



# SAYFC AGRI & RURAL AFFAIRS

**STUDY TOUR 2023: CANADA**

**6<sup>th</sup> - 21<sup>st</sup> July 2023**



# INTRODUCTION

Following on from previous successful tours in various parts of the world, Canada was the chosen country for the 2023 National Agri and Rural Affairs study tour.

A country of vast diversity and scale of agriculture spanning 10 provinces from large scale production in the west to the smaller scale production in the east. Primary agriculture accounts for 7% of Canada's GDP, providing jobs for 2.3million of its population. Primary agriculture, which is work carried out on farm, nursery or greenhouse is an economic driver highly diversified across the country. 189,874 farms cover 62.2 million hectares or 6.2% of Canada's land area which is concentrated across the Prairies, Quebec and Southern Ontario. With this in mind it was decided that the tour would visit two provinces, the first Alberta, known for its beef, canola and wheat production and the second, Ontario where Dairy, Soya and Vegetables are the top three commodities. As usual with this type of study tour, many other farms and businesses would be visited during the trip to allow the group to see as much variation as possible.

Also, as with every tour, a theme is chosen to give the group a focus while travelling and in preparation for the study tour the group felt that one of the most important and topical discussions in agriculture currently is sustainability, both in individual farm business and the sector as a whole. With the many changes and challenges facing the industry each business needs to work towards a sustainable future and the group felt that this would be a thought provoking discussion to have with the businesses visited during the tour.

The theme for our trip was set as "Sustainability, what does this mean to you?"

## Group Selection Process

Once the location was announced applications were opened to all current members of SAYFC. Applicants were asked to complete an application form detailing why they wanted to go on the trip, what they hoped to learn, why they would be a suitable candidate and finally how they planned to share what they had seen with the wider industry. We were delighted to receive over 50 applications, the majority of which were of a very high standard.

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Iain Wilson and Andrew McGregor (both previous Agri & Rural Affairs Chairs) reviewed the anonymous applications and selected candidates who were invited to attend a face to face interview with an independent panel of Claire Taylor, Colin Ferguson, Sandy Wilkie and John McCulloch (current Agri & Rural Affairs Chair).

The panel were impressed with the quality of all the individuals who made it to the interview process and after a lengthy discussion, selected 17 delegates who would be part of this trip of a lifetime tour to Canada.

## **The Tour**

We set off from Glasgow airport on the morning of Thursday 6<sup>th</sup> July, flying to Calgary via Toronto. Unfortunately there were some travel delays in Toronto which resulted in a late arrival to the hotel.

After a night to catch up on sleep we headed for the first day of the trip looking forward to the next two weeks of visits and tours.

Over the course of the 15 day tour, we spent a week touring Alberta, travelling from Calgary to Edmonton before taking a flight east to Ontario where we travelled from Ottawa to Toronto (see maps on page 37).

This report details the visits and tours experienced throughout the trip. Each delegate came home with different highlights and we look forward to sharing these with you in this report.

Finally, I would like to take the opportunity on behalf of the whole group to thank each and every one of the sponsors, a full list of acknowledgments can be found at the end of this report, without their support tours like this would not be possible and to SAYFC for arranging the tour for the group. I hope you enjoy reading our report on what has been a trip of a lifetime for us all.

Scott Dey, Agri & Rural Affairs Vice Chair 2023-24



## THE GROUP

All members of the group are involved in agriculture, some directly farming, whilst others are in careers supporting those at grass root level such as consultants, sales merchants and a vet.

All are members of the Scottish Association of Young Farmers, and represent a wide geographical spread of Scotland from as far afield as Caithness in the North to Dumfries in the West and Border Federation in the East.

The group were accompanied by Janelle Anderson, SAYFC staff member who organised the tour and visits during our time in Canada.

Name		Club
Erin	Boyle	New Cumnock
Scott	Brown	Crossroads
Lynne	Carrick	Kilmaurs
Scott	Dey	Inverurie (Agri & Rural Affairs Chair)
John	Forbes	Bower
Abby	Forsyth	Stewartry
Lewis	Gallier	Udny
Calum	Greer	Kinross
Katrina	Kennedy	Aberfeldy
Alan	Lindsay	Bathgate / Carluke
Jane	Lindsay	Bathgate / Carluke
David	Mitchell	Biggar
Lauren	Nelson	Lower Nithsdale
Eve	Newlands	Lower Speyside
Alistair	Smith	Crossroads
Christina	Smith	Edinburgh/ Campbeltown
Lauren	Todd	Reston

Throughout the trip the group posted a daily blog on the SAYFC website to share their experiences. These posts were also shared via the Association's social media pages which currently have over 20,000 followers collectively.



## Day 1: Setting the Scene

Friday 7th July - Written by Scott Dey, Inverurie

An overcast morning burnt off into a sunny afternoon to kick start the Agri Affairs Study Tour in Alberta, Canada. We began with a fantastic tour of the OH Ranch which is owned by the world famous Calgary Stampede. The Ranch is managed by husband and wife team Ken and Deb Pigeon and was donated to the Stampede by a neighbouring ranch in 2012 to mark their 100th anniversary. OH is an 8000 acre unit with 300 head suckler herd with calves being sold store to feed lots at 6 months old through an online sale. The ranch is part of a conservation scheme which results in everything being grazed with all fodder bought in to feed cattle throughout winter.



The ranch is in a verified beef production plus scheme which is part of a levy board carrying out work similar to what Quality Meat Scotland do for the industry at home. The ranch runs educational days for



school children educating them on where their food comes from and how it is produced. When asked about what sustainability meant to them, both Ken and Deb said that getting the next generation into farming has a big part to play in the future of agriculture. They also highlighted that due to the high cost of land if someone was to buy land and cows they wouldn't have any money left to run a business. This is very similar to us in Scotland and shows the same problem is happening worldwide.

Our second tour of the day was to The Black Diamond Elk Ranch owned by Steve Koeckhoven. Elk are very similar to red deer but much larger in size. Their main purpose on the ranch is for their antlers which are very popular and lucrative with most being used for art work or furniture. An antler that was on display was priced at £10,000. Their antlers regrow after being cut off and can grow as fast as 2 inches a day with the only thing that can grow quicker being mushrooms. The ranch is 300 acres with 300 head of female cows and Steve showed us round his handling facilities comprising of races and hydraulic squeeze crushes. The selection process for future breeding is all down to the genetics and the appearance of the





antlers as they need to follow a symmetrical pattern. Any elk meat that do go into the food chain has a value but Steve is not producing for this market.

Our finally stop of the day was to tour Eau Claire Distillery. This is a unique small batch distillery where they are committed to using traditional processes and have won awards throughout the province and countrywide using German custom built stills. There is a Scottish connection with two of their members of staff having trained in Scotland before taking their skills across to Canada. The companies tag line is “farm to glass” because they have the process operating through from start to the finished product. We rounded off the visit with a tasting session and lunch.



## Day 2 & 3: Calgary Stampede

Saturday / Sunday 8<sup>th</sup> & 9<sup>th</sup> July - Written by  
John Forbes, Bower & Alistair Smith, Crossroads



On Saturday morning we arrived in Calgary for the much anticipated Calgary Stampede. We were grateful to the Stampede who provided accreditation passes which allowed access to the park before opening time to receive a behind the scenes tour of the chuckwagon racing stables and stadium from Honorary Director, Teri McKinnon. We learned about the family business of chuckwagon racing from previous world champion driver, Layne MacGillivray where we heard an in depth insight into the unique sport. The Stampede were celebrating 100 years of holding the chuck races which added more excitement to the event this year.

We were given access to the international lounge where we met a whole collection of people on similar travels and with similar interests to ourselves. We received an inspiring and thought provoking talk from Kim McConnell, a leading voice for the Canadian agricultural industry. He told us about his interpretation of the phrase 'sustainability' and concisely conveyed his views regarding the future of the industry. He felt it paramount that any forthcoming policies or schemes must be straightforward, profitable and credible for all parties involved. He spoke about the importance of improving our communication to achieve more positive results and used the analogy, "carrot always beats the stick".

Later in the afternoon we were all in awe of the horseback cattle penning competition which left us dreaming of having horses like that at home.







