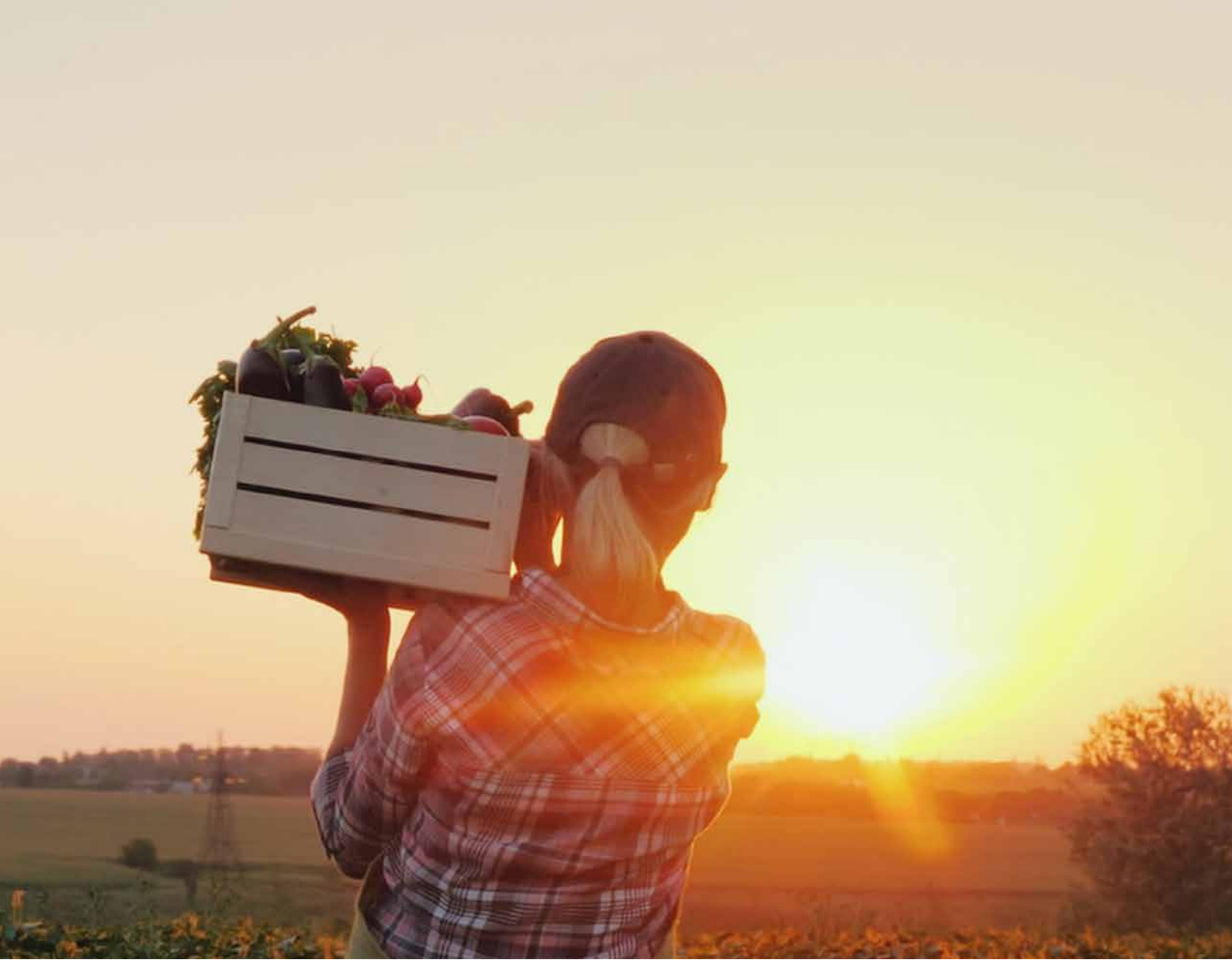

Greenbelt Farmers: Economic Network Case Studies

Dr. Wayne J. Caldwell, Kate Procter and Regan Zink

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Possibility grows here.

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The Greenbelt Foundation is committed to promoting awareness and education about Ontario's Greenbelt. To this end we occasionally publish research and general interest papers that explore our three program areas: viable agriculture and viticulture; vibrant rural communities; and, a restored and protected natural environment.

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Many people were involved in the creation of this report.

Most importantly we would like to thank the individual farmers who shared the details and stories of their farms. The resulting seven case studies demonstrate their commitment to agriculture, and their community. We hope that we have fairly captured the details and ideas that they shared with us.

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Photo courtesy of Dennis Hristokski

Introduction

The Greenbelt and Greater Golden Horseshoe (GGH) region have a robust agricultural and agri-food economy. Continued success in the sector requires not just protecting farmland but also ensuring that farming is a viable business. Agriculture in Ontario and within the Greenbelt is the product of thousands of individual decisions made on a daily basis. In the short-term farmers are constantly evaluating markets, monitoring weather, animal health and crops, managing finances and books, maintaining equipment and interacting with suppliers. In the long-term there are plans to be made about crop rotations, nutrient management, herd management, staffing, contracts, building and property maintenance, farm investments, estate planning and expansion opportunities, all with an eye to remaining competitive, productive and profitable.

Collectively, these individual decisions produce the diversity and economic reach of Ontario's agricultural system. Over time these individual decisions lead to changing production systems, land use, farm numbers and employment while contributing significantly to the local, regional and provincial economy.

There are different ways to understand the agricultural system. The census, for example, collects information from all farms at a point in time and amalgamates this data allowing us to know how many farmers there are in a given geographic area, the farm size, what they produce, and their production practices, among many other variables tracked by the census. Conversely, individual farms can be studied leading to a deeper understanding of how agriculture interacts with and benefits local communities, their economies, social fabric and the environment.

This report presents a series of case studies that highlight the economic contributions, diversity, breadth and interconnected nature of agricultural and agri-food systems in the Greenbelt and GGH.

These case studies are based on interviews with seven farmers who represent a variety of commodities, different farm types and sizes of operation across the Greenbelt. Individual farm participants were recruited with the assistance of a number of partners including farm organizations, commodity groups, and municipal and Greenbelt staff. The interviews were conducted in the fall of 2021. However, there are common themes and outcomes that are shared across the selected farms that are likely shared by other farm types as well.

Farmer interviews collected information about where inputs were purchased, where and how products were processed and sold, and where other services were procured. Beyond these more obvious relationships, the context and nature of each farm had to be established and a number of secondary or supporting interactions explored (ranging from seasonal workers to farm equipment repair to legal and accounting services, among many others). The interviews explored the individual context and the network of interactions involved by farmers in operating their business. Each interview and farm is unique and reflects what the farmers shared during the interviews.

While there are as many stories as there are farmers within the Greenbelt, these seven case studies provide the reader with a better understanding of the economic relationships and interactions associated with their farm operations. Collectively, this farmer input helps to tell the story of agri-food systems from the perspective of these farmers, uncover the diversity of actors involved, and highlight agriculture's contributions and value to the economy.

Case Studies

Photo: Shutterstock

1

Almet Farms

Farm Profile

For over 150 years and through seven generations, Almet Farms has been growing food for Ontarians. Ron and Brenda Metcalf and their family operate Almet Farms, which is located near Tyrone, Ontario. They farm 1,400 acres within the Municipality of Clarington, of which 627 are owned and 775 are rented. They have 25,500 laying hens and 140 Holstein cows, and grow white beans, soybeans, grain corn, silage, hay and wheat.

Relationships with the Agri-Food Sector

Equipment, Tools and Machinery

The Metcalfs generally travel between 35 and 40 kilometres to purchase equipment and access services and maintenance, although some repairs are done locally. They try to purchase high-quality used equipment for the farm and usually look outside of Clarington for better availability. Small tools and fuels are purchased within town, as well as internet services which are becoming more important for the business.

