Yukon Agriculture : series of articles that appeared in the *Yukon News* October – December 2016

by Miche Genest

Hay is for horses

Yukon News Friday October 7, 2016

Submitted Photo/Yukon Archives

Hay was a valuable commodity during the gold rush era, spawning numerous businesses dedicated to growing or importing hay.

Miche Genest

Special to the News

In order to understand hay farming in the Yukon it's useful to recall what your mother said when you yelled "Hey!" to get her attention. "Hay," she would retort, "is for horses." In the Yukon, the story of hay production starts with horses.

During the human stampede over the Chilkoot and White passes into the Yukon interior, some horses were badly mistreated by people desperate to get themselves and their goods to the goldfields in the Klondike. It is estimated that between 2,000 and 3,000 horses died on the Chilkoot Trail alone, from malnutrition, overwork, and accidents.

Dead Horse Gulch on the White Pass is littered with the bones of horses that plunged to their death during the gold rush and later, the building of the White Pass and Yukon Route (WP&YR) railway from Skagway to Whitehorse. The packhorses that accompanied the dozens of cattle drives between 1897 and 1906 didn't fare much better. "Cattle were money on the hoof, and every effort was made to care for them and deliver them to market in good condition," writes historian — and News columnist — Michael Gates in Dalton's Gold Rush Trail. "But it seemed as though those who were using horses as

pack animals saw no other value in them. They worked the poor creatures to death and then moved on."

But once off the madness of the trail, horses acquired value. By 1899, horses were replacing dogs as the working animal of the North. "Horses, horses everywhere, with drays and wagons," wrote Jeremiah Lynch in his memoir, Three Years in the Klondike. "It was easy to see the dog was doomed."

A horse could haul a ton of cargo, the equivalent of 20 dogs pulling three sleds. Lynch tells us that thousands of horses were imported into Dawson in 1899, and 1,200 were employed working the winter roads between Dawson and the goldfields, hauling goods and men. But, as historian Sally Robinson writes, while dogs could eat dried salmon, horses needed oats and hay. Suddenly, there was a market for hay.

Imported hay was expensive — in the winter of 1897–1898 it sold for $400 a ton in Dawson, and some owners fed their animals flour and packing straw. But by September of 1898 local wild hay was selling for $250 a ton. Cutters could obtain permits to cut wild hay by paying a royalty of $1 per ton.

Gold seekers turned haymakers jumped on the opportunity. In October, 1899, a local newspaper reported "Dawson is doing her haymaking, or rather, is bringing home her harvest from the hayfields." The "hayfields" were meadows of wild grasses situated on the Yukon River above Fort Selkirk, in the valleys and hills in the Klondike River drainage, and downriver from Dawson in the Yukon Flats.

Dawson's vacant lots were already piled high with imported hay bundles, and that October the haymakers' loaded rafts lined the riverbank for half a mile. Men compressed the hay into bales by stomping it into a hay press, then tying it into 150-pound bundles. The going price for wild hay was 12 cents a pound, but there was one lot of cultivated hay selling for 15 cents a pound, from Chris Sonnickson, a miner at Forty Mile in the late 1880s who was perhaps the first person in the Yukon to cultivate hay. That year, the local press reported the total harvest at 350 tons, and there were enough horses in town to consume ten times that amount.

By the end of 1898–1899, several farms were established in the Klondike and Yukon River drainages close to Dawson, and many of them experimented with different varieties of feed crops. Demand for fodder crops remained high in the decade immediately after the Gold Rush. In 1904, Menard and Genier, who started the Pelly Farm in 1901 (it's now the Pelly River Ranch), offered delivery of first class oats to roadhouses along the WP&YR winter road, established in 1902. In 1905 the farm had 25 acres under cultivation in oats and potatoes. The next owners of the farm boarded government horses in the winter of 1915, feeding them on the hay from their own fields.

In 1911 Yukon-grown timothy and clover hay brought the same price as imported hay, about $80 to $100 a ton. Mixed farms continued to grow hay, green feed such as oats, and vegetables to satisfy local demand. Sally Robinson calls this era the "golden age" of Yukon agriculture, when some farmers could make a living at their trade. It was a brief golden age — by 1916, increased mechanization and a shrinking population reduced the demand for fodder (and other) crops, and many small farms were abandoned.

In the early 1920s, Yukon hay crops included timothy, western rye, oats and the always-dependable Brome grass. Pelly Farm was the largest farm growing hay. As the need for horsepower declined, the owners started growing cattle and selling beef, but for many years they continued to board horses for prospectors and Canadian government surveyors. Horses and hay production helped keep farms afloat through many lean years.

This article is part of a series commissioned by the Yukon Agricultural Association and funded by Growing Forward 2, an initiative of the governments of Canada and Yukon.

Yukon outfitters run on horses, and on hay

Miche Genest *Yukon News* Friday October 14, 2016

Dave Andrews photo

Horses feed on hay at Dave Andrews□farm near Whitehorse. Hay is Yukon△ largest single agricultural crop.

The production of hay is a cornerstone of Yukon's agriculture sector. This is the second of a three-part series on hay farming in the territory.

In the early part of the 20th century, a new market emerged for hay and oats in the Yukon in the form of hunting guides, now known as outfitters. The earliest outfitters were pack train operators in Dawson and Whitehorse, but by 1912 guiding of non-resident hunters in search of big game had taken hold as an industry.

After big-game hunters wrote books about their hunting experiences, the Yukon developed a reputation as a hot destination. Legendary outfitters Louis and Eugene Jacquot, Thomas Dickson, Charles Baxter, Johnny Johns, Alex Van Bibber, Curly Desrosiers, and Louis Brown were all in operation by the early 1920s. They took hunters on horseback deep into the Yukon wilderness on one- or two-month-long trips to hunt bears, sheep, caribou, mountain goat, and moose.

