Heritage Inventory
Agriculture Historic Context Statement

Kawartha Lakes Economic Development

Kawartha Lakes
Jump In

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Agriculture in Kawartha Lakes

The Agriculture Historic Context Statement examines the socio-cultural, economic, and built history of agriculture in the former Victoria County between c.1825 and c.1915. The Historic Context Statement is intended to provide an overview and foundational understanding of settler agriculture in nineteenth- and twentieth-century Victoria County and the ways it was largely shaped by global and national markets and farming theories. The unique circumstances surrounding the county's settlement propelled the region's agricultural success and set the stage for a productive agricultural economy, and with it, natural and manmade resources that can still be seen today.

Mass migration and settlement in Upper Canada, and more specifically, Victoria County, had a drastic impact on the region's natural environment and landscape. From cultivating the land to building structures related to agriculture, early immigration to Victoria County significantly altered the natural landscape and the environment. From rolling fields to built heritage resources, these lasting changes provide valuable insight into social, cultural, and economic shifts that came from Victoria County's early agricultural industry. Despite Ontario's growing urbanization, the townships that make up the former Victoria County remain largely rural, but farming, as an occupation, has decreased over the course of the early twentieth century. However, despite the changing agricultural industry, the rural environment still bears the recognizable marks of its early development, including barns, crops, farmhouses, transportation routes, and infrastructure. The Agriculture Historic Context Statement explores the timeline of non-Indigenous agricultural settlement as revealed through built and natural heritage resources, as well as the broader Canadian context, to determine its historical significance and modern impacts in the City of Kawartha Lakes.

Context Summary

Summary Statement of Significance: The agricultural industry in former Victoria County, now known as the City of Kawartha Lakes, was both an economic driver and cultural establishment throughout the nineteenth and early twentieth centuries. Settler agriculture in Victoria County began in the early 1800s following the War of 1812, when Britain encouraged mass migration to solidify its hold on Canada as a colony, and loyalists left America following the American Revolution. This occurred between c.1815 and c.1850 and is known as The Great Migration. This period overlapped with the Black Refugee Immigration (c.1815 to c.1865), which saw tens of thousands of Black Americans entering Canada through the Underground Railroad in search of freedom from slavery. Many of the families and individuals a part of these migratory surges settled throughout Ontario, typically establishing homesteads in the southern and western regions of the province in search of greater agency and security. The children of some of these settlers made their way northward in search of cheaper farmland.

The Peter Robinson Settlement Scheme and other organized settlement schemes only played a small part in the Great Migration, but settlement in Victoria County was influenced by these movements. While some people apart of the Peter Robinson Settlement Scheme settled in Emily and Ops Township around 1825, many stayed in eastern Ontario. Those who initially settled in Emily and Ops encouraged other people back in Ireland to settle in newly established towns like Omemee. Other regions were subsequently settled by unorganized groups of Western European immigrants and by settlers leaving urban centres due to rural land grants or in search of new opportunities. Mariposa and Eldon Townships exemplify this phase of settlement, as they were first settled in 1827 by Scottish immigrants from Toronto who received land grants and second-generation immigrants from areas near Toronto. Settlement in other townships, like Verulam and Somerville, began in the early 1830s, when speculators started buying land in this region. The unorganized and organized migration of Western European and American immigrants not only spurred regional settlement, but also, more generally, agricultural development in this region of Victoria County.

Many of the immigrants that settled in Ontario during the Great Migration were from Ireland and Britain, and while not all immigrants had farming or trades experience, many did. This was especially true regarding the settlers who were a part of the Peter Robinson Settlement Scheme, who were largely selected for their agricultural experience. Schemes like this were put in place to encourage agricultural development in the “backwaters” of Canada, particularly in central regions of Ontario like Victoria County. The Crown idealized that if they encouraged emigration to unsettled areas of the colony, they could begin cultivating the land and exploiting Canada’s natural resources and create an agricultural export market that largely benefited the Crown.

After Confederation in 1867, profits from Canadian agricultural exports were less reliant on global markets, but agriculture as an industry remained profitable and prevailed as a way of life for several generations. Farming remained a primary means of income until the early twentieth century, when rural populations began to dwindle, and many rural people moved to cities and towns for greater employment opportunities and education, especially young women. Urbanization, industrialization, and commercialization altered the agricultural industry as tinned and imported foods became more widely available and accessible, which undermined families’ reliance on farm-fresh produce and products. Improved farming equipment also changed the surplus market, as the surplus generated by several smaller family farms could now be achieved by one larger farm with improved equipment. By the late 1910s, the agricultural industry had changed to reflect a more recognizable industry that differed significantly from that of the nineteenth century.

While the agricultural industry has changed over the nineteenth and twentieth centuries, many built and natural heritage resources in Kawartha Lakes still attest to its important and longstanding history. These resources include agricultural buildings, fences, transportation routes, and cropland. Many are no longer extant, having been demolished, re-purposed, expanded, or destroyed by natural forces like weather. The surviving resources provide valuable information about the agricultural industry in nineteenth and twentieth-century Victoria County.

Primary Period of Significance: c.1825 to c.1915

Period of Significance Justification: This period covers ninety years of agriculture in Victoria County. It was chosen to help understand early settlement, the growth of the market economy, and the mechanization and commercialization of farming in Kawartha Lakes. The study ends around 1915. This marks a time of major social, mechanical, and technical change that shifted Canadian agriculture, due to advancements from the First World War and its post-war use.

The Agriculture Historic Context Statement is a colonial study on a largely Western European – particularly Irish, Scottish and English – settler demographic that settled in Victoria County in the early nineteenth century. While this overview does not neglect to acknowledge the prosperous Indigenous communities that farmed, engaged with, and lived on the land, their agricultural history will be contextualized and detailed in the First Nations Heritage Context Statement.

Geographic Location: Citywide, there is a higher concentration of resources in the central and southern townships.

Context Statement

Early Settlement Trends: Agriculture

Agricultural settlement began in Canada during the seventeenth century when European colonists first established settlements in the Maritimes and Lower Canada (parts of modern-day Quebec). The earliest colonists were primarily from France and set the stage for a forthcoming, and largely British, settler population that engaged in agricultural colonization in other areas of Canada during the late eighteenth and nineteenth centuries. For early French settlements like Port Royal (located on the west coast of Nova Scotia, near modern-day Annapolis Royal), agriculture was a means of survival as growing vegetables provided colonists with a more varied diet, vitamins, and minerals. Without early agricultural efforts, these settlements would not have survived. Vegetables were crucial dietary staples as they helped prevent and combat diseases like scurvy, which plagued colonists because of their reliance on preserved food and lack of foods with Vitamin C. One of the ways colonists mediated scurvy was by planting and growing vegetables. Often, these newly planted vegetables were imported from Europe since settlers were unfamiliar with native plants. Samuel de Champlain, French cartographer and explorer, introduced a variety of vegetable seeds into Canada, including cabbage, beets, radishes, lettuce, and grain, samples of which were sent back to Europe to test for soil viability to determine Canada's future as an agricultural resource for Europe. Growing vegetables and grains not only provided early colonists with a more varied and nutrient-dense diet but also a means of agricultural experimentation to determine the soil's arability. Thus, cultivating produce was the means of survival for not only the colonists but also for the continued colonization of Canada and its natural environment.

The British government emphasized agricultural settlement and expansion as a central aspect of the colonization of what would eventually become Canada. The Crown believed that to successfully colonize Canada was to 'tame the environment' and make it a productive agricultural landscape by clearing the land and replicating British farming methods and techniques. When Britain formally recognized Upper Canada as a colonial province in 1791, the Crown prioritized agriculture as a central part of claiming the land as a British colony, particularly after the loss of the American colonies in 1776, as well as to increase marketable agricultural resources for the large urban population back in Britain. The successful cultivation of the land was considered a direct reflection of the Crown's ability to conquer Canada's natural environment and impose British cultivation and farming techniques on a landscape vastly different than that of rural Western Europe. Not only was the landscape heavily wooded, which differed greatly from an already cleared and cultivated European landscape, but it also had different native plants that needed to be domesticated or destroyed to ensure the survival of imported crops and seeds. In 1793, the Act of Upper Canada mandated that farmers must diligently uproot native weeds and plants like raspberries, fireweed, sumac, sarsaparilla, and ginseng to prevent them from suffocating or outgrowing European plants. Those who failed to root out these types of plants from their crops were not only considered by the government as negligent and bad farmers, but could also be fined $2 to $10 for noncompliance with the law. The legislative lengths the Crown took to ensure the domestication of the Canadian environment demonstrates the correlation between agricultural and colonial activities in late eighteenth and early nineteenth century Canada.

Over the course of the century, especially after 1812, hundreds of thousands of primarily Western European immigrants came to Canada in search of new opportunities, a better quality of life, and social mobility. In rural Ontario, most immigrants were British or Irish, and typically came to central Ontario by way of Quebec using the waterways. This resulted in earlier settlements being close to the water so they could take advantage of the water as a resource and transportation route. Since there were no developed roads in the early nineteenth century, and densely forested land was challenging to navigate. These settlement areas were also connected to larger settlement areas and townships like Cobourg, Port Hope, and Peterborough. Early settlements were concentrated in the south of the county since settlers typically arrived via southern bodies of water like Lake Ontario. Gradually, settlement expanded north, as the government sought more uncultivated land for agricultural development. This migratory pattern also reflects the natural landscape of Victoria County, as southern regions were more fertile than northern regions. The fertility of the southern and central regions in Victoria County spurred the establishment of townships that developed out of agricultural progress and inspired the increased migration and settlement of uncultivated lands in central Ontario.