We returned on Sunday to watch the rodeo, the main event of the stampede. To say it lived up to our expectations would be an understatement. The stampede has the biggest rodeo cash prizes on offer which along with the illustrious titles attracts the very best cowboys and cowgirls from all over the world.

The girls kicked it off with horseback barrel racing, a timed flat race around three barrels and back to the start with some serious pace on show. Then, we had

bronc riding with riders managing to stay on some very explosive wild horses. The next generation of competitors were on show next in the kid's calf riding - a hilarious spectacle and a lot of fun. The calf roping followed, this was very impressive with some cowboys having the calf down and tied up within only a few seconds, a very useful skill to have - although we would like to see them do it on a wet Monday morning in Scotland! Finally, onto the bull riding. The bulls are bred specifically for the job of bucking and the aim of the competition for the rider to stay on for 7 seconds. Both the rider and the bull are scored with the cowboys hoping to be allocated the most feared bulls.

Overall a very enjoyable afternoon at the rodeo and definitely a highlight of the trip! From Calgary we headed North to the town of Olds to continue the tour.





## Day 4: Pedigree Breeding & Hay Feeding

Monday 10th July - Written by Abby Forsyth, Stewartry

No Monday blues for the Canada team today, as they embraced the fourth day of their study tour. The first visit of the day was an hour east of Olds to the Richmond Ranch near Rumsey, owned by Jim & Stephanie Richmond, 6th generation farmers, who farm a herd of Limousin, Black Angus & Red Angus'. Their daughters, Tiffany and Samantha, were our tour guides for the day. The herd was developed initially with 6 pure bred limousin heifers, and then Angus' followed a few years later. The numbers now stand at 300, with 200 Limousins and the remainder forming the Black & Red Angus herd, grazed across 3000 acres (mixed of owned & rented ground). Everything is calved outside during the months of April & May, and the number of assisted calving's is extremely low as they are very much bred to be 'left to it'. They breed their own replacements, however, due to the drought they have sold over 100 heifers already. This is not their ideal situation, but they do not have the grass to feed them all.



Most stock bulls are homebred, but for those that are bought in, they come from all over western Canada and there are two particular elements that the Richmond family look for:

1. The most important element to look at when purchasing a bull is feet. Looking for straight forward front feet with no crossovers and a thick back heel.
2. The family also look at the Dam of every bull before making a decision. They believe that by looking at the Dam, this is what they can envision future calves to look like. Effectively, if they don't like the Dam, they will not purchase the bull.

With regards to selling their own bulls, they sell about 100 a year, ranging between \$7000 and \$12000.

All the cattle are hot branded at 3 months old. The family shared a bit of background on the branding background – the family came from England in 1912 but they missed the Titanic, and sailed across on a fishing boat instead. This boat was called SS Grampian, and the brand used for the herd is SS to reciprocate this.



Touching on the subject of sustainability, the Richmond family believe that bigger is better. Having enough land and enough cattle in order to remain profitable is the aim. The example used referred to a combine – why harvest 1000 acres when the combine is capable of doing 2000 acres. The combine will pay for itself quicker if you do 2000 acres. However, Jim explained how the quality might offset quantity in the pure bred industry. This is not a problem as this is a specialist

market, due to the fact not everyone sells breeding cattle. There is a lot of commercial stock in Canada. The trip was finished with some hot dogs and a bit of home baking before making the journey to our second visit of the day.

After the drive back to Olds, we arrived at Barr Ag, the biggest producer and exporter of hay and forage in Canada. Exporting to Japan, China, Korea and the Middle East, shipping 25-40 containers a week. The size of the farms receiving the produce varies from herds of 5-10 cows and a herd of 30,000. The cost of hay is \$600 a tonne. All the products go to dairy farmers, with the majority being long term customers. The process of packing the hay begins in the field, where it is baled and brought into the shed to be packaged. It is run through a slicer, made into square bales and then double compressed. The weight of a square bale which is 2ft square is 38-40kg. Hay and forage is cut across 8000ha – a mix of owned and rented land. The company also aim to eliminate waste, by using the excess straw and hay and combining it with blended grains in order to form TMR for dairy farms.

This means that all markets are catered for and anything left after this, will be fed to the company's own cattle herd. Traceability is also very important to the company. Every bale has QR codes and bar codes. The purpose of this is that if a customer receives a bale they are not happy with, they can take a picture of it and send back to Barr Ag where they will scan the barcode. By doing this, they are able to check which field the hay was made in, when it was cut, what pesticides and fertilisers were used etc. They will then analyse this production, fix the problems and ensure the bales improve for next time. The group agreed this was extremely interesting to see, as it is a very different set up to what we have back in Scotland... not a small square baler to be seen!



## Day 5: Auction Market & College Innovation

Tuesday 11th July - Written by David Mitchell, Biggar

We woke up to rain on our 5th day, so what do you do on a wet day? ...you head to the market! We arrived at Olds Auction Mart, where owner Patrick Cassidy took us for a tour of the site. They sell cattle, sheep, goats, pigs, machinery, land and everything in between. They sell between 80,000 – 90,000 cattle a year, with 50,000 of them sold in the fall run, a 10 week period in October, November and December. The majority of these store calves are going to the 'Feedlot Alley' in Lethbridge. All cattle are ran off the wagon and are pre-sorted the day before the sale. They are split by sex, weighed and then split by weight, conformation and quality and mixed with similar cattle from other farmers. For example, all Black Angus 6wt steers (600lbs) are put together to make lots of a maximum size of 120. This makes the sale a lot shorter and streamlined – making buyers happier and keener as they are not waiting all day for specific lots with all there spec of cattle coming through at the same time in the sale. Wagons are filled quicker, therefore they are able to leave sooner, cutting down on downtime. It was met with some resistance from consigners but over time it raised their average price and brought the standard of livestock up, encouraging quality and consistency. They also do bred cows online, 5 sales in the back end and every 2-3 weeks after the turn of the year. To get traceability in the livestock, independent brand inspectors make sure that all cattle put forward by consigners are owned by them – these inspectors are employed by the federal government.



The market needs to stay competitive as there are a lot of markets in the area and providing a premium service is the best way to retain customers. The average age of cow calf operators in the area is only rising with very few young people coming into the industry as they are competing with the oil and gas industry where yearly salaries average \$250k– \$350k (Canadian dollars), meaning that the business has to constantly adapt in order to survive and remain profitable. To finish the visit we made our way to the mart cafe to try the local ware with a top end market lunch.

After our lunch we headed to Olds College of Agriculture and Technology. After a short welcome from the Dean of the college, we got split off into groups to learn about some of the cutting edge research they are doing on site, mainly their Oc RAE system which is using sensors to harvest real time data on plants to monitor crop growth and disease activity, and there development of a LoRaWAN system (Long Range Wide Area Network) to shift data on a commercial size without the need for cellular data connection. After that we headed out on site to see a research project headed up by Dr Dan. It involved planting native grass and rushes to clean storm ponds so they can utilise water that would not be usable and stops run off which can harm the wildlife and environment. We then visited an automated tractor which can improve efficiency and improve accuracy by cutting down on operator fatigue.

We left the college to make a flying visit to the 4H Summer Synergy Youth Livestock Show where we saw stockjudging, showmanship and sheep dressing. We then all got on the bus and headed for Edmonton for the next chapter of our adventure.





## Day 6: Galloway Seeds & Highland Feeders

Wednesday 12<sup>th</sup> July - Written by Lynne Carrick, Kilmaurs

We left Edmonton, travelling east to Vegreville for our first visit of the day which was to Galloway Seeds Ltd; a family run business producing 5000t seed grain a year that is distributed all over Canada.

The family own a total of 2,800 acres growing a mixture of cereals, pulses and Canola (Better known as Oilseed Rape in Scotland) and contracting a further 2,800 acres from neighbours.



In 2018 a new grain facility was built on the farm allowing them to process and handle a larger volume of grain in a more efficient manner. All grain is passed through four machines: firstly using an indent roller to sort by width and then by length to remove smaller grains, the third machine uses a gravity table to remove the lighter grains and

finally it is passed through a colour sensor which removes foreign matter and grain that isn't fully germinated before being blown into a storage bin. No grain is wasted and any that is removed through the processes is either sold as cattle feeding or cleaned and sold to seed buyers.