Outfitters use a lot of horses. By 1966 there were 22 outfitters in the Yukon, half of whom used aircraft. The rest employed between 20 and 60 saddle and packhorses. In the early 1980s there were 20 outfitters who typically used 25 to 35 horses each. In 2016, there are 19 registered outfitters, most of whom use some combination of planes and horses. Outfitters became, and remain, one of the biggest markets in the Yukon for farmed and foraged hay.

Outfitters need to feed and house their horses in the winter off-season. Often they board them, sometimes at farms in northern B.C. or Alberta, but just as often on Yukon farms, providing local farmers with both an income and a market for their hay.

Dave and Tracey Andrew started off as Yukon outfitters in the early 1990s, with 20 head of horses and an eight-hectare parcel on the Carcross Road. They soon moved to a larger piece of land on the Alaska Highway, about 19 kilometres from the Mayo Road cutoff. Once they were established, Tracey Andrew, the horse-lover in the family, started boarding horses, as many as 120 head a winter, often for outfitters.

The Andrews cleared their land in 1996, and though they soon had about 50 hectares in grass, it still wasn't enough feed for the horses. After consulting outfitter Pete Jensen in Carmacks, who was successfully irrigating his land, Dave applied for a permit to run a line under the Alaska Highway and pump water from the Takhini River.

"We were just going to do a few acres, but once you've bought all the equipment you might as well do a few more, so it just kind of mushroomed," he says. He ended up with 40 hectares of irrigated hay, about 140 hectares of improved pasture and 53 hectares of dryland (non-irrigated) oats — feed for his horses and a small herd of cattle. He sold the rest of the hay, mostly to horse owners, plus a few cattle operations.

Learning new methods in the hay business

The '80s and '90s were a time of experimentation and learning in the Yukon hay business. Challenges were many — they included figuring out when to fertilize, what fertilizer to use, and learning about which grasses grow well. There were no farm dealers, so getting parts and equipment was tough. Dave and Tracey Andrew bought used equipment and hauled it up the highway in the winter, and, like many Yukon farmers, Andrew became his own mechanic.

Andrew also learned how to reseed his hay pastures gradually.

"The hayfields are getting close to 15 years old since we first seeded, and that's unheard of. What we did, with a no-till grass seeder, was over-seed certain areas every year at a lower rate. In my mind, that was putting new grass in as old grass was dying off, and it worked for us. We didn't have to re-seed."

Mike Blumenschein started farming in the mid-1980s and for the next 20 years, farmed some of his own land and custom-farmed for other Yukon farmers. A lot of the soil Blumenschein saw in the early days was "just powder," he says. "It was so hard, it had never been prepped properly since day one, and there was no moisture in it." When the ground is that hard, the moisture stays on top and just evaporates instead of going into the soil.

Through experiments, consulting other farmers and “just paying attention to what was going in the ground,” Blumenschein helped develop a system of feeding the soil and the crops using aeration and fall fertilization. He invented and built his own field aerator, based on the lawn aerator.

Typically, Blumenschein aerated the land when the hay was newly cut and was growing aggressively. Aerating splits plants in two, and pokes holes in the soil to let in both fertilizer and moisture. Applying fertilizer in the fall means that the spring meltwater takes the fertilizer down into the root system of the plant. Whether the fertilizer is manure or chemicals, the same principle applies.

Horses lead to hay, hay leads to cattle

Hay starts out as grass — it’s only called hay once it has been harvested, bundled and fed to animals. Compared to other crops, grass is relatively straightforward to grow, and it’s a good crop for marginal land.

After years of experimentation by hay farmers like Andrew and Blumenschein, and at government experimental farms in Dawson, Haines Junction and now McCabe Creek, we know which grasses are best suited to the Yukon’s soil types and short growing season (meadow brome and smooth brome).

These factors help explain why hay is the biggest crop grown in the Yukon. In 2014, of the 10,646 hectares of agricultural land in the territory, 63 per cent was being used for pasture, green feed or preserved forage (bundled or silage hay).

The market is another important factor. In 2016, the price of Yukon hay is competitive — the same price as Alberta hay plus shipping, which makes it a viable option for the local market. In an interesting twist, hay farmers, who grew hay primarily for the horse market, sometimes become small-scale cattle farmers in order to extract optimal value from their hay. These cattle are then sold as beef to Yukon householders through farm gate sales. Blumenschein observes that most cattle farmers are now raising their own hay.

Hay started out for horses, but without horses we might not have had hay for cattle.

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Haymakers: Meet the Whitehorse farmers who keep local cattle fed

Miche Genest *Yukon News* Friday October 21, 2016

Submitted Photo/Yukon News

Calves at the Heart Bar Ranch nibble on some hay. Below: The ranch is home to about 20 cattle.

The production of hay is a cornerstone of Yukon's agriculture sector. This is third in a three-part series on hay farming in the territory.

Hay farmer Joanne Jackson Johnson's motivation is to feed the animals that feed people, and to do it organically. Standing at the edge of her hayfield, looking out over the snowy plain, she snapped off a seed head from a piece of grass and broke it apart in her palm.

"I love hay," she said. "Hay is pure sunlight." She was quoting alternative farmer and author Joel Salatin, one of her mentors. "And there it is, just growing."

Jackson Johnson has been growing hay on 60 of her 178 acres since 1991. When she bought the farm, hay was the logical place to start — the land had been cleared by the previous owners and the Yukon's

horse population provided a good market. She knew from the start she wanted to farm organically, a decision that would add a degree of challenge to her farming life. This was on top of the existing challenge — no access to water, and therefore no possibility of irrigation.

