugal cream separator. Later, the Fairlamb system was adopted, by which only cream was

forwarded to the factory, thus lessening the cost of transporting and handling the product.

The production of butter in Huron County increased from 63,944 pounds in 1848²⁶ to 200,000 pounds in 1851²⁷, and to 1,569,832 pounds in 1870. In 1851, Upper Canada produced 16,064,532 pounds, and in 1861, 26,828,264 pounds²⁸; during the latter year, Lower Canada produced 15,906,949 pounds. The product was not esteemed very highly in Great Britain in 1863, and in 1870, sold at only one-third of the price paid for Irish, Dutch, and French butter.²⁹ Meanwhile, Canada was still importing substantial amounts of American butter, owing to the inferior quality³⁰ of the home product, and to the scarcity of it during several months of the year. By 1874, Canadian butter exports to Great Britain surpassed those of the United States;³¹ English buyers preferred butter made at Morrisburg (Dundas County), at Brockville (Leeds County), and in the Eastern Townships. In 1879-80, the amount of Canadian butter exported was 18,635,362 pounds, valued at more than three million dollars.³² Only a small amount of creamery butter was exported before 1897, the year in which ships plying between Montreal and Great Britain were equipped with mechanical refrigeration.

Until the 'sixties, the price of Canadian butter ranged from eight to ten pence per pound.³³ In 1873, the merchants of Goderich decided to pay sixteen cents per pound for first-class butter packed in firkins, and fourteen cents for butter packed in rolls,³⁴ and thus indicated their preference for the former. Five years later, Brussels merchants paid from six to fifteen cents for rank to choice butter.³⁵ In 1880, W.S. Robertson,³⁶ of Seaforth, one of the foremost butter dealers in Huron, paid twelve to sixteen cents for dairy butter, and twenty-four cents for creamery butter.³⁷ Robertson, engaged in this business since 1870, shipped a considerable amount of butter to the British market, on consignments. Edward Cash,³⁸ also of Seaforth, had been in business since the 'fifties, but preferred to sell butter to shippers, rather than ship the product himself.

Farmers produced from twenty to one thousand pounds per season, and preferred to sell their butter to local dealers, and thus avoid market fees which were imposed on farmers who sold butter and eggs directly to stores.

MILK: The growth of urban centres led to an increased consumption of fresh milk, but this product, like butter, proved to be unsatisfactory, because of the absence of any systematic regulations for inspection. Milk distribution, during the 'seventies, was conducted daily by a driver who seldom left the seat of his wagon; his customers, summoned by a hand-bell, filled their pitchers from milk-cans. Complaints were often voiced against the milkman's addition of chalk to restore normal appearance to blue milk, and against his too frequent recourse to the pump in order to replenish his milk supply.³⁹ In 1872, the public analyst at the Toronto General Hospital reported: "From results, I conclude that the milk is diluted with from fifteen to twenty per cent. of water, a grave matter in such an important item of the diet of the sick."⁴⁰ Sixteen years later, an analyst at Kingston denounced milk as a cause of unhealthy conditions in large cities.

In 1860, L.C. Colvin, Cincinnati, patented a milking machine which obtained four quarts of milk per minute;⁴¹ four years later, an English machine, operated by means of hand-bellows was advertised.⁴² Neither of these was used to any noticeable extent in Upper Canada. The first milk condensery in Canada⁴³ was established at Truro, Nova Scotia, in 1883, but south-western Ontario subsequently became the foremost district in the production of all forms of concentrated milk. Little was known, in 1880, about the fat content of milk, and scientific tests were not forthcoming until 1888-90. Improvements in hygiene and sanitation, the adoption of better methods of bottling, transportation, and distribution, and the use of mechanical refrigeration, resulted in a considerable increase in milk consumption, by the end of the century.

CHEESE: Cheese-making was confined almost entirely to the farm until the 'fifties and 'sixties: skim-milk cheese was popular among the early farmers,⁴⁴ but it remained secondary in importance to butter and milk, which were more essential articles of produce. During the 'forties, numerous cheese dairies functioned in New York state,⁴⁵ and several Canadian farmers began to manufacture cheese on a large scale. By 1845, Hiram Ranney, of Salford (Oxford County) manufactured cheese from the milk of nearly one hundred cows, and hauled the product to Hamilton. Private cheese manufacturing concerns also operated in the Leeds and Grenville district; in 1851, one of these establishments shipped eight tons of cheese to Scotland.⁴⁶ By 1861, Ranney and his son-in-law, James Harris, owned seven hundred acres and one hundred cows,⁴⁷ and manufactured from twenty-four to twenty-eight tons of cheese annually. Another Oxford farmer, Andrew Smith, of Norwich, produced more than fifteen tons in 1863.⁴⁸ Evidence indicates that Huron County contained two or three private manufactories of cheese, by 1875, which, for the most part, adopted the methods used in the American system of cheese manufacturing.

The American system of cooperative cheese factories appears to have been in operation in New York state after 1850, although its origins lay in Switzerland in the early part of the century. Cheese factories were established⁴⁹ for the purpose of manufacturing cheese from the milk produced on farms within a given area, and did not include farm dairies, where cheese was made from the milk of the owner's herd. Jesse Williams is generally credited with having erected the first cheese factory, in 1852, in Oneida County. Twelve years later, Harvey Farrington, of Herkimer County, built the first Canadian cheese factory near Norwich (Oxford County), and accepted the milk of more than three hundred cows. At about the same time, Thomas Ballantyne⁵⁰ erected the first cheese factory in Ribbert⁵¹ (Perth County), and James Burnett established the first one in the province of Quebec, at Dunham. By 1865, Lower Canada contained

two factories and Upper Canada contained ten, four of which were situated in Oxford County, and one in Hastings County, erected at Belleville by Ketchum Graham.⁵² One of these, owned by Andrew Smith,⁵³ of Norwich, utilized the milk of six hundred cows, including one hundred and twenty of his own.⁵⁴ The ensuing years witnessed a phenomenal growth of cheese factories in Upper Canada, which contained: in 1866, one hundred factories; in 1867, two hundred and thirty-five factories, of which thirty-six were in South Oxford;⁵⁵ and in 1871, three hundred and twenty-three factories. It is noteworthy that, although the factory system began slowly in the eastern part of the province, by 1880 factories were located predominantly (after Oxford County) in Hastings, Glengarry, and Leeds Counties.⁵⁶

By 1875, there were at least seven cheese factories⁵⁷ in Huron County, which provided sources "from which a good many of the farmers got most of their revenue at that time."⁵⁸ Three factories were located at Seaforth, and were owned by A. Malcolm; John Chisholm;⁵⁹ and E. J. Hickson and Company, respectively; the remaining four were situated at Brucefield,⁶⁰ Brussels, Londesboro, and Clinton. Hickson and Company, in 1874, produced eighty tons of cheese. The factory at Brucefield was established in May, 1874, and during its first season also manufactured eighty tons, from the milk of more than four hundred cows.⁶¹ The Brussels factory presented a satisfactory report⁶² for 1874: 46,254 pounds of cheese were produced from 466,658 pounds of milk; the price received by patrons for the cheese was 8.07 cents per pound. Meanwhile, the Londesboro factory produced from the milk of three hundred and fifty cows 112,210 pounds of cheese. The Clinton establishment, owned by Callendar, Scott, and Company,⁶³ produced 72,823 pounds of cheese from the milk of five hundred cows. The seven factories produced, in 1875, an aggregate of 250 tons of cheese, from the milk of 2,500 cows, at an average yield of 200 pounds of milk per cow. The price of cheese averaged 12½ cents per pound, thus adding to the wealth of Huron farmers,

from cheese alone, the sum of \$62,500 -- or an average of \$25 for each cow.⁶⁴

By 1880, there were at least nineteen cheese factories in Huron County,⁶⁵ located as follows: Ashfield, one, in the south-east corner of the township; West Wawanosh, one, at Manchester;⁶⁶ East Wawanosh, one, the Beaver cheese factory, at the eleventh concession; Turnberry, two, at Bluevale and at Belmore; Howick, two, one of which was at Gorrie;⁶⁷ Morris, one, at the sixth concession; Grey, Colborne, and Goderich, none; Hullett,⁶⁸ one, in the south-east section; McKillop, two, one of which was at Winthrop;⁶⁸ Stanley, one, near Varna;⁶⁹ Tucker-Smith,⁷⁰ four: one on the southern boundary, one and one-half miles from Hogerville; another at Brucefield; a third factory two miles south-east of Clinton; and the fourth at Seaforth,⁷¹ which provided a market for the north-eastern part of the township; May contained no factories; Stephen, two, at Exeter⁷² and Crediton;⁷³ and Osborne, one, at Farquhar. It would appear that numerous other cheese factories⁷⁴ had sprung into existence for a short-lived period, as was the case in most of the agricultural districts of the province. Cheese-manufacturing enterprises were not confined within the borders of the county: in 1877, a Seaforth citizen went to Manitoba in order to lay the foundations of a cheese factory there.⁷⁵

There were two types of cheese factory, -- the proprietary and the cooperative. Proprietary factories purchased milk from a number of farmers who neither shared in the profits, nor had any direct voice in the management. Cooperative factories were profit-sharing, and were controlled by a committee or board of directors. The first type outnumbered the second in the province, but the average output of the latter was much greater. In the dairying districts of Oxford and Huron Counties, farmers generally favoured the proprietary system at first, preferring to receive six cents for one gallon (ten pounds) of milk than to obtain two cents per pound for whatever price the cheese brought at the market. In 1878, it was common for farmers to sell their milk to cheese

factories at seven or eight cents per gallon.⁷⁶ The cooperative system had some supporters, however; for example, a Tuckersmith concern, in 1876, offered to transport the milk and to manufacture the cheese, in return for 2 3/4 cents per pound, -- an offer which was accepted by the factory's patrons.⁷⁷ The cooperative factory gradually supplanted the proprietary system, and became almost universally accepted. An indication of the volume of business conducted by a typical Huron factory is revealed by the following statistics: in 1879, the Ragerville concern purchased 1,586,373 pounds of milk, from which 148,730 pounds of cheese were made; from the sale of this cheese, the factory realized \$9,835, and declared a dividend of 13 per cent. on the capital stock.⁷⁸

The earliest cheese factories in the western part of the province were commodious and well-built, and usually consisted of two main buildings: one for the manufacture of the cheese, and a "dry-house" for curing it. In 1871, the "Globe" received numerous letters of inquiry concerning the erection of factories. The cost of a small factory, sixty by twenty-six feet, and two stories in height, containing vats, presses, hoops, and scales, and providing room for one hundred cows, ranged from \$1300 to \$1600. The cost of additional equipment, in order to provide for two hundred cows, was about \$300.⁷⁹ The principal faults of Canadian cheese factories during this period were their inadequate sites,⁸⁰ lack of sanitation, and little or no control of temperature in the curing-rooms, so that "the old cheese with cracked surfaces was the happy hunting-ground for the cheese-fly and its larva, the 'skipper'.⁸¹

Various implements⁸² were used in manufacturing cheese, including vats, presses, agitators, curd fillers, and bandages. In the domestic manufacture of cheese, milk was heated, usually in a wash-boiler or large vat, curds were drained in a specially-constructed basket, and the cheese was pressed with a home-made lever. After 1864, some of the finest cheese-presses and churns in the province were manufactured by S.F. Clench, of Cobourg (Northumberland County)

and Coriden Lewis, of Salford (Oxford County). Noxon Brothers, and Turner and Brothers, of Ingersoll, made cheese-vats, and by 1869, R. Whitelaw, of Beachville (Oxford County) began to manufacture dairy supplies. The upright press was long used in the factory until it was replaced by the gang press after 1886. At about the same time, the Macpherson card-rake supplanted the short-handled rake which had been used as a curd agitator since the late 'seventies. In 1878-80, a power agitator was invented by a factory owner in Hastings County. Bandages, cut from cheesecloth and sewn by hand, were first used at about 1875, but were replaced by seamless bandages five years later. The card-mill was not in general use until 1880, when two types appeared. Cooling-rooms⁸³ for cheese were experimented with during the 'nineties.