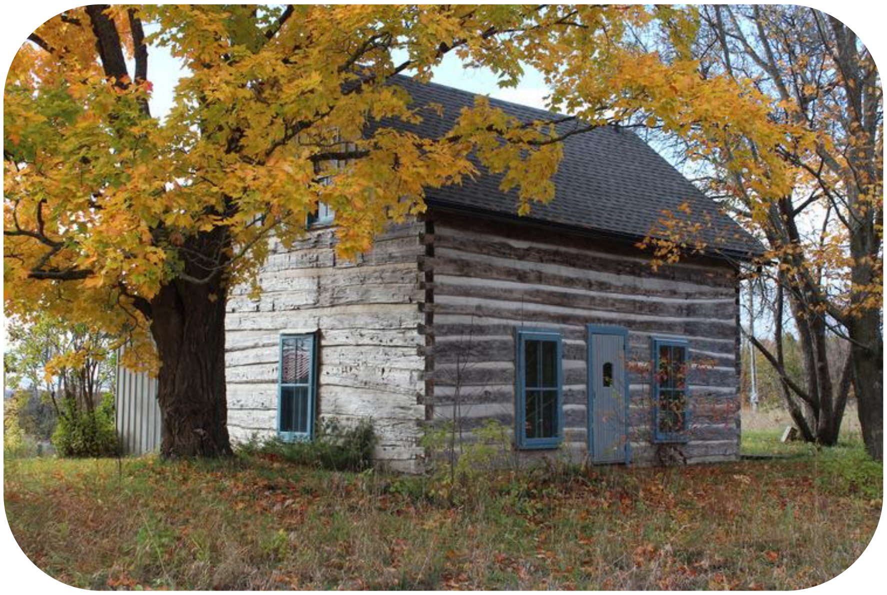
Immigrating to Canada was attractive to the impoverished and unemployed Irish and British who left rural and urban European centers for a new life in Canada. Settlers left Ireland and Britain for many reasons, including poverty, food shortages, rising rents and prices, lack of job opportunities due to industrialization, and overcrowding. They believed that emigrating to British colonies, particularly those in Canada, would provide more employment opportunities and social mobility through land ownership and agricultural exploits. Those who settled in Canada were drawn to rural regions because of the ability to own land, obtain financial agency, and establish new communities with other settlers of similar cultural backgrounds. While tenant farming still existed in Canada, it worked differently than it did in Ireland or the United Kingdom, as it provided greater leniency and agency. Many settlers believed that tenant farming in Canada was only temporary and that it was the first step to land ownership rather than a permanent, insurmountable social station, as it typically was in Europe. The mass migration of Irish and British settlers to the countryside similarly benefitted the Crown’s agricultural expansionist goals, as it allowed the Crown to promote – or subsidize, as was the case with a number of settlement schemes that pushed forward immigration to Upper Canada in the early twentieth century – agricultural settlement throughout Upper Canada. This included what would eventually become Victoria County, which was first surveyed in the late 1810s. Starting with Emily Township in 1818, Mariposa in 1820, Fenelon in 1824, Ops in 1825, and Eldon in 1826. Later, Verulam, Somerville, and Bexley were surveyed and opened for settlement in 1831, 1835, and 1834, respectively. Other northern townships were originally surveyed under the Newcastle District, but came under the jurisdiction of the United Counties of Peterborough and Victoria in 1854. When Victoria County broke away from Peterborough County in 1863, the previously mentioned townships came under Victoria County's authority. Soon after these regions were surveyed, settlement rolled in, and agricultural development began slowly, but steadily.

To ensure successful immigration and agricultural productivity, uncultivated regions being opened up for settlement were divided into 100-acre parcels of land that could either be purchased by settlers, granted by the Crown to emigrants, or leased to poorer settlers by wealthier landowners. There were many different ways that settlers came to Victoria County. Many came by boat and landed in other regions of Canada or the United States before making their way by foot or wagon to various areas throughout the county. Others used the waterways to travel from the coast in land. Whereas some settlers, like those who settled in Mariposa, were second generation immigrants and travelled from their family lands in the southern parts of Ontario for cheaper land in the north. There was also organized settlement efforts, like the Peter Robinson Settlement Scheme that saw 2000 poor Irish farmers take up settlement in Victoria County and surrounding areas.

Settlers who found their way to Victoria County could obtain land in a few different ways depending on their social status, financial security, and connections. Wealthier gentlemen were often granted parcels of land by the Crown for their service, but still had to pay settlement fees and duties (unless they were soldiers or loyalists). The status of the person's service would determine how much land they received from the Crown. For example, civilian loyalists received one hundred acres and then fifty acres for each family member, and more senior roles like surveyors could receive thousands of acres for each township plan, which they could either keep intact or divide and sell. Some settlers came to Victoria County and started as tenant farmers, who are farmers that rent land from a property's owner. Tenant farmers typically leased the land and often had to follow the property owner's rules, including what to plant and how much to plant. Another way immigrants settled the land was by squatting on a parcel of land long enough that they could legally claim it as their own. Immigrants came to Victoria County in a variety of ways, most unorganized, but not always. Organized settlement was another way immigrants came to Victoria County. Settlement schemes like the Peter Robinson Settlement Scheme helped settle thousands of poor Irish and British people by granting them plots of land and basic provisions, including tools, food, and seeds to start their homestead. This was a way to encourage settlement in specific areas of central Ontario, notably Peterborough County, Newcastle District, and Victoria County. The majority of families that came to Victoria County settled in Emily and Ops.

The granting of land was a unique benefit of emigrating under a scheme, as most early settlers had to either purchase their land outright or work as tenant farmers until they could purchase or inherit land. Victoria County had low tenancy rates compared to other regions in southern Ontario, with 0.168 percent in 1871, 0.196 percent in 1881, 0.242 percent in 1891, and 0.153 percent in 1901. While surrounding counties like Peterborough and Hastings had comparable rates, other counties' rates were exponentially higher. For example, Durham County's rates were higher than Victoria County's by 0.085 percent in 1871, 0.091 percent in 1881, 0.056 percent in 1891, and 0.107 percent in 1901. While some tenant farmers were able to settle on already cleared land, this was not always the case, and sometimes, tenant farmers had to clear their landlords' land before they could begin farming.

While not every person who settled in Victoria County had agricultural experience, many did. Those who immigrated to Victoria County and had prior agricultural or trade experience came with the necessary skills required to start and sustain a farm, as well as a foundational knowledge of subsistence farming. Other advantages occurred when settlers travelled in larger family units or settled in areas with a high concentration of people with similar religious beliefs or cultural traditions, since this would help build reciprocal relationships and the necessary collaborative workforce to engage in the laborious task of clearing and cultivating the land.



Nineteenth-century log cabin, "Sellen Log Cabin", Somerville Township, built 1860

Before settlers could begin farming and cultivating the land, they had to clear a small portion of the lot to erect a log shanty. This was a mandatory first step – especially before winter – since the shanty provided shelter for the family, their provisions, and even the ox. Building a shanty required a tremendous amount of effort, and often, neighbours helped mitigate the labour by lending each other a hand. By helping neighbours, settlers formed a reciprocal labour cooperative within the community, which spearheaded agricultural growth and community expansion. This cooperative labour system also expedited the time-consuming, but necessary, process of building a shelter from beginning to end. In order to build the shanty, trees needed to be felled and their limbs removed to create sturdy logs that would be notched on either end and stacked on top of one another. Since the wood was not left to dry before being stacked, the logs did not sit flush on top of one another, and the gaps needed to be filled with some sort of natural weather-proofing, typically a combination of clay, moss, or foliage. Shanties were only supposed to be temporary shelters for over-wintering, clearing land, and a place to live while newly felled trees were being prepared and dried to construct the permanent home. Larger log farmhouses were built soon after settlement and were typically completed within the first decade. As the century wore on and the agricultural industry became more profitable, larger homes were built out of sturdier materials, including brick or stone. After building a shanty, settlers could begin clearing the land in preparation for cultivation.

Clearing the land was a laborious and time-consuming job since the trees were massive and their trunks very thick. There were also a lot of trees, as old-growth forests covered the vast majority of Victoria County, and Central Ontario more generally. These trees were often two to three feet wide and required meticulous coordination with other family members and neighbours to cut them down. Settlers typically used one of two ways to do this: junking or girdling. Junking was the preferred method and required that the settler manually cut down the tree and then chop the trunks and limbs into ten-to-fourteen-foot length logs that were then hauled by a team of oxen – or later, horses – into separate piles for burning or for export. Girdling was less preferred and differed from junking because it resulted in a gradual and natural decay of the girdled tree. This method required that settlers cut out a thick strip of bark around the tree trunk, preventing nutrients from travelling from the roots into the branches, which killed the tree over the course of a couple of years. When the tree died, it was usually blown down by the wind. Girdling was not the preferred method of tree felling since the tree was unpredictable when it died and could fall onto the farmhouse, barn, or onto livestock and people. While both methods have their advantages and disadvantages, they both left considerable debris, including dead foliage, small branches, wood chips, and stumps, on the newly cleared land.