This cleaning process happens between September and April and is sold between April & May. The new system has allowed the family to reduce man hours and work eight hour days compared to fourteen with the old system, processing 500 bushel/hr (12/13t). Going forward the business plans to continue testing new seed varieties and improving soil quality on farm.

Following some lunch at the Canadian classic, Tim Hortons, our next visit was to Highland Feeders. A feedlot producing premium Alberta Beef. We were met by feedlot managers, Sherry and her husband who told us all about the history of the farm.

The Kotelko family first started farming in 1946 and by 1976 they were running a 50 head herd of pure Herefords. Now they are running at a maximum capacity of 36,000 cattle making them one of the top 10 largest herds in Alberta.



Our visit was at their quietest point of the year as they were only running 8/9000 finishers, 3500 of which are contracted out to neighbours. They also have 5000 cow calf pairs and 300 bulls. All cows are bred on farm to Charolais or Angus and calved between May/June. Home bred calves are raised at the feedlot and sold to Cargill for a premium. Contracted cattle are fed on the farm and sold to another plant



Animals are fed rations comprising of silage, oats, barley and straw. Most of which is produced on farm. At full capacity they need:

- 40,000 metric tonne of wheat silage for the season
- 350t barley a day
- 35 straw bales a day

All rations are intended to attain a gain of 2.5% body weight with bunkers checked daily to make sure intakes are correct.

The farm has its own feed mill to process grain and mix minerals and antibiotics. Unlike the UK, hormones are still allowed in the production of beef. When animals are brought on to the farm they are ran through and processed; checking tags, health and inserting a hormone tablet to the ear. Pens of cattle are run regularly to be weighed and hormones can be inserted as many as 2/3 times.

One of the most recent additions to the farm is an ethanol and bio gas digester. The power produced is put back into the grid and the by products are used on farm as feed and as slurry.

On return to Edmonton, we then finished off our day by visiting one of the world's largest shopping malls, Edmonton Mall.





## Day 7: ASB Farm Tour

Thursday 13<sup>th</sup> July - Written by Katrina Kennedy, Aberfeldy & Lauren Todd, Reston

Day 7 came and it was time for our 6 visit day. Reesa, our Edmonton guide had organised for us to attend the annual Sturgeon County Agricultural Service Board (ASB) farm tour. This event has been running for 30 years as part of ASB. 75 years ago farmers and ranchers decided they needed a smaller organisation to help incorporate farmers into the government. Similar to what we have at home with NFUS.



The farm tour took us to various stops with the first one being Sturgeon Valley Fertiliser (SVF). SVF was founded in 1967 and provides agronomy services, custom applications, various crop inputs and custom packaging for agricultural oilfield businesses and the manufacturing sector. SVF provides dry fertilisers that are blended to spec. They thrive off of their unique small bag fertiliser packaging. They also pack around 600,000 bags a year of ice melt which is a rather niche market.

At SVF all their products come from multiple suppliers. All products are stored in warehouses until they are ready to be packaged. The urea comes from Nutrien and gets stored in a warehouse which is over 40ft in height and holds 3,800 tonnes. There are some other products stores including potash, phosphate and ammonium sulphate. Some of these products come in from overseas.

The next stop on the tour was a demonstration at Lakeside Intercropping. They use unique farming approaches to achieve their 4 main goals. These being; lower overhead costs, lower input costs, yield stability throughout bad weather and achieving goals whilst maintaining high production.



One of their intercropping fields contained a mix of 2 x Barley/Peas + 1 x Canola. The purpose of intercropping is to reduce disease without having to apply herbicides and pesticides whilst maintaining high yields. The Canola grows up and forms stability for the peas, reducing disease pressure. By adding barley into the mix the hope is that high yields can be achieved without having disease pressure.



When planting this mix blocking and cheap modifications are used to make sure the three individual crops stay separate. They get harvested together as one crop and then get separated afterwards. They try to encourage disease at Lakeside by not applying insecticides in the hope that disease can be prevented by intercropping. The main focus for Lakeland is reducing cost and risk with less applications.



When asked about sustainability we were told that “if you are on the winning side of sustainability then the biodiversity is good for the soul” and that without microbiology in the soul you cannot grow the crop profitability for the business.

Lakeland also gave us a quick whistle stop tour of their farm shop where they sell cheese, ice cream, milk and dairy products which are made from milk produced from their own herd of Holstein cows.

They add value to their producer by selling products like cultured butter milk which is uncommon but highly sought after in the catering industry.

### **Katrina Kennedy, Aberfeldy**

Unfortunately due to time constraints our 4th visit of the day was skipped and we went straight to Paradise Acres Ranch – ran by Bobby and her family, it is a horse and small animal wellness ranch that specialise in equine assisted learning, riding lessons, meet & greets, team building and much more.

During our visit we got to meet some of the young people who volunteer on the ranch as well as the horses that they look after. Bobby then gave us a demonstration of the kind of work they do with families when communication in their household has broken down. John, David and Lauren Nelson were among the volunteers who had to saddle a horse without John using his arms or David speaking, Lauren then assisted them.





We then headed to the University of Alberta's Research Trails - unfortunately due to a large thunderstorm our visit was cut short but we did manage to see 3 areas of their trails including nitrogen management and cropping systems. The students who were involved in the nitrogen trail were testing if putting different amounts of nitrogen at different times of the plants life will help limit emissions. They were also testing Co2 emissions they did this by using a plastic enclosure to sample greenhouse gases, testing them 3 times over a 1 hour period.

During the cropping system presentation we learned that the students are testing different crops to see if they can reduce erosion in the soil. They have 8 different places all over Canada where they are testing this. Within the trial they are also using different treatments on the crops. The crops are planted at 4 different seeding times this allows studies to be carried out covering a large range of weather conditions.

After our time at the university we headed back to Cardiff park (where we had first met the group in the morning) to spend some time at their Sturgeon County Bounty Bash- this was a wee festival celebrating farming and local culture after listening to a local band and grabbing some donuts we headed back to Edmonton for Dinner.

Overall it was a hugely enjoyable day for the group and something that we feel could definitely be implemented at home.

**Lauren Todd, Reston**

## Day 8: Alberta Pork & Lewis Farms

Friday 14<sup>th</sup> July - Written by Jane Lindsay, Bathgate/Carluka

Our time in Alberta finished on a high with a cracking line up of visits, starting the day off with the Alberta Pork Science Centre in Edmonton, where Christina and her team kindly shared their knowledge on the pork industry with us. The centre was set up to cater for educational trips and for research purposes. The centre has two viewing galleries, one of which looked out onto the loose sow pen and the other looking into the farrowing pens – which is used for sows and piglets. Christina had told us that farrowing pens had a low mortality rate by reducing the amount of piglets that were squashed by the sow.

The centre completes a full cycle from farrowing to finishing, although it is common for farms to only rear to the weaning stage, or only finish the pigs. Ongoing research is being undertaken, with a current investigation comparing protein sources. The sows have 2.5 litters per year with an average litter consisting of 14 piglets. They often foster on piglets and find this to be most successful when twinned onto a sow which has farrowed within 24 hrs. Piglets are kept with their mothers for 3 weeks before being weaned and put into the food chain at 6 months weighing approximately 110-120kgs. No growth hormones are given to piglets however a growth promoter is given, to encourage a healthy weight gain. A total of 3.2 million pigs are raised per year within Alberta alone, trends suggest that



the consumption of pork will remain consistent but the number of producers will decrease. With over 20,000 producing pork 20 years ago this has decreased significantly and now sits at around 1000 producers within Alberta. Approximately 70% of Alberta's pork is exported, however Canada is still importing pork from the United States which is frustrating for the Canadian pork farmer. The USA produce corn fed pigs which are cheaper to produce however, the meat appears with a white tinge and lacks the same marbling qualities. Biosecurity had a big emphasis throughout the visit – a Danish entry system and strict staff illness protocol is in place to prevent diseases.

Alberta Pork aims to protect the farmer themselves, no membership fee is paid however, \$1 for every pig processed is taken as commission. Loose sow housing is now a requirement for all newly built sheds within Canada. An electronic feeding system was in place, which would read the sows ears tags and distribute feeding accordingly. This reduces bullying and is far more efficient. On average a sow within the gestation period receives 2.5 kg of grain per day.