The process of collecting and hauling milk was comparatively simple. Farmers left their milk in ten-gallon cans on a small platform erected at the roadside, or, if the heat was too intense, the cans were placed in the shade.⁸⁴ These cans were collected daily by teamsters, and delivered to the factory. During the 'seventies, Robert Dalrymple, Tuckersmith, used to gather milk and transport it by wagon.⁸⁵ In time, with the improvement of roads and wagons, collections were made twice daily, and occasionally platforms were equipped with weighing-machines.⁸⁶

Huron County's production of cheese leaped from 5,549 pounds in 1845,⁸⁷ to 22,000 in 1851,⁸⁸ to 68,243 pounds (homemade) in 1870, and to 500,000 pounds in 1875, -- an increase which compares favourably with the production of butter during the same period. In 1851, Upper Canada produced 2,293,600 pounds, and in 1861, 2,688,172 pounds, a slender increase which fails to compare favourably with the relative increase in the production of butter.⁸⁹ The exportation⁹⁰ of cheese from Canada was as follows: in 1857, 6.2 tons; in 1858, 5.85 tons; in 1859, 16.15 tons; in 1860, 55.5 tons; in 1863, 23.3 tons; in 1864, 56.9 tons.

In 1866, Canada purchased \$306,000 worth of cheese from the United States.

Two years later, owing to the furor of factory building, Canada and the United States were both glutted with cheese; the latter exported nearly thirty thousand tons to Great Britain, and still retained eighty thousand tons to dispose of at home.⁹¹ The abrogation of reciprocity in 1868 deprived Canadian farmers of a market for cattle, and, together with the formation of the Dairymen's Association of Ontario, increased interest in dairying.

In July, 1867, the Canadian Dairymen's Association,⁹² modelled on the American Association formed in 1863, was organized at Ingersoll. The occasion of the formation of this body was a picnic, held on the farm of Jonathan Jones, to celebrate the return of militia which had been summoned to suppress the recent Fenian insurrections. C.E. Chadwick was elected president, and Richard Manning, of Exeter, was named as a vice-president.⁹³ Five years later, William Fowler, of Clinton, became Huron County's representative.⁹⁴ In March, 1872, the Ontario Dairymen's Association was organized at Belleville, under the presidency of Ketchum Graham.⁹⁵ For a few months, intense rivalry existed between the two bodies, -- a rivalry which was terminated⁹⁶ in 1873, by union, to form the Dairymen's Association of Ontario. Cheese boards were established at Ingersoll, and later, at Stratford, Belleville, and London. At annual meetings, various topics were discussed such as the colouring of cheese, the cooling of milk, and the erection of different types of factories.

The Dairymen's Association of Ontario held its first annual cheese fair at Ingersoll, in October, 1878. Nearly four hundred cheeses were exhibited by forty-four factories, the majority of which represented the western section of the province. Four prizes were won by Huron County representatives: in Class A, A. Malcolm, of Seaforth, received first prize (\$100) for the six best factory cheeses, weighing at least fifty pounds each; Callendar, Scott, and Company,

of Clinton, and E.J. Hickson and Company, of Seaforth, won fourth prize (\$25) and thirteenth prize (\$5), respectively, in the same division; in Class F, John Chisholm gained first prize (\$18) for the four best factory cheeses.⁹⁷ Cheese fairs were subsequently held at London and Stratford, and in 1876, a group of Goderich citizens suggested the holding of a similar fair there.⁹⁸

By 1874, the dominion had an excess of ten thousand tons of cheese, and had gained, within a decade, a \$2,000,000 industry, nearly all of which -- \$1,825,000 in fact, -- lay in Ontario.⁹⁹ It was stated in that year that "the prices of dairy products [had] advanced, during the past ten years, more rapidly and more steadily than the prices of the ordinary products of the farm."¹⁰⁰ Until 1871, most of the Canadian cheese which was exported overseas was shipped via New York dealers, who were frequently accused of practising "fraud and dishonesty."¹⁰¹ After that date, however, practically all Canadian cheese bound for Britain was shipped directly.

In 1879, the cheese and butter markets were affected by violent fluctuations, and prices decreased to such an extent that many dairy factories suspended operations. Conditions returned to normal, during the fall, with the result that, in the ensuing year, Canada's export of cheese totalled 20,184 tons.¹⁰² The tariff imposed under the "National Policy" increased the cost of imported cheese by three cents per pound,¹⁰³ -- a step which encouraged the consumption and manufacture of Canadian cheese.¹⁰⁴ Throughout the 'sixties and 'seventies, there was much competition and price-cutting; cheese was often purchased by agents, who paid from nine to twelve cents per pound for the product.¹⁰⁵ After 1900, cheese production in Canada began to decline, and butter production to increase. Cheese declined from 110,500 tons in 1900 to 49,500 tons in 1934; butter increased from 18,000 tons to 107,000 tons during the same period.

EGGS: Although eggs are mentioned as an Upper Canadian export in 1851,¹⁰⁶ they were an unsalable commodity in several sections of the province, including Huron County.¹⁰⁷ Obstacles to the production and exportation of eggs included the absence of adequate systems of storage and transportation, and a lack of producers of large quantities of the product. Several methods of storage, many of which appear to have been exceedingly strange, were employed. Eggs were stored in such media as water saturated with lime (one quart of lime to two gallons of water), molasses, tallow, dry salt, meal, charcoal dust,¹⁰⁸ and water-glass (silicate of soda). Another method was to rub the shells with lard or butter, in order to close the pores and exclude air.¹⁰⁹ Another suggestion was to pack eggs with the large ends down, and thus prevent the air bubble from spreading.¹¹⁰ Still another method was to punch holes in a tin pail, fill it with eggs, and lower the container in a kettle of melted tallow; the eggs, thus coated with a thin covering of tallow, and placed in a barrel, in a cool cellar, would remain fresh for more than six months.¹¹¹ A Parisian method, practised by Ontario farmers, was to coat eggs with dissolved beeswax and olive oil: the eggs would be preserved for two years.¹¹² Eggs might also be packed in fine salt, but this method did not entirely exclude air or moisture.

J.D. Moore, of St. Mary's, is credited with having devised a system of storing eggs for export, in 1867.¹¹³ In 1876, Joseph Flavelle noted the method used by a Toronto firm in preserving eggs: dealers packed surplus eggs in a solution of lime and water in large vats, which were then covered with cotton sheets. A paste of lime and water was spread over and around the sheets, in order to keep the vats as air-tight as possible; occasionally, fresh lime-water was added, to replace that which had evaporated. D.D. Wilson, of Seaforth, and other egg exporters made extensive use of this method of storage. Wilson also used ice for refrigeration purposes, and obtained his ice from a dam at Egmondville,

on the Bayfield River.¹¹⁵ In 1880, it was believed that the best methods of preserving eggs were to place them in lime-water, to which had been added some salt and cream of tartar, or to pack them in bran as soon as possible after they were laid.¹¹⁶

In 1867, D.D. Wilson, who had been an egg dealer for two years at Galt, settled in Seaforth, where he established an "Egg Emporium." During his first year at Seaforth, he purchased 1,100 barrels, each containing seventy dozens of eggs,¹¹⁷ many of which were sold in New York city, the principal market, at as low as eight cents per dozen. Ten years later, Wilson's purchases reached the enormous total of 9,000 barrels, or 630,000 dozens of eggs, per year,¹¹⁸ and earned for him the title of "the Egg King of Canada." He employed from seven to ten teams, which collected eggs from country store-keepers; his collectors travelled forty miles north, north-west, and north-east, and twenty miles south, of Goderich, thereby covering most of Huron County, portions of Bruce and Wellington Counties, and the western part of Perth. Collections continued from March until the fall, and the largest shipments were made as the autumn months approached.

By 1880, Wilson was purchasing eight times the quantity of eggs he had been able to buy in 1867, in the same territory. Moreover, he also received a lesser proportion of spoiled eggs, -- evidence that farmers were taking better care of their product. In 1880, the average price paid by Wilson was ten cents in cash, per dozen; during 1878-79, a great many eggs were bought at eight cents per dozen; in 1879, the highest price paid was fourteen cents per dozen. Farmers in Goderich and Colborne townships preferred to sell their eggs to Seaforth store-keepers, or directly to Wilson, in order to escape paying market fees imposed on farmers who sold eggs and butter directly to stores in Goderich.¹¹⁹

Most of Wilson's eggs were shipped to New York city, where the demand was practically unlimited. New York depended largely on Canada for its supply of eggs during June, and on the southern states in December, January, and February, before the laying season began in the north. The obstacles to success in the British market were the lack of suitable refrigeration, and the competition of French egg-dealers.¹²⁰ During 1877-78, Wilson shipped eggs to Glasgow and Liverpool, chiefly as an experiment; he learned that the most suitable season to ship to Britain was in October-November, because eggs shipped in mid-summer were too perishable.