Settlers often chose to burn all the debris, including the stumps. However, some settlers preferred to burn the leftover foliage and twigs and pull the stumps using a team of oxen, horses, or a stump-puller if they had access to one. If the stumps were pulled from the ground, they could be repurposed as fencing, but if they were burned, they would be reduced to potash. Potash was an invaluable natural resource in the nineteenth century. It was created by leeching cold ash in water, straining it, and then boiling it down into a white, powdery, mineral-rich residue. Potash was an important agricultural and household staple in Victoria County, as it was used to make soap and as a fertilizer. There was also an internal export market for Canadian potash, making potash one of the first marketable agricultural resources in Victoria County. Potash, however, only sold for about 30 shillings per 100 pounds. Despite its low cost, almost all the timber in the Kawartha Lakes was burned and turned into potash because the logging industry was still in its infancy and would not become profitable until the second half of the nineteenth century. Settlers began making, selling, and using potash as a way to make some profit while eliminating forest debris and unwanted trees. Often, great piles of logs were burned in controlled burns rather than exported because the potash was easier to market and transport than the unburned logs. These burns sometimes lasted for days since freshly felled timber was hard to burn, and the fire was sometimes extinguished by rainfall or wind. The family and other local farmers would monitor the burn and relight the fire if it extinguished.

Abbott Farm, Henry and Isabella’s, Hickory Beach, c.1910

Despite the intense caution many farmers took to control land-clearing burns, their new lots were highly susceptible to bush fires as the debris from felled trees acted as kindling and the lack of a tree canopy dried out the forest floor. Bushfires were dangerous, not only to the surrounding woodlot, which provided settlers with wild game and berries, but also to the meagre sustenance gardens and log shanties the settlers built when they first arrived. Losing their shanty, provisions, and gardens to a bush fire was not only devastating and time-consuming to replenish or rebuild, but it could also prove fatal. To prevent the possibility of starting a large-scale bush fire, settlers typically burned debris and logs in the spring, fall, or winter when it was cooler and damper.

Settlers often only managed to clear around 1.5 acres of land each year, suggesting that subsistence farming was often a requirement rather than a choice simply due to the amount of available cropland. Clearing heavily forested land was a time-consuming and extremely labour-intensive process, so early settlers only cleared what was necessary to establish their farmstead. Settlers were also taxed on cleared land, so most families would only clear land if they were able to make a profit from it, which, in early nineteenth-century Victoria County, was limited since an agricultural marketplace was just burgeoning.

Farmhouse, Somerville Township, built mid to late nineteenth century

Most settlers slowly built up their homesteads as they had to rely on modest equipment, tools, and family labour to clear land and build structures. While some settlers were able to build reciprocal relationships with neighbouring families to share labour and tools, this was largely dependent on seasonal needs like harvest time, and did not result in a permanent workforce. Wealthier settlers, including gentry farmers who emigrated to Victoria County in the early nineteenth century in hopes of obtaining wealth and status through commercial agriculture, sometimes hired help. Many of these men were retired officers, aspiring gentry, or successful businessmen who believed that engaging in agricultural activity would allow them to acquire greater wealth and obtain a higher social status in North America than they might have otherwise in Europe. Gentlemen like Thomas Need, an English businessman, and John Langton, Canada's first Auditor General, bought unsettled land in Verulam and Fenelon Townships to develop and commercialize in the 1830s. Unlike most settlers, the men's existing wealth allowed them to quickly establish and develop farmsteads by hiring local settlers to clear and cultivate the land and build various structures. Gentlemen farmers quickly learned that a hired labour force was unsustainable due to the lack of available settlers willing to take time away from developing their own homesteads. Hiring help was also expensive, which proved unsustainable in an underdeveloped agricultural market. In 1833, Thomas Need paid local labourers £3, 7s, and 6d per acre, to chop down, clear, and burn the timber, before spreading the ash throughout the newly cleared fields. He also hired someone to build a shanty for £6, which was equivalent to the monthly wage of a skilled tradesman. Building and establishing a farmstead using hired help was difficult, and many gentlemen farmers abandoned their agricultural plans since it proved unprofitable. Many turned to other industries by the mid-nineteenth century, notably the timber trade, which was growing in profitability and moving westward from the Ottawa Valley region into Victoria County and Central Ontario.

Those who continued to cultivate and clear the land left a lasting impact on Victoria County's built environment and set the stage for greater agricultural development in the second half of the nineteenth century. Land clearing initiatives altered the landscape by destroying old-growth forests and burning foliage, leaving nutrient-depleted soil that relied on fertilization and strategic crop rotations. While cropland has undergone significant changes since the nineteenth century to better accommodate modern farming practices and agricultural commercialization, the absence of old-growth forests and the presence of rolling fields remain as a reminder of the land clearing initiatives followed by early settlement and their impact on the local landscape. Some structural resources from early settlement initiatives remain standing today, but these are rarer due to the Victorian and Edwardian emphasis on 'improvement' in the agricultural sector. The economic and social need to constantly improve the farm, which saw the demolition, repurposing, and replacement of older structures with bigger and more efficient structures for more profitable agricultural production. While early agricultural structures rarely survive into the twenty-first century, those built in the late nineteenth and early twentieth centuries provide important insight into Victoria County's agricultural environment and its desire to improve.

Getting Settled and the Growing Market Economy

By the late nineteenth century, some settler families had already been in Ontario, including in Victoria County, for nearly two generations, and while the first generation was largely focused on settling the land and cultivating basic subsistence crops, the second generation could expand on what the earlier generations had established and improve the quantity and quality of cropland. While first-generation settlement was still taking place in northern Victoria County, agriculture as an industry rather than a means of survival was becoming more prevalent in the central and southern townships where settlers had arrived earlier, and the environmental conditions supported widespread agriculture. Agricultural development in these regions was influenced and accelerated by widespread agricultural transformations that were impacting rural Ontario between approximately 1850 and 1870. During this period, crop and garden seeds diversified and the introduction and availability of new seed species helped expand new and existing markets for agricultural products, but also helped expand kitchen gardens for the personal use of farm families.

Throughout the nineteenth century, settlers were instructed to bring seeds with them when they travelled from Europe to Canada. This was not only to introduce European crops to Canada, but also as a way to ensure that settlers had some produce to eat as they established their homesteads. The ability to plant a modest subsistence crop was essential to the health and survival of the family. Most families in Victoria County kept a modest crop of mainly root vegetables since they kept the best over the winter when stored in a root cellar. A basic garden for early settlers would have potatoes, beets, carrots, and turnips, which would, over time, expand to include other vegetables such as onions, beans, peas, wheat, cucumbers, and cabbage. The types of vegetables that settlers chose to plant were selected based on their hardiness and ability to withstand the Canadian climate and were comprised of a mix of imported and native seeds. These vegetables were also chosen because they were easy to preserve through drying, pickling, or storing in the root cellar. While fruit seeds were also available, these were less common since important fruits did not fare as well in the harsh Canadian climate and did not store well unless dried or jellied. Settlers typically relied on wild berries during the warmer seasons and, eventually, imported apple trees. Herb gardens were also popular since herbs could be used to flavour cooking, applied medicinally, or used to dye garments. Typical herbs planted by early settlers included sage, savoury, thyme, caraway, pepper grass, and mint. Not all herbs could be easily found in Ontario, including sweet marjoram and basil, so settlers wanting to recreate European dishes asked friends, family, and incoming settlers to bring seeds with them to plant in Canada. Settlers would also plant perennials as a way to promote plant growth by attracting bees and other pollinators to the garden. Typically, women cared for and cultivated the vegetable and herb gardens near their homes, whereas men tended to the crops, larger plots of land – typically measured by acres – further away from the house. Establishing a garden was extremely important and provided essential nutrients for the family to survive. It also required little space and could be planted in the same clearing as the shanty.

Some species of vegetables and grains fared better in the Canadian climate than others. While most settlers did not have the means to experiment with growing different species of seeds to determine which types grew best in Canada, some did. This was most common among gentlemen farmers who had financial stakes in other industries, like lumber or retail, and could afford horticulture as a hobby since they had a financial fallback if their experimental crops and gardens failed. This was the case with Lindsay resident, Thomas Beall, who owned a profitable jewelry business on Kent Street and founded the Horticultural Society in Lindsay in the 1870s. He was a successful experimental horticulturalist, and his findings were published in national periodicals, providing the rest of Canada with valuable insights regarding the Ontario climate. While Beall was not the only person engaging in experimental horticulture, he was outspoken and well-known, presenting lectures and his findings to members of agricultural societies around Ontario. The success of experimental cultivation trickled down into the rural farming industry, and by 1871, 67.5% of farms grew a wider range of garden vegetables. However, this success did not significantly impact crop farming, since creating more arable environments in a kitchen garden was more feasible than over acres of land, since many farming families did not have the manpower or capital to curate the growth of more sensitive vegetable crops, especially orchards. Regular settlers could not afford to experiment with a wide variety of crops or fruit trees to the same extent as gentlemen farmers could, since a failed growing season could prove to be fatal or financially disastrous. However, early settlers still needed to determine what crops grew best in their environment since not all soils were composed of the same minerals and possessed different levels of fertility. This was especially true in Victoria County since the region has vastly different soil compositions, impacting which produce grew best in different areas.