When asked what sustainability meant to them, Christina and her team believes that public education is crucial with only 3% of the population having an awareness of animal husbandry. In addition to this, they also recognised that the number of individual producer will continue to decrease but drove sizes will increase. It was highlighted that pork producers often experience two profitable years and two years without profit, making efficiency within the industry crucial and a gap for further research.

Next stop was Rig Hand Distillery, where Mike the head distiller showed us around after we grabbed a bite to eat in their restaurant. The distillery makes a range of products including beer, coolers (cocktail cans), vodka, flavoured vodka, whiskey, gin and 'brum'. First we seen where the beer was produced – up to 450 litres can be fermented at once. Fermentation times vary along with the types of yeast used. Yeast can be used 3 times, after this the distillery believes the yeast alters the taste. After fermentation the beer is cooled and CO2 is added, this is required in all canned drinks to ensure the can stays rigid. All bottling and packing is completed manually – 240 cans can be packaged per hour. The Rig Hand Distillery pasteurises their coolers, this process is completed by keeping the cans in 60 degrees Celsius water for 30 minutes. Pasteurisation allows the cans to last longer and is a unique feature of Rig Hand Distillery coolers.

The Distillery's aim is to support local businesses and remain sustainable, therefore use local grains from farms around the Edmonton area to make their spirits. Three types of vodka is produced onsite including: potato vodka using reject potatoes from a local company; red wheat vodka and corn vodka. Four types of whiskey are made: corn, rye grain, single malt and a 3 grain whiskey which includes 10% rye, 40% wheat and 50% malt barley. The stills behind making these products cost \$150,000 and each still was named by the staff at Rig Hand Distillery, as within the distillery world there is a myth that an unnamed still produces bad alcohol. Following our tour we were lucky enough to sample four products.



Finally we headed west to Spruce Grove area to visit Lewis Farms, where Tyler and Kyle gave us an insight into both the cattle and arable aspect of a 10,000 acre farm. 500 acres are used to plant seed potatoes, 4000 acres of grain, 250 acres of corn, 500 acre of silage and the remainder for grazing. 90% of the seed potatoes are sold onto farms in the south, any seed which is not fit for purpose is graded out and used for cattle feed. Two variety of potatoes are grown including Russet and the chipping varieties – there was not a Maris piper to be seen. The potatoes are stored in large ‘bins’ which could hold up to 40,000 tonne. The seed potatoes are sold before May, therefore air conditioning is not required. The desired temperature is 37 degrees Fahrenheit, this can be difficult to achieve in winter especially during lows such as -40 degrees. Therefore, the potatoes require a lot of attention throughout the winter months. A heater is present within the shed to ensure this temperature can be maintained whilst allowing the door to open slightly to let fresh air into the ‘box’. The average yield from Russet potatoes are 18 tonne per acre, this has the possibility to increase to 22-24 tonnes per acre with irrigation but unfortunately the farm cannot access this at this point.

Throughout the summer months the team focus on machinery maintenance as Tyler put in to perspective that all it takes is for a few nuts and bolts to come loose to cause havoc. Harvest season runs from the 5th of September to the end of the month, giving staff one last social occasion at Labour Day before the busy season begins harvesting 40 acres a day. A recent game changing piece of equipment that the family purchased 5 seasons ago was a 3 in 1 seeder which also rotavated and fertilised the crop, this has saved the farm a massive amount of time.

The farm recently installed a new grain dryer which can dry 40-50 tonne per hour in comparison to their previous dryer which yielded 13.5 tonne per hour. All equipment is owned except for a chopper and corn planter which is hired in. Arable fields are ideally planted in a rotation in the following order: potatoes, corn (or canola), wheat, barley and back to potatoes. Around 70% of the farms barley is fed to the cattle.







The farm has 1000 breeding cattle majority of which are black Simmental's which are 1/16 Angus. It was explained that this is as pure as they will ever be able to become. The rest of the herd is made up of black and red Angus. Bulls are sold at roughly 14 months old at their annual on farm sale at the end of February. The farm has a very impressive on farm auction ring, where they have been hosting their bull sales for over 40 years. The average bull price from 2023 was \$11,000 from 300 bulls, these bulls

were sold to various regions throughout the country. The farm offers a 'volume discount' allowing farmers who purchase two or more bulls a discount this starts at 2% and is capped at 10%. The farm artificially inseminates 40% of their cows, Simmental semen is mainly bought within Canada however, Angus semen is often purchased from the United States.

When asked what sustainability meant to Lewis Farms, the cousins believed that the agricultural industry has survived thousands of years and has progressed throughout and therefore has already proven itself to be a sustainable industry.



Following on from three tremendous visits, the group headed to Edmonton airport before departing to Ottawa for our final week of the tour.

## Day 9: Travel to Ottawa

Saturday 15<sup>th</sup> July

## Day 10: Maple Syrup, Milking Goats & Maize

Sunday 16<sup>th</sup> July - Written by Alan Lindsay, Bathgate/Carlisle

For the first visit of our 10th day we all headed a short drive from Ottawa to the Stanley's Maple Syrup farm where Earl Stanley farms a 150 acre farm and collects syrup from his 300 maple trees. Earl farms 2 other farms in southern Ottawa, having 5000 tapped trees at one and a further 25,000 trees at the other. On the 150 acre farm Earl aims to keep things traditional for the purpose of general public visits, which is a major part of his business having thousands of tourists visit throughout the year and purchase from his farm shop. The syrup is produced in an old wooden shack that is over 100 years old, the sap is ran through a metal pan, capable of holding 1200 litres. The pan is situated above a wood fire which heats the sap up to 70 degrees burning off any moisture. It was interesting to hear that 40 litres of sap creates just 1 litre of syrup, it takes 1 hour to produce 1 litre of sap using the traditional method. The saps original sugar content sits at 2-3% and this is evaporated until 66.5%. Earl also went onto say that he is looking into expanding his diversification with the addition of an ice cream shop, taking advantage of the volume of tourists passing through.



Onto the second visit of the day, we took a short drive down the road where the Raat family farm run 540 Saanen milking goats along with a slurry contracting business. The family started milking goats 3 years ago, choosing goats over cows due to not needing the same amount of infrastructure and requiring less input to start up.

The parlour was built in house as a rapid exit which tilts and allows the goats to slide off increasing the efficiency as the goats can take a long time to leave the parlour. The parlour is currently 32 a side, at present only one side is in operation with the second side being installed currently. The milking duration takes 2.5 hours to complete, with the addition on a second side to the parlour this will reduce milking time. The shed is split into three

sections one of which has no natural light, this allows for the goats to breed out of season.



Kids are bottle fed for the first 48-72 hours before being put onto an automatic feeder for 8 weeks, the family believes this increases consistency. All male kids (Bucks) are sold in at \$15 dollars a kid, the family currently to do not have the space to facilitate raising bucks therefore, this is the best option. Kids are weaned off milk at 8 weeks and put onto a grain and hay mix, consisting of barley, corn, beans and alfalfa. The buck is put in with goats at 1 year old, AI is not used on the farm as this only has a 40% success rate in goats therefore, not viable.

The average daily yield is 2.4 litres, majority of this milk is sold onto cheese producers for \$1.15-1.25. Mastitis is not treated medically on the farm due to a cast goat only being worth \$500. Within the goat



industry it is difficult or treat animals as few products are specifically made for goats, and therefore, require vet approval before use which is expensive. Goats are fed via an automatic feeder which cycles 9 times per day.

The Raat family spreads slurry on 15-16 thousand acres per year. They are particularly busy throughout the spring and fall seasons. The tanker tyres are fitted with air piles to increase and decrease tyre pressure dependant on farms and ground conditions. Approximately 1000 hours are put on the tractor per year for spreading slurry alone. An impressive two co-joined tankers are used holding 17,000 US gallon, making the \$400,000 tanker pay its way.