A system of egg inspection had been begun, as early as 1874, in New York state.¹²¹ During certain seasons, Wilson's eggs were inspected "by candle light." Prior to shipment, they were properly sorted and packed, usually in kiln-dried oat-shells, in flour-barrels. All eggs were not marketed at once, however: Wilson "pickled," or limes, about 100,000 eggs during the summer, for shipment in the fall.¹²² Eggs were transported to New York in ventilated freight cars, within three or four days; the cost of freight, to New York, was one cent per dozen, and to Great Britain, twice that amount. There was no duty on eggs exported to the United States.

Wilson was the outstanding shipper of eggs in Canada, but there were several other dealers in the province. During the season of 1873, a Bowmanville (Durham County) merchant shipped 50,000 dozens of eggs to New York.¹²³ William Scott, an egg dealer at Galt (Waterloo County), shipped 941 barrels of eggs to the same destination, representing, along with those he sold in Galt, 7,600 dozens.¹²⁴ In April, 1878, John Hanna, an East Wawanosh merchant, sold 1,000 dozens, the third sale he negotiated that season.¹²⁵ Other shippers included J.D. Moore, of St. Mary's, who shipped about one-half the amount shipped by D.D. Wilson; D.K. McNaughton and Company, at Chatham; one each at Wingham,

Walkerton (Bruce County), Fergus (Wellington County), Strathroy (Middlesex County), and Waterloo (Waterloo County), and a number of small shippers in the vicinity of Galt.¹²⁶

By 1880, Huron County had made considerable progress in all aspects of dairying, even as it had done in the other phases of agriculture. At provincial exhibitions, Huron representatives gained twelve prizes, eight of which were received in 1880 and 1881. Of the twelve awards, nine were for butter and three for cheese. In the production of these products, Huron County ranked high among the counties of the province; in the production of eggs, Huron ranked first in the dominion. The development of dairying in Huron, as in other counties, was implemented by government assistance, and by improvements in refrigeration. In 1874, the Ontario government adopted the policy of awarding an annual grant of \$700 to the Dairymen's Association.¹²⁷ Prior to 1880, this money was carefully expended, chiefly in the holding of annual conventions for educational purposes. Between 1880 and 1890, the grants were partly used to defray the salaries of dairying instructors, for example, S. W. Barré,¹²⁸ who taught at the Ontario Agricultural College in 1885-86. No government organization for the purpose of conducting such services as factory inspection or milk testing existed until 1891-92. At this time, Professor James W. Robertson was appointed dairy commissioner, and a dairy branch was established at Ottawa, in order to develop winter creameries. Mechanical refrigeration, as has been stated, affected not only dairying, but the whole pastoral industry. Storage plants were erected as early as 1865, at Montreal, and 1886, at Ingersoll, but the possibilities of storage in the dairying field did not become fully apparent until the 'nineties.¹²⁹ The first attempt at refrigerated ocean transport, in Canada, was made after 1895, when the Commissioner of Agriculture was authorized to order the construction of ice-cooled, insulated chambers in a number of steamships. In 1907, the Dominion Cold Storage Act was passed, to encourage the erection of public cold storage warehouses in localities where none already existed.¹³⁰

Chapter XII: Dairying.References:

- 1 Agric. and Can. Journal, vol. I, 1848, May 15, p. 98; June 1, pp. 110-111; 113.
Cf. James, G.C., p. 358.
- 2 Brit. Amer. Cult., vol. III, 1844, April, p. 86.
Note the instructions given to a Huron farmer, by the "Weekly Globe" (vol. XXX,
1878, July 19, p. 458).
- 3 Landon, F.: The 1860's, etc., p. 7.
- 4 Innis and Lower, vol. II, pp. 557-559.
- 5 Can. Agric., vol. IV, 1852, July, p. 217; vol. XV, 1863, April, pp. 144-146.
Can. Farmer, vol. IV, 1867, June 15, p. 182; vol. I, (new series), 1869,
May, p. 174; vol. III, (new series), 1871, May, p. 176; September, p. 334;
vol. IV, (new series), 1872, April 15, p. 129.
- 6 For a good description of dairying utensils, vid. Chapais, J.C.: The Past,
Present, and the Future of the Dairy Industry in the Province of Quebec.
(Quebec Sessional Papers, No. 5, 1909).
Can. Agric., vol. V, 1853, December, p. 89; vol. XIV, 1862, October 1, p. 581.
Vid. supra, p. 124.
- 7 W.G., Vol. XXVI, 1874, August 29.
- 8 Can. Farmer, vol. IV, (new series), 1872, February 15, p. 57; vol. II, 1874,
February 16, p. 74.
- 9 W.G., vol. XXVI, 1874, May 29.
- 10 Memorandum by the late (Sir) Joseph Flavelle; dated Toronto, April 20, 1934.
- 11 Can. Farmer, vol. II, (new series), 1870, April 15, pp. 134-5; cf. ibid.,
July 15, p. 256.
- 12 Landon, F.: The 1860's, etc., p. 7.
- 13 Cf. letter written by Richard Manning of Exeter, in Can. Farmer, vol. IV, 1867,
August 15, p. 246.
- 14 The meeting was held at Toronto, on February 3, 1867.
Cf. Can. Farmer, vol. I, 1869, February 15, p. 55; May 15, p. 166.
W.G., vol. XXIII, 1871, August 25; vol. XXIV, 1872, February 16; vol. XXVIII,
1876, June 23, p. 4.
- 15 Ibid., vol. XXXII, 1880, July 9.
Tests were made with English and Canadian salt in the Seaforth area, prior
to 1880, at W.S. Robertson's suggestion, but no appreciable difference
had been noted.
- 16 Agric. Report, 1881, vol. I, pp. 488-494.

- 17 Ibid., vol. III, p. 92.
- 18 Cf. W.G., vol. XXX, 1878, July 5, p. 427; vol. XXXI, 1879, June 13, p. 379; July 11, p. 443.
- 19 Cf. Teon, p. 133.
- 20 W.G., vol. XXX, 1878, March 22, p. 187.
- 21 The Lusknow factory was modelled after the one at Teeswater, which handled the milk of from 250 to 300 cows. (W.G., vol. XXX, 1878, April 12, p. 235).
- 22 Ibid., April 19, p. 251; April 26, p. 267.
- 23 Ibid., June 14, p. 379.
- 24 Agric. Report, 1881, vol. IX, p. 211.
By 1881, Ontario contained at least seven creameries, two of which were located in Waterloo County, at Breslau and St. Jacob's.
- 25 W.G., vol. XXXIII, 1881, July 2.
Cf. Agric. Report, 1881, vol. III, p. 92.
- 26 Brown, J.B., p. 302.
- 27 McQueen, p. 199.
- 28 Can. Agric., vol. XIV, 1862, October 16, p. 627.
- 29 Can. Farmer, vol. II, (new series), 1870, April 15, pp. 134-135.
- 30 The Canadian home market for butter in 1866 was extremely poor, following the profitable years of 1864 and 1865. (Can. Farmer, vol. IV, 1867, February 15, p. 59).
- 31 Ibid., vol. II, 1874, May 1, p. 171.
- 32 Agric. Report, 1881, vol. I, p. 404.
- 33 Cf. Bonnycastle, pp. 211-213.
- 34 W.G., vol. XIV, 1873, July 18,
- 35 Ibid., vol. XXX, 1878, June 7, p. 363.
- 36 Agric. Report, 1881, vol. I, p. 495; vol. IV, Appendix J, pp. 33-34.
In shipping, Robertson preferred a tub built of split staves, which held brine better, and enabled English importers to turn out the butter in a smoother condition.
- 37 During the late 'eighties, creamery butter sold, in Chicago, at 12½ to 15 cents per pound.
- 38 Agric. Report, 1881, vol. I, p. 417; vol. IV, Appendix J, p. 35.

- 39 W.G., vol. XXIII, 1880, July 2; vol. XXIII, 1881, Jan. 7.
- 40 The percentage of skim milk was highest in April, and the percentage of watered milk increased from March to June.
- 41 Can. Agric., vol. XV, 1863, Dec., p. 469.
- 42 Can. Farmer, vol. I, 1864, April 1, p. 87.
- 43 For a discussion concerning condensed milk, dried milk, and ice cream, see Raddick, pp. 73-75.
- 44 Wood, A.C., p. 93.
- 45 Agric. and Can. Journal, vol. I, 1848, May 15, p. 98; June 1, pp. 110-111; 113.
- 46 Can. Agric., vol. IV, 1852, July, p. 216.
- 47 Can. Farmer, vol. I, 1864, February, pp. 22-23.
- 48 Landon, F.: The 1860's, etc., p. 6.
- 49 Raddick, pp. 46-49.
- 50 Johnston, W., p. 159.
Wood, A.C. (p. 200) calls Ballantyne the founder of the Canadian cheese industry.
- 51 Can. Farmer, vol. IV, 1867, Jan. 15, p. 29.
In 1873, a factory was erected in Fullarton township, also in Perth County. (W.G., vol. XIV, 1873, May 16).
- 52 Can. Farmer, vol. II, 1874, February 16, pp. 74-75.
Mr. Graham named his factory the "Front of Sydney."
- 53 The other three factories were owned by Harvey Farrington, James Harris, and a man named Galloway, respectively.
- 54 Dean, H.H.: Canadian Dairying. (Toronto, 1906), p. 110.
Can. Farmer, vol. I, 1864, Oct. 1, p. 279; Nov. 1, p. 310; vol. II, 1865, Aug. 1, p. 231.
- 55 Ibid., vol. V, 1868, Feb. 15, pp. 60-61.
- 56 Agric. Report, 1881, vol. I, p. 404.
- 57 Sess. Papers, vol. VIII, Part I, 1875-76, p. 55.
- 58 Elder, John, March 8, 1935, No. 4.
- 59 W.G., vol. XXV, 1873, Oct. 31.
- 60 Cf. *ibid.*, vol. XXIX, 1877, Oct. 26, p. 699.
The Brucefield factory was owned at first by E.J. Wickson, and McDougall and Brownlee, of Seaforth.