Crop Production

Almet Farms sells seed for Pride Seeds and Quality Seeds, both based in Ontario. They also make most of their seed purchases for their own farm through these two companies. Fertilizers are purchased outside of Clarington. Various field operations must be completed in coordination with crop stage and appropriate weather conditions in order to maximize crop production. Because of this, relying on custom applicators is difficult, so Almet Farms owns and operates their own equipment for most of their crop protection, fertilizer application, planting and harvest operations.

Livestock Production

The dairy cow feed is derived largely from crops that are grown on the farm, but supplements are purchased from Grand Valley Fortifiers, a livestock nutrition company in Cambridge, approximately 200 kilometres from the farm. Straw grown on the farm is used as bedding for the dairy cows along with some shavings, which are obtained just outside of the local region. The Metcalfs breed and produce their own cows to replace the animals in the milking herd, but occasionally purchase genetics from other sources.

Both laying hens and feed are supplied by Archer's Poultry Farm, in Brighton, which is located about 100 kilometres from the farm. Laying hen flocks across Ontario are managed by Egg Farmers of Ontario through Canada's national supply management system. Ontario flocks are managed to ensure there is no disruption to the provincial egg supply. Each farm is provided with the date that old hens leave the farm and new ones arrive. Farmers have one week to clean and disinfect their facilities before the arrival of young laying hens, called pullets.

Farm Labour

A multifaceted operation such as Almet Farms requires a combined management effort from various people. Ron and Brenda manage the chickens, their daughter looks after the calves, one son-in-law manages the cattle, while their other son-in-law manages the crops and the machinery. Almet Farms currently employs 11 people, which includes both family members and hired staff.

Farm Infrastructure, Buildings and Maintenance

In 2020, the Metcalfs built a new layer barn. The barn construction company was based in Wallenstein, Ontario and the housing for the birds came from Germany. They also recently built a new barn to house their heifers and hired workers from Lindsay for the construction.

Due to the decreasing number of farms in the area, the number of service and supply providers are also declining. The Metcalfs have always done much of their building maintenance themselves, but may need to travel further for supplies.

The farm is situated next to an excavating business that supplies the farm with gravel. Almet Farms employs a company located outside the region that hires local people to install their tile drainage as necessary.

Photo: Shutterstock

Crop Transportation, Storage and Drying Services

The Metcalfs deliver their field crops for storage to a nearby farm elevator in Clarington, as they do not have storage or drying facilities on-site. The haylage used for cattle feed is stored in bunks on the farm.

Sales and Marketing

Milk production is also regulated in Canada by a national supply management system, which is managed by Dairy Farmers of Ontario. Farmers receive a guaranteed price for their product, enabling them to pay the costs associated with production. Dairy Farmers of Ontario collects the milk from Almet Farms for processing every other day, and eggs are sent to Burnbrae Farms in Mississauga twice a week. The Metcalfs also have an on-farm store where they sell their eggs to local customers.

Corn, soybeans, wheat and white beans are all delivered to a local elevator, which manages the sale and marketing of these crops. White beans and Identity Preserved (IP) soybeans are sold to the Hensall Co-op, in Hensall, Ontario, one of Canada's largest non-financial co-operatives. Farmers sign a contract with Hensall Co-op prior to planting the crop, which determines seed variety and various crop management requirements. Both white beans and IP soybeans are considered food grade. The white beans are sold internationally, usually to England, while the soybeans are destined for Japan. Grain corn is destined for various uses beyond human consumption including livestock and pet food, and ethanol production.

For marketing services, the Metcalfs recently joined the online marketing group for local businesses, "A Country Path". In addition to being featured on their website, the group distributes brochures and does seasonal advertising for its members. Almet Farms also has a Facebook page, updating the public about their farm activities.

Additional Services

The Metcalfs access various services outside of Clarington, including banking, lending, insurance and farm succession planning, all of which are done in Lindsay, and legal services, which are accessed in nearby Peterborough. Veterinary services and field advisors for their egg and dairy production are provided within Clarington, and animal nutrition advisory services are sourced further away by two companies in Ontario: Archers and Grand Valley Fortifiers.

Conclusion

From supplying local consumers with farm fresh products, to maintaining Ontario's egg and milk supply and exporting crops internationally, Almet Farms is a major economic contributor. Their supply chain includes very local inputs as well as items sourced internationally. While some service providers and suppliers are still nearby, Ron and Brenda are having to go further to source their products and services as the decreasing number of farms in the region has led many of these companies to move elsewhere.

Their outputs also range from the very local–supplying neighbouring consumers–to international markets in Japan and England. Demanding requirements of international markets have required Almet Farms to progressively adapt and modify their production methods in order to take advantage of these opportunities.

Brenda sees access to land as one of their biggest challenges going forward. Competition for both rented and purchased land is becoming more fierce both from development and from other farmers. As leaders in their industry with regard to environmental sustainability and animal welfare, Almet Farms advocates for agriculture and continues to adapt to constantly changing market demands.

2

Grimo Nut Nursery

Farm Profile

Linda and Ernie Grimo own and operate Grimo Nut Nursery in Niagara-on-the-Lake. Their farm consists of a 4.5 acre nursery and 10 acres of orchard. The nursery is the primary source of revenue for the farm and the orchard is used for research, development and testing new varieties. The farm sells over 100 cultivars of nut and small fruit trees including hazelnut, heartnut, walnuts, chestnuts, hickory, ginko, oak, mulberry, figs, pawpaw, America persimmon, Aronia berry, Saskatoon berry, elderberry and lingonberry. The farm also sells fresh nuts grown in the orchard and tools such as nutcrackers and harvesting equipment.

Ernie Grimo moved to the property in the early 1970s from the City of Niagara Falls. The farm was originally more of a hobby for Ernie who has a passion for experimenting with what can grow in Ontario. Both Ernie and his daughter Linda were teachers and grew into farming over the course of their careers. Linda, who had moved to Arizona to teach, returned to the farm in 1999 with her two sons, around the time Ernie was looking to retire and expand the farm business. Since then, the farm has grown in leaps and bounds and relies on both Linda and Ernie working full-time, as well as the farm manager Armando, who was hired in 2020.

Photo courtesy of Linda Grimo

The seasons and workload at Grimo Nut Nursery look a little different than other farms. In the spring the crew is busy digging trees out of the ground, and trimming and grading them in preparation to fill orders. Once the shipments go out, the trees that were not sold go back into the ground for the next year. Summer activities on the farm are much less intensive and primarily include mowing, weeding and cultivating. But it is not long before activity picks up again and harvest begins in September. Unlike fruit trees, nuts are only harvested when they have dropped to the ground and there are specialized tools that pick the nuts up as staff walk along.

Relationships with the Agri-Food Sector

Equipment, Tools and Machinery

Linda and Ernie typically buy machinery from Texas, piggybacking on the pecan industry there. For the majority of their nuts, they use a Savage harvester that has been modified for their farm and the nuts they produce. Another challenge for sourcing equipment for Ontario nut farmers is the small size of farms. For example, the hazelnut industry in Oregon has developed specialized equipment and machinery, but farms there are more than double the size of a typical hazelnut farm in Ontario. As a result, equipment for hazelnuts is sourced from Germany and Italy because their farms are a more comparable size.

The equipment used for digging up trees in the spring is much easier to find in Ontario. The equipment Linda and Ernie use is pulled behind the tractor, however, there are also side diggers, and both are commonly used at tree nurseries, including fruit tree nurseries in Niagara.

Other equipment at Grimo Nut Nursery includes a cleaning system, a conveyor system to sort the nuts, and a de-husker. Some of these were purchased ready-made, while others were made specially for the farm using specifications that Ernie and Linda provided. In the early days, there was a mechanic down the road who Ernie and Linda went to for repairs and modifications to machinery. The mechanic has since closed, and today the farm manager, Armando, makes most repairs and modifications. For fuel, most of the farm equipment and vehicles use either diesel or unleaded gas, both purchased locally.