Jackson Johnson is what's known as a "dry land farmer." Usually located in arid climates, they cope with the lack of water by using moisture retention and deep planting techniques to cultivate their crops. The downside of dry land farming is yield: you simply don't get as much hay.

Of the many dry land hay farmers in the Yukon, Jackson Johnson was the first to receive organic certification. In 2008, she fertilized with six tonnes of rock powder sold by Bob Snider, an organic farmer from Alberta and one of Jackson Johnson's mentors. She applied the rock powder with an old-fashioned seed drill. The results were interesting: "The hay got thicker," she said. "Instead of being tall, more individual plants grew with less space between them."

The "chicken tractor" was another success. Essentially a portable, bottomless chicken coop, the "tractor" contains the chickens in a small area where they poop and then scratch the poop into the ground. Every day the farmer moves the coop by one-pen length to fresh grass. It's an easy, hands-free fertilization method that keeps the chickens healthy too.

There have been years when Jackson Johnson hasn't been able to get the hay in — the rains came at exactly the wrong time, or she was busy slaughtering her chickens when she should have been haying. Her yield remains small — about half a tonne per acre, and so does her client base of two or three customers.

Submitted Photo/Yukon News

Her yield may be small but it's mighty: customers have told her that their horses, goats and sheep prefer her hay to other local and imported hay.

Gail Riederer also grows hay, but her first and enduring love is horses. Riederer was born and raised in Juneau, Alaska. "I was fortunate to have a mother who was an Idaho farm girl. When her youngest expressed an interest in farming and horses, she cultivated that," Riederer said, as she showed a couple of visitors around Heart Bar Ranch, her homestead off the Alaska Highway near the Takhini Bridge.

"I used to ride my pony along the beach looking up at the Muskeg Meadows and fantasize about living on a homestead in the mountains surrounded by horses." Her gaze swept from the horses in the corral to the mountains that surround the homestead. She grinned. "And I got a chance to do it."

Riederer "bought the paper" on the titled property in 1990 with her first husband. The ranch started as a place to grow forage for a horse operation. They cleared about 48 acres that first year and planted oats. At harvest time in late August they brought in a binder to make oat bundles and the next morning it snowed. "All the oats went down. So we put up a quick electric fence and got an outfitter herd out there and grazed it."

After she and her husband parted ways in the mid-1990s, Riederer started a riding school as a way to use the property and to spend more time on her land. She started boarding horses for outfitters and for horse owners who lived in town.

Though she has a day job, Riederer gives lessons on evenings and weekends and runs summer riding camps every year, on top of the regular chores that come with caring for three donkeys, about 20 head

of cattle, 27 horses (19 of which belong to the ranch), and three elderly horses in a back corral who are part of the Heart Bar Ranch “extended care” program. Life is busy. “Sometimes we don’t sit down to dinner until 9:30,” she said.

The other half of the “we” is Riederer’s husband Dirk, who joined her, and the operation, about six years ago. The first cows came to the farm at about the same time Dirk did. He’s worked with cows all his life, first in a family dairy operation in Holland and more recently on a dairy farm with a beef operation in BC.

The couple started small, with two steers. Now they try hard to keep the herd down to 20 cattle.

“It’s just like a bad disease, you want to do more and more,” said Riederer. “But you put money into what you enjoy, and we do enjoy the cows.”

A couple of scruffy Highland cows and their three calves are currently at the ranch, along with several Gelbvieh cows and one majestic Gelbvieh bull. Riederer said that in cattle breeding, crossing continental European breeds — the Gelbviehs — with the British breeds — the Highlanders — produces stronger hybrids. So Riederer will breed the bull with the Highland cows and see what happens.

“Who knows?” she said. “It’s a fun experiment.”

Riederer developed more land when she could and now has approximately 160 acres of pasture and hay land. The hay is a combination of smooth brome and meadow brome. “That’s what does well here,” she said.

Heart Bar Ranch is also a dry land farm where Riederer works “with what we have, rather than forcing things.” She fertilizes with manure, harrowed back into the ground, and chemical fertilizer. The yield is about 1.5 tonnes of hay per acre, not enough to feed all the animals, so they supplement with locally bought hay and higher protein imported alfalfa. Riederer also grows a few acres of cereal forage and oats, which the cows love.

The meat operation at Heart Bar Ranch is small. Beef sales happen through word-of-mouth, and when Dirk brings in weaner pigs every spring to sell to local farmers Riederer puts an ad out on Kijiji to let people know when they’re coming.