- 61 W.G., vol. XXVI, 1874, May 22.
- 62 Ibid., vol. XXVII, 1875, March 5.
- 63 Agric. Report, 1875, pp. 269 ff.
Clinton "News Record", Aug. 6, 1936.
- 64 Sess. Papers, vol. VIII, Part I, 1875-76, p. 55.
- 65 There were two cheese factories in Biddulph, one on lot 16, first concession, and the other on lot 1, south boundary. McGillivray contained one factory, in the west section of the township.
- 66 Hist. sketch of Huron, p. xxi.
Cf. W.G., vol. XX, 1878, May 24, p. 331.
- 67 Hist. sketch of Huron, p. xvi.
- 68 Ibid., p. xvii.
- 69 Ibid., p. xviii.
- 70 Vid. W.G., vol. XXVIII, 1876, March 17, p. 11.
- 71 This factory was purchased for \$4200, in 1876, by W.S. Robertson.
- 72 Vid. letter from Richard Manning, owner of the Exeter cheese factory, in Canada Farmer, vol. V, 1868, Jan. 15, p. 22.
- 73 W.G., vol. XX, 1878, Jan. 18, p. 43.
- 74 Cf. item concerning cheese factories near Plym, in W.G., vol. XXX, 1878, Sept. 6, p. 571.
- 75 Ibid., vol. XXIX, 1877, June 8, p. 375.
- 76 Ibid., vol. XXX, 1878, April 12, p. 235.
- 77 Ibid., vol. XXVIII, 1876, Mar. 17, p. 11.
- 78 Ibid., vol. XXXII, 1880, Jan. 30.
- 79 Ibid., vol. XXIII, 1871, March 24; October 20.
Can. Farmer, vol. III, n.s., 1871, Dec., p. 451.
- 80 E.g., not near a spring of cool water.
Can. Farmer, vol. I, n.s., 1869, Dec., p. 454; vol. III, n.s., 1871, Sept., p. 334.
- 81 Muddick, p. 61.
- 82 Cf. ibid., pp. 58-59.
- 83 Cf. London "Free Press," March 5, 1838.
- 84 Clinton "News Record", Aug. 6, 1936.

- 85 Elder, John, April 8, 1935, No. 8.
- 86 Teen, p. 138.
- 87 Brown, J.B., p. 302.
- 88 McQueen, p. 199.
- 89 Cf. supra, p. 289.
Can. Agric., vol. XIV, 1862, Oct. 16, p. 627.
- 90 Agric. Report, 1861, vol. I, p. 404.
- 91 Can. Farmer, vol. V, 1868, Feb. 15, pp. 60-61; June 1, p. 180.
- 92 Ibid., vol. I, n.s., 1869, February, p. 53; vol. III, n.s., 1871, Sept., p. 334.
Farmer's Advocate, 1867, August supplement, p. 69; 1868, March, pp. 36-38;
1869, March, p. 36.
- 93 Can. Farmer, vol. IV, 1867, Aug. 15, p. 246.
- 94 London "Free Press", March 5, 1938.
- 95 Can. Farmer, vol. IV, n.s., 1872, April 15, p. 129.
- 96 But cf. Ruddick, pp. 78-79.
- 97 W.G., vol. XXV, 1873, Oct. 31.
- 98 Ibid., vol. XXVII, 1875, Aug. 13.
- 99 Can. Farmer, vol. III, n.s., 1871, Feb., p. 52; vol. II, 1874, May 1, p. 171;
cf. Farmer's Advocate, 1875, March, pp. 42-43.
- 100 Can. Farmer, vol. II, 1874, March 2, p. 89.
- 101 Teen, p. 153.
- 102 Agric. Report, 1861, vol. I, p. 404.
- 103 W.G., vol. XXXI, 1879, Feb. 26, p. 133; April 18, p. 247.
- 104 Many persons, however, continued to prefer British cheese, manufactured
with Liverpool salt.
- 105 Can. Farmer, vol. III, 1866, Sept. 15, p. 275; vol. V, 1868, April 1, p. 102;
vol. III, n.s., 1871, Feb., pp. 53; 76; June, pp. 215-6; vol. II,
1874, June 1, p. 207.
- 106 Brown, J.B., p. 82.
- 107 Fordwich "Record", Jan. 15, 1936.
Cf. Johnston, W., p. 153.
In January, 1846, eggs sold at 1s. 3d. per dozen at Toronto. (Bonnyeastle,
pp. 211-213).

- 108 *Can. Farmer*, vol. III, 1866, July 2, p. 199.
- 109 *W.G.*, vol. XXIII, 1871, April 7; vol. XXVI, 1874, Dec. 4.
- 110 *Ibid.*, vol. XXIII, 1871, June 2.
- 111 *Ibid.*, vol. XXIV, 1872, Jan. 19.
- 112 *Ibid.*, vol. XXV, 1873, April 11.
- 113 Johnston, A., p. 165.
- 114 Memorandum by the late (Sir) Joseph Flavelle; dated Toronto, April 20, 1934.
- 115 Seaforth "Expositor", June 13, 1937.
- 116 *W.G.*, vol. XXII, 1860, July 23; vol. XXXIII, 1881, April 1.
- 117 "Huron Expositor", Jan. 29, 1932.
- 118 Cf. item in *W.G.*, vol. XXVII, 1875, Dec. 3.
- 119 *Ibid.*, vol. XXII, 1860, July 2; vol. XXXIII, 1881, Jan. 7.
Cf. *supra*, p. 290.
- 120 *Agric. Report*, 1881, vol. I, pp. 477-484.
- 121 *W.G.*, vol. XXVI, 1874, Nov. 6.
- 122 *Ibid.*, vol. XXII, 1860, Aug. 20.
- 123 *W.G.*, vol. XIV, 1873, June 6.
- 124 *Ibid.*, Nov. 21.
- 125 *Ibid.*, vol. XXX, 1878, April 19, p. 251.
- 126 *Agric. Report*, vol. V, Appendix L, pp. 10-13.
- 127 *Can. Farmer*, vol. II, 1874, February 16, p. 75; April 1, p. 132.
- 128 Barré had been sent abroad in 1879 by the province of Quebec, in order to study Danish methods of dairying.
- 129 Darling, pp. 18-19.
Vid. Walter, pp. 19-23, for a discussion of the progress of dairying in Ontario, 1800-14.
- 130 *The Dairy Industry in Canada*, pp. 98-100; 117-119; cf. p. 130.

CHAPTER XIII

Transportation and Marketing Facilities.

The agricultural development of Huron County would not have attained the heights it reached by 1880, if transportation and marketing facilities had not also been developed to a high degree of efficiency. The Tract was traversed by a road even before it was settled, and other highways were not long in forthcoming. The era of railway construction preceded a period of rapid growth, perhaps too rapid for the health of various communities. Lake transportation was slow in developing, owing to the inadequacy of harbour facilities at Bayfield and Goderich. Transportation was enhanced by the existence of fine horses for teaming goods between farms and railway stations. The marketing facilities of the county, by 1880, were better than those of most of the counties in western Ontario. The existence of various types of mills, -- grist, flax, oat, wool, and saw, -- aided and abetted the growth of these facilities, by providing products which were in universal demand.

During the first fifteen years of its existence, the traffic and trade of the Huron Tract were confined principally to two roads, which were "simply straight lines, formed by felling trees"¹: the Huron Road,² constructed by the Canada Company in 1828, linked Goderich to Hamilton, via Stratford and Galt, and the London Road, built in 1834 by the provincial government, extended from Goderich, through Clinton, Brucefield, and Exeter, to London. Travellers³ during the 'thirties spoke highly of the energy exerted by the Canada Company in constructing and maintaining roads; by January, 1840, the Company had spent approximately £30,000 on roads within the borders of the Tract.⁴ Two branches of the London road were subsequently built from Brucefield: one to Bayfield, and the other through Seaforth and Brussels to Wroxeter. By 1856, a road was

built from the township of Woolwich (Waterloo County) to and through the six northern townships of Huron.⁵

From 1856 to 1861, following the passage of a county by-law providing for the gravelling of roads, three hundred miles of highway were travelled,⁶ including a road between Auburn and Goderich.⁷ The first private corporation to control a road in Huron County was the Goderich Northern Gravel Road Company, incorporated by act of parliament in 1861,⁸ which built a first-class gravel road⁹ from Goderich to Lusknow, a distance of twenty-two miles. This road passed through Saltford (originally known as Slabtown and Maitlandville), Dunlop (formerly Millburn), Smith's Hill (Carlow), Nile, Dunganmon, and Belfast. During the early 'seventies, the Huron County Council purchased this road and all rights pertaining thereto; at about the same time, a gravel road was built between Clinton and Wingham.¹⁰ Meanwhile, roads were constructed between Goderich and Bayfield, and between Goderich and Kincardine, at government expense. By 1880, Huron County contained two hundred miles of the finest gravel roads in the province.

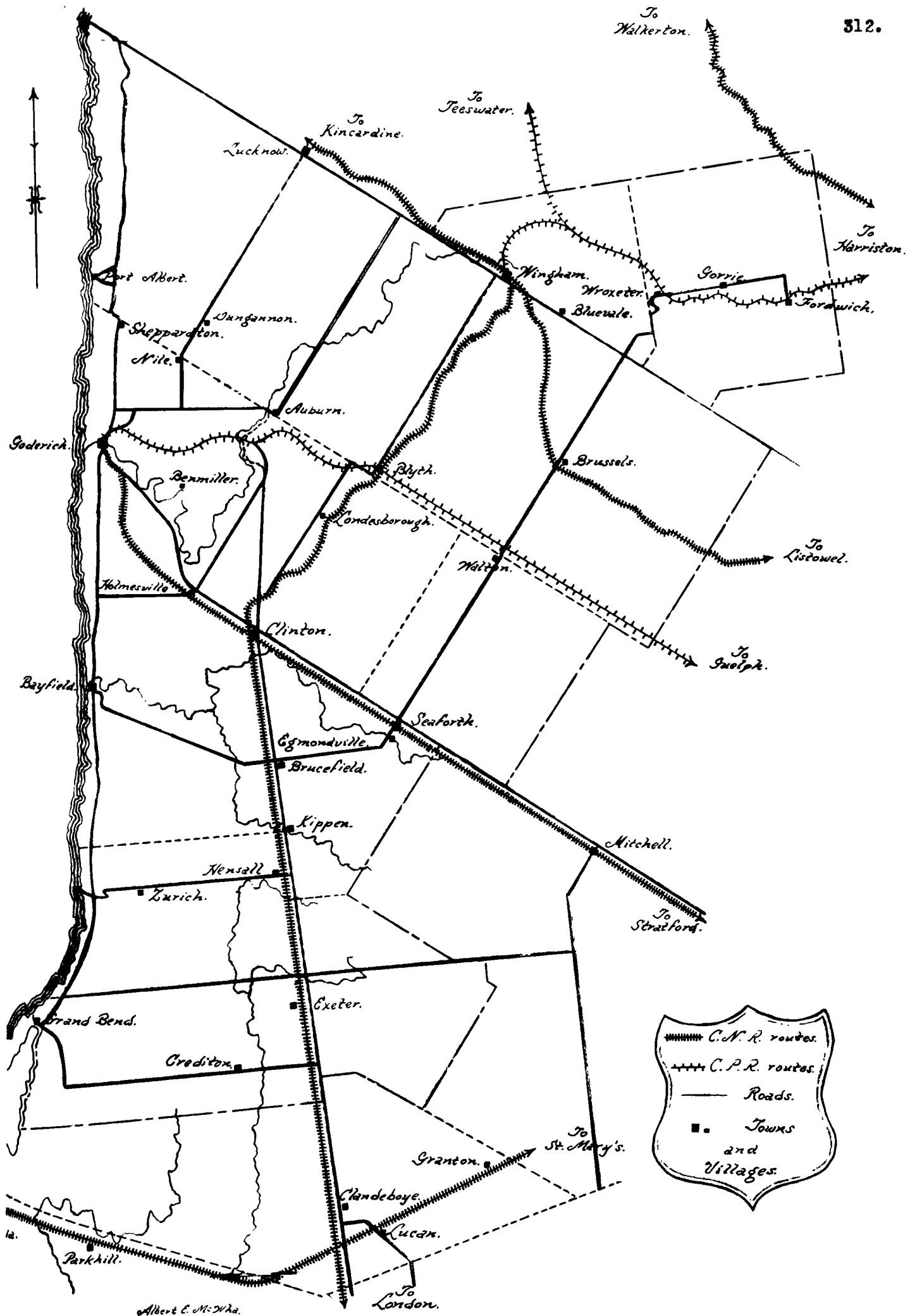
Prior to the 'sixties, most of the roads in the county were in a primitive condition; in swampy areas they were usually corduroy, while others were simply mud or dirt roads. Travelling in winter was easier and more pleasant, although various hazards, such as partly frozen rivers and pools, thaws which spoiled the surface, and drifts which overthrew sleighs, had to be surmounted.¹¹ During the 'sixties, a system of statute labour was employed, but proved to be unpopular, chiefly because it discriminated between large and small property owners, to the detriment of the latter.¹² Moreover, because one day's work was considered the equivalent of only one dollar in taxes, farmers inclined to become indolent and careless, intent on performing only the required number of days' work.¹³