For the third visit Andrew Pattermore showed us around a recently added irrigation system that involves pipes being inserted 14 inches underground, every 45 inches. Drip pipes allows the plant to soak up the water from the roots up. He said this system is better suited than a more conventional system above, as his ground is very sandy and as both systems have similar instillation costs, underground was the best way to go. The underground system works from 4 pumps, the water passes through filters beforehand to keep the pipes free from silt. Andrew also added that this will save money in the long run, as he will be able to apply his fertiliser through the pipes in a liquid form. Andrew reported that this crop of corn had a greater yield of 85 bushels per acre more with the drip line compared to without it. The farm is currently growing 1400 acres of corn which is sold and sent south to produce ethanol and the further 800 acres of soy bean is grown with it being sown at 140,000 seeds per acre and using a variable rate of seed throughout the field to achieve greater yields. Andrew also showed us a tiger cat machine which is used for burning waste wood from nearly any size right down to a bio charcoal format which is then

mixed with chicken litter and applied to the fields he added that this can help keep moisture content within these sandy soils and the soil should reap the benefits for years to come.

Onto our last visit of the day to Carleton farms, where we met some of Carleton County Junior Farmers for a BBQ and farm tour. The farm had a 350 herd of Holsteins. The family have a second farm where they milk an additional 200.

The dairy calves are put into individual pens for 5-10 days and then introduced to pens of 35 calves which are on automatic feeders. All dairy bull calves are sold between 2 and 3 weeks old. The 350 milking herd are housed all year round and fed a main diet of maize silage, alfalfa and added proteins. The cows average 33-34 litres per cow whilst achieving 4-5 lactations.

Andrew went onto discuss his problems with finding local staff that are reliable workers so he has to hire 4 Guatemalans who milk in the farms 10 a side rapid exit parlour which takes 4.5 hours 3 times per day.

Running alongside the cow enterprise there's a 750KW bio gas digester which runs 2 engines with the power being put back into the grid. The plant is solely run from the dairy herds slurry and manure from the calf pens as well as any waste feed that's been left from the milking herd. Andrew added this is a great way to reduce spraying costs due the digester killing any weed seeds that would have been in the slurry. The dry fibre that is left at the end is reused for bedding cubicles.

The evening was finished off with a great BBQ and a chance to chat with some likeminded local young farmers.



## Day 11: All Things Dairy

Monday 17<sup>th</sup> July - Written by Erin Boyle, New Cumnock

Day 11 was a day for the dairy fanatics, but it was extremely interesting for the whole group. Our day started off on the outskirts of Ottawa at Blackrapids Farm, owned by Peter & Rosemary Ruiters. The family emigrated from Holland in 1958 where Peter's father became a hired worker before taking on the farm 4 years later. The Ruiters milk 55 Holstein cows through an A5 Lely robot, averaging around 38kg milk/cow/day and 11,000 litres per lactation, with 4.2% fat and 3.1% protein. The cows are milked on average 3.1 times a day, with the A5 sitting with 28% free time. They use a sexed/beef strategy and breed 35% of their herd to Angus with the remaining 65% being bred to dairy for their own herd replacements. The steading has no owned land with the family renting 400 acres from the government at the market rate. All ages of animals are reared in the same shed as the milking cows, moving from



single calf hutches to group pens to small cubicles before moving in with the main herd after calving. The calves are fed aggressively with milk in their first couple months of life. They spend 4 days in single hutches getting their dam's colostrum, before they are moved to the pens with robotic calf feeders. Here they have the opportunity to drink up to 20 litres of milk per day until they are 45 days old where it gets lowered to 12 litres max until they are weaned at 65 days. The aim is to triple the birth weight of the calves by the time they reach 60 days old. The Ruiters believe those that drink well as calves will perform well later on in the herd and will take to the A5 robot better. The Angus beef calves are sold when they reach 125lbs and get around \$700 for a heifer and \$900 for a bull.

Breeding starts when they are 12-13 months old (when heavy enough) with the aim to calf in at 22 months and 1400lbs body weight. Main selection criteria for Peter when choosing bulls is good legs and feet (with locomotion and digital dermatitis being the biggest issue on farm for culls), nice udders (for the robot) and +1,000kg of milk. There is also a conscious effort on farm to try bring the size of the cows down, with average cow bodyweights previously having sat at 1,090kg. Once weaned, calves are fed a high fibre straw/pellet diet until they are 4 months of age to develop their rumen (\$4/day/heifer) before moving onto a haylage based diet (\$1.35/day/heifer). In-calf heifers continue to get 3kg straw a day to keep the fat off them before calving in. Cows are fed a diet consisting of a 21% protein alfalfa mix, corn silage, and straw. All slurry produced on farm goes into a 4 million litre clay lined lagoon, before getting spread onto their land.





Dairy farmers in Canada still implement a quota system, where they can exchange or purchase quota based upon litres of milk and percentages of butterfat. This is still a well received system as the banks know they are getting paid and the farmers know they will get a fair return. There are incentive days that occur all throughout the fall where farmers can make more money from their quotas, so Peter tries to ensure there are a few more calves on the ground around this time. Average milk price for Blackrapid's is currently sitting at 90 cents/litre (52p), and can go as high as 98 cents (57p).

The most impressive part of the farm was the attitude of Peter who is embracing new technology to improve his work life balance and increase efficiencies on farm. The aim is to spend around 40 hours per week with the cows and the rest of the time can be spent cropping. Unfortunately 5 years ago the cow barn went on fire, destroying the whole barn and the family lost all the cows inside it. After a mental battle on what to do next, Peter made the decision to rebuild, completely upgrading the whole setup from the tie-stall barn that had previously been there. Within the cow shed now, many automated systems are being used; Lely A5 robotic milker, Lely calf feeder, automatic scrapers, Lely Vector feeding system, sprinklers and automatic air filled curtains (all which can be controlled from his phone).

Peter also rears some heifers for a local showcase herd in Ottawa that has public viewing, mainly Jerseys, Brown Swiss, but some more nearly extinct breeds like the breed Canadienne (less than 300 full blood registered animals left). This brings in another income source for the farm. Hopes for the future would be that their son would come back to take on the farm and other sources of income, such as agritourism avenues or on farm milk sales could be explored to further safeguard their business for the future.



When asked about sustainability of the farm he believed that his current practices were sustainable and the fact the farm is a 'one man' operation they do not need to struggle with the issue of staff retention.

For our second visit of the day we headed south west to the Stirling area to The Ontario Water Buffalo Company. Martin Littkemann and Lori Smith have both dairy and beef buffalo on farm with 140 milking cows and around 300 head of beef cows, a total of 800 head (including youngstock). Previously both dairy farmers, once they got together they decided they wanted to milk again but to venture into something a little bit different. In 2008, after a visit to an organised Buffalo tour in Italy, they fell in love and by April they started their herd with 39 heifers and 1 bull (bought from a farm in Vermont). Breeding



starts when the buffaloes have reached 2 years of age, with the average age of calving at 3 years. The buffalo heifers are bull bred with all cows being given at least 2 times with conventional semen (have tried sexed but not worth it when they also appreciate a bull calf for meat production). Bulls are selected for milk production (no emphasis on fats and proteins), as well as PKM (predicted kg of mozzarella). Calving ease is very high on farm, with very few assisted calvings. The gestation length of a buffalo is slightly longer than a cow at around 320 days which means calving intervals sit at 450 days. Calves are left with their mothers until cleaned and they've had their first drink of colostrum, before they are then transferred to single then group pens. They are then moved outside (if in summer) before making their way into either the dairy or beef herd, or the fattening pen.

Diets fed are pretty similar to those of a dairy cow. Calves are fed corn silage and grains, whilst the cow diet includes hay, corn silage and a dairy ration to keep energy and protein high. The dairy Buffalo are milked twice a day with average yields of 10 litres/day, however those producing 5 litres or below are only milked once. The parlour is a 10 a side rapid exit parlour which was specifically made for the buffalo, as they are a bit wider than normal dairy cattle. Lauren Nelson was missing milking cows at home and got to try milking some of the buffalo. The milk is sold to 2 main buyers, one in Toronto and one in the US, with mozzarella and ricotta being made and sent back to be sold in the on-farm shop 'The Buff Stuff Store'. They also use their milk to pasteurise and make their own gelato which they also sell at events. Currently their milk price sits at \$4/litre (£2.30). The beef and bull calves are raised until fattened and then their meat sold in the shop in high end cuts and value added cheaper alternatives. They employ 14 people in total, with 3 in the shop and the rest working with the buffalo or carrying out tractor work.

Sustainability to the Buff Stuff team is being able to get more value out of their milk and meat products by selling them on farm allowing them to afford to keep going. We finished the day with some buffalo milk ice cream, which we all agreed was delicious!