Photo courtesy of Linda Grimo

Crop Production

Where a lot of farms must buy seed, Grimo Nut Nursery is primarily able to supply themselves. For nut trees, the nut that comes off the tree is the seed and can be planted directly into the ground. This is the same for pawpaw where the seed from the fruit is planted and the resulting tree is sold through the nursery. Grafting and creating clones are other methods that the nursery uses to produce more trees using their existing orchard. Grafting and creating clones can be time consuming and the growing demand for hazelnuts has Linda and Ernie looking to labs to help grow trees faster. Linda is hopeful that down the road this technology will help their business keep up with the demand for hazelnut trees in Ontario. There are also some seedlings, such as American persimmon, that are sourced from nurseries in Ontario or the United States. Similarly, Linda and Ernie buy rootstock for grafting when they cannot produce enough of their own.

The majority of trees grown at Grimo Nut Nursery are wind pollinated. Hazelnuts flower in the winter months, typically in March. The fact that they flower and produce pollen in some of the harshest winter weather means that they are extremely hardy and there is not much that can disrupt the pollination processes. The rest of the trees are wind pollinated in May and June, and the fruit trees are a little different in that they require bees or carrion flies.

Every couple of years, Linda and Ernie take soil samples from both the nursery and orchard to their local farm store who provides them with custom amendment blends. The local farm store also provides herbicides to maintain good ground cover and ensure that the trees are not competing with weeds. This is particularly important in the nursery where the trees are small. Linda and Ernie have always used pesticides sparingly as they want to test the resilience of new cultivars. That being said, there are some pests that require pesticides, such as walnut husk flies. All necessary pesticides are also purchased from the local farm store.

Photo courtesy of Linda Grimo

Farm Labour

In addition to Linda, Ernie and Armando, the farm relies on support from Ernie's wife, Bernice, and Syme, the part-time bookkeeper. The farm also hires four to six local seasonal workers each spring and fall. These workers are local and typically do not have prior experience working with tree nuts.

Processing

Labels and packaging materials are purchased locally. There are two types of labels used on the farm. Avery labels are used for bagged nuts and shipping, and are made with a standard printer. The farm also has a more high-tech label maker, purchased from a store in Beamsville that prints plastic labels for tree identification.

Farm Infrastructure, Buildings and Maintenance

The original farm buildings, with some modifications, have served most of Ernie and Linda's needs. That being said, they added a 10 x 60 foot greenhouse last winter that was purchased from a local company who designed and shipped the materials to the farm. Another local company was hired to install the concrete pad, and Armando and another staff member built the greenhouse.

There is one shared laneway with a neighbouring grape farmer, whose equipment is much larger and heavier than the equipment used at Grimo Nut Nursery. This means that the neighbour has taken responsibility to manage the laneway. The majority of other maintenance, including the irrigation system, is carried out by Linda, Ernie, Armando, and their farm staff. Ernie is the engineer and inventor behind many of the modifications on the farm, with Armando carrying out, building and implementing his plans.

Crop Transportation, Storage and Drying Services

All storage and drying takes place at the farm. Shipping and transportation services vary depending on prices. Canada Post and Freightcom are used to determine the fastest and cheapest shipping, and typical carriers include Canpar, UPS, FedEx and Purolator. The trees and nuts are shipped all over Canada and the United States, although there are some restrictions based on biosecurity measures. When trees are shipped, they are packaged so that they can survive up to three weeks.

Photo courtesy of Linda Grimo

Sales and Marketing

Grimo Nut Nursery has built a good reputation over the years and primarily rely on word-of-mouth for their advertising and marketing. Most of the advertising and graphics are made in-house, and Linda manages the social media accounts. Both Linda and Ernie are actively involved with a number of associations and societies including the Society of Ontario Nut Growers, the Northern Nut Growers Association, and the Ontario Hazelnut Association. These organizations provide the opportunity to advertise to growers and potential customers for the nursery.

Grimo Nut Nursery is one of the main suppliers of trees for the hazelnut industry and many sales happen remotely. They have worked very hard to develop hazelnuts that are suited for very cold climates. Ferrero Rocher has also increased the demand for small hazelnuts in Ontario, which they often purchase from farms who have trees supplied by Grimo Nut Nursery.

Farm gate sales are also very important. When the nuts are harvested in the fall, people drive from all over Southern Ontario to purchase fresh nuts. There are also big buyers that order for their businesses. For example, chef Ryan Crawford from Ruffino's Pasta Bar & Grill in Niagara-on-the-Lake buys nuts and pawpaw for desserts and ice cream. This is a particularly good arrangement for the farm as Ryan returns the pawpaw seeds to Linda and Ernie so they can plant them. Forbes Wild Foods, Mark's Mushrooms, and Jewels Under the Kilt are other big purchasers.

Additional Services

There are a number of other businesses that support Grimo Nut Nursery. A local law office helped Linda and Ernie incorporate their business and their accountant and farm business consultant in London, provides specialized farm tax support. The Ministry of Agriculture, Food and Rural Affairs' (OMAFRA) pest and disease specialists are another important resource.

Conclusion

The story of the Grimo Nut Nursery is interesting at many levels. In many ways, they created their own supply chains to cater to the needs of their novel industry. Linda and Ernie source inputs both locally and internationally, and often need to make tweaks or changes to equipment so it meets the needs of their business.

Outputs and marketing are equally interesting with their products sold all over Canada and the United States. The Grimo Nut Nursery demonstrates the opportunities connected to innovation and embracing new ideas, thereby contributing to local economic growth in the Greenbelt agricultural system.

As leaders and advocates for the nut industry in Ontario, Ernie and Linda are passionate about food security and educating people about what they can grow in their own backyards. Linda reflected that if her parents had not bought the land when they did, they would not have been able to afford it today. From their perspective, the price of land around Niagara-on-the-Lake is no longer affordable for farms like Grimo Nut Nursery. Today the farm is known for their expertise with tree nuts and other niche fruit trees and people often send them interesting varieties to try out on their farm.

Photo courtesy of Bill and Avia Eek

3

Eek Farms

Farm Profile

Bill Eek is the third generation farming in the Holland Marsh. His great uncle was one of the first settlers in Ansnorveldt, Ontario in 1934. After college, Bill helped his father on the farm while working two other jobs off-farm, a practice that he has kept up throughout his working career. Starting with ten acres of his own, Bill and his wife, Avia, now work 90 acres, 20 rented and 70 owned. They grow carrots and onions for sale, and also grow purple-top turnips and beets to provide organic matter and nutrients for future crops. Bill uses cover crops as part of his soil management program, occasionally using a multi-species mix to add necessary biodiversity in his organic based muck soil.

Photo courtesy of Bill and Avia Eek

Relationships with the Agri-Food Sector

Equipment, Tools and Machinery

Bill sources most of his equipment from outside of their region, travelling over 100 kilometres to purchase equipment. He purchases tractors and equipment from Minto Ag Ltd., located near Harriston, Ontario, and Maple Lane Farm Service located in Mount Forest. Parts are made all over the world, with manufacturing companies located in different countries. For example, the Deutz tractors Bill uses are manufactured in Germany and Italy. His carrot combine was built in the Holland Marsh, and Bill rebuilt it himself, and his onion combine came from Quebec.

> Bill has noticed that the number of suppliers in their area has been declining for years. There are now only two local repair men who are both close to seventy years old and will not be working for much longer.

Bill also points out huge increases in cost of new equipment and tires that are making business viability a struggle for growers. For example, in 1987 when Bill purchased the home farm from his parents, he paid $157,000, which was the cost for them to purchase a new home in Bradford. In 2018, Bill purchased two new Deutz-Fahr tractors for $157,000 and $162,000. The price paid for carrots and onions has not risen much in thirty years, yet all other costs have gone up substantially.