The Northern Gravel Road Company, in 1861, received the right to maintain six toll-gates on its road, in order to help defray the expenses of construction and upkeep. The first toll-gate, at Saltford, was in charge of Richard Postlethwaite, who had formerly been toll-gate keeper at Glenn's Hill, between Dunlop and Lucknow. Other gates were located at Smith's Hill, north of Duncannon, and north of Belfast, respectively. Toll fees were, for a single team of horses or oxen, five cents, and for a double team, ten cents; men on horseback were charged two cents, while foot passengers, and funeral and wedding processions were exempt from payment.¹⁴ By 1871, it was becoming apparent, throughout the province, that toll-roads in the hands of private companies generally fared badly, while roads supervised by county councils were kept in a fine state of repair.¹⁵ Farmers were urged by the "Globe" to agitate against this state of affairs;¹⁶ in Huron County, opposition found expression via vigilance committees, which destroyed some of the toll-gates. When the county council purchased the rights of the Northern Gravel Road Company, at about 1873, the toll-gates were removed, and were permanently abolished.

Vehicles in the early days of the settlement included ox-carts, and two- or four-horse teams; during the early 'thirties, Colonel Van Egmond maintained twenty four-horse teams on the road between Goderich and Toronto, in order to transport immigrants and goods. At about 1832, the Canada Company established a stage line from Hamilton to Goderich, to facilitate the opening-up of the Tract.¹⁷ Eventually, a similar service was introduced on the London Road.¹⁸ By the 'seventies, light spring wagons, such as buggies, democrats, and surreys, became the popular form of conveyance, and were replaced by sleighs in winter. By 1875, "horses, mules, and oxen were in the heyday of their usefulness, constituting as they did, not only the motive power in the woods and on the farms, but the sole means of inter-county transportation."¹⁹

During the period under consideration, Huron County was traversed by four railways, which deeply affected agriculture and general economic development. The construction of the railroads caused serious demands on farm labour, but brought about increased travel and transportation, and the rapid growth of numerous towns and villages. In 1852, plans were projected²⁰ to extend the Buffalo and Brantford Railway through Stratford and Clinton to Goderich, under the name of the Buffalo and Lake Huron Railway. Six years later this railway was completed, to become a part of the Grand Trunk Railway, in 1869.²¹ In 1867, the Toronto, Grey and Bruce Railway Company was organized to construct a narrow-gauge railroad (supplanted by standard gauge in 1881-82)²² from Toronto to Owen Sound; a branch line was built from Orangeville (Dufferin County) to Teeswater (Bruce County), and passed through Howick and Turnberry townships. In 1875, the Southern Extension of the Wellington, Grey, and Bruce Railway was completed, between Listowel and Kincardine. This railway, to become a part of the Great Western Railway, entered Huron County at the eastern boundary of Grey township, and passed through Morris and Turnberry into Bruce County. The London, Huron, and Bruce Railway, begun in 1875,²³ was opened in 1876, as a division of the Great Western Railway; it lay parallel to the old London Road, from London to Clinton, and thence passed through Hullett, Morris, and Turnberry, meeting the Southern Extension of the Wellington, Grey, and Bruce Railway at Wingham. A fifth line, to be known as the Lake Shore Railway, was begun during the 'seventies, between Goderich and Kincardine. Considerable controversy raged before work had progressed very far, however, and the railway's sponsor withdrew.²⁴

The wave of prosperity which swept over Huron County following the construction of railways led to several proposals to provide increased accommodation via other railways and branch lines. In February, 1877, a scheme was advanced to construct a branch linking Wingham with the Toronto, Grey and Bruce Railway.



Six months later, the rate-payers of Wingham appeared to be in almost unanimous favour of granting a liberal bonus²⁵, but the branch was not built until after 1865. A second scheme, also advocated in February, 1877, entailed the building of a line to connect Blyth with the Buffalo and Lake Huron Railway.²⁶ The matter was referred to the Blyth Council, but did not attain fruition until after 1885, with the construction of the Goderich and Guelph Junction Railway. This line, owned partly by Guelph and partly by the Canadian Pacific Railway, entered Huron County at the south-east corner of Grey township, and passed through Walton, Blyth, and Auburn, to Goderich. The inhabitants of Bayfield agitated, for several years, for the construction of a Bayfield and South Huron Railway, but despite the town's grant of \$10,000 in 1880, to defray a part of the expense,²⁷ the line was never built. The erection of an independent line from Bayfield to Stratford was later advocated, but this plan likewise failed to materialise.²⁸ Of the five railways in Huron County, two later became incorporated into the Canadian Pacific system, namely, the branch line of the Toronto, Grey and Bruce Railway (including the short branch to Wingham), and the Goderich and Guelph Junction line. The Buffalo and Lake Huron, the Southern Extension of the Wellington, Grey and Bruce, and the London, Huron and Bruce Railways ultimately became parts of the Canadian National network, a branch of which, after 1885, passed through the north-east corner of Howick.

During the years 1852 to 1858, wheat and other produce had been teamed to Goderich and Bayfield. In the winter of 1855-56, for example, Mr. A. McDonald, a store-keeper at Fransestown (Exeter), purchased 13,000 bushels of wheat, which, if the road to Port Franks had been in a passable condition, could have been shipped at 7 $\frac{1}{2}$ d. per bushel less than it cost to team it to Bayfield or London.²⁹ The Buffalo and Lake Huron Railway, originally built to attract the trade of the American west via Detroit, provided considerable

impetus to local business, and after 1858, Clinton and Seaforth replaced Bayfield as the centre of grain shipments. By 1866, owing principally to the existence of good roads and the Buffalo and Lake Huron Railway, market facilities in Huron County had greatly improved, a condition which was noted³⁰ by George³¹ Buckland:³²

"It is pleasing to observe how several of the villages on the railway, intersected by the excellent gravel roads that characterise these western counties, are making progress; and the produce of the farm and forest that reaches these centres for shipment is, considering the comparative newness of the country, really astonishing."

The railway era was characterized by the swift rise of some towns, and the corresponding decline of others, causing a shift in the concentration of produce, business, and markets. Following the completion of the Buffalo and Lake Huron Railway, Seaforth enjoyed a rapid growth, -- at the expense of Egmondville and Harpurhey, which declined,³³ -- and gained widespread recognition as the leading grain market, handling greater quantities of wheat, from first producers, than any other point in the province, including Toronto. Single firms at Seaforth handled more than one million dollars' worth of wheat during one season, and it was common for streets to be crowded with teams from a distance of fifty miles, -- from such centres as Brussels, Wroxeter, Gorrie, Paisley, and Walkerton. In January and February, 1862, Seaforth shipped more than one hundred thousand bushels of grain.

The Toronto, Grey and Bruce Railway ushered in the growth of Fordwich, Wroxeter, and Gorrie, and the Wellington, Grey and Bruce extension encouraged the growth of Brussels and Wingham. These railways tended to divert much of the county's trade from Seaforth. Prior to the building of the London, Huron and Bruce Railway, the produce of the area about Exeter was taken to St. Mary's and Stratford, in quest of markets. At the railway's inception, in 1873, Exeter was created a village,³⁴ and three years later became a fine grain and

produce market; in 1878, a market was erected in the public square.³⁵ Meanwhile, Ro(d)gerville, founded in 1835-36 by Matthew Rodger,³⁶ declined, and Clinton, Blyth,³⁷ and Wingham received added prominence, to the further detriment of Seaforth.³⁸ By the early 'seventies, Clinton was the leading grain centre, and was patronised by farmers from the northern townships and Bruce County, who brought their grain and pork to the Clinton market.³⁹

Lake transportation facilities were not developed to a very high degree by 1880, principally because of poor harbour facilities at Goderich and Bayfield. In 1833, the Canada Company began to operate the steamer "Menesetung" -- re-named "Goderich" in the following year -- which plied between Goderich and the ports of Lakes Erie and Ontario until 1835, when it was imprisoned in the harbour.⁴⁰ During the next fifteen years, various ships plied between Detroit and Goderich; in 1851, Messrs. Ward, of Detroit, operated a small steamer which travelled between the two points fortnightly. Three years later, Canadian boats were placed on the route, and trips were extended to thrice weekly. In 1856, steamship communication, twice weekly, was established between Goderich and the mouth of the Saugeen River, and intermediate ports. From 1850 to 1856, the schooner tonnage of Goderich increased about 300 per cent., and from 1852 to 1856, the exports from the town rose from £1000 to £16,000, while imports increased from nearly £7000 to nearly £23,000. It was predicted in 1856 that with similar progress during the next three years, Huron County would become an important exporting district.⁴¹