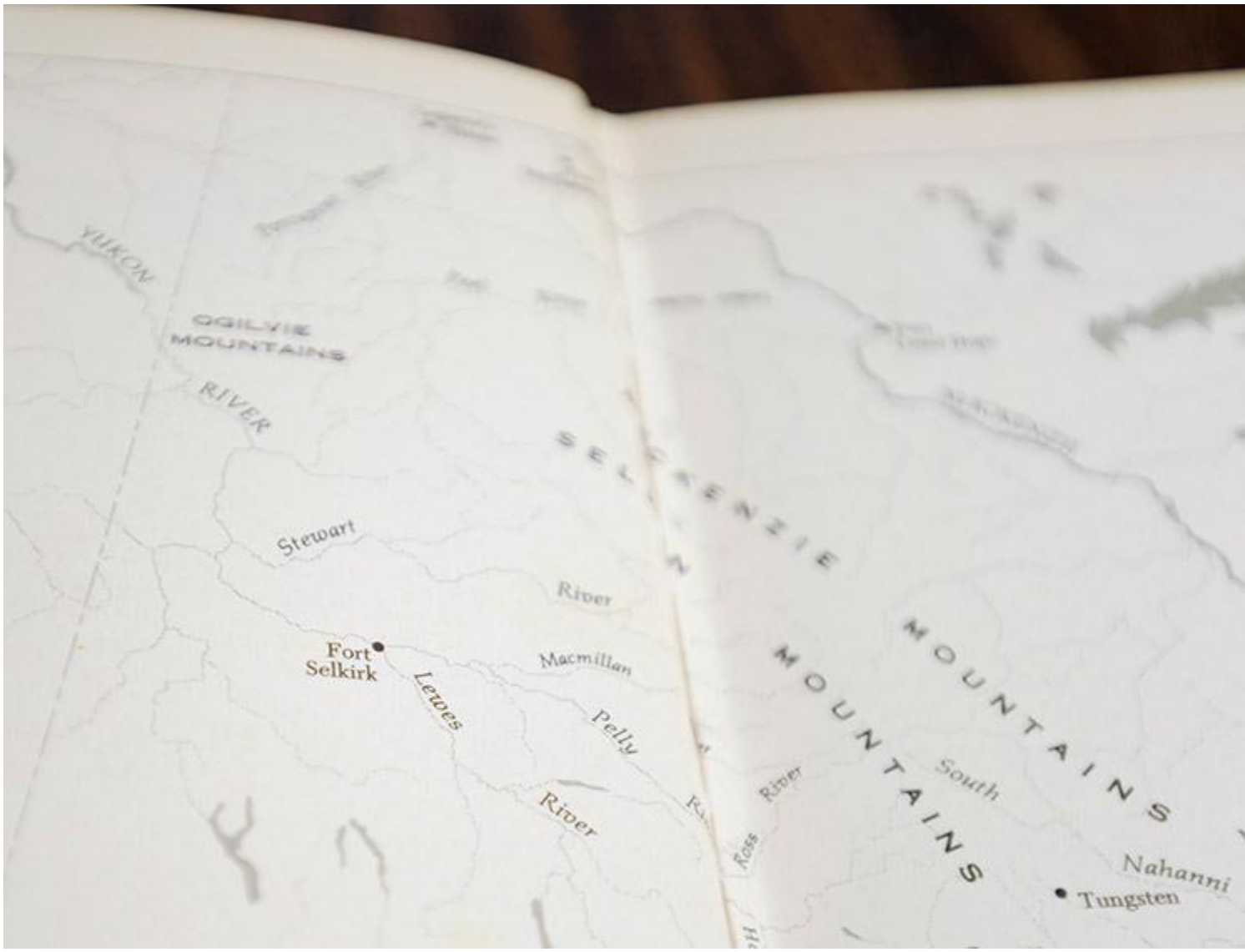
Every farmer raises hay for a different reason. At Heart Bar Ranch, the forage crop allows the farmers to manage the ground properly, and most importantly, to feed the animals. “We’re animal people that grow some forage,” said Gail. “We’re all about the husbandry and enjoying all these creatures that we care for.”

This article is part of a series commissioned by the Yukon Agricultural Association and funded by Growing Forward 2, an initiative of the governments of Canada and Yukon.

Rawhides: Robert Campbell and the Yukon's first cattle drive

Miche Genest Friday October 28, 2016

Chris Windeyer/Yukon News



Fort Selkirk was the end point of the Yukon's first cattle drive in 1852.

The first cattle drive into the Yukon was to have been a small one: two heifers and a young bull, brought from Fort Simpson on the MacKenzie River to Fort Selkirk on the Yukon River in 1852.

The story begins with Robert Campbell, the Hudson's Bay Company explorer and fur trader who founded Fort Selkirk, and for whom a highway and a bridge in the Yukon are named. Campbell came from Perthshire, Scotland, not as a fur trader but as a farmer, hired by the Hudson's Bay Company (HBC) to help establish an experimental farm at Red River Settlement in what is now southern Manitoba.

From 1831 to 1833 Campbell wrangled beasts ("a most erratic stock of Cattle, Horses, Pigs &c") and men ("mercurial and promiscuous"), while building houses and barns, plowing the virgin land and

harvesting crops. After a tedious and unsuccessful trip driving sheep up from Kentucky, Campbell “had a hankering after the more stirring life” of a fur trader. In May 1834 he asked for a transfer to the fur trade, and HBC Governor George Simpson granted his request.

Campbell spent the next 18 years trying to open up the western region of the MacKenzie River district for the fur trade, exploring some of the great rivers of the Pacific Northwest — the Stikine, the Dease, the Liard, the Pelly, and the Yukon. He established forts at Dease Lake, Frances Lake and Pelly Banks and finally, Fort Selkirk, which he built in 1848 at the junction of the Pelly and the Lewes (Yukon) rivers.

They were exciting but difficult and often dangerous years. Rival First Nations traders harassed Campbell and his people. Starvation was a constant threat. At each new outpost, Campbell planted crops and vegetables, experimenting with barley, potatoes and garden vegetables, but with little success. Hunting and fishing were only intermittently reliable. Supplies from headquarters were erratic.

During most of Campbell’s 18 years in northern B.C. and southern and central Yukon, the only known route into that territory from HBC headquarters at Fort Simpson was the Liard River and its tributaries. The Liard is a fast and dangerous river that roars through canyons, rapids and whirlpools. No HBC employee undertook the journey lightly. In 1840, eight Company men enroute to Fort Simpson died on the Liard when their voyageur canoe was sucked into a whirlpool.

But by 1848, Company traders had found a safer northern route from Fort Simpson to the Yukon River down the easily navigable MacKenzie River, up the Rat, over the Richardson Mountains, down the Bell to the Porcupine and down the Porcupine to the Yukon. Trader Arthur Murray built Fort Yukon that year at the junction of the Porcupine and the Yukon rivers. Campbell and his men had established Fort Selkirk, 600 kilometres upriver, but neither the traders nor the company were certain that the same river flowed between the two forts. In June of 1851, under orders from Governor Simpson, Campbell set off downriver to settle the question. He arrived at Fort Yukon three days later, confirming the two rivers were one and the same.