## Day 12: Orchards, Sheep & Dairy Visits

Tuesday 18<sup>th</sup> July - Written by Lewis Gallier, Udney & Christina Smith, Campbeltown / Edinburgh

An early start for the group as we draw into day 12 of our Canadian tour. We arrived in Georgina County for the first of three visits, Homestead Orchard to be greeted by owner Nathan, who runs the business in partnership with his sister and father. Having come out of dairy, they now focus their enterprise on a farm shop and bakery. They grow 17 acres of apple trees comprising of 18 different varieties, pumpkins, raspberries, strawberries, corn, beans and garlic. The family also produce 300 litres of maple syrup a year.



All this produce is sold fresh through the farm shop. During harvest season they allow the public to come in and pick their own and the family host events throughout the year to encourage people to buy local. They pick and process a lot of their fruit into different bakery produce like fresh pies, home bakes and preserves. The farm shop also has an apple processor to produce apple cider (apple juice to us in the UK) which is sold in 5 litre box cartons. Sustainability was all about making a living from what little acres they farm and adding value to each product they produce.

Our next visit of the day was to the neighbouring dairy farm 'Belridge Farms' which is run by the Johnson Family. Day to day the business is run by the father and son team Greg and Bart Johnson with help from wider family at busy times. They're currently milking 50 Pedigree Holstein cows through a double 8 swing parlour twice a day averaging approximately 30 litres per cow. The TMR that the milking herd is given consists mainly of haylage & corn silage with some ground corn, calcium carbonate and yeast. Their cows average 3-4 lactations and when selecting bulls the main driver that the Johnston family are looking is quality feet and legs to try and improve locomotion and longevity within the herd. The calves are fed 8 litres of a powered milk replacement per day and they generally wean the calves at





approximately 2 months of age. The cows are inside all year round but they have an exercise paddock to allow them to roam outdoors when they please. They use collars for heat detection and keep a closed herd by breeding all their own replacements using AI with a mix of conventional and sexed semen. They grow 400ac of arable crops consisting of a mix of corn, soybeans, hay and wheat. They also sometimes use oats as a cover crop. Ag bags are used for silage making as opposed to bale silage or a silage pit. They also do some silage contracting for four other farms using this bagger system. They are planning for the future at the moment to try and make life easier and more efficient, the main consideration is moving towards a robotic system however the initial investment is a major restriction.



Next we arrived at the home of the Smith family for a lunch provided by the Ontario sheep organisation before our tour of their 600 Rideau breeding flock. They lamb around 1500-1600 lambs a year selling direct to a variety of 6 local abattoirs. Weighing the lambs at 50 days and weaning at 60, the market is looking for a long narrow lamb that provides plenty meat over the loin, as this is where 60% of their money is gained. All lambs are kept inside from birth to point of sale.



The ewes are batched in 2-300 lots and are put out to 2 acre rotating pasture comprising of a mix of alfalfa and orchard grass at weaning time. The flock lambs 3 times in 18 months, remains a closed flock and run 100-120 ewes to a ram. Lambs are fed a diet of corn and 16% protein pellets from birth, the whole flock receives a mineral supplement made specifically for their farm with added Bovatec alongside their diet. The flock is parasite free and the family strive on a high health status. Tups are bought privately through online advertising as there

is not a great amount of sheep in the country to establish market tup sales. Due to the natural wildlife in Canada the family owns multiple marenmma dogs to keep predators away from the farm. The ewes get shorn 4 weeks prior to lambing and all wool is sold through Canadian wool growers.

Following on from our sheep visit we headed across the road to learn about the life of bees and honey production from friends of the Smith family. Their business involved both honey production and hive removals. They started with 10 hives and have now expanded to 30 full sized hives. They sell all the honey the bees produce to local farmers market which is on every Thursday. The honey must have a 17% or less moisture content to be considered as finished honey. They explained that the key to having healthy hives is frequent replacement of wood to ensure that the boxes are clean. They feed in sugar water to try and rebuild the honey production. They explained that it would cost approximately \$500 to set up a new hive.



We enjoyed a lovely dinner organised by the Smith family to finish off the evening which was kindly sponsored by Farm Credit Canada (FCC) who support growth and prosperity in the Canadian Agricultural and food industry. They are the only lender that are 100% invested in Canadian Agriculture and food. They offer an FCC starter loan that helps to increase financial literacy in the next generation of entrepreneurs with no guarantor required. They also offer a young farmer loan which has special interest rates with no processing fees, up to \$1,500,000 and is available for reliable farmers under 40. A member from the Trillium lamb producer group also gave us a talk about how they help support Ontario sheep farmers market their lambs to abattoirs.



## Day 13: Vegetable Production and Grain Storage

Wednesday 19<sup>th</sup> July - Written by Calum Greer, Kinross & Scott Brown, Crossroads

Day 13 saw us head to the Smith family's large vegetable growing operation in the Bradford Marsh area where just shy of 1000 acres of mainly flat peat soils are farmed. Home for over 50 years the operation has expanded to specialize in growing carrots, parsnips, onions as well as a small acreage of beetroot on a rotation basis with some years two crops being able to be grown depending on the season. With such changeable growing conditions once the seed is planted in the spring Iain explained how quickly the pivot irrigators can be needed to enable excellent germination rates across the farm. All tractors and harvesters were on tracks due to the soil conditions and to help with long-term compaction. However tracks were only lasting 6-7 years and costing £125,000 to replace each one per time. The business was aiming to run machinery for longer due to high replacement costs as well as ad blue issues they had encountered on some modern John Deeres they had bought.



The Farm also carries out all its own vegetable grading, washing and packaging. This is aimed mainly at the fresh Canadian markets but some cut carrots went to the US but haulage is extra expense to the business. Fresh carrots have to be washed before being graded on shape and colour and put into boxes averaging 750kg per one with the aim of grading 200-250 boxes per day to meet demand. 320 acres of Onions were planted this year with red onions proving to be ever more popular with Subway being one of the biggest customers. Yields of around 50 boxes per acres has been achieved in a great growing season following planting in greenhouses then replanted in fields. Onions are only skinned and dust blown off leading to a little more waste than the carrots.

On the theme of Sustainability the business already recycles all its own wash water used in the vegetable processing/grading. Currently any waste vegetables go as stock feed to a local farmer but plans are in place to build an Ethanol Plant on site to utilise this waste better. Secondly, on most of our visits each farmer has mentioned the challenge of recruiting and employing staff and this one was no different. One of the biggest costs to the business is staff with wages for weeding crops last year amounting to £400,000. Whilst touring the veg fields we were shown how they were trialling a solar powered weeder



which cost £120,000 with the aim of cutting labour requirements significantly. Technology was also being considered in future by investing in robotic graders in pack house as a way of further cutting reliance on labour.

Regulations and rules are getting tighter to grow such specialist crops as no cattle manure or chicken litter can be spread on land, instead the use of cover crops is being trialled to help with organic matter retention as well as the usage of copper to try and stop the breakdown of the peat soil so rapidly.

### **Calum Greer, Kinross**

After a couple of hours travel south west towards Guelph, we arrived at Woodrill Grain Elevator, a family run business. The family started farming in 1929 with pigs, chickens and cows before changing to grain farming during the 60s and also started custom farming. The business started adding value to the grain products by selling it for seed. The seed is packaged into boxes and bags sold per seed size rather than weight they can weigh anything from 900 to 1200kg. Along with the farming side of the business, they also buy, sell and store anything crop related and offer an agronomy service including soil sampling. Approximately 55000 tons of grain are put through annually. Some soya is kept for seed the rest sold to Hamilton where it is squeezed for oil, the crushed product is then sold for animal feed. 70% of the soya



bean meal goes to the European and Japanese markets. Wheat is grown mainly for export and seed. Corn is mostly sold for ethanol production. Fertilizers are bought and blended before selling on to customers, some of which will be custom spread. They cover 100-150,000 acres per year and also have around 20 trailed fertiliser spreaders, which can be hired out to farmers throughout the season.

There are 45 full time staff working to the business. The staff get 6 days statutory holidays and thereafter are asked to avoid peak season for holidays. Technology is something the business is investing in hugely. One reason is to cut down staff, particularly in the seed and packaging sector. Soils are another area, where they have started sampling heavily and found the soil varies a lot throughout each field. The soil is tested for conductivity. As the conductivity changes though each soil type, a core sample is then taken and analysed. Field mapping is then used to target inputs to certain areas. The aim is not to get an even crop but more for an even profit.