Fuel can still be purchased locally, and Bill relies on an independent dealer located seven kilometres from the farm. He has dealt with this business for his entire career, and it has been taken over by a son of the original owner. Bill is concerned that excessive red tape and regulatory challenges will limit the viability of this independent business in the future.

Photo courtesy of Bill and Avia Eek

Photo courtesy of Bill and Avia Eek

Crop Production

Bill and Avia source their crop production inputs from a variety of sources. They purchase fertilizer from Agrico in Orangeville, and other crop inputs are sourced locally from the Bradford Co-op. Wooden pallet boxes used to harvest the vegetables in bulk to go to the processor are built locally.

Seeds are purchased from a variety of companies: Stokes Seeds located in Thorold, Ontario, Norseco, located near Montreal, Quebec, and Clifton Seed Company located in New York State. The seeds are produced all over the world including Australia, New Zealand, China, Japan, Mexico, Africa, and the southern United States. Bill explains that varieties can be cross pollinated, so must be grown hundreds of miles apart.

Farm Labour

Bill manages the farm operations including planting, harvesting, drainage, machinery and crop protection, while Avia does the bookkeeping and administrative work. "She deals with getting the migrant workers here, which is a feat in itself," says Bill. "She completes the Labour Market Impact Assessment (LMIA) annually, and arranges for housing inspection of the bunkhouse, which is a house on one of the properties we purchased 18 years ago and renovated." Avia also helps in the field when labour shortages affect the operation. Bill's son works on the farm and their daughter helps with office administration when needed.

Bill and Avia usually hire three workers from Trinidad who stay with them from April to November. They are hired through the Seasonal Agricultural Worker Program (SWAP), which is run by Foreign Agricultural Resource Management Services (FARMS). They also hire three or four people to help remove weeds from May to August through a local employment company.

In 2020, COVID-19 restrictions delayed the arrival of seasonal workers from Trinidad, and the supply of local workers was not consistent enough to complete the vital spring work. They were forced to shut down their operation when workers, hired through a local agency, did not show up. Bill explained that without foreign workers, Canadian consumers would have a lot less food on the table and it would be a lot more expensive.

Photo courtesy of Bill and Avia Eek

Farm Infrastructure, Buildings and Maintenance

Farm structure and maintenance work is all sourced locally. Bill prefers to work with a local builder who lives outside of Bradford, approximately ten kilometres away, and has another carpenter who works on the smaller jobs. Bill does all his own property maintenance and water management. His cousin has a local gravel company and he sources irrigation equipment from Cookstown.

Crop Transportation, Storage and Drying

Bill and Avia's produce is sold both directly off the field to packing companies and is also put into storage until a price is agreed upon. Bill uses a tractor trailer to deliver their produce to the packers, which are located in Bradford or King Township, a 24-kilometre round trip. The packers buy their produce unwashed and with no processing. Once delivered, the onions are brushed, carrots are washed, and then they are graded, bagged and sold to large retail stores across Ontario, as well as other provinces within Canada and around the world.

Sales and Marketing

The produce sold from Bill and Avia's farm is priced daily, based on the amount of produce the packers need that day. The produce is destined for one of five local packers, down from ten or fifteen when Bill started in the business. They do not have a contract but accept the daily price. When produce from the US or Quebec comes into Ontario, the price paid to Ontario growers is lower. Even when transportation costs are factored in, US growers have a much lower cost of production than Ontario producers due to cost of labour, input costs, and the cost of regulations, which allows those growers to accept lower prices for their product. Commercial growers like Bill and Avia operate in a global marketplace, despite recent interest in buying and supporting local growers.

Additional Services

Bill and Avia are able to access most support services nearby. Professional services such as legal, accounting, insurance, banking and lending are all accessible in New Market or Bradford. Crop advisory services can be found right in the Holland Marsh from the University of Guelph at the Muck Crops Research Station and their input supplier from Orangeville has an agronomist who also provides crop advice.

Avia is a local municipal councillor and is on the board of the local Conservation Authority, as well as having been appointed to two other York Region Agricultural committees. Bill is chair of the Holland Marsh Joint Municipal Services Board, which deals with function and maintenance of the unique drainage system in the area. He also works for the township, so they are well-connected to local government services.

Conclusion

Eek Farms is part of a unique and valuable sector of Ontario agriculture located within the Greenbelt. The special conditions of the Holland Marsh are unequalled in Canada, but the pressure to replace agriculture with other uses in this area is intense.

Bill and Avia are concerned about urban development taking up more and more farmland, which is a finite resource. They also see negative effects of climate change on their business and feel that the growth in size and density of urban areas is contributing to that problem.

Bill Eek has witnessed vast changes since his ancestors immigrated and started growing produce in the Holland Marsh decades ago. Produce from Eek Farms provides food for Ontarians as well as for international consumers. The supply chain includes international and varied suppliers as well as businesses based throughout Ontario and Quebec.

Layers of regulations, consolidation within the grocery industry and international competition all present challenges for growers like Bill and Avia. "Basically four grocery chains, all owned by a small number of companies, make it hard for smaller farmers to compete," he explains. Imported produce from areas with less stringent regulations puts Canadian producers at a competitive disadvantage because of lower production costs in other countries.

4

Tomar Farms

Farm Profile

Mitch Morawetz grew up on his family's farm and was actively involved helping his parents with the business. In 2008, he started farming with a friend and they rented land using share crop arrangements with the landowners. They grew soybeans on rented land that first year. They continued working together, renting more land and farming more acres until Mitch was able to purchase his farm in the spring of 2011. The partnership eventually dissolved because lower commodity prices through 2015 to 2018 in Ontario and North America made it financially difficult to survive. He currently farms between 600 and 700 acres, comprised of both owned and rented land.

Mitch now owns and operates Tomar Farms in Orono, Ontario with his wife, Naomi. They grow corn, soybeans, wheat and hay, some of which they use to feed their sheep and some of which they sell. They also grow oats and white beans occasionally. They raise a small flock of sheep, which Mitch describes as being very much secondary to the principal cropping operations. His parents still farm and they occasionally help each other, but the two businesses are completely separate.

Recently, Mitch and Naomi have started growing sweet corn that is sold directly to customers. They hope to expand and improve this part of their operation in the future. Mitch is hoping to also add production of other vegetables and market them through his neighbours who already have established retail businesses. "This would provide us with an opportunity to grow our farm business beyond the amount of product we are capable of marketing ourselves," says Mitch. Their farm is in a good location for direct marketing as they are located on a busy regional road that sees a lot of daily traffic.

Relationships with the Agri-Food Sector

Equipment, Tools and Machinery

Most of the farm inputs come from adjacent regions. They are relatively close by, but not all are within the farm's municipal boundary. Equipment and machinery maintenance and repairs are all accessed locally as Mitch's farm is next door to the dealership that he uses. Fuel is delivered to the farm from a supplier within his municipality, approximately 20 kilometres from his location. There is a variety of small tool sales and rental options available locally, however, for certain things they have to go further afield to access. Some electronics and technology can be sourced within 10 kilometres, but more specialty software or hardware must be acquired outside the region and are mostly shipped.

Crop Production

Mitch produces corn, soybeans, wheat, white beans and oats. Crop and horticultural inputs, including seeds, fertilizers and pesticides are largely sourced locally. The majority of the seed that they use is sourced through dealers, located from three to 15 kilometres away. Fertilizer and pesticides are brought in from further away, approximately 35 to 40 kilometres from the farm, and Mitch applies these products himself.

Livestock Production

Mitch estimates that about half of the products that are most frequently required for raising animals are found locally, with some specialty products sourced over 100 kilometres away. Most of the livestock on the farm was raised there, but they occasionally purchase livestock from other farms approximately 50 to 100 kilometres away. All livestock feed and supplements are available locally, and all bedding used is grown on the farm.

Farm Labour

Mitch and Naomi provide most of the labour for their operation. Mitch operates the equipment required for growing and harvesting crops, while Naomi does the bookkeeping, and helps with the sweet corn and the sheep. They also occasionally hire seasonal labour, usually local students.