For Campbell, this discovery meant that his vision of a robust trading post and a thriving settlement at Fort Selkirk, complete with livestock and crops, was finally within reach, made possible by the easier, northern supply route into the country. Campbell continued on from Fort Yukon to Fort Simpson, following the northern route, and arrived filled with optimism.

There, on August 6, he wrote a letter to the incoming Hudson’s Bay Company Chief Trader.

“This I trust will be the finale of the countless miseries and hardships wantonly and to no earthly purpose endured for three years we have now been on the Pelly. The road is now open and I beg to leave it with you to turn it and the ample resources and production of the country to advantage.”

Arthur Murray had told Campbell there was enough pasture at Fort Yukon to support 1,000 head of cattle. In the same mood of optimism, Campbell left another note for the Chief Trader, requesting delivery of a young bull and two heifers to Lapierre’s House on the Porcupine River. His people would pick them up the following spring and bring them up the Yukon River to Fort Selkirk. He requested a bell for the bull, too. Those three animals, brought into the country via the new northern route, were

almost certainly, in Campbell's mind, the beginnings of a herd and part of the new foundation for a secure and permanent settlement.

Campbell returned to Fort Selkirk in October, and that winter he and his men moved the fort to a better site on the Yukon River. In May 1852 he travelled to Lapierre's House to pick up his outfit, but there is no mention in the historical record of the cattle he had ordered. Nevertheless, he was pleased to be returning to Fort Selkirk "with the first real Outfit ever rendered there."

In August 1852 Campbell and his men were out in the fields cutting hay when a party of Chilkat traders attacked Fort Selkirk. Campbell and his whole company were forced to flee. Campbell's dream of Fort Selkirk as a thriving fur trade settlement was in ruins, like the fort.

The attacking Chilkat were intent on defending their long-established trading relationship with interior First Nations. They had travelled up the coast from Klukwan on the Chilkat Inlet, over the mountains to Kusawa Lake, down the Takhini River to the Yukon River, through Lake Laberge and on to Fort Selkirk. This route was just one of several trade routes from the coast to the interior traditionally owned by coastal Tlingit.

Forty years after Campbell's departure, control of another of these routes would be wrested from the Chilkat Tlingit by adventurer and entrepreneur Jack Dalton. From 1896 to 1906 the Dalton Trail became a conduit for the delivery of hundreds of head of cattle destined for the interior, in a new era of trade. Cattle would come to the Yukon, in numbers Campbell wouldn't have imagined possible.

This article is part of a series commissioned by the Yukon Agricultural Association and funded by Growing Forward 2, an initiative of the governments of Canada and Yukon.

Meat the Klondike

Miche Genest Friday November 4, 2016

H.C. Barley fonds, #4677/Yukon Archives

Cattle scows were used to transport livestock down the Yukon River to Dawson.

For the cattle drivers who followed the thousands of hungry miners, adventurers and entrepreneurs pouring into the Klondike at the turn of the 20th century, cattle drives were a means to an end, and the end was profit.

Yukon historian (and News columnist) Michael Gates' book "Dalton's Gold Rush Trail" is a wonderful source of stories and accounts of these dangerous, exhausting and sometimes unsuccessful drives. By Gates's count there were more than 100 cattle drives into the Yukon using four different routes. He has done a rough calculation and reckons that in 1898 about one-third of the gold recovered by miners was spent on beef.

Willis Thorp, a butcher from Juneau, Alaska, was the first person to drive cattle from the coast into the interior in 1896, lured by the potential market among the growing mining communities at Forty Mile and Circle, Alaska. He started with 40 to 60 steer at Haines Mission, swam the cattle up the Chilkat

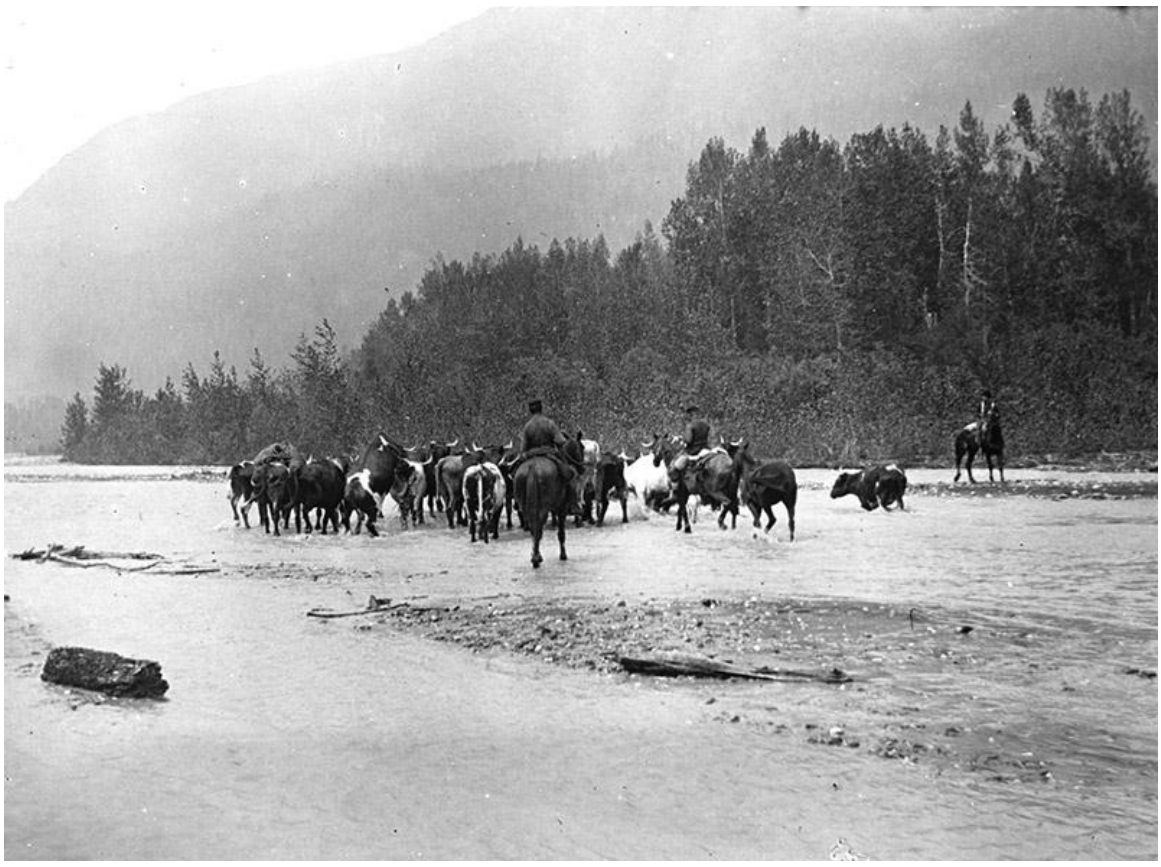
River, and was chased off the trail by Jack Dalton near Klukwan village. Thorp and his party of 10 men cut their own trail over the mountains to Kusawa Lake, then travelled overland on a track to the Yukon River, landing just below Five Finger Rapids with all but four steer intact. They travelled down the Yukon River to the mouth of the Klondike, and stopped there. Hundreds of miners had set up camp; the first trickle of what would soon become a flood. Thorp sold most of his meat at Dawson for $16,000, and took the rest to Forty Mile.