In 1854, the Bayfield council negotiated a loan of £2,500 to spend on the harbour there; a pier was erected, and another £1000 was borrowed, with little success. In 1856, schooners lay at anchor off shore and were loaded with one hundred thousand bushels of wheat, and large quantities of peas and oats,

by means of scows and row-boats.⁴² Goderich harbour, in 1856, was a "discreditable spectacle", even though the Canada Company claimed to have spent £17,000 on improvements: the planking of the wharf had collapsed, and the Company was accused of acting like a "dog in the manger" with respect to the harbour.⁴³

In 1871, Goderich's shipping prospects were enhanced by the acquisition of a steam barge, the "Herald", and a steamer.⁴⁴ The former plied between Goderich and Malden and Pi(d)geon Bay, below Amherstburg, and transported salt, returning with coal. The steamer, built at Goderich, was intended to compete with the steamer "Seymour", on the route between Goderich and Sarnia. These additions provided further incentives to the improvement of the Goderich harbour, which by 1873 began to receive the government's attention. Proposed improvements included the erection of docks, the extension of the breakwater to the beach, a cut below Galt's Hill as an outlet for the river, the repair of the damage done to the new piers in the spring of that year (1873), and dredging in an additional area. Mr. James Smill suggested that a new entrance, north of the existing one, and a new pier, extending in a north-eastern direction, should be constructed; these changes would provide ample space for wharves and elevators, which would necessarily spring up, following a proposed extension of the Ontario and Quebec Railway. It was the consensus of opinion that Goderich harbour, with these improvements, would be the best on the Great Lakes.⁴⁵

The Dominion government called for tenders for the improvement of the harbour, and sixteen, ranging from \$182,650 to \$300,000 were submitted. The tender of Moore, Clendinning, and Wilson, of Walkerton, which stipulated \$212,540 (nearly \$28,000 less than the estimate of government engineers) was eventually accepted, and caused a minor scandal, inasmuch as the recipients of the contract were Conservatives from Mr. Blake's constituency.⁴⁶ In the spring of 1880, an American firm purchased the Point Farm, near Goderich, with the

intention of spending \$50,000 on improvements, including a wharf at which steamers might call.⁴⁷

Meanwhile the citizens of Bayfield were active in demanding the improvement of their harbour. In 1877, a deputation of three men was appointed to make overtures to the government for the receipt of \$60,000 in order to build a suitable harbour.⁴⁸ The government granted \$50,000 for this purpose, in the following year. The lack of a harbour at Bayfield was the principal reason for the absence of railway facilities, and was also a factor in Goderich's favour. Another factor which boded well for Goderich was the fact that Kincardine, the most important point to the immediate north, did not become a port of entry until 1875.⁴⁹ Both Bayfield and Goderich harbours nursed a grievance in 1881, when it seemed imminent that the traffic of wheat from the West would be diverted from lake-ports by the Canadian Pacific Railway.⁵⁰

By 1880, marketing facilities in Huron County were reported generally to be excellent.⁵¹ Goderich, Hullett, and Tuckersmith townships appear to have enjoyed the most advantageous situations. Goderich's trade was chiefly with Clinton and Bayfield, although the town of Goderich, which possessed two fine grain elevators, had a considerable shipping trade⁵² with lake ports to the north and south. One of these elevators, built in 1860, was owned by the Grand Trunk Railway, and held 100,000 bushels; the other, owned by the firm of Ogilvie and Hutchinson, possessed a capacity of 175,000 bushels.⁵³ Hullett's markets lay in Clinton, Seaforth, and Blyth. Tuckersmith's facilities were exceptionally good, as there was no portion of the township more than five miles from a railroad station. Seaforth (on which most of McKillop's trade was dependent) and Clinton were the important stations on the Buffalo and Lake Huron Railway, which ran along the northern boundary, and Brucefield, Kippen, and Hensall were vital points on the London, Huron and Bruce Railway, which paralleled the western boundary.

Hay and Stephen had fairly good facilities, via roads and the London, Huron and Bruce Railway, while Usborne enjoyed an even better location. Exeter served as a market for all three townships, but Usborne was only a short distance (less than ten miles, indeed) from Mitchell, Dublin, Lucan, and Granton, all of which contained railway stations. Ashfield, Colborne, and Wawanosh contained no railroads, and hence much of their produce was transported via roads, to the nearest ports or stations. Most of the trade of Ashfield and Colborne was conducted via Kincardine, Lucknow, and Goderich; the Northern Gravel Road, which provided transportation facilities for goods from such points as Kinloss (or "Black Horse"), was especially an important route. Wawanosh's business was conducted via such towns as Wingham, Lucknow, and Blyth. Two railways traversed Turnberry, Morris, and Howick, whose products found markets, not only inside the county, but also in Bruce and Wellington Counties. Grey township, intersected by a railway, conducted a fair trade via Brussels and Listowel, as well as a considerable amount with Seaforth.

Mills, by their very utilitarian nature,⁵⁴ were indispensable to the progress and prosperity of the inhabitants of the Huron Tract. One of the handicaps suffered by the earliest pioneers was the scarcity of grist-mills to supply them with flour; it was common, indeed, for farmers to carry grain to mills sixty miles distant. According to "legal custom", millers retained one bushel of grain for every twelve ground. In 1832, the Canada Company built the first grist-mill in the Tract, at Goderich, and this mill operated two or three days per week for the next three years.⁵⁵ A second mill was erected by the Company at Egmondville, during the winter of 1832.⁵⁶ At about the same time, Brewster and Company purchased from the Canada Company a mill site and power privileges on the Aux Sables.⁵⁷ Following the construction of a dam, which caused adjoining land to become overflowed and useless, the Canada Company unsuccessfully sued Brewster, whose dam and mill were eventually destroyed by a "violence committee", during the 'fifties. In 1834, William McConnell

constructed a grist-mill at the junction of the Aux Sables and the London Road.⁵⁸ Meanwhile, the Canada Company built other mills, one of which was located at Kippen. This mill was taken over by Robert Bell, who had migrated to the Tract in 1838, and who constructed a dam and saw-mill. Bell's mill proved to be eminently successful, and was patronised by farmers from points twenty miles distant.⁵⁹ By 1850, the number of grist-mills in the Huron Tract was fourteen, of which nine were in Huron County proper.⁶⁰

The earliest grist-mills were operated by water-power; steam-power and the adoption of rollers for the grinding of wheat did not be in to appear until the late 'fifties. By 1854, Samuel Rance built a flour-mill at Clinton,⁶¹ and William Harris erected one in Ashfield, three miles from Dunganon, and another at Bedmin, in Morris township. Harris' first mill proved to be extremely popular, and led to the founding of a small village, named Cransford.⁶² Ashfield farmers also patronised Piper's Mill, at Goderich, and as settlement progressed, their flour was shipped from Goderich to Port Albert, whence the farmers teamed it home. In 1854, Arthur Mitchell built a mill at Fordwich, in Howick,⁶³ and eight brothers of the Leech family established mills in Howick, at Gorrie (formerly known as Leechville or Howick Village), and in Turnberry, at Bluevale,⁶⁴ Business was so brisk, by 1856-57, that as many as sixty ox-teams were to be seen waiting for grists, at one time.⁶⁵ In 1859, William Vanstone built at Brussels a number of grist-mills which were later operated by combined steam- and water-power.⁶⁶ At Egmondville, a saw-mill was replaced by a grist-mill, which also adopted steam-power and the roller method of grinding grain.⁶⁷ At about 1870-72, the Saunby grist-mill was built at Dunganon by William Givens.⁶⁸

By 1880, there were more than a score of grist or flouring mills in Huron County. Ashfield contained four mills, Wawanosh contained two, near Lucknow, and Morris contained one, at Blyth. Turnberry contained a number of mills, including one driven by combined steam- and water-power, at Bluevale,

and several (whose capacity was two hundred and fifty barrels per day) erected by John and Thomas Gregory, at Wingham.⁶⁹ Howick boasted a flouring mill with four run of stone, at Wrexeter, and McKillop contained a steam-driven mill at Winthrop. Goderich township contained several important mills, including Fair's mills at Clinton, and Ogilvie and Hutchinson's mill at Goderich, one of the finest in the province, which had a grinding capacity of four hundred barrels per day. Stanley contained a mill operated by water-power, at Payfield, and Hay contained several mills at Zurich, the first of which was built by Fred Knell. Tuskersmith contained four of the most important mills in Ontario; three of these, owned by Messrs. Ogilvie and Company, of Montreal; Walter Marshall, of Stratford; and Currie and Thompson, of Mitchell, were located at Seaforth, and the fourth was operated by Messrs. Charlesworth, at Egmondville.⁷⁰

Saw-mills were almost as necessary to the early inhabitants of the county as were grist-mills. In 1853, William McConnell erected a saw-mill at the junction of the London road and the Aux Sables River, the first mill of its kind to be built in that area.⁷¹ The Canada Company constructed a number of these mills, and Robert Bell and sons built four in the neighbourhood, a decade later.⁷² By 1860, the Tract contained thirty-four saw-mills, of which twenty-two were in Huron County proper.⁷³ In succeeding years, numerous mills were erected throughout the county, including such prominent mills as those of the Leech brothers, at Corrie and Bluevale, Fair's mills at Goderich and Clinton, and Beaker's steam-driven saw-mill, built in 1875, between the Aux Sables and Black Creek, in Stephen township. The construction of the last-named mill was justified by the great number of its patrons: on one occasion, in January, 1875, more than one hundred teams waited for lumber.⁷⁴

In 1850 the county contained five oat and barley mills, five distilleries, two breweries, and twenty-four potash and pearlash factories.⁷⁵ Oat-meal mills

began to be erected on a larger scale during the 'seventies;⁷⁶ an important oat-meal mill functioned at Goderich before 1873. Five years later, James Keith, of Woodstock, planned to build at Blyth a similar mill, for which P. Kelly offered building material at low rates.⁷⁷ A mill with two run of stone was erected at Wroxeter,⁷⁸ by this time, and still another at Seaforth, which also added "its quota to the foreign markets."⁷⁹ During the early 'fifties, Samuel Rance operated a distillery in connection with his flour-mill at Clinton.⁸⁰ In 1872, Messrs. Nicholl and Fitzpatrick planned to construct a distillery at Goderich, expending \$30,000 in 1872, and \$60,000 in 1873. This project signified the opening of a new market for grain, and increased trade generally.⁸¹

During the 'seventies, at least five flax mills and five woollen mills⁸² were functioning in Huron County. The first woollen mill was owned by a man named Logan, and was situated at Piper's Dam, near Benniller.⁸³ In 1867, this factory (which continued to function for the next eighty years) was purchased by Jesse Gledhill, whose family had practised the woollen business in England, and who had located at Lockport, N.Y., prior to coming to Huron.⁸⁴ A second mill, owned by Thomas Disher, was active at Dungannon, during the 'sixties. Three others functioned at Crediton, Exeter, and Blyth, and were operated by Gaum and Krause, George Kilpatrick, and James McQuarrie, respectively.⁸⁵

Agricultural progress was hastened by the development of transportation and marketing facilities, and by the general expansion of business enterprises, a flood which followed the railway-building era. In the adaptation of these facilities by Huron farmers, and the synchronizing of new economic notes with the old, lies much of the secret of the success of agriculture in Huron.