"Some summers we hire some students on a full-time contract basis for the summer," he says. They have had mixed results trying to find adequate labour and some summers they have been unable to hire anyone. While it is a challenge finding casual labour, finding skilled labour to operate highly technical farm equipment is very difficult. "I do the vast majority myself. For some of the lower skilled jobs, I've had an easier time. It is critical to have the right person. With the amount of product or acres you can cover in a short period of time, if someone makes a mistake, it usually ends up being costly by the time it is caught," says Mitch.

Mitch also provides some custom work for others and hires some services done that he does not have time to complete himself. The custom operators he hires travel up to 50 kilometres to reach his farm, while the custom work he provides would not exceed 10 kilometres from his main location.

Farm Infrastructure, Buildings and Maintenance

Contractors that are used for building and maintaining the farm structures are locally available, and most are based within a 50 to 60 kilometre radius of the farm. Fencing contractors are very close by, while contractors for land clearing and drainage are accessible within a 50 to 60 kilometre range.

Crop Transportation, Storage and Drying

Mitch delivers his grain to licensed grain elevators, none of which are located within his municipal boundary. The distances to the elevators from the fields range from 10 to 30 kilometres, but all are outside his municipal boundary. He does not know where the grains he produces end up after they are delivered to the elevator.

When it comes to crop transportation, storage and drying, Mitch has noticed an improvement in access to these services. "If anything, we have more access to those services than we did before," he says. He does not currently have capacity for on-farm storage, transporting some of his crop himself and hiring some done by local trucking companies.

Sales and Marketing

The marketing of their products has remained fairly consistent. He makes his selling decisions based on price, proximity of the elevator to the farm, hours of operation, as well as relationships he has built with the elevator operators over the years. Grain is graded and the price is based on both grade and quality. This can be somewhat subjective, and Mitch also uses this knowledge to make marketing decisions.

Sweet corn and lamb are generally marketed directly to their consumers. If they have surplus lamb, it is marketed through Ontario Stockyards Inc. in Cookstown. Mitch uses two local abattoirs that are located between 30 and 45 kilometres from the farm. Access to local abattoirs has dramatically declined over the past 10 to 20 years. "Historically, I would've had five or six abattoirs, while now I have two or three," he says.

Additional Services

Regarding other services that support the farm activity, Mitch says that most professional services including legal, accounting, banking, insurance and veterinary services are all available locally, within 10 to 20 kilometres of the farm. Mitch largely uses social media for marketing his produce, and uses Kijiji for selling equipment.

Succession planning is something that Mitch thinks about, but he plans to address this in the future, as his children are still young. His parents' farm is located close enough to his own that he plans to eventually take over farming their land as well.

Agricultural extension workers, animal nutrition advisory services and crop advisory services are somewhat limited in availability, and are mostly available through agricultural retailers now. "Independent crop advisors are definitely more scarce," he says. He accesses government services such as municipal services and Conservation Authorities, both of which are fairly nearby. His municipal office is less than 10 kilometres from the farm. He deals with two Conservation Authorities as his land is located within two separate watersheds. Both have offices within 25 kilometres in opposing directions.

Conclusion

Mitch's story is one of integration, flexibility, investment and growth. In a dozen years he and Naomi have established and invested in a farm that has grown and now caters to global and local markets. While the price of commodities (corn, wheat and beans) is largely determined by international markets, the Morawetz's also produce sweet corn and lamb that is sold locally.

> This willingness to be flexible and adapt production to market opportunities is a hallmark of many farms. It speaks to the broad network of suppliers required to support innovation on the farm.

Just as Mitch has adapted his production to different opportunities, farmers across the Greenbelt are doing the same. The evolution of a farm depends on a diversity of services from equipment dealers to repair services to marketing experts and accountants. Some of these services are available locally while others are regional or provincial in scope. For example, the combine that a farmer may purchase and service locally may be financed through provincial and national institutions and is likely manufactured out of the country. Collectively all of these interactions and businesses contribute to a web of required activities that support agriculture and in many ways define the agricultural system and related supply chains.

Photo courtesy of Kauzlaric Family Farms

5

Kauzlaric Family Farms

Farm Profile

Michael Kauzlaric's parents immigrated to Niagara, Ontario from Europe in the 1970s. From the beginning the Kauzlaric family grew a mix of crops, including peaches, pears, plums, apricots, cherries and wine grapes. Beyond fruit trees, the family also grew field vegetables in the mid 1980s and 90s. Today, the 25-acre farm grows tree fruits and wine grapes and is run by Michael, his parents and brother.

Beyond selling fruit to wholesale, the Kauzlaric's operate a farm-gate market. Mike's wife, Lisa, also started a small-batch jam company five years ago called 2x4 Jam Co. The jam business is a way to use fruits that are too ripe to sell and is a way to add value to the products they grow on the farm.

Photo courtesy of Kauzlaric Family Farms

Relationships with the Agri-Food Sector

Equipment, Tools and Machinery

The Kauzlaric family generally deals with equipment suppliers directly for purchasing and repair. Premier Equipment Ltd. (a John Deere dealership) in Smithville and Lakeview Vineyard Equipment in Niagara-on-the-Lake are two local equipment suppliers that the family purchases from. For fuel, the farm uses McDougall Energy which has an office outside of St. Catherines. Canadian Tire, Best Buy, and Staples are the go-to businesses for small tools and electronics.

Crop Production

Most crop inputs for the farm are sourced locally in Southern Ontario. They purchase fruit trees from Upper Canada Growers in Niagara-on-the-Lake, Grindstone Creek Nursery Inc. based out of Hamilton, and Canadian Fruit Tree Nursery Co-operative in Lincoln. Honeybees and hives are provided by Charlie-Bee Honey/Parker-Bee Apiaries based out of Beamsville.

The farm purchases fertilizers, soil amendments and pesticides from Niagara Orchard & Vineyard Corp and Vineland Growers Co-operative. These are the only two suppliers for fertilizers and pesticides for fruit trees located in the Niagara Region.

Photo courtesy of Kauzlaric Family Farms

Photo courtesy of Kauzlaric Family Farms

Farm Labour

In addition to Michael, his mother, father and brother, the farm supports two migrant and two local seasonal workers each year. In Niagara, the general rule is that you need one worker for every 10 acres of fruit trees and two or three workers for every 10 acres of vineyard.

Farm Infrastructure, Buildings and Maintenance

Aside from a few minor renovations, the farm buildings have not changed much since the Kauzlaric family purchased the farm in the 1970s. About 15 years ago, the family replaced their asphalt roof with steel, which was purchased from Hy-Grade Roofing based in Guelph. They also extended one of their barns a few years ago for additional storage space, and used local supplies and labour for this project.

For irrigation, a local contractor was hired to install the underground pipe system that irrigates the rows of trees and grapevines. The Kauzlaric Farm faces a unique situation where the only viable source of water to hook up to the irrigation system is the municipal fire hydrant. This means that irrigation on the farm, just like water that comes from any municipally serviced tap, is pay-per-use.

In terms of property maintenance, the family purchases a few dump trucks of gravel from Walker Aggregates every few years for their laneways. All other property maintenance including lawn cutting and landscaping is done by the family.

Sales and Marketing

As with all tender fruit farmers in Niagara, the Kauzlaric Family primarily wholesales their fruit to Vineland Growers' Co-operative. This means that from the Kauzlaric Farm, the fruit is delivered to a central cold-storage packing house provided by Vineland Growers' Co-operative who takes care of the rest. The Vineland Growers' Co-operative acts as an agent to sell the product to major retailers such as Costco, Loblaws, Longos, Sobeys, Metro, No Frills and FreshCo. The co-operative is also responsible for packaging and shipping the product, most of which stays within Canada. As far as the Kauzlaric family knows, the majority of their fruit is sold fresh to consumers. That being said, Michael thought that Ravine Vineyard Estate Winery in St. Davids purchased a small quantity of their fruit to produce peach and pear cider.