One ten-pound piece of meat made it up to Circle, Alaska, where it was displayed in a window at the trading post and then auctioned off as a fundraiser for a new hospital. The meat brought in bids as high as $35 per pound, the story was published in papers throughout Canada and the United States, and the cattle stampede to the Yukon was on.

The Klondike cattle drives originated from as far south as New Mexico and as far east as P.E.I., arriving by rail or sea at the coast then over the Dalton Trail or the White Pass.

As Gates notes, timing was everything. Cattle drivers had to start their journey in spring after the snow had melted. They would graze the animals along the way, and either slaughter the animals when the weather was cool enough to preserve the meat or arrive in Dawson with live animals. No route was safe from hazards: mosquitos, swamps, quicksand, poisonous feed or none at all, river crossings, spring blizzards and fall whiteouts, lack of food for horses and men, disease, lameness and death.

J.B. Tyrrell fonds, 82/15, #6/Yukon Archives



Cattle drives in the Yukon were fraught with dangers like blizzards, quicksand, and swift-moving rivers.

Norman Lee's diaries, published in the small volume "The Klondike Cattle Drive" (1960), are a fine account of the misfortunes and occasional triumphs encountered on the trail. After an often heartbreaking, four-month journey, during which he seems to have kept his sense of humour, Lee arrived at Teslin Lake where he slaughtered and butchered his cattle and loaded them on to scows headed for Dawson. Halfway down the lake a squall erupted, the scows broke apart and nearly all the beef was lost. Lee made his way slowly back to the Chilcotin empty-handed.

Some drives were very successful, including those led by Ed Fearon of Saskatchewan in 1887, Pat Burns of Calgary (whom Gates describes as a "cattle baron"), E. Pearson, the Tuxford Brothers from Saskatchewan, Jack Dalton himself and by H.L. Miller, who brought first cattle, then pigs and then turkeys to Dawson.

Drivers following the Dalton Trail (550 kilometres from Pyramid Harbor to Fort Selkirk) would arrive at the Yukon River north of Five Finger Rapids, build scows and rafts and send their cattle down to Dawson. Or they would butcher at Slaughterhouse Slough, a makeshift slaughtering yard near Fort Selkirk, and hope the weather would stay cold, but not so cold the river froze up. More than one driver lost his meat to the freeze-up.

Once in Dawson, meat was sold to butcher shops, to restaurants and to individuals, at prices ranging from 75 cents to $2.50 a pound, depending on how saturated the market was. In 1898-99 there was also a lucrative trade in selling wild game — Tappan Adney, a reporter for Harper's Magazine and a great chronicler of the Gold Rush, describes a hunt he went on with Chief Isaac and his people, the "Tro-chu-tin" (Tr'ondek Hwech'in) during which the party harvested 32 moose, selling some of the meat to miners for $1.25 to $1.50 per pound.

Once the White Pass & Yukon Route railway was established in 1900, live animals or meat could be transported by rail and river, and the cattle drives to the Klondike fell off and so did the trade in game. There was little incentive, too, for farmers in the growing agricultural industry to raise livestock for any table but their own. Jack Dalton drove his last herd of 200 cattle in 1906, transporting it from Skagway by rail, to Dawson by scow, from there to Circle, Alaska and from there to Fairbanks. Similarly, cattle destined for Dawson would travel by rail to Whitehorse and scow to Dawson, and the local papers would report on their progress.

In what Gates calls an interesting postscript to the story of cattle drives into the Yukon, T.C. Richards, who managed the P. Burns and Co. butcher store in Whitehorse, successfully drove a herd of cattle to Mayo and then to the mining camps at Keno in the early 1920s. It was a tough haul. The wranglers were two weeks on the trail from Fort Selkirk to Mayo, four head were lost in a snowstorm, there was no feed, and the cattle broke into the wranglers' supplies and ate everything but their tea. The wranglers survived on rabbits and tea for the remainder of the journey. Richards did manage to sell a quantity of meat to the United Keno Hill Mining Company, so the venture was not a complete disaster.