Chapter XIII: Transportation and Marketing Facilities.

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- 3 Cattermole, W.: Emigration, the Advantages of Emigration to Canada. (London, 1831), pp. 43-44.
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Cf. also, Lundy, B.: Diary (in Ont. Hist. Soc.: Papers and Records, vol. XIX, 1923, pp. 110 ff.).
- 4 Smith, W.H., vol. II, pp. 157-8.
- 5 McQueen, p. 186.
- 6 On the farm of a Mr. Clutton, in Tuckersmith, was considerable gravel, which was used extensively in road building; a stone crusher was subsequently erected on this farm. (Elder, J., July 5, 1935, No. 17).
- 7 Goderich "Signal", Oct. 1, 1936.
- 8 Goderich "Star", Nov. 12, 1937.
Green, G.H., p. 182.
- 9 During the early 1930's, considerable improvement was made to this road, which, it was planned, would become a paved road connecting Provincial Highway No. 8 at Goderich with No. 9 at Kinloss.
- 10 Clinton "News Record", Aug. 6, 1936.
- 11 Glasebrook, G.P. de T.: A History of Transportation in Canada, (Toronto, 1936), p. 124.
- 12 Johnston, W., pp. 101-104.
- 13 Can. Farmer, vol. III, n.s., 1871, Aug., pp. 302-304.
Cf. Glasebrook, p. 122.
- 14 Green, G.H., pp. 184-186.
- 15 Can. Farmer, vol. III, n.s., 1871, Aug., pp. 343-344.
- 16 Cf. W.G., vol. XXIII, 1871, Sept. 1.

- 17 Talman, J.J.: Travel in Ontario before the Coming of the Railway.
(Ont. Hist. Soc.: Papers and Records, vol. XXIX, 1938), pp. 9-10.
- 18 Cf. Hist. sketch of Huron, p. xv.
- 19 Fenwick, George: "Personal Reminiscences"; in Exeter "Times-Advocate",
Sept. 19, 1935.
- 20 McQueen, p. 179.
- 21 Glasebrook, p. 293; also *ibid.*, pp. 167; 286-7; 292; 340.
- 22 Seaforth "Expositor", July 21, 1937.
Vid. also Agric. Report, 1881, vol. II, p. 210.
- 23 Cf. W.G., vol. XXIV, 1872, March 22.
- 24 Hist. sketch of Huron, pp. iv-v.
- 25 W.G., vol. XXIX, 1877, Aug. 10, p. 520.
- 26 *Ibid.*, Feb. 23, p. 136.
- 27 *Ibid.*, vol. XXXII, 1880, Sept. 3.
- 28 *Ibid.*, Dec. 24.
- 29 At this time, it was believed that "Francestown [was] likely to become
the commercial depot of the southern townships." (McQueen, p. 189;
cf. McLeod, George: Unprinted Documents; vid. map of Francestown
and inscription thereon).
- 30 Clinton was incorporated as a village in 1857. (Hist. sketch of Huron,
p. vii).
- 31 Can. Farmer, vol. IV, 1867, Oct. 15, p. 314.
- 32 *Ibid.*, vol. III, 1866, April 2, p. 104.
- 33 Seaforth "Expositor", June 18, 1937.
- 34 London "Advertiser", July 26, 1935.
- 35 W.G., vol. XXX, 1878, May 31, p. 347.
- 36 London "Free Press", Feb. 26, 1935.
- 37 W.G., vol. XXX, 1878, Oct. 11, p. 651.
- 38 The decline of Seaforth was quickened by a disastrous fire which caused
a loss of \$150,000 in the business section. (Seaforth "Huron
Expositor", Sept. 4, 1936).
- 39 Clinton "News Record", Aug. 6, 1936.

40 During the early 1830's, a ferry plied between "The Ridge" (opposite Dunlop's "Castle Hill") and the Goderich side of the Gaitland River; passengers were transported for one shilling each. (Goderich "Signal", Oct. 1, 1936).

41 Statistics concerning the port of Goderich, 1852-56, are as follows:

	1852			1853			1854			Year ending Feb 5, 1856		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Exports	1,070	15	0	2,499	4	0	4,927	15	6	15,946	9	0
Imports	6,972	8	8	9,284	6	1	19,006	13	0	22,952	14	8
Gross amount of dues collected-	671	5	8	977	4	3	1,719	1	6	2,210	18	4

42 McQueen, pp. 191-2.

43 Cf. supra, p. 36.

44 W.O., vol. XXIII, 1871, April 7; May 5.

45 Ibid., vol. XXV, 1873, Sept. 1; Dec. 12.

46 Ibid., vol. XXIX, 1877, May 11, p. 304; vol. XXX, 1878, March 22, pp. 179-180.

47 Ibid., vol. XXXII, 1880, May 7.

48 Ibid., vol. XXIV, 1877, Feb. 9, p. 101.

49 Ibid., vol. XXVII, 1875, May 28.

50 Ibid., vol. XXXIII, 1881, Jan. 7.

51 In 1880, Biddulph's markets centred about Granton, Lucan, and Clandeboye, all of which were intersected by railroads. McGillivray's commerce found outlets at Clandeboye, Lucan, Ailsa Craig, and Parkhill.

52 Agric. Report, 1881, vol. II, p. 210.

53 Hist. sketch of Huron, p. vi.
Cf. Stokes, p. 56, and supra, pp. 181-2.

54 Cf. Merritt, J.H., pp. 76; 82.

55 Clinton "News Record", Jan. 30, 1936.

56 Hist. sketch of Huron, p. xix.

57 London "Free Press", May 28, 1938.

58 London "Advertiser", July 26, 1935.

59 London "Free Press", Sept. 4, 1937.
Cf. supra, p. 36.

60 Smith, W.L., p. 188.

- 61 London "Free Press", March 12, 1938.
- 62 Goderich "Star", November 5, 1935.
- 63 Hist. sketch of Huron, pp. xvi-xxii.
- 64 The machinery used in these mills was hauled by teams from Paris and Guelph. (London "Free Press", March 5, 1938).
- 65 Cf. Fordwich "Record", Dec. 16, 1936.
- 66 Hist. sketch of Huron, p. xxiii.
- 67 Seaforth "Huron Expositor", June 18, 1937.
- 68 Green, G.H., p. 42.
- 69 W.G., vol. XXX, 1878, Jan. 18, p. 43.
- 70 Hist. sketch of Huron, pp. vii-ix; xii-xiii; xv; xvii; xx.
Agric. Report, 1881, vol. II, pp. 213-231.
In Biddulph, in 1880, there were four grist-mills, two-saw-mills, and one flax-mill. McGillivray contained a tile-yard, located in the central part of the township.
- 71 London "Advertiser", July 26, 1935.
- 72 London "Free Press", Sept. 4, 1937.
- 73 Smith, W.L., p. 188.
- 74 W.G., vol. XXVII, 1875, Jan. 29.
- 75 Can. Agric., vol. IV, 1852, pp. 135-6.
Strickland, vol. I, pp. 286-7.
- 76 Cf. supra, p. 184.
- 77 W.G., vol. XXX, 1878, Jan. 18, p. 43.
- 78 Hist. sketch of Huron, p. xii.
- 79 Ibid., p. viii.
- 80 London "Free Press", March 12, 1938.
- 81 W.G., vol. XXIV, 1872, Sept. 20.
- 82 Vid. supra, pp. 197-8.
- 83 Green, G.H., p. 25.
- 84 Goderich "Signal", July 28, 1937.
- 85 Middleton, p. 642.

CHAPTER XIV

Conclusion.

In a study such as the present one, numerous conclusions are self-evident: their essence denotes that the pioneer farm underwent a complete metamorphosis, as a result of industrial and scientific advances, and the farmer's adaptability. During the 'thirties and 'forties, civilization in Huron County was "in transit"; by the 'eighties, civilization had entrenched itself, and had laid foundations for the future development of the community. Agriculture was more than a frontier experiment: it constituted the life-blood of the settlement, and was the proton about which social, political, and economic electrons revolved. The agricultural state of a community provides a reasonably accurate index of that community's well-being, and it is safe to assert that Huron County, by 1880, had attained an advanced stage of development.

The period under discussion laid emphasis upon adaptability in the 'thirties, to be followed by three successive decades of experiment and innovation, which in turn were superseded by adaptability in the 'seventies, -- a return of the tide. Canadian agricultural methods were, for the most part, adapted from those employed in Great Britain and the United States. The process of adaptation was natural and spontaneous, and accompanied the early settlers (the story of the spread of agriculture from the eastern coast of North America approximates, indeed, to the story of the advance of frontiers); after 1880, the process became more consciously deliberate. Mixed farming provided the means of salvation prior to the 'fifties, and after two decades of attempted specialisation, was again resorted to, during the 'seventies.

On the threshold of the 'eighties, the Huron farm² was again practically self-sufficing, as it had been fifty years previously. The principal differences were that farming, in its various phases, had undergone a process of mechanization, and the farmer had undergone a process of "awakening": his economic, social, and cultural spheres had broadened enormously. His position in the community, by 1880, was as firm as it had been fifty years before, and despite the increasing pressure of economic forces, he stood his ground. These forces, by their very pressure, drew the farmers together, and, in part, contributed to increased agricultural cooperation.

By the late 'seventies, then, an aggressive "farmer-consciousness" was evolving, and manifested itself in organization and in expression via agricultural journals. Farmers felt increasingly that they comprised a potentially powerful but politically neglected factor in national development. The 'sixties had brought with them a growing discontent over politics, and a bitter antagonism toward the legal profession.³ In the words of a prominent agricultural crusader:⁴

"The aspirant for parliamentary honours took no notice of farming; we have not selected those whose main interest is agriculture Let agriculture be foremost, and take its proper position. You farmers have the power, if you had but the unity among yourselves, to act."