Low-risk experimentation was done on a small scale in early settlers' gardens to determine which species of produce grew best in the conditions and climate at hand. For example, while all wheat grew in Canada, some species of wheat grew better in less nutrient-dense soils than others. One of the most successful examples of this type of experimentation was done by David Fife, a Scottish immigrant who settled in Otonabee Township in Peterborough County in 1825, and conducted a low-risk planting experiment with wheat. In 1841, Fife sent a letter to his friend in Scotland requesting that he send samples of a Polish wheat variety, Gdansk, to his homestead in Otonabee Township. Fife believed that this species of wheat would grow best in the Canadian climate and increase his crop yields and support an ever-growing agricultural economy. A few grains of Galician wheat had accidentally been mixed into the packet with the Gdansk seeds, and Fife had indiscriminately planted both types of wheat. Upon harvest time, he discovered that the Gdansk seeds did not fare well, but the Galician seeds did. Not only was Galician wheat heartier and able to withstand the climate better than the Gdansk seeds, but this species of wheat was also resistant to rust. When milled, Galician grains produced excellent quality flour, a dietary staple for both settlers and European countries. By the 1850s, the cultivation of what is now known as Red Fife Wheat spread into adjacent regions, like Victoria County, whose southern and central townships were similar environmentally and climatically to Otonabee Township, and then catapulted into national recognition and cultivation. While wheat remained an important subsistence crop, it quickly became a major agricultural export in Canada since it provided a high yield and proved profitable due to the growing urban demand in Europe. Canada, and more specifically Ontario, quickly became a key agricultural exporter to Europe and helped accelerate the shift of agriculture from a subsistence to a commercial activity.

Ontario had already been exporting wheat to Europe since the 1840s. However, with the introduction of heartier wheat strains such as Red Fife, producing bigger yields and more established settler families with the capital to expand their cultivatable acreage, wheat exports from Ontario as a whole rose by five hundred percent between the 1840s and the late 1860s. Wheat as a primary agricultural export peaked in the 1860s before declining following Confederation in 1867. However, until 1867, the exponential growth of the wheat market sparked the expansion of many homesteads throughout Upper Canada, including Victoria County. Farmers wanted to profit from this market, so they began clearing more land to cultivate greater quantities of wheat, while maintaining enough land to grow staple crops for subsistence. While each region in Victoria County had different wheat crop yields due to the differing fertility of the soil, farmers could expect to see upwards of thirty-five to forty bushels of wheat per acre in 1855, as recorded by farmers in Ops Township. From 1851 until 1861, farmers were harvesting more wheat than any other type of grain. Some farmers could harvest upwards of

106 bushels of wheat total per season, typically saving about half the yield for personal consumption or to replant next season.

Harvesting wheat was a time-consuming process and could take anywhere from twenty to forty hours to reap, bind, and stack (or *stook*, which was the traditional Irish method of stacking wheat into an A-shaped pile for drying) with sickles or cradles. While both handheld harvesting tools required a significant amount of time and effort to yield, farmers in Victoria County, and, in other regions of Ontario with high wheat yields, preferred the cradle because of its finger-like rake that would gather cut wheat at the base of the cradle and allow farmers to lay it on the ground in piles. Since harvesting wheat was so time-consuming and labour-intensive, most farmers only cultivated approximately half an acre to two acres of wheat and used other land for subsistence farming or other grain crops. This meant that most families did not produce a large surplus of wheat for market despite its marketability. However, the majority of families produced a small surplus that, taken together, meant that large quantities of wheat were exported from Victoria County; for example, in Fenelon and Verulam townships, 73% of farmsteads produced a marketable surplus of wheat in 1851, whereas 27% did not.

Hay Harvest, early twentieth century

Large estates were responsible for the majority of marketable wheat. Gentlemen farmers and more established and wealthier families could typically produce over one hundred bushels of wheat total because of the availability of cropland and improved equipment. Only sixty-one families in Verulam and Fenelon townships were able to achieve a yield of this size in 1851. These significant wheat yields began to decrease by the second half of the nineteenth century as the soil became less arable due to nutrient depletion. For example, in 1865, wheat yields in Ops Township decreased to about twenty bushels of wheat per acre. This was not an isolated occurrence in Ops Township, as it was happening throughout Victoria County and, more widely, Ontario. As a result, the focus of crop farming was shifting from wheat to other grains by the 1860s as farmers began noticing a general decrease in wheat yield.

Farmers and policymakers quickly realized that the rapid wheat boom of the 1840s and 1850s and its subsequent decline were caused by the rapid land-clearing schemes that occurred throughout new settlement regions. Land clearing schemes were very successful, and by the twentieth century, nearly ninety percent of the forests in southern Ontario had been cut down. Land clearing drastically impacted the quality of the soil since removing the trees, especially old-growth forests, caused significant and long-lasting impacts on the soil quality. The loss of the forest canopy caused the soil to dry up, since the tree tops acted as a natural greenhouse and trapped moisture, creating a forest floor that blossomed with vegetation, which helped increase and sustain nitrogen levels in the soil. Without a canopy trapping in moisture and blocking the sun, the soil quickly became less arable due to loss of moisture content and nitrogen-generating vegetation. Trees were also natural barriers against flooding and river run-off, so when the land was cleared, cropland experienced higher rates of flooding and sediment residue deposits that further deteriorated the quality of the soil. It took about a generation for these consequences of land clearing to actually impact crop yield because when the forests were originally cleared, the dead underbrush and intact tree roots continued to nourish the soil as they rotted and were burned. Once the plant matter and ash had deteriorated, the soil had no way of replenishing its nutrients under the agricultural system and cultivation methods used by early settlers. At the same time, wheat cultivation expedited the depletion of nutrient reserves in the soil because wheat was an exhaustive crop and required a lot of minerals to grow.

The application of British agricultural methods in Ontario further depleted the soil and prevented the replenishment of vital nutrients by naked fallowing, an agricultural method that alternates between growing crops and leaving the field empty and unplanted. Early settlers often used – and were encouraged by the Crown to use – a wheat-fallow-wheat cultivation pattern, where the field would lie empty every other growing season. This was a common practice in Britain at this time. This method proved to be detrimental to the fertility of the soil since fallowing the land did not work to replenish nutrients depleted during the wheat growing period and was an unsustainable practice in Ontario because of the climate and soil conditions. While settlers realized after a few growing seasons that the wheat-fallow-wheat pattern was ineffective in Ontario, it was not until the second half of the nineteenth century that fodder crops were introduced into the planting rotation. When fodder crops were introduced into everyday farming, farmers would plant clover or hay rather than let the land fallow, creating a wheat-fodder-wheat rotation instead. Clover and hay required fewer nutrients to grow, and, unlike fallowing, these crops could be used for feeding and pasturing livestock, which was a more efficient use of the land than leaving it empty. This crop rotation pattern came into widespread use by the 1870s when mixed farming practices – meaning a rotation of crop cultivation and animal husbandry – became the more popular farming methodology for its effectiveness in restoring soil health and boosting crop yields. Animal husbandry existed before the 1870s, as most families had small flocks of chickens, a horse, a milk cow, and maybe some pigs and sheep for personal use. However, by the end of the nineteenth century, livestock as a profitable industry staple became more widespread and effective animal husbandry was just as important as successful crop cultivation, as farming practices shifted in the final decades of the nineteenth century.

Mixed Farming

The growth of mixed farming did not necessarily terminate the importance of wheat production in Ontario, as eighty-three percent of its cropland was reserved for wheat cultivation in 1871. However, it became less profitable by the end of the nineteenth century and, in 1871, only made-up fifteen percent of Ontario’s ninety-four-million-dollar agricultural export revenue. Non-wheat crops, on the other hand, contributed to fifty-three percent of the total revenue, and livestock-related products contributed thirty-two percent in that same year. Thus, while wheat remained a staple crop, its profitability as an export had significantly decreased by the end of the nineteenth century and was overshadowed by a more diverse agricultural market and industry. While these statistics apply to the whole of Ontario, Victoria County was similarly affected by these changes as farmers began to implement mixed farming practices to compete in regional and provincial markets.

Grain Elevator, location unknown, twentieth century

By the second half of the nineteenth century, farmers began planting a more diverse selection of crop seeds, including peas, oats, potatoes, rye, corn, carrots, hay, and a variety of native and European produce and grains. While some of these crops were introduced in the first half of the nineteenth century, they were mainly grown for subsistence farming or as fodder for the small herds and flocks that families had for personal use. However, by the 1870s, non-wheat crops were growing increasingly profitable, particularly as urban populations grew, developing an expanding market for grains and produce. Grains and produce brought into larger towns like Lindsay could be sold at market for a modest profit, but they could also be sold to packaging houses and then sent to larger, urban markets in cities like Toronto using the newly introduced railroad infrastructure, as the railway network expanded rapidly in Ontario between the 1860s and 1880s. Before the introduction of the railroad, produce would often spoil before it reached larger urban markets and non-wheat grains were not typically grown in large enough surpluses to justify their transport and export.