Southern beef, pork and turkey arrive in the Yukon today via the Alaska Highway, but Yukon farmers are developing a healthy market for locally grown meat. In 2011, the last census year for which there is data, 13 farms reported that there were 213 cattle and calves in the Yukon. Data from this year's census has yet to be published, but will likely show an increase in those numbers. Yukon's cattle sector

is growing steadily thanks to an expansion of Yukon-based abattoir facilities and retail opportunities. At a time like this, it is amazing to look back at the risky efforts of the wranglers who first brought cattle into the territory during the Klondike Gold Rush era.

This article is part of a series commissioned by the Yukon Agricultural Association and funded by Growing Forward 2, an initiative of the governments of Canada and Yukon.

Pelly ranchers: Yukon's oldest farm does it all

Administrator Thursday November 10, 2016

Mike Thomas/Yukon News

The Pelly River Ranch is the oldest, continuously working farm in the territory.

Miche Genest

Special to the News

A visit to the Pelly River Ranch is like entering a funhouse of country mayhem. Chickens peck at the feet of wandering cattle, dogs come running to be petted, busy volunteer farm workers from around the world chat in several languages, and Dale Bradley cracks jokes to entertain visitors while keeping an eye on the whole proceeding. An air of friendship and hard work pervades the place, one of the most successful family farming operations in the Yukon.

Dale and Sue Bradley have the distinction of running the oldest, continuously working farm in the territory. They're the second generation of Bradleys on the Pelly River Ranch, and the Bradley family are the fifth in a series of owners dating back to 1901 when Edward Menard bought 20 acres on the Pelly River "for farming purposes" and brought in farmer George Grenier as his partner. Menard and Grenier

sold to Pete Olsen and Frank Chapman in 1915, who sold to the Fairclough family in 1927, who sold to the Wilkenson family in 1940. In 1954, Dale's uncles Hugh and Dick Bradley bought the place from the Wilkenson family. The farm is like a good car: well-loved by every owner, albeit with quite a few miles on it.

The Bradleys were young, keen and up for anything — Dick had just come from the animal husbandry program at Olds College, and Hugh had a Bachelor of Science and Agriculture from the University of Alberta. They started off with seven head of cattle, a sow and a boar. In her history of the farm, Marjory Bradley writes, "These [pigs] helped to pay the grocery bill for the Bradley's for the first five years."

Dale Bradley's parents, Ken and Dorothy Bradley, joined the farm in the mid 1960s, and he grew up there surrounded by family and animals. As a young adult he went out and explored the wide world but then came back in the early 1990s "to get away from working for a living" as he puts it. Like their family before them, Dale and Sue and their son Ken run a mixed farm, which means they engage in several agricultural practices. They raise chickens and beef cattle, mostly Hereford and Angus, have a big vegetable garden, perhaps the biggest patch of Saskatoon berries you're likely to see in the Yukon, and they raise hay to feed the cattle. The Bradleys sell their eggs, chickens and beef to customers in Dawson, Faro and especially Whitehorse. In addition, they supply local markets with a range of root vegetables — potatoes, carrots, rutabaga and parsnips.

The Bradleys are supply all their own hay, which is the cornerstone of the beef operation. "Hay determines everything," says Dale. "The size of the herd, how many cattle overwinter, and in part, how many cattle are slaughtered. Financial need also enters into it."

He tries to maintain a population of 25 breeding cows — "I'd like to go up to 30 but it all depends on the consistency of the feed." A dry spring and a wet July like the one in 2015 can wreak havoc with haying. Hay needs three to five days drying time, dry weather to cut it and more dry weather to bale it. And that, says Dale, is where silage, a form of animal feed, comes in.

"Silage is more weather forgiving," he explains. "You can make silage when it's high humidity and right after a rain. There's no drying time; it's cut and processed right away. You can make good silage out of any forage, and it helps to control weeds. The window of palatable silage is much wider than hay — poor forage makes poor silage but cows will live on poor silage. [Whereas] cows get sick on mouldy hay, and they don't like dry stocks."

Dale uses a large pit for his silage, piling it in when it's green, and packing the oxygen out by driving the tractor back and forth over top. "That's usually the job of some poor WOOFer (volunteer farm worker)," he says with a grin.

The Yukon Agricultural Branch suggests that pit silage is the most appropriate silage method for the Yukon, and Dale agrees. He tells horror stories of round, plastic-covered silage bales freezing into cement at -40C, whereas a crust forms over the silage pit in winter and insulates it from the weather. He can feed his cattle on silage all winter and sometimes well into the next winter.

A report on animal feed written for the Yukon Agriculture Branch in 2014 suggests that for most Yukon beef producers, “a feed management system based on grass feed, either as fresh forage, silage, hay or a combination of these is most likely going to produce the best results for the least amount of cost.”

The Pelly River Ranch is a textbook illustration of this system. In addition to hay and silage, cattle there eat a lot of fresh forage, everything from grasses to rose leaves to young fireweed, a feed that gives the beef a wild, natural flavour that Bradley appreciates. Currently, he finishes his cattle on grain. “I was taught as a young man that was a proven way to finish your animal.” But the market is changing, and as interest grass-finished beef grows, it’s possible that Bradley will be able to capitalize on that wild, natural flavour as a selling point.

He has watched the market change in other ways. When his uncles were selling beef most of their customers were families on a budget who would buy in bulk and butcher at home. Sometime in the late 1980s that situation shifted. Instead of delivering to people’s homes, the Bradleys started delivering to the Deli in Whitehorse. Their clients continue to look to professional butchers for cutting and wrapping services. Customers buy in bulk but they are also interested in buying a variety pack of cuts or a single package from the grocery store. The Bradleys predict the market for Yukon-grown vegetables will continue to expand too.