Agricultural credit,⁵ "big business", banking, insurance, and speculation did not begin seriously to affect the farmer until the 'seventies. One reason for the farmer's insensibility in this respect was the existence of an avenue of escape,⁶ namely, the West, which was considered to be merely an extension of the frontier. The increase in the number of loan corporations in Upper Canada, from eight in 1860 to eighteen in 1870,⁷ and to seventy-three in 1882, supports the contention that corporations held the lion's share in the loan field. Rivalry between private and corporate groups tended to suppress

rates of interest. The rivalry of both groups was focussed against the government, in an effort to prevent government loans for agricultural purposes, but thanks to the efforts of the Grange, the government advanced a number of loans as early as 1877, at extremely low rates. Thus, governmental assistance was successfully obtained as a result of organization on the part of the farmers.⁸ Government credit during the 'eighties was, however, negligible, in comparison with private loan companies, which began to oust the corporate groups, by the 'nineties: farmers preferred to deal with private concerns rather than with the government, chiefly because of the "red tape" involved in negotiations for government loans.⁹ During the late 'eighties and early 'nineties, farmers tended to deposit more and to borrow less, -- a condition which was indicative of better "agricultural times", and of the increasing ability of the farmers to finance themselves. The result was that numerous loan companies were compelled to move westward, in order to escape bankruptcy.

Farmers sought to protect themselves from "big business" and monopolies in various ways; for example, they often withheld their crops in order to await higher prices.¹⁰ Agricultural distrust of banks was manifested early in the demand for the establishment of a Farmers' Bank, following the failure of the Bank of Upper Canada in 1868.¹¹ Business was occasionally upset by the tendency of many farmers to depend upon the proceeds of crops which had not yet been harvested. Banking was disturbed by the farmers' practice of placing their money in the custody of store-keepers,¹² who favoured long-term credit dealings. Life insurance and fire insurance companies were a relatively unimportant factor, by 1875, but they became increasingly significant during the 'eighties.

A feature of the period under consideration was the rôle enacted by private enterprise, which received its stimuli from both British and American influences, and which proved to be a more powerful factor in agricultural development than was government legislation: the latter usually succeeded and supplemented private organisation. The promotion of cold storage was an exception to the general rule, and received the government's attention and financial backing. After 1890, when the export trade in dairy products began to thrive, the government became more enthusiastic, visualising an enormous trade in fruit and vegetable products.¹³

In the matter of grain-growing, the Canadian west did not present a serious threat to eastern Canada until the early 'eighties.¹⁴ In a study of the Canadian grain trade, M.L. Stokes ascribes¹⁵ the chief cause of the decline of wheat production in Ontario to the influx of immigrants to the west. He ignores, however, the problem of soil exhaustion, the increased prominence of dairying and stock-raising, and the significance of new crops. Fruit-growing was also affected by western Canadian (especially British Columbian) rivalry, after 1900, and soil exhaustion contributed to the decline of Huron County's apple industry to "a most pitiable condition" in 1915.¹⁶ The Canadian west began to appear as a rival to eastern farmers in stock-raising, at about 1888.¹⁷ The market for horses suffered a set-back, following the use of electric power in street-railway service. After 1890, the Canadian export trade in cattle with Great Britain declined, owing to the imposition of a British embargo in 1892; the widening of the American market, by the Underwood Tariff of 1913; competition, provided by Australia, New Zealand, and Argentina; and increased consumption at home.¹⁸ Dairying exhibited a steady growth after 1900, with the output of butter gradually surpassing that of cheese.

Although the Huron farmer of 1880 was maintaining a firm stand in the community, the signs of the deterioration of the farm were beginning to loom on the agricultural horizon. The first two or three generations had drawn the first flushes of fertility from the soil, and settled into venerable arm-chairs, distressed at their sons' failure to acquire profitable returns, and at the necessity of mortgaging the "old homestead." This situation was brought about by a problem of deficiency, -- soil exhaustion, -- which served to repel youth from the rural communities, at about the same time that urban centres and professional fields were beckoning.

Huron County offered an extremely arable soil to the earliest generations, but the limestone base¹⁹, which extends over the greater part of the county, presented a natural obstacle, even as it did in several other sections of the province, notably in the Haldimand Clay Belt.²⁰ Lime does not easily "work up" into the upper soil, which, because of the resultant deficiency in lime and phosphate, contributes to the emergence of a lime-hungry people, struggling against the economic disadvantage of tilling fields which yield only diminishing returns. The solution to the problem, -- namely, to inject new vigour into the soil by the application of restorative elements,²¹ -- will help to establish Canadian life on a sounder economic basis, and to ensure the health of future generations. Otherwise, the sixth and seventh generations may surrender their farms to New Canadians from eastern Europe, many of whom are content to live on a scale which is distinctly sub-Canadian. The rebuilding of the farm will more than contribute to a rearmament of the nation's resources: it will be a factor in the revitalisation of the national spirit.

* * * * *

This study of a particular phase of Canadian local history was begun as an experiment, to serve to show that students need not wander far afield in search of historical lore: it lies here at home, in the midst of our own

communities. A war such as the present one may well serve to weld a nation together, but the results of peaceful enterprises are no less substantial in contributing to the erection of nationhood. Canada has long been in need of a suitable history or its literature, a comprehensive anthology of its poetry, and a study of its culture, as well as a guide to the study of local history which would stimulate a consciousness and appreciation of these constituents of our dominion's nationality. Such a guide would make feasible the teaching of local history in the schools of this and other provinces. At the same time, interest in Canadian history generally would be stimulated: history becomes much more vital when it concerns objects and scenes immediately around us. The study of the history of particular communities would also contribute to the assimilation of New Canadians: their traditions and ideals might be exchanged for ours, and a common bond would thereby be sealed.

Such a work would necessarily have a beneficial influence upon local historical societies: an incentive would be furnished for greater and more numerous undertakings, in regard to the writing of reports, the search for records and sources (whether of an historical, antique, or artistic nature), the desire to create better collections of material (whether in the local libraries or in the archives), and the aim, generally, to bring out the salient features of the background of a particular community, -- for example, by erecting monuments, or by inaugurating excursions and sight-seeing tours. Not only would such a guide provide a coordinating element for those societies which already exist, but it would contribute to the birth of new ones, and to the resurrection of any which have become defunct.

A practical theme underlies these "pseudo-theoretical" influences: namely, the effect of historical interest upon one of the Dominion's most valued sources of income -- the tourist trade. All localities of necessity

possess common characteristics, but each locality has its own peculiarities -- in events, personalities, and lines of development. If each locality developed one or more of these themes, it would acquire a distinct identity and personality, and its appeal both to the stranger and to the "hometowneer" would be increased ten-fold. Not only would communities continue to attract visitors, and perhaps permanent residents, but they would instil native sons with civic pride so that they would appreciate the responsibility and duty of developing their respective communities, instead of wandering to the "city" or to other countries (the United States, in particular) in order to develop their individual talents. Not the least of the values of a guide to local history would be the educational influence it would exert on those general readers who are "in search of Ontario."

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Chapter XIV: Conclusion.References:

- 1 Cf. Fox, D.R.: *Civilization in Transit*. (American Historical Review, N.Y., 1927), vol. XXXII, pp. 753 ff.
- 2 Cf. Bromfield, Louis: *The Farm*. (N.Y. and London, 1933), chapter V.
- 3 Vid. *Can. Agric.*, vol. II, 1850, September, p. 194.
- 4 William Weld, in *Farmer's Advocate*, 1867, July, p. 57; 1870, March, p. 33; October, pp. 145-6.
Cf. *Can. Agric.*, vol. IV, 1852, June, p. 162.
- 5 Cf. Teon, pp. 257-8.
Cf. Walter, pp. 31-45.
- 6 *Ibid.*, p. 60.
- 7 In 1882, there was a total of 104 loan corporations in the whole of Canada. (Easterbrook, pp. 3; 45).
- 8 *Ibid.*, pp. 18-19.
- 9 Cf. *supra*, pp. 163; 165.
- 10 Easterbrook, pp. 33; 52-53; cf. *ibid.*, pp. 60; 86, for a description of trends during the 'eighties and 'nineties.
- 11 *Can. Farmer*, vol. II, 1865, March 1, p. 72.
Farmer's Advocate, 1868, December, pp. 178-9.
Transactions, etc., 1864-68, pp. 501; 525.
- 12 Cf. *Can. Farmer*, vol. III, 1866, March 15, p. 68; vol. III, n.s., 1871, May, pp. 181-2; July, pp. 263-4.
Vid. *supra*, pp. 290; 299, on relationship between farmers and store-keepers.
- 13 Darling, pp. 18-19; cf. *ibid.*, pp. 23-24; 32-33.
- 14 Stokes, M.L.: *The Grain Trade of Canada*. (University of Toronto Studies, Toronto, 1922), pp. 3-4.
- 15 *Ibid.*, p. 5.
- 16 Walter, p. 27.
- 17 Abbett, p. 3; cf. *supra*, pp. 258-9.
- 18 *Ibid.*, pp. 17-18; 22.
- 19 Vid. map, *supra*, p. 4.
- 20 Lecture on "A Study in Soil Conservation", by Ridd Elliott, March, 1940.
- 21 E.g., phosphates, ammonium, and nitrogen.

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The research entailed in this study of the agricultural evolution of Huron County necessitated a wide reading of the "travel" literature of the period, together with a systematic use of all available agricultural journals and government records. Various county histories were first consulted, in an effort to gain an idea of the techniques employed in their composition. The references to agriculture in the "travel" books are scattered (indexes are usually lacking), but they exhibit uniform characteristics, and, on the whole, indicate that life, both in "the clearing" and in "the bush", was difficult.

The agricultural journals furnished innumerable facts, which were generally isolated; items of local interest, correspondence columns, agricultural departments (where they existed), and even advertisements, were assiduously scanned. Government documents, especially the report of the Ontario Agricultural Commission of 1880, and reports of various associations, provided rich sources of information. Atlases were studied, including several which are not listed, in order to gain a complete mental picture of the geological, physical, climatic, and commercial properties of the prescribed region. Theses which bore on the subject also received attention, -- but their name is not legion.

The arrangement of the resultant conglomeration of facts resembled the construction of a mosaic, or the solving of a jig-saw puzzle. The various footnotes attest to this; it is to be hoped that they will form, to some extent, an index to the sources used. Throughout the composition of this thesis, an attempt was made to retain a wide perspective, and to trace the story of a particular locality against a background of national and even international developments.

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