The Kauzlaric's also sell their produce at their self-serve, farm-gate market. This avenue for sales is relatively new for the family, as a subdivision has emerged near the farm. Increased traffic through the area has allowed the family to take advantage of farm-gate sales but has also meant encroachment and trespassing on their land. For the farm-gate market most of the packaging is reused and customers are provided compostable bags for their purchases. The farm also has a small amount of cold-storage which is used to keep the farm-gate products fresh.

Photo courtesy of Kauzlaric Family Farms

Additional Services

The Kauzlaric Family Farm is well connected to the Niagara Region for a number of other supporting services. The farm lawyer and succession planning consultant are located in St. Catherines, and their accountant, bank and insurance provider are in Niagara-on-the-Lake. The farm also works with the Vineland Research and Innovation Center located in Lincoln, and procures crop advisory services from Ryan Brewster Consulting based out of St. Catherines and Ken Slingerland Consulting from Niagara-on-the-Lake. For marketing and advertising, the family relies on Niagara Farmers' Monthly and social media platforms such as Facebook. The family also uses a home daycare in Niagara-on-the-Lake.

Conclusion

The Kauzlaric's represent an important agricultural sector within the Greenbelt. They are involved in both primary production and value-added diversification. When people think of agricultural production in Niagara Region they often think of grapes, tree fruit and farm gate markets.

Over the years, the Kauzlaric's have seen changes to their supply chains including a decrease in suppliers. For example, today there are only two production input suppliers for fertilizers and pesticides for fruit trees in Niagara. Michael reflects that based on his experience growing up in the area and running the farm for the past 20 years, that the tender fruit industry has really shrunk, and the wine-grape industry has dominated. He sees the tender fruit industry in Ontario becoming a very niche market. Specifically in the Niagara area, where tender fruit can be grown, land prices make it difficult for young farmers to afford the land base required to support fruit production. Today, Michael suggests that there is no return on investment for farmers in Niagara and this is preventing the next generation of farmers from coming to the area. He encourages government and organizations such as the Greenbelt Foundation to be involved in addressing this and providing incentives and support for young people interested in farming.

Despite concerns for the future, it is evident that tender fruit and wine grapes are still an important component of the agricultural industry within the Greenbelt. There is an extensive supply chain to support this sector–providing equipment, marketing and processing facilities–with associated employment and economic benefits to the region. These benefits reiterate the importance of supporting and encouraging the growth and prosperity of this sector.

Photo courtesy of Jay Akras

6

Ovino Farm

Farm Profile

Ovino farm was started by the Akras family back in 2014. The Akras' first purchased a farm outside of Milton, Ontario to begin a renewable energy project as part of an incentive program by the province. After the solar energy project was complete, they began thinking about how they could use the land and considered a range of farm commodities. The family decided sheep farming was the most viable option. Sheep farming was also in the family's history.

In 2018, Ovino farm relocated to Acton, Ontario and built a 60,000 square foot sheep barn, and in 2021 the farm launched under their own brand, "Ovino". The new farm has approximately 70,000 square feet of indoor space and the entire farm is 165 acres. Jay and his family also grow feed for the sheep on their property and process some of the milk in-house. In addition to selling bottled sheep milk, the farm produces a range of products, including yogurt, feta, halloumi, kefir and ghee.

Since the Ovino brand launch in June 2021, the farm has had over 13,000 people visit the farm and has received media coverage from CTV, CBC, the Toronto Star and BlogTO. The primary reason for allowing people to visit the farm is to give them the experience of being on a sheep farm, to see the facilities and to try sheep milk products. Jay explained that sheep's milk tastes very similar to cow milk, perhaps a little bit sweeter. Not only are people surprised by how good it tastes, but it is very healthy with more protein, minerals and vitamins when compared to cow's milk. Sheep milk is also an A2 milk and is lactose friendly.

Photo courtesy of Jay Arkas

Photo courtesy of Jay Arkas

Relationships with the Agri-Food Sector

Equipment, Tools and Machinery

The equipment on Ovino farm is state-of-the-art. For example, the milking parlour has the capacity to milk 1000 sheep an hour. Most of the equipment at Ovino farm comes from local dealers in Ontario, including the tractor, the parlour and the feeding equipment. These dealers also offer repair and maintenance services.

That being said, the Akras family has the know-how to do many repairs themselves. For smaller tools, the Akras family purchases from local hardware stores. For example, there is a nearby hardware store in Milton. Similarly, technology used on the farm, such as phones and computers, are purchased from local suppliers.

While the equipment and small tools are purchased locally, they are often manufactured internationally. For example, the milking parlour is manufactured by SAC and they have locations in Denmark and the Netherlands. Similarly, the feeding and bedding equipment is manufactured by a company in Norway. Pioneer Dairy is the local dealer for both SAC and the TKS bedding system.

All fuel and energy on the farm is purchased locally. The tractors use diesel, the smaller equipment often uses gas, and the buildings are heated using natural gas. The Akras family has future plans to install solar panels at their new location with the goal of being net zero for electrical consumption.

Crop Production

The family grows alfalfa and grass hay on the farm and the seed for this is purchased in Ontario. The farm does not use pesticide and aims to minimize the number of inputs they rely on. The alfalfa and grass hay are used to feed the sheep, and then manure from the sheep is used to fertilize the fields. Jay reflects how circular this aspect of their farm operation is: the field grows alfalfa and hay to feed the sheep, the sheep eat the feed and produce manure, and the manure is put back on the field to fertilize the crops.

Livestock Production

The sheep on the Akras farm were purchased from dairy sheep farms in Ontario. When purchasing their animals, consideration was given to the health of the flock, the genetics in terms of milk production and the health of the lambs. Ovino continues to purchase sheep from other farms in Ontario, in addition to raising their own flock. The farm has approximately 700 sheep but can accommodate up to 1,700 which they will grow into over time.

The farm has two veterinarians, one for the basic health of the sheep and the other specializes in genetics and helped to introduce sheep genetics from France to the flock. In addition, the Akras family consults with an animal nutritionist based out of Guelph, who recommends different feed recipes for the sheep. For grain and feed supplements, Ovino purchases from local feed suppliers such as W-S Feed & Supplies and Nieuwland Feed & Supply. They also purchase straw for bedding from local suppliers, along with additional feed when needed.

Photo courtesy of Jay Arkas

Farm Labour

In addition to the family, the farm typically relies on one hired staff per day. As the farm continues to grow, the number of staff is expected to increase. AgCareers and the University of Guelph's Ridgetown Campus Career Fair have been important resources to find new hires for the farm. For some field work Ovino hires custom operators.

Processing

Ovino products are processed in-house, including milk, yogurt and feta cheese, among others. The farm also has on-site refrigeration to store products before they are shipped. Packaging and labels for Ovino products are purchased from Ontario suppliers.

Today, Ovino products are sold at several independent grocery stores, but the family has plans to expand to major grocery chains over the coming years. Products can also be purchased during farm tours which are offered seasonally. Unprocessed sheep milk is also purchased by other processors who use it for their own products.

Farm Infrastructure, Buildings and Maintenance

The main barn is metal and was constructed in 2018. Several local contractors were involved in the construction and the materials were all sourced from Ontario suppliers. Property maintenance is generally carried out by the family and includes activities such as fence repairs and grading the laneway with locally sourced gravel.

Photo courtesy of Jay Arkas

Additional Services

The majority of supporting services such as legal services, insurance, accounting, banking and bookkeeping are all located within an hours drive of the farm. Companies used for shipping and trucking associated with inputs and outputs are selected based on availability and price, and local companies are used if possible.

Conclusion

Ovino is a relatively new farm and Jay is hopeful that the farm will stay in the family. COVID-19 has presented a unique set of challenges but the launch of the Ovino brand in early 2021 was a great success. Having people visit the facilities, learn about sheep farming, and try the products has been an important part of the economic viability of their farm.