### **Scott Brown, Crossroads**

## Day 14: Orchard Fruits & Vineyard Visit

Thursday 20<sup>th</sup> July - Written by Eve Newlands, Lower Speyside

Day 14 began at the Warner Fruit Grower Company in Beamsville, Ontario, where we were warmly welcomed with freshly picked sweet cherries to taste on arrival. The farm is family run and has been since 1919, with Torrie Warner being the 3rd generation to farm it now. The farm spans 60 acres, including 10 acres each of apples, peaches, pears, plums and table grapes, with the remainder growing a mixture of cherries, berries, walnuts, hazelnuts, kiwis, persimmons, apricots, nectarines, red and black currants and an unfamiliar fruit to us, the pawpaw. A pawpaw is native to North America which ripens in October and until recently was only



identified in the wild, not commercialised. It is 2-3 generations out of the wild, with a breeding programme running at Kentucky State University and also a private breeder in West Virginia. The paw paws sell for \$18 per lb and the fruit is said to have a custard-like taste with a texture between a mango and banana. They thrive in moist soils and are often found growing in fertile soil along waterways, which Torrie believes could be the way they spread to Ontario, via the Niagara River Valley.

As with most farmers, weather is a large issue for fruit growers and it greatly impacts yields. Georgia, a large peach producing state had a “very awkward” winter according to Torrie, with not enough of a cooler period for the peach trees to grow in the spring, followed by a frost affecting others, resulting in a very poor crop. However, in Ontario, the Warner family experienced a bumper crop of peaches and due to the state of Georgia becoming importers of peaches rather than one of the usual main exporters, the prices have risen, greatly benefiting the company. Following on, Torrie explained that if the winters were consistent, apricots would be their most profitable fruit but due to the unreliability of the weather, this varies year on year. Torrie did attempt growing almonds in Ontario, however, he commented that they did not like the harsh winter and of the 15 almond trees planted, only 8 remain. Positive as ever on our tour he just remarked “nothing ventured, nothing gained”.

The majority of the produce is sold at farmers markets, with a small amount selling wholesale including peaches, plums and apricots if there is a large crop, which is true of the apricots this year, or to restaurants willing to collect the produce which makes up around 5-10% of their business. Torrie attends the farmers market once a week in Toronto from late June right through to Halloween, explaining that selling direct to the consumer creates a premium product niche, making his business sustainable and putting more control into the business’ hands.



It was highlighted, that due to all of their produce being hand-picked, sourcing labour is a challenge so the company employs 5 workers through the seasonal agricultural workers programme throughout the fruit season from April to early November, when they usually finish apple harvest. Further staff are employed through the temporary foreign workers programme, which allows people to stay for up to 2 years and this adds to the workforce of around 15-18 staff typically, from June to October.

Warner Fruit Grower Company extend their profits out with the growing and harvest seasons by keeping some fruit in industrial coolers, such as pears, which will keep for 4-5 months at -1 degrees to allow sale in February/March.

An interesting issue Mr Warner regularly encounters is people eyeing up the delicious fruit from the road and helping themselves! He explained that in Canada they have the trespass act, meaning if someone is on a “cared-for cropland”, then they are not allowed to enter, however, with the enforcement of the “green belt” policy (protected farmland policy), attitudes locally have changed and people appear more entitled about their right to enter. As a result of this it often proves difficult to gain support from local services to enforce the trespass act.

Out with the issue of the public entry, Mr Warner has experienced issues this year with squirrels eating apricots and birds eating the cherries and grapes. The squirrels shred off the flesh of the apricots to reach the apricot stone, leaving behind piles of torn up flesh.

Having demolished multiple punnets of fruit and more apricots than the squirrels ever could, we got aboard the bus and continued on to the Peninsula Ridge Winery.

Peninsula Ridge Estates Winery, also located in Beamsville, features a stunning Queen Anne revival Victorian manor, built in 1885, making it unmissable for passing traffic and providing a grand, majestic feel. Neighbouring the Victorian manor is the restored post and beam barn, where we headed for our tasting session and guided tour of the modern winery facilities and traditional underground barrel cellar.

The winery has 42 acres of vinifera grapes as well as a neighbouring 43 acre vineyard, producing all types of wine from Sauvignon Blanc and Chardonnay to Cabernet Sauvignon, Malbec and Merlot.



The vineyard is situated in a perfect region for grape growing, due to its proximity to Lake Ontario, sitting on the Niagara Escarpment which is a World Biosphere Reserve. The escarpment which was historically the shore of a lake, sits between Lake Ontario and Lake Erie. The Peninsula Ridge vineyard sits on the Western edge of the Beamsville bench, the plateau of land known as one of the best grape growing areas in Canada. Lake Ontario is particularly deep, meaning that it does not freeze in winter and during the summer, the cold air rises from the bottom to the top, allowing the cool air to drift off the water and cause a moderate temperature rather than the usual harsh Canadian temperatures. They call this the “Lake effect” and this also assists the fruit growing abilities for Mr Warner at our previous visit as most fruits and grapes prefer a moderate temperature to grow, nothing too high or too low. The 175-185m escarpment creates a thermal pump-like effect to reduce any damage from frost in the spring and allows good air circulation year round.

Peninsula Ridge Estates Winery usually begins their grape harvest in September/October and they operate as a 30,000 case winery, using what winemaker Sean Palmer described as the “new world technology”. Fermentation is regulated delicately utilising dual-batch, temperature controlled tanks from France, meaning some wines never need to see a barrel, for example, the Sauvignon Blanc which is purely kept in stainless steel to savour the fruity characteristics.



Underground is the barrel cellar, where the wine can age in over 300 French or American oak barrels to develop their individual flavours and aromas. There are no more than 3 barrels the same in the cellar to allow Mr Palmer to experiment with different blends and barrels. When samples are taken from the barrels and tanks they are assessed based upon their acidity (pH and strength) as well as sugar content, which indicates the alcohol content. The aim for the winery is to achieve as much sugar as possible, which sometimes requires pushing harvest back as far as feasible to maximise alcohol concentration.

To create white wine, the process from the vine to finishing fermentation can be as short as 2-4 weeks, with the grapes being pressed right away, with the white juice going into the tank and being inoculated with yeast.

For red wine, grape skin contact is required, so the juice and skins sit fermenting for 2-3 weeks, developing both the wines colour and flavour. Following this fermentation the red wine enters an oak barrel for 18-24 months, unlike the white wine. It will oxidise slightly in the semi-permeable barrels and this helps with the ageing process of the wine. The oldest wine (reserve wine) at the Peninsula Ridge Estate Winery is 24-30 months.

A new flavour to the group was the Peninsula Ridge Estates Ice Wine. Ice wine is made by allowing the grapes to go through a full growing season and allowing them to freeze in January/February to then pick. Due to the grapes being frozen, there is only 1/10 of the normal volume of juice produced and it is very sweet. As a result of the small volumes produced, the wine is expensive to produce and this is reflected in its end price.

Post-Covid the price of barrels was extremely high (\$1500-\$2000 per empty barrel) and to adapt to the new market and pricing, the Peninsula Ridge Estate Winery introduced a new Barrel Club Membership scheme, for VIPs and local “Torontonians” where they could pay the value of the barrel up front and in return they could come to the winery and taste from their own personal barrel, as well as having the option to take their barrel home after 3 years. All barrels were brand new and the winery must purchase 20-25 new barrels per year to keep up with their production demands.

Grapes at the vineyard are harvested using a machine which has fingers to pick the grapes from the vines. Once a vine is planted it usually takes 3-4 years to produce grapes and one bunch of grapes usually produces around 60-100ml of wine. Vines are productive for 25 years on average. As of August, Peninsula Ridge Estate Winery is classed as “Wine-making sustainable” and are currently producing a total of 27 different wines which are almost entirely sold within Ontario. When asked how to “properly taste” a wine, Mr Palmer explained to us that there are three main criteria when wine tasting.