The commercialization of non-wheat grains increased when grain elevators were introduced in the late nineteenth and early twentieth centuries. Grain elevators were usually built beside the railroad to facilitate the shipping process. When distribution buyers bought grain from local farmers, the grain was brought to the elevator for temporary storage and then loaded into freight cars and sent to its intended location. Some elevators could hold very large quantities of grain, especially those that were multiple storeys, like the mid-nineteenth century grain elevator at Mariposa station that was located about a mile outside the village center. The elevator was closely associated with the Hogg Bros., successful merchants and businessmen in the area, who used the elevator to export upwards of 50,000 bushels of barley in 1877. Other buildings and businesses were also constructed and established in the second half of the nineteenth century to promote and facilitate shipping and export. Buildings like the Lindsay Packing House waxed and packed produce to prevent spoilage on long journeys to bigger cities like Toronto. The introduction and development of infrastructure throughout Upper Canada supported the expansion of the agricultural market and, by extension, the adoption of mixed farming practices in Victoria County.

As the century wore on, farmers focused on improving their land to better implement mixed farming practices to expand their crops and, by extension, their businesses. Often, this meant clearing more acreage for bigger and more diverse cropland. Farmers usually had multiple different crops a year to not only increase profitability from a variety of different sectors in the market, but also ensure food security, as pests, fungus, natural disasters, and extreme weather often put produce and the family at risk. Wheat was still being grown and continued to bring in about $10 an acre throughout Victoria County in the 1870s, but other crops often proved more profitable. For example, potatoes could bring in $15 to $20 per acre around this time, although potato farming was extremely laborious and potatoes were highly susceptible to potato bugs, so most farms in Victoria County did not cultivate more than three and a half acres of potatoes per season. Corn, on the other hand, introduced in the 1830s, did not fare well in Victoria County until the mid-twentieth century because of its need for nutrient-rich soil. It was not cultivated in profitable quantities until the mid-twentieth century, but rather grown for personal use or as fodder. Other vegetable crops like peas and beans were becoming increasingly popular and profitable, with peas often being sold in bulk as fodder, especially for pigs. Other vegetables remained kitchen garden staples and were not planted as crop vegetables until the later nineteenth century but rather cultivated for personal use, like carrots, beets, mangelwurzel, pumpkins, squash, and onions. Grains, however, still remained much more profitable than vegetables in the nineteenth century, likely due to new infrastructure and transportation methods that facilitated their sale and export and the fact that grains did not spoil as quickly as fresh produce.

By the 1870s, barley had surpassed wheat as an export crop, likely due to its higher yield since it was less exhaustive on the soil. In 1877, Mariposa Township as a whole shipped 50,000 bushels of barley out by train over the course of the year. While barley started out as a small subsistence and fodder crop, it grew into a more substantial export crop as railway networks facilitated its shipment to breweries across the province and, as a result, it became a more profitable crop for farmers. Rye also produced a higher yield than wheat because it fared well in poor soil and harsh climates, but was not as common as barley or wheat and was often only grown as a fodder crop because of its lack of profitability in human-consumption markets. However, by the 1880s, a short-lived market for rye had developed in Lindsay, and bushels of rye sold for eighty-six cents a bushel at its peak – it is uncertain at this time why the rye market had a short-lived peak, but it may be due to a variety of natural consequential climactic reasons or possibly a burgeoning whiskey market in the second half of the nineteenth century. Buckwheat also became more profitable by the end of the nineteenth century, as it was commonly used as poultry food. However, it remained a modestly farmed grain as most farms only grew a maximum of four acres of buckwheat, which typically produced around sixteen bushels per acre.

Oats, on the other hand, rose exponentially in popularity for both animal and human consumption, but it was not a lucrative crop and only brought in about sixty cents a bushel at its peak in 1884. Nonetheless, oats were an extremely important crop because they were used for both human and animal consumption, and there were productive local milling and export factories in Victoria County and the surrounding regions. Oats were especially important as food for draft animals since they were very nutritious and inexpensive. For example, the average working horse needed around 2.5 pounds of oats daily, which amounted to over 600 pounds of oats over eight months to perform daily farm operations like hauling equipment and logs. While oats were exhaustive on the soil, implementing a crop rotation that alternated between a root vegetable, like potatoes, and a cereal grain, like oats, was an effective way to sustain crop production and increase yield without leaving the crop empty to fallow.

Man Holding Horses, early twentieth century

While farmers used improved crop rotations to increase and mediate soil fertility, they also relied on fertilizers to help increase crop yield beyond the natural yield of crop rotations. There were two primary fertilizers used by farmers in the nineteenth century. The first was potash, which was used by early settlers and remained an important fertilizer into the twentieth century. Potash would be spread throughout the fields, and the mineral compounds found in this substance would help replenish exhausted nutrients.

The other option was manure, which was more uncommon in the early nineteenth century since families did not have a large supply of animal feces, but became increasingly used as families began engaging in animal husbandry. As livestock farming became more widespread, so too did the availability of animal feces and thus manure. Manure was an abundant and effective fertilizer and was stockpiled and collected to spread onto fields during planting season. Manure was so valuable that a popular nineteenth-century agriculture journal called *The Canada Farmer* stated in 1864 that "manure is wealth without a figure of speech, and should no more be waste and mis-applied than money"[1] and that farmers should use leaves and other natural foliage to soak up the liquid left behind by manure and use that in the fields. This statement demonstrates how important manure was considered as a fertilizing agent and that the ability to save and spread manure was in direct correlation with the yield and profitability of crops.

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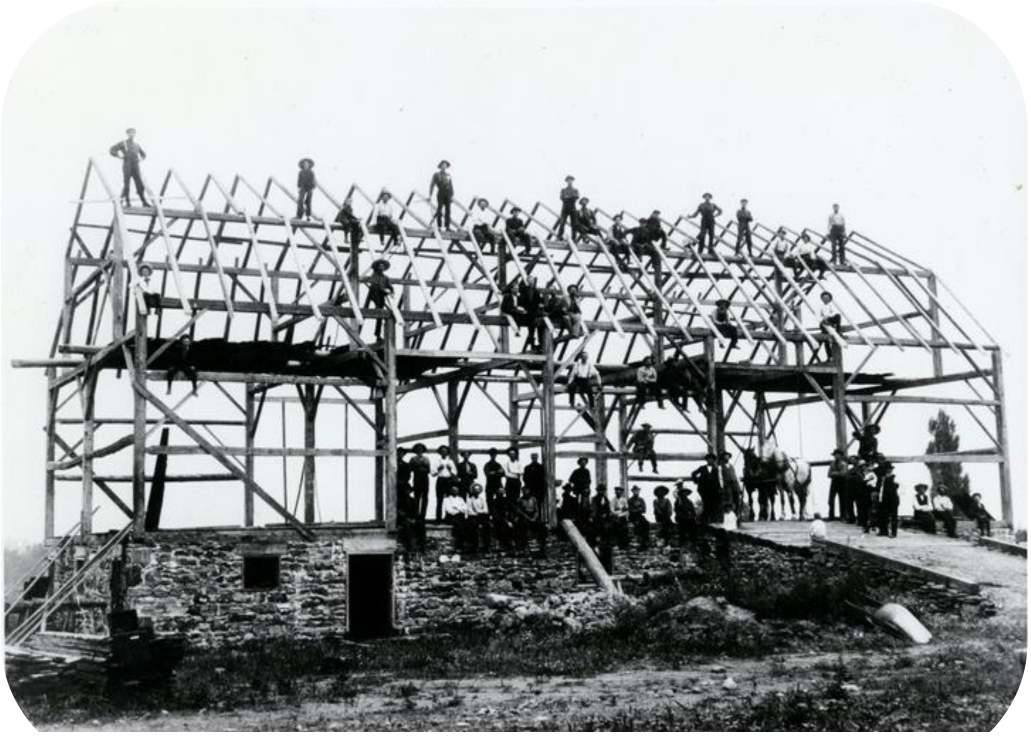
[1] *The Canadian Farmer* 1, no. 2 (Feb. 1, 1864): 1.

The availability of manure was dependent on the number of livestock a farmer had at the time and the farmer's ability to collect the manure. In the early nineteenth century, families had few animals, and most did not have large barns where animals were kept and manure collected. Animals were frequently pastured outside, often in woodlots, meaning that any manure the animals produced was challenging to gather. Collecting manure was easier in the winter since livestock spent more time inside modest shelters and barns rather than free-range outside. An article in *The Canadian Farmer* stated that "the skillful farmer's motto must be, in the winter, to save all the manure, and raise large crops next season,"[2] suggesting that the importance of manure as fertilizer was locally and nationally well known, and its use encouraged. To increase the collection of manure was to increase crop yield.