> The Ovino farm demonstrates how quickly a new farm business can establish, be immersed in the local agricultural sector, and make important economic contributions. With thousands of visitors, products in local and regional grocery stores, and plans for expansion, there are important growth opportunities associated with this specialized farm.

In only a few years they relocated to Acton, established supply chains working with suppliers to build new facilities, and established processing facilities and marketing arrangements with area retailers. The farm is connected to a variety of local and regional businesses including veterinary services, nutritionists, contractors, feed suppliers, equipment dealers and custom operators. As the farm continues to grow so will their connections with the agri-food system in Ontario.

Photo courtesy of Ben Loewith

7

Joe Loewith and Sons Ltd.

Farm Profile

Ben Loewith's grandparents came to Canada from Czechoslovakia as refugees in 1938. In 1947 they bought the family farm, located outside of Hamilton, Ontario. For the majority of the last 75 years, the farm has been exclusively a dairy farm. Today, the farm has 1,000 animals, including 480 cows that are milked three times a day, young stock, dry cows (cows that are in between lactation) and other non-milking cows. Joe Loewith and Sons is one of the largest dairy farms in Ontario and is well known for outstanding farm management. The farm averages 47 kilograms of milk per cow per day, compared to the provincial average of 30.

Photo courtesy of Ben Loewith

Ben's father retired from the farm a couple of years ago and today the farm is run by Ben and his uncle. Ben's father and uncle completed their Bachelor of Science in Agriculture from the University of Guelph. Ben attended the University of Waterloo for a general arts degree. Farm staff come from a wide variety of backgrounds.

The farm also crops 850 acres of alfalfa and corn. The farm is split over many properties, approximately 650 acres are owned and 200 acres are rented. All of the properties are within two kilometres of the home farm and are within the city limits of Hamilton. This has presented a number of regulatory challenges, particularly since the family is looking to construct an in-house processing facility. Ben reflected that the number of regulatory hurdles and fees associated with the application is so extreme that the only reason you would undertake something of this nature is if you didn't fully appreciate what was involved.

Relationships with the Agri-Food Sector

Equipment, Tools and Machinery

Most of the equipment the farm owns is purchased second-hand. For example, there is a local dealership within five kilometres that sources and sells second-hand tractors. Some select pieces of machinery are purchased new, such as the mixer wagon and the equipment for bedding and putting sand in the stalls. For repairs and maintenance, the farm primarily relies on the dealership that sold the equipment or a local mechanic.

Ben explains that much of the work on the farm, including planting and harvesting, is completed by custom operators. This means that the farm does not own the equipment needed for these activities as the tradespeople bring their own equipment and tools.

Photo courtesy of Ben Loewith

Photo courtesy of Ben Loewith

The Loewith farm supports a number of research projects associated with the University of Guelph and as a result uses a fair bit of technology. The partnership between Joe Loewith and Sons and the University of Guelph goes back decades. Today, all of the cows at the farm have pedometers on their legs that count their steps. The pedometers also detect heat and are used to identify when the cows enter the milking parlour. This allows the farm to track changes in behaviour, from the number of steps the cow takes to how much milk they are producing. The pedometers are produced by a company called Afimilk, based out of Israel. The farm also uses neck collars produced by an Israeli company, SCR. The neck collars have a similar function to the pedometers, measuring steps through neck movement, but they also record and graph the amount of time the cows spend chewing their cud, also known as ruminating. Rumination is a good indicator of animal health, particularly around calving when cows are most vulnerable.

The milking parlour at the farm is a Double 16, which means 32 cows can be milked at a time. The farm is also in the process of trialing a technology in the milking parlour that shines a laser through the milk to measure the dispersion pattern of the milk, used to track fat and protein content.

> The Loewith's also applied for a government grant to install solar panels. If they are successful, the grant would pay for half of their proposed million-dollar solar energy project.

The family has also considered biogas for fuel, but current technologies have difficulty processing the sand-manure mixture produced on dairy farms.

Crop Production

The farm grows an even split of alfalfa and corn, which are both used to produce silage. These two crops are grown in rotation and on occasion, the farm grows other crops such as sorghum or rye. For seed and other crop related inputs, the farm purchases from large input suppliers such as Pioneer and Bayer. The Loewith's rely on these companies to advise on what inputs, including fertilizers, pesticides and herbicides are needed. As mentioned, the majority of the field work at the farm is completed by custom operators, including planting, manure spreading, fertilizing, tillage, harvesting and pesticide use.

Livestock Production

Joe Loewith and Sons have not purchased cattle in over 60 years as the farm creates their own replacements. However, genetic resources are purchased through a variety of Canadian and American companies such as Semex and CRI International. Genetics are very important for dairy farms and several staff members are trained in breeding. Ben explained that they take a genetic sample of every cow so they can make the best breeding choices.

The farm also works with a nutritionist from Parion Animal Nutrition to purchase mineral supplements. The nutritionist monitors the weight of the cows, how much fat they are carrying, as well as components of the milk. They also look at the nutritional quality of the feed for the cows, which includes crops grown on the farm as well as locally purchased cornmeal and straw. The nutritionist uses this information to formulate a supplement mix. The nutritionist also works very closely with the vet to monitor metabolic diseases, fertility and other general health concerns. The vet visits the farm nearly every week. The farm tracks the health of all of their animals, including any issues they've experienced over the years.

For livestock bedding, the Loewith's use sand. Sand is inorganic and as a result minimizes bacteria growth. Ben estimates that the farm is spending $80,000 a year on sand that is sourced from Tri City Materials in Kitchener. The sand becomes mixed with manure and is eventually spread onto the fields. The farm also uses wood shavings for bedding young cows and chopped straw for dry cows who are going to calve within the next month. The wood shavings come from a carpentry shop in Dundas and the straw is purchased from a neighbouring farm.

Farm Labour

In addition to Ben and his uncle, the farm also supports five full-time and roughly 20 part-time employees. Employees range from students to retirees and dairy industry experts. The farm also has one foreign worker who exclusively milks cows for 45 hours a week. This employee is the Loewith's first experience with the temporary foreign worker program.

In terms of the recruitment process, word-of-mouth has been a very successful way to find new employees, particularly part-time employees. For full-time positions, Ben typically needs at least one year to find someone who is a good fit.

Photo courtesy of Ben Loewith

It is not uncommon for Ben to receive international applications, but the cost of living and visa processes are significant barriers that prevent candidates from moving forward with their application. To offer competitive employment and improve quality of life for employees, salaries have increased considerably over the last two years.

Processing

All milk produced on the farm is sold directly to the marketing board. Dairy farmers have no control over which processing plant their milk goes to, and it may go to different processing plants on different days. Some of the biggest processors in Ontario and Quebec are Agropur, Gay Lea Foods, Lactalis and Saputo. There are several companies that are involved in the transportation of milk. However, the marketing board controls the logistics and regulations that these companies must follow.

In Ontario, dairy farms can only produce as much as they have quota for. Quota can also increase or decrease depending on market demand. It is very important that farms only produce what they have quota for. Not only will they not be paid for additional milk, but the marketing board fines farmers who ship milk in excess of their quota.

Farm Infrastructure, Buildings and Maintenance

The Loewith's have a trusted group of contractors that they use for new buildings, repairs and maintenance. For example, the family has retained POST Structures for their last few projects. A lot of property maintenance, such as grass cutting or grading of the laneway, is done in-house. For major projects or more complicated work, such as electrical or plumbing, a tradesman is hired. The same goes for equipment and technology repair.

Water on the property is relatively limited. Dairy farms are water intensive, and the Loewith farm uses between 80 and 100 thousand litres of water a day. Recently the farm drilled a well to increase access to water, using local labour.