1. Appearance – judging colour and clarity, looking for a see through look with no cloudiness
2. Nose – trying to detect a pleasant taste, any poor odour will not be enjoyable on the palate and could indicate a fault in production, such as the corking in storage
3. Legs of wine – assessing the viscosity of the wine, the slower the legs are, the higher the residual sugar and the higher the alcohol content will be. The wine should hit every part of the mouth and tongue when swished around and by the 2nd/3rd sip, the palate should be conditioned to the taste.



Day 14 was a lovely, relaxing and highly educational day of the study tour, with us learning about two industries not a single one of us had involvement in. It was evident that both farms believed they were sustainable due to their connections and conscious involvement with their local community and due to their regenerative practices. From here we travelled to Niagara for our final night of the tour where we visited the 160 metre high Skylon Tower for dinner and a bird’s eye view of Niagara Falls and the surrounding area.

## Day 15: Niagara Falls

**Friday 21<sup>st</sup> July**

The group enjoyed a morning of free time to visit Niagara Falls before heading to the airport for the journey home.

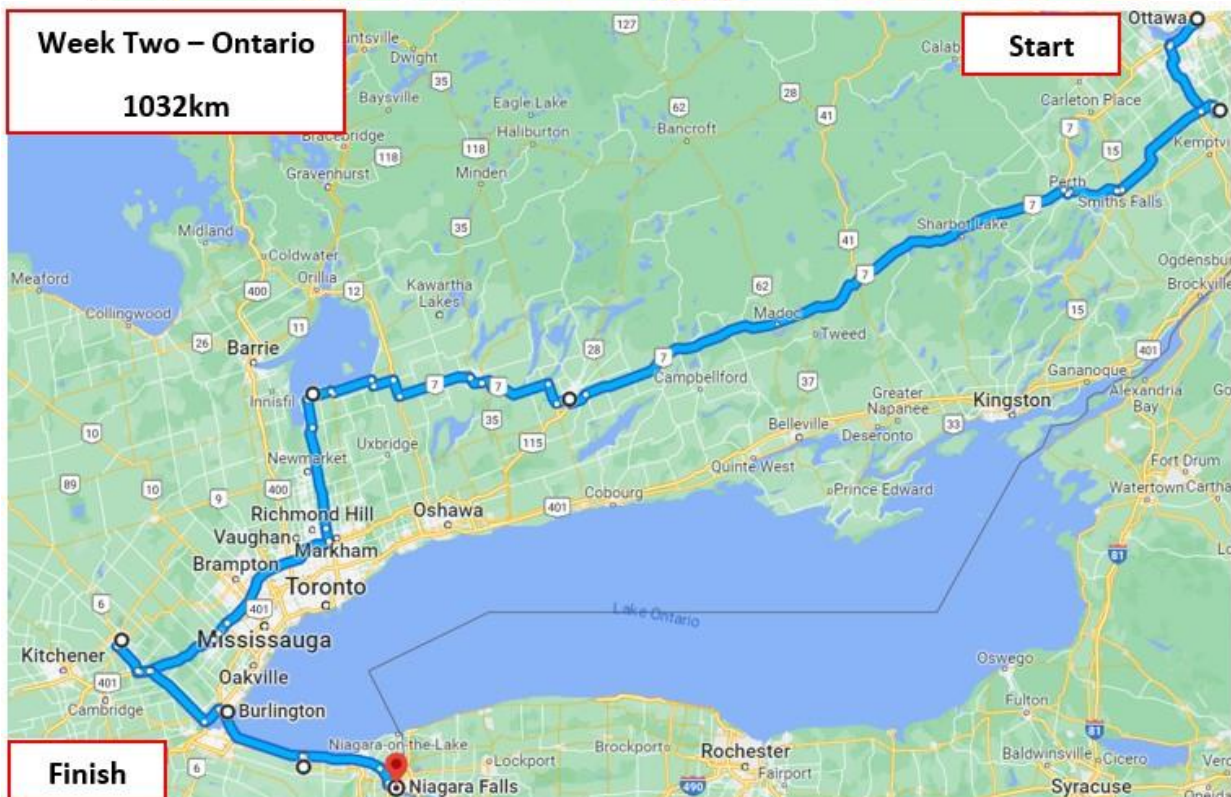
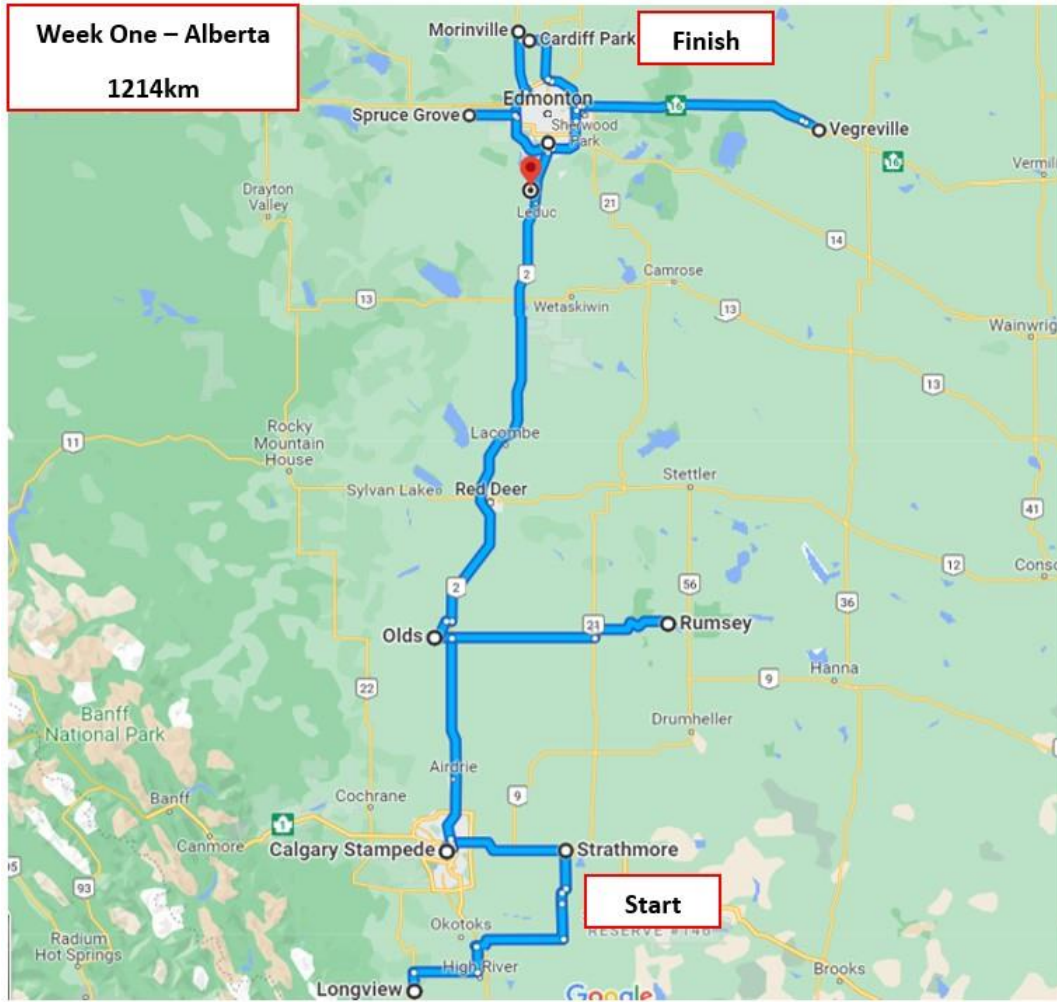


The next two pages cover the areas and routes travelled during our time in Canada and our acknowledgements to our sponsors and others who assisted with the tour, we are indebted to them for their support.

We hope that you have enjoyed this report on our Agri & Rural Affairs Study tour and that it will encourage other young farmer members to apply for the opportunity to attend in the future.



# Route Covered During the Tour



## Acknowledgments

The group are indebted to all contacts in Canada who assisted with the tour from visit hosts to travel companies but special thanks must go to; **Teri McKinnon, The Calgary Stampede, Reesa Schafers, Edmonton, Leslie Weagant, Ottawa and Philip Smith, Georgina** for their assistance in arranging visits in their areas and for accompanying the group on those days during the tour.

## Sponsors

The group are indebted to all those who supported them financially, whom without this trip would not be feasible. The members would like to thank the following for their contribution to the full group:

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