By the second half of the nineteenth century, animal husbandry practices had changed, which not only increased the collection of manure but, more importantly, the productivity of animals. Not only were barns and other shelters being built to accommodate larger herds, but livestock were also prevented from free-roaming the village, which regulated their diets and protected them from predators and angry neighbours. In Verulam Township, by-laws were passed in 1852 and 1872 that mandated the pasturing of horses and sheep, respectively. These by-laws encouraged the construction of fences and similar structures to keep animals on the farm and out of neighbours' gardens and crops. It also encouraged the construction of proper shelters that could withstand both summer and winter climates. Farmers soon discovered that animals were better producers if they were kept warm. Dairy cows, for example, produced richer, better-quality milk if they were kept out of the cold, and chickens laid more eggs when they were kept warm. The need to provide warm and safe shelters for animals encouraged the use of bank barns across Ontario, and especially in the hillier regions of Victoria County. Bank barns were a style of barn that made use of the landscape by being built into the side of a hill, which not only provided extra insulation for the animals inside the barn, but also a natural ramp into the second storey of the barn where hay and


Barn Raising Bee, late nineteenth century

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[2] *The Canadian Farmer* 1, no. 1 (Jan. 15, 1864): 3.

straw were stored. A variety of animals were sheltered in bank barns, but typically, these types of shelters housed horses and cattle.

Horses were becoming an important work animal on the farm by the end of the nineteenth century, especially in Ontario. By 1871, Ontario had fifty-seven percent of all horses in Canada, many, but not all of which lived and worked on farms as there was also substantial urban horse population at this time. While oxen remained staple draft animals until the 1850s, horses slowly began replacing the ox as the draft animal of choice in the second half of the nineteenth century. Soon, the average number of horses owned rose from three to four horses from 1871 to 1891, demonstrating the recognized importance and efficiency of horses on many homesteads in Ontario. Unlike other types of animals, most farmers did not have herds of horses on their farm and usually relied on a pair of horses. Animals like geese, chicken, pigs, and sheep were also becoming increasingly present on the nineteenth-century farm. Farmers in Victoria County were particularly drawn to beef and dairy cattle, chickens, and pigs since they were profitable, hearty, and easy to care for compared to other animals like sheep. Some gentlemen farmers like John Langton in the first half of the century had tried raising a variety of animals to determine their marketability and profitability and discovered that some animals like goats and rabbits did not fare well in the markets or climate around Victoria County. Some gentlemen farmers, like Mossom Martin Boyd the son of Bobcaygeon lumber baron Mossom Boyd, succeeded in raising various species of cattle and types of livestock and joined a profitable national and international market.

Mossom M. Boyd successfully bred cattle-buffalo hybrids on his farm in Bobcaygeon, called Big Island Stock Farm. Boyd’s original husbandry and cross-breeding goal was to produce bigger, meatier beef cattle and Big Island Stock Farm quickly became nationally recognized for its high-quality Aberdeen Anguses and Polled Herefords. Boyd understood that, in theory, cross-breeding species of beef or dairy cattle would help eliminate undesirable genetic traits and produce types of cattle that were optimal for production and produce meatier, richer, and better-tasting beef and dairy. Boyd took cross-breeding to a new level and decided to experiment with cross-breeding buffalo and beef cattle to produce bigger bovines with higher meat density. Boyd’s cattalo breeding program was rather successful and lauded as one of the most methodological programs in North America. His success with cattalo and cattle breeding provided him with the financial security and interest in raising other types of animals, including Merino, Persian, and Southdown sheep, Clydesdale, Percheron, and Suffolk Punch horses, and Berkshire and Yorkshire pigs. Boyd also raised St. Bernard dogs, Burro donkeys, and Angora goats, which many people in the community had never seen before. The ability to raise and care for these species required significant infrastructure that could protect these types of animals from the harsh Canadian climate and enough fodder yield to supplement their diets. Not all nineteenth-century farmers had the ability or means to participate in businesses like Big Island Stock Farm, instead relying on smaller herds and heartier animals. Boyd was in a unique financial position to raise a variety of species and organize breeding programs because of his family’s significant wealth from the lumber trade. Unlike Boyd, typical farmers in Victoria County stuck to animals that had a profitable market and were proven to fare well in Canadian climates, such as cattle, pigs, and poultry.

Millie McIllmoyle feeding chickens, Bobcaygeon, early twentieth century

Most families kept livestock for personal consumption and use, as few farms had developed commercialized livestock farming. Animals like cattle and chickens not only provided families with dairy and eggs, but they could also be slaughtered and their meat and lard consumed. Beef cattle were easier to care for since they required less nutrient-dense feed and were less affected by colder weather. Dairy cattle, on the other hand, required greater infrastructure to keep warm as warmth directly correlated to milk production. Dairy cows also needed to be fed grains and other feed that would increase milk production. Chickens, on the other hand, were given free rein of the farmstead in the summer months and locked in the chicken coop at night to protect them from predators. In the winter, chickens were usually kept inside the coop, where they were fed and warm. Even though pigs only provided meat and lard, they were still important animals to have on the farm because pork was easy to preserve over the winter for personal consumption. They were also extremely profitable in the agricultural export market as bacon was becoming extremely popular in Britain. Pigs were also hearty animals and could fend for themselves against predators, and were easy to feed because they would eat kitchen scraps and could forage for themselves. Most families, however, only owned a few pigs, and there was rarely pork produced in excess. Sheep were also valuable animals to have on the farm because they produced meat, lard, and, most importantly, wool. Wool was both a profitable export and an at-home resource. It was essential for the cold winter months since it would be turned into yarn and made into warm undergarments or outerwear. There was also a profitable export economy for wool in the nineteenth century, as a sizable market developed in Britain for woollen garments. Sheep, however, were a rather challenging animal to care for. Not only did they fare poorly in cold weather – often being sent to slaughter in the fall – but they were also extremely susceptible to predators.

Wild predators were a significant threat to the agricultural industry in the nineteenth century. In 1880, 200 sheep were killed by loose dogs roaming Ops Township. This incident led to the introduction of a tax imposed on owners of loose dogs and the ability for farmers to kill loose dogs if they were deemed a threat. Dogs were not the only threat to livestock, as wild predators were driven from forests due to a changing environmental landscape in search of food. This meant that predators like bears, wolves, and birds of prey were becoming a significant threat to the safety of herds, and farmers killed them indiscriminately to protect livestock. While predators like bears and wolves played a significant role in places like Victoria County, smaller wild animals could be just as problematic. Groundhogs also posed a threat to livestock since they would burrow in the field and leave holes big enough for horses, sheep, and other animals to break their legs. Rodents like groundhogs and squirrels were also notorious for eating crops. There were a few ways to fully eliminate the threat of wild animals. Shooting, poisoning, and trapping predators were some of the more involved ways farmers protected livestock. These methods were deemed necessary to protect the livestock and the livelihood of farmers.

The agricultural industry began to take a more recognizable shape by the end of the nineteenth century. After the wheat boom collapsed, farmers turned to other grains to supplement their income. While wheat was still grown, it was not nearly as profitable as it once was and was overshadowed by other grains in the second half of the nineteenth century. Livestock farming also began to rise in popularity and commonality, as most farmers engaged in mixed farming due to the financial security of crop farming and animal husbandry. The growth of non-wheat crops was also due to the growth of infrastructure in the late nineteenth century, as railroads, grain elevators, and packing houses facilitated the introduction of Victoria County agricultural products to larger cities further away. As farming diversified and markets grew, farmers needed to adapt their methods, tools, and techniques to effectively compete in the market.

Mechanization and Commercialization

By the end of the nineteenth century, farming was becoming a much more commercialized industry. As seeds diversified, cropland increased, and herds grew, farmers needed improved harvesting and processing equipment to keep up with production and market demand. A variety of improved agricultural equipment was introduced and used throughout Ontario in the later decades of the nineteenth century to save time and energy. Equipment was introduced to reduce the need for multiple farmhands and harvest crops more efficiently and in less time. With the rise of dairy farming in the region, cheese factories were becoming more popular and cheese, butter, and cream were introduced to the market. The mechanization and commercialization of the agricultural industry began in the late nineteenth century with the use of improved farming equipment and processing factories. Ploughs were a staple agricultural tool throughout the nineteenth century and were one of

Working the Summer Fallow, Baddow, c.1920

the most important farm implements. By 1871, 80.3 percent of all farmers owned at least one plough, and while some farmers had more ploughs, this was uncommon and reserved for the wealthiest farmers. Depending on the type of crop that was to be planted, ploughing took place in the spring, summer, and early fall. Early ploughs in the area were made out of wood and usually pulled by oxen, but by the second half of the nineteenth century, ploughing technology was improving to make them more durable and more efficient. Slowly, wooden ploughs were replaced with more durable iron ploughs, and oxen were replaced by more agile horses, a change that became more widespread by the late 1870s. Not only did manufacturers begin making ploughs out of more durable materials, but they were also made in different styles to accommodate the needs and soils of different farms. Ploughing was a crucial step in the crop sowing and harvesting process as it created ruts in the earth and overturned the soil. Having an efficient plough meant more cropland could be processed for sowing, and thus more grain or vegetables could be harvested.