Conclusion

Joe Loewith and Sons is one of the top dairy farms in Ontario, both in terms of production but also farm practices. The dairy industry has advanced significantly over the years, and the Loewith's have been at the front of these advancements. Joe Loewith and Sons has many connections to the agri-food system here in Ontario and are also involved in testing new technologies. The farm today is run by Ben and his uncle who are unsure if the farm will stay in the family. There are a number of challenges associated with the farm, some related to the quota system, others related to owning and operating a farm in close proximity to urban centres.

While the Loewith dairy farm is tightly woven into the local economy with suppliers ranging from veterinarians to trucking and processing, it is worth noting the specialized technology that they use to monitor herd health and production. While using technology from Israel, they are strongly connected to researchers at the University of Guelph for example. This focus on technology is important because it demonstrates the evolving nature of technology that is used on so many farms ranging from herd health to GPS monitoring of crop yields and crop inputs. This continued evolution of the supply chain speaks to the high-end technical opportunities associated with agricultural production within the Greenbelt.

Photo: Shutterstock

Observations

The provincial government recognized agriculture as an important part of the landscape and essential component of the economy when it created the 2005 Greenbelt Plan that affirmed agriculture as the predominant land use. In addition to requiring municipalities to protect farmland through their Official Plans, the Plan directs municipalities to work to support the agri-food network (i.e., infrastructure, agricultural inputs and services, and other assets) by creating the conditions under which the agri-food sector can succeed and grow. The Implementation Procedures for the Agricultural System in the Greater Golden Horseshoe (2019) emphasize the importance of integrating land use planning with economic development, and encourages municipalities to collaborate with the agri-food sector to develop strategies to support the complex web of economic relationships that sustain farming.

There continues to be a lack of understanding of farming's critical importance to the larger agri-food sector. Moreover, the economic contribution of agriculture and the agri-food sector to Ontario's economy tends to be underestimated and played down. As a result, impacts on agriculture can be disregarded or overlooked by governments when making policy and planning decisions.

The economic contribution of agriculture to the province has been well documented by the Ontario Federation of Agriculture ("Economic Contribution of the Ontario Farm Sector," 2013) as well as by the Greenbelt Foundation ("Dollars and Sense," 2014 and "Economic Impact Assessment," 2020) at the Ontario, southern Ontario, and Greenbelt levels.

The purpose of this project is to further substantiate the significant contribution of the agriculture sector in the Greenbelt and GGH by describing the supply chain for seven farms.

The case studies, together with a separate project involving economic analysis using a variety of data sources (Greenbelt Foundation, Understanding How Greenbelt Agriculture Feeds the Regional Economy, 2021), help to 'tell the story' of the complexity of the agricultural and agri-food sector in the Greenbelt and GGH, its relationships with other sectors, and the value of agriculture and agri-food businesses to the region's economy more broadly.

This project is based on interviews with seven farmers across the Greenbelt aimed at understanding their supply chains. Farmers were asked to describe where they purchase their seeds and other inputs, where their crops are processed, and where they sell their crops. This provides insight into the vast web of connections that support agricultural production. In turn this helps to identify the diversity of actors and economic impact of agriculture across the Greenbelt and GGH.

These case studies also provide insight that is not always apparent through a more statistical overview of the agricultural sector. The life histories and stories provided by individual farmers tend to span many years and sometimes generations of family involvement with agriculture immersed in a local community. These stories shed light on successes, challenges and opportunities associated with farming within the Greenbelt. They allow us to see farmers not as statistics, but rather as individuals attempting to make a living while producing food, managing the environment and contributing to their community. They help us to understand the complexity of the agricultural system and the interconnections with the rest of society. The following summarizes some of the key observations that flow from the case studies.

Economic Benefits of the Agricultural Economy

- **Farms as an Economic Hub:** As noted in the case studies, farms require a wide range of goods and services to support the diversity of agricultural activities that exist throughout the Greenbelt. In this respect the farms that comprise the case studies are each economic engines that in turn support a multitude of small businesses and service providers. This observation, while drawn from the seven case studies is equally valid for the thousands of other farms scattered across the Greenbelt. Collectively all of these farms are major drivers of Ontario's economy–employing thousands of Ontarians in retail, processing and various services which directly and indirectly support agriculture.
- **Innovation:** Each farm is an innovation hub. Equipment is invented, modified and designed to accommodate the needs of the individual farm. Production practices are modified to suit growing conditions and livestock management is adjusted to achieve sustainable production merged with optimal animal welfare. This is evident through the case studies and is repeated by other farmers throughout the Greenbelt. Some farms pursue new and sometimes unique farming systems and face particular challenges that they overcome through innovative thinking and application of innovative processes.
- **Relationship to Consumers:** Each of the case studies is connected to consumers in one way or another. Some farmers sell direct to consumer through on-farm and online sales or farmers markets, for example, while others sell wholesale through regulatory bodies, distributors and commercial elevators. As a farmer, even if you produce milk and may not specifically know where the milk ends up, there is a highly regulated system that ensures a quality product is delivered to the consumer. Likewise, corn, beans and wheat, for example, are graded for quality before they are turned into various food products ranging from flour to animal feed. In many instances there are also very direct relationships between farmers and consumers. Some of the case studies have direct on-farm sales ranging from eggs to sheep milk and related products, and others have end of lane produce outlets with multiple interactions between the farmer and local residents.

The Agricultural System

- **The Agricultural System:** The case studies presented within this report collectively bring life to the concept of the agricultural system. The agricultural system is defined within Ontario's Provincial Policy Statement and consists of "inter-connected elements that collectively create a viable, thriving agricultural sector." It includes both the land base and an agri-food network "which includes infrastructure, services, and assets important to the viability of the agri-food sector." These inputs, outputs, services and production systems are more than words on paper; they are interconnected and woven together as part of a system. It is a symbiotic relationship between multiple actors dependent on each other driven by the many farms that span the Greenbelt. This reinforces the need for agricultural systems planning to protect and support the economic dynamism of the agricultural economy.
- **The Importance of Land:** A concern expressed by several farmers was the availability of productive affordable land. Farmland is essential for agriculture and the substantive economic activity that it generates. The viability of individual farms is also connected to the land base and competition with other land uses can lead to inflated land prices thereby reducing farm viability and opportunities for young farmers. While some farmers are able to add to their land base through the rental of land from their non-farm neighbours, there are other instances where productive farmland has simply been lost to non-farm uses. Farmland preservation and supportive provincial and municipal policies are logical directions required to ensure the continuance of a vibrant agricultural sector.
- **Every Farm is Different:** In the case studies it is evident that farms differ based on commodity, scale and approaches to management. Even farms within the same commodity group vary significantly in terms of production practices, the land base they occupy, the relationship to the environment, their engagement with suppliers and so on. Some farms are small supporting a single family and other farms may have numerous employees supporting multiple families. Some farms have diversified with direct connections to consumers (i.e., farm gate sales) while other farms sell grains or oilseeds directly to elevators with products entering the food chain as bulk commodities.
- **Supply Chains and Distribution of Farm Business Activity:** Each of the case study farms work with a wide range of suppliers and businesses that are scattered locally, regionally, provincially and in some instances nationally and internationally. This tends to be typical for farms throughout the province. Some services are more generalized (such as finance and hardware) and tend to be available locally whereas other services are more specialized and regional in nature (such as farm equipment or a veterinarian with a specific specialty) and yet other services or goods might be quite unique and require imports from the U.S. or Europe (such as specialized poultry housing or high-tech equipment).
- **Supply Chains and Diversity of Services in Support of Agriculture:** The completed case studies clearly demonstrate the diverse needs of agriculture. Some farms require equipment in support of moving nut trees and other farms require equipment to house laying hens. These diverse equipment needs are complemented by diverse service needs ranging from crop advising in the Holland Marsh to nutrient management associated with livestock production. Likewise, staffing needs range from seasonal harvesting in Niagara to complex computer systems in support of dairy operations. Hundreds of services exist because of agricultural activity.