After the seeds had been sown – sometimes using a sowing machine – and the crops had grown, it was time to harvest in the early or late fall, depending on the crop. While most vegetables had to be harvested by hand using a spade and shovel for most root vegetables, grains could be harvested using specialized farming equipment by the latter half of the nineteenth century. Before these machines were made widely available, farmers used sickles, reapers, and cradles to harvest grain and

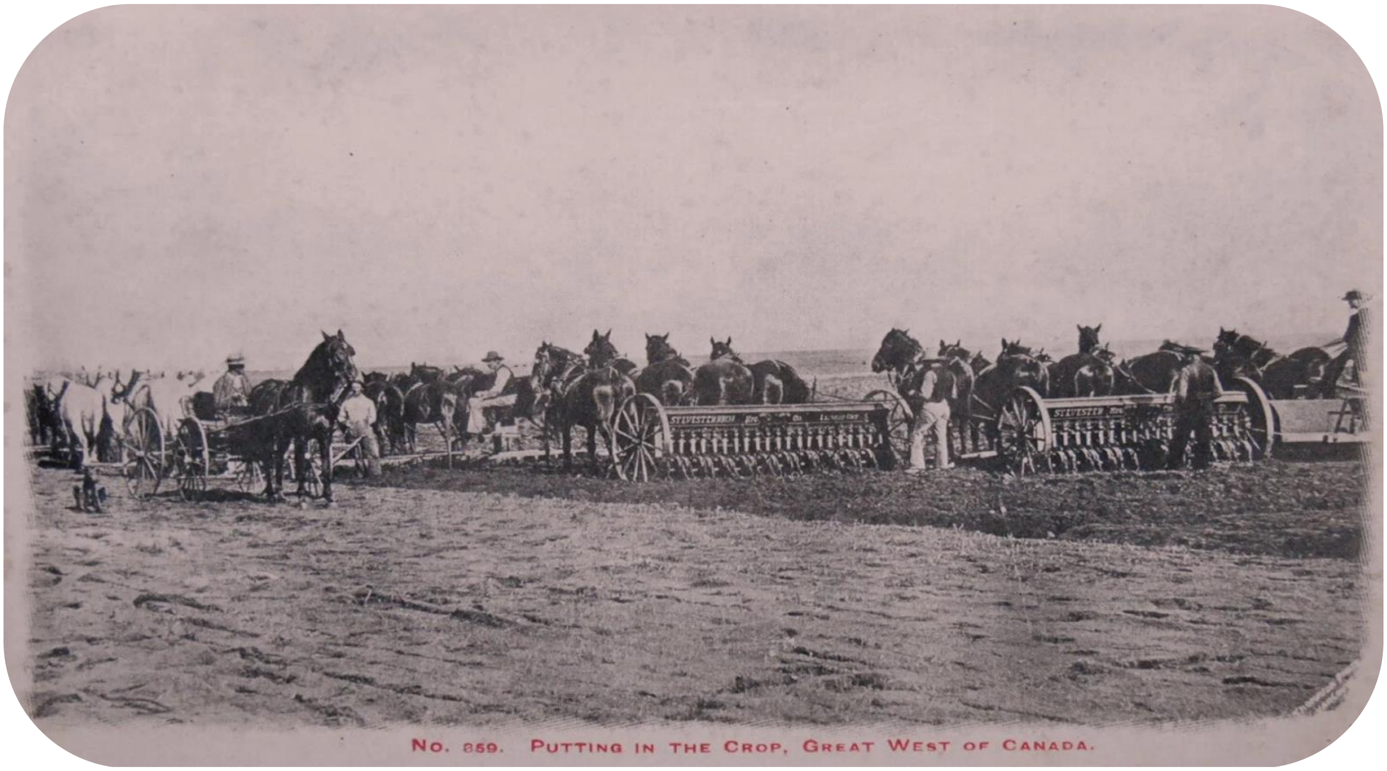
Woman driving a team of horses pulling a hay rake across a field, Fenelon Township, 1918

hay. Harvesting crops by hand was extremely time-consuming, and farmers and their families could expect to spend twenty to forty hours harvesting a single acre. Not only did the family have to cut down the grain stalks in small batches, but they also had to lay out or stack the freshly cut grain into A-shaped *stooks* to dry. Once dry, the grain needed to be bundled into bushels and then stacked for easy collection.

Farmers in Victoria County preferred cradles because they harvested wheat more efficiently than sickles because of their shape. It had claw-like spindles on the end that would be swung by the farmer to cut the grain stalks. The freshly cut stalks would fall into the basin like the base of the cradle, and then they could be gently laid on the ground to dry, already in convenient little piles.

Scythes, on the other hand, required a little more intervention, as farmers would have to grab the tops of the grain stalks and then cut them down and let the stalks fall haphazardly in the field. Either themselves or younger family members would gather the fallen stalks, lay them out to dry and then stack them. While cradles were slightly faster and more efficient than sickles or reapers, they were not nearly as effective as harvesting machines.

By the 1870s, harvesters were introduced into rural regions of Ontario, including Victoria County. They were marketed as time-saving and effective harvesting devices that increased crop yield with less manual effort. Many early harvesters still required the work of multiple people to function properly, but they were faster and less labour-intensive. Farmers were still needed to guide the horses, unclog the machine, and catch the threshed grain in a bag before it fell to the ground. Even after the introduction of these types of machines, many families continued to harvest crops by hand since these types of machines were expensive and costly to maintain. In 1871, there were only



Sylvester Brothers' Seed Drills, Prairies, c.1890-1900

twenty-two reapers and mowers in Fenelon and Verulam Townships. It was not until the mid-twentieth century that harvesters became more widespread and affordable. Uneven landscapes and rough terrain also impeded the widespread use of agricultural machinery throughout Victoria County. For example, hay mowers were inefficient in the majority of Victoria County because many of the fields were too hilly and the machine could not perform properly on this type of landscape. Despite the challenges some of these machines posed, harvesting equipment was still extremely popular for those who could afford it, as it helped make the harvesting process faster and more time-efficient.

Eventually, the horse-drawn rake was introduced in the latter half of the nineteenth century, and it became more popular than mowers. In 1871, 10.6 percent of farmers in Victoria County owned a rake. Those who had a horse-drawn rake could rake hay around five times faster than by hand. Farmers who used rakes could harvest more hay faster and more efficiently, leaving time for other chores around the farm or the ability to plant bigger crops. Harvesting equipment kept improving over the course of the century, and by 1900, self-binding movers were becoming more popular in Victoria County, saving even more time by binding the hay as it was being harvested, eliminating the need for family members to bind the hay themselves. It wasn't until the mid-twentieth century that fully automated machines were introduced in Victoria County, transforming the agricultural industry and leaving a lasting and recognizable mark on the commercialization of farming in Ontario.

Not only was the initial harvesting process becoming faster and more efficient due to the number of mechanical and technological innovations being used on the farm, but the entire process from ploughing to consumption was also becoming faster and more efficient. Before the introduction of threshing machines in the second half of the nineteenth century, farmers had to thresh grains by hand which required the farmer to beat bundles of wheat on the ground loosening the seed form the shaft which was time consuming and physically demanding. When large barns became more popular, some farmers utilized the empty workspace on the first floor as a threshing room and laid the grain stalks out on the floor and had oxen, cows, or horses tread over the grain to loosen the seed from the stalk. This was faster than hand-threshing, but often resulted in damaged and dirty seeds. The process of threshing produced a lot of chaff, which is the inedible seed casing of the grain. This needed to be separated from the edible seed part before the grain was sent to market. Before the introduction of fanning mills and threshing machines with fanning mills built in, the newly threshed materials would be gently tossed into the air when there was a breeze and the chaff would be blown further away than the grains. When the fanning mill was introduced, the process of separating chaff from marketable grain became much more efficient, less laborious and more sanitary. Fanning mills quickly caught on, and by 1871, 66.3 percent of farmers owned at least one fanning mill in Victoria County. The use of threshing machines and fanning mills throughout the region expedited the grain processing process and prepared grains for market or to be stored in silos for personal consumption and fodder. Mid-nineteenth century threshing machines were horse-powered and few farms actually owned their own machine. Neighbours would typically participate in a communal machine-sharing rotation, where one company would go to each farm for a modest rental fee and thresh their grain. This equipment and labour exchange program continued into the later nineteenth century with the introduction of steam powered threshing machines.

The availability of these machines was aided in large part by their production in various townships throughout Victoria County. Foundries and factories made a variety of agricultural equipment for commercial and subsistence farmers throughout the region, with some manufacturers becoming

Cheese Factory at Cameron, late nineteenth century nationally acclaimed and part of the large agricultural supply industry that was developing across the country in the late nineteenth century. Places like Woodville and Lindsay made and produced fanning mills, seed drills, straw cutters, and threshers for local consumption, whereas factories like the Sylvester Manufacturing Company in Lindsay became nationally and internationally recognized for their agricultural implements and improvements, selling machines throughout Canada, including in western Canada, and the United States. The creation, development, and use of agricultural equipment helped improve cultivation and production of agricultural products and, over the years, aided in the commercialization of the agricultural industry.

Other developments that came to the forefront of the agricultural industry in Victoria County near the end of the nineteenth century were cheese factories, butter factories, and creameries. Before the final decades of the nineteenth century, women made cheese and butter at home and primarily for personal consumption. They collected milk from their cows, heated up the milk, and then added a curdling agent to make cheese. Butter was made using a butter churn and then pressed into shape using hands or a butter press. Most families consumed all the dairy products they made themselves, but some families had a surplus of milk, cheese, or butter that could be traded or sold to market, often locally. However, it was not until the introduction of cheese factories that dairy products entered the marketplace more consistently and on a larger scale.

By the 1870s, the popularity of dairy farming in Victoria County was growing, and farmers were acquiring larger, more productive herds, causing a surplus in milk from which farmers wanted to profit. This coincided with the availability and affordability of iron cookstoves in Ontario, which proved essential in the commercialization of cheese making since the stoves would be used to heat up large vats of milk during the curdling process. In turn, with a surplus of milk and the availability of iron cookstoves, cheese factories proliferated throughout Victoria County. Alongside cheese factories, Cheese Cooperatives were established in individual rural communities. These cooperatives were responsible for collecting all the surplus milk in the neighbourhood and then bringing it back to the cheese factory to make cheese. This cheese was then sold to the market, and the money made from these sales was divided among the neighbourhood.

Cheese making quickly became a popular industry because of cheese’s marketability. For example, the Mariposa cheese factory received 660,380 pounds of milk and made 71,713 pounds of cheese, which was either sold back to the community or sold in Peterborough markets. Cheese was a lucrative industry, as demonstrated by the Bobcaygeon Cheese Factory's revenue of $11,790.81 in 1899, in which each farm that contributed received a few thousand dollars from sales. The commercialization of cheese is also attested by the 1888 Milk Act, which authorized representatives of cheese factories the authority to test the purity of milk before it was turned into cheese. This was to eliminate the potential for cross-contamination of milk from different farms and avoid the potential spread of diseases. Cheese factories mostly operated from May to October, and, before the 1890s, closed for the winter season since it was too cold to effectively make cheese.

To mitigate the lack of revenue over the winter months, cheese factories were temporarily converted into creameries or butter factories to ensure the continued profitability of the dairy industry. Around this time, the Ontario Creameries’ Association was established to promote butter manufacturing, attesting to the growth and known profitability of creameries. Some cheese factories never converted into creameries; instead, a creamery extension was added to the original cheese factory building so they could maximize profitability by engaging in two aspects of the dairy market. This is exemplified by the Oakwood Cheese Factory, which was originally built as a cheese factory in May 1898, but then extended to include a creamery in October 1898, prompting a new company name: The Oakwood Cheese and Butter Company. This helped promote profitability since they could manufacture cream, butter, or cheese, depending on the market, availability of milk, or time of year. The dairy product production industry continued to grow into the twentieth century, until each township in Victoria County had at least one cheese factory. By 1906, Ontario had 1237 cheese factories, of which at least 16 were located in townships throughout Victoria County, including Palestine, Lorneville, Downeyville, Omemee, Cambray, Cameron, Little Britain, Mariposa, Valentia, North Ops, Reaboro, Bobcaygeon, Dunsford, North Verulam, Red Rock (Verulam), and Star (Scotchline/Bobcaygeon). Beyond dairy, the meat industry also industrialized and commercialized by the end of the nineteenth century.

Before 1870, the meat market was domestic and localized, meaning that most farms slaughtered their own livestock and processed the carcass themselves, or they sold surplus meat to the local village butcher. Most families ate poultry and pork, since these were the least expensive animals to raise and easily preserved or consumed before spoilage. Mutton and lamb were also consumed, especially on holidays and in the fall and winter. Some families ate beef, but beef and veal were less commonly eaten than pork or poultry meat since cattle were more useful as draft animals or dairy producers. However, beef was still consumed, especially on special occasions or when the animal died by natural causes. After 1870, when livestock farming grew in popularity across Canada, and the agricultural export economy expanded, meat packing and processing industrialized to meet the demands of a national and international market, as well as the availability of surplus meat. Meat packing plants began to appear around 1870, and differed from village butcher shops because of their graduated labour division, where different sections of the plant would specialize in different types and cuts of meat, creating a streamlined system of processing and packing meat that processed a higher quantity of meat than local butcher shops.

Meat packing plants quickly became some of the largest employers in Ontario, and many small butcher shops were absorbed by the large-scale industrial plants. Most meatpacking plants processed pork, but some processed beef. While there were some beef packing plants in Ontario, they were largely confined to the western “cattle-country” provinces of Manitoba, Saskatchewan, and Alberta. In Ontario, pork was more commonly processed than beef because of the availability and surplus of hogs on Ontario farms. Hog processing in Toronto was so rife that the city was nicknamed Hogtown after the sprawling stockyards, processing plants, and significant pork export economy. Victoria County was home to an equally successful pork processing plant, the George Matthews Company, which first opened in Lindsay on Cambridge Street North. The business rapidly grew, and branches opened in Peterborough, Ottawa, Toronto, and Brantford. Eventually, the Peterborough plant became the primary processing facility, but the company’s headquarters remained in Lindsay until the company merged with other companies following the First World War. The merge was due to the oversaturation of the meat processing market, where there were more processing plants than demand for pork (or beef), largely due to the efficiency of the industrialized plant.

The second half of the nineteenth century saw a burgeoning commercial agricultural market. The shift in the market economy was not only facilitated by the introduction of a mixed farming economy, but also by the mechanization of farming equipment. Improved farming equipment like mowers, rakes, threshing machines, and fanning mills expedited the harvesting process and alleviated labour requirements. Faster, more efficient mechanized equipment helped produce bigger yields as well as facilitated the growth of cropland, ultimately increasing marketable surplus and profitability. While not all farming families benefited from improved equipment, many did, and the introduction of mechanized farming equipment helped usher in the age of commercialism.

Decline of Farming

While the agricultural industry continues to thrive today, there was a mass decline of farming as an occupation in Ontario in the early to mid-twentieth century. The First World War altered the market economy significantly as it not only mandated a surplus of food in order to provide for Canadians affected by trade embargoes, but also to send food overseas to the military. During the war, many farmers had bought machinery to improve their farming efficiency, but when the war ended, farmers were left in financial distress because of falling market prices and the crashing demand for agricultural surplus. The war also introduced changes to farming equipment, improved by the technological and mechanical advancements made during the war and the wartime farming effort that made farming easier and more productive. With more efficient farming technology, fewer updated farms could produce the same yield as an abundance of small, traditional farms. The introduction of the tractor to Ontario farming in 1914 marked a transition between the new and old ways of farming, as it opened the doors to more mechanized methods of harvesting beyond horse-drawn machines. New, improved harvesting machines not only required fewer farmhands, since most of the jobs were either automated or could be done by one person, but also, they harvested crops efficiently and covered a lot of acreage in a short amount of time. What originally took weeks or months to harvest by horse-drawn harvesters or by hand could now take hours or days to complete.

Following the war, a mass outflux of young people from the country to the city occurred. This was in response to declining need for farmhands and small independent farms, as well as the growing opportunities for young men and women in the city. While there remained a strong rural population until the 1970s, the agricultural economy was never as prolific as it was in the nineteenth and early twentieth centuries. The advent of frozen foods, tinned foods, and prepared goods also devastated the farming economy since people relied less on farm fresh produce than they did in the late nineteenth or early twentieth centuries. Not only were market demands changing, technologies were too, which limited the need for cooperatives, large families, and helpful neighbours.

Nevertheless, Agriculture in Victoria County was an important industry that was greatly affected by larger historical forces and was not an isolated industry. Social, cultural, and economic factors that affected Canada, and, more specifically, Ontario, had monumental impacts on the agricultural industry in Victoria County, and ultimately, Kawartha Lakes, as it is now known. Over the course of a century, agriculture changed and developed from small backwater operations on newly cleared land to large commercial-industrial operations with domestic and overseas markets. From the arrival of the first settlers in 1825 to the First World War, agriculture evolved, developed, and changed to suit the Ontario environment and changing economies – both domestically and internationally. The agricultural industry in Victoria County played a crucial role in the larger context of the Canadian agricultural industry and helped bolster Canada’s reputation as a global agricultural powerhouse today.

Types of Heritage Resources

The types of heritage resources related to the development of agriculture in Kawartha Lakes encompass built and natural resources dating from the early nineteenth century to the early twentieth century. These resources, many of which have been adapted as part of the twentieth-century development of modern agriculture in Kawartha Lakes, continue to remain extant and serve their original purpose, or a modified version thereof. These resources are largely located in rural areas of the municipality, although some, particularly those related to the commercialization of agriculture, are also located in the City's urban areas. These resources can generally be categorized into the following types of resources:

- Cropland, woodlots, and fields
- Barns and outbuildings
- Fences, stone walls, hedges, and other built and natural features used for property demarcation
- Farm houses and residential structures, railroads and associated infrastructure, including grain elevators and turntables
- Food manufacturing facilities, including cheese factories and creameries
- Foundries and factories that made farming implements
- Mills
- Commercial buildings, including general stores, groceries and distribution centers

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