Dale Bradley is philosophical, as farmers have to be. He and Sue will embrace the changes and realities of running a mixed farm on the banks of the Pelly River, as their family has done for over 60 years.

This article is part of a series commissioned by the Yukon Agricultural Association and funded by Growing Forward 2, an initiative of the governments of Canada and Yukon.

Constant gardeners: The early days of Yukon agriculture

Administrator Friday November 18, 2016

Submitted Image/Yukon News

To be as self sustain as possible, traders in the mid-19th century would plant crops at all outposts.

Miche Genest

Special to the News

Though food security is a hot topic in the Yukon today, finding a reliable source of homegrown, fresh food has been a challenge since the first newcomers came to the territory in the mid-1800s.

Over thousands of years, Yukon's First Nations had evolved a balanced diet based on wild foods, but explorers, traders and miners from the south didn't have that tradition or local knowledge. Scurvy and starvation were a constant threat. The colonists had to learn how to grow food. And so they became gardeners.

Over the ensuing 175 years, Yukon farmers and gardeners have become very good at growing vegetables and fruits for our tables. But in the beginning, it wasn't easy.

Before the Gold Rush

Hudson's Bay Company fur trader Robert Campbell was one of the first farmers in the Yukon to experiment with growing grain and vegetables. The company required trading posts to be as self-sufficient as possible and fur traders planted crops wherever they established an outpost.

Between 1840 and 1852 Campbell and his men sowed plots of barley, potatoes, vegetables and lettuce at Fort Frances, Pelly Banks and Fort Selkirk. Most of those crops failed due to poor soil, arid conditions, early frosts, insect infestations and mishaps, and the traders rarely harvested any significant quantity. Instead they relied on hunting and fishing for the bulk of their diet, augmented by the sporadic delivery of canned, salted, dried and powdered food from Hudson's Bay Company district headquarters at Fort Simpson, which involved a long, taxing and dangerous journey via the Liard River and its tributaries.

Anxiety about having enough food was always present and an inadequate food supply was a frequent topic in Campbell's diaries and letters. He and some of his men were harvesting wild hay in 1852 when rival Tlingit traders attacked Fort Selkirk and drove him out. The trading posts at Fort Frances and Pelly Banks had already been abandoned, and with the destruction of Fort Selkirk the first farming experiments in the Yukon ended.

The next batch of farmers in the Yukon were the traders and prospectors who moved into the middle and upper Yukon River drainages in search of gold starting in the early 1870s.

Like Campbell before them, they relied on fish, game and patchy delivery of goods and foodstuffs from a supplier, in this case the Alaska Commercial Company. Traders planted gardens at their posts for a fairly small market at first, but in 1882 the Chilkat started allowing prospectors to use the Chilkoot Trail and more miners came into the territory. Gold was found in the Stewart River in 1885 and in the Forty Mile River in 1886, and the community of Forty Mile was established at the mouth of the Fortymile River. Three years later, trader Jack McQuesten harvested 10 tons of turnips from his garden there.

Trader Arthur Harper settled at Fort Selkirk with his family in 1888 and experimented with several crops, but was foiled by early frosts, just as Campbell had been. In what may have been one of earliest adaptations in Yukon agriculture, Harper started covering his gardens with heavy cotton on clear nights when frost threatened, and successfully harvested potatoes, turnips, carrots, parsnips, cabbage, barley and oats in 1892.

In another adaptation around the same time, Sam Patch experimented with growing potatoes in a protected nook on the south side of the Fortymile River where the sun didn't get to them until noon. There, they warmed up slowly and survived the effects of frost.

After a bout of scurvy in 1892-93, more miners in the community at Forty Mile took up gardening and by 1895 a traveller to Forty Mile was impressed at the many gardens growing there. Sam Patch was getting a good price for his turnips and potatoes at McQuesten's post, and by 1896, McQuesten was also growing potatoes, barley, oats, turnips, lettuce, radishes, and cabbage for sale in his store.

Farms and market gardens in the Gold Rush era

In 1896, when gold was discovered in the Klondike River drainage, there was no time to farm, and the population once again relied on supplies shipped up the Yukon River.

But in 1897-98, serious experimentation began, as the population grew and aspiring farmers tried to figure out the best locations and soil. Market gardens were established around Dawson, on the banks of the Yukon and Klondike Rivers, and on various islands in the Klondike. Even so, the supply of fresh vegetables was limited and there were many cases of scurvy in Dawson in 1898.

But by the next year there were a dozen market gardens selling vegetables in Dawson City, and by 1901 there were several farms clustered in four areas — the Klondike Valley, Sunnydale Slough on the Yukon River just upriver from Dawson, West Dawson and Klondike Island. Farms were small, about four or five acres, or just the right size to be worked by two men.

The yield from these small acreages was impressive. The Fox and Daum farms, both on Klondike Island, produced between them thousands of pounds of potatoes, celery, cabbage, turnips, cauliflower and cucumbers, plus radishes, greens and lettuce.

At Sunnydale Slough John Charlais harvested 1,000 cauliflowers. One of his cabbages weighed 30 pounds and spread its leaves five feet in diameter, and he displayed it proudly in Dawson. As historian Sally Robinson tells us, Henry Daum was an experienced florist and greenhouse operator who came from Germany via New Jersey. His planting strategy will be familiar to northern gardeners — in mid-winter he planted seeds in flats in the greenhouse, moved the young plants into bins and pots, moved them again into cold frames in the spring, and once the sun was shining 20 hours a day, moved them into the fields.

In Whitehorse, a much smaller town in those years, backyard vegetable gardens were common and the North West Mounted Police were feeding themselves fresh peas, lettuce and cauliflower from their own garden outside the barracks. The winter road between Whitehorse and Dawson was constructed in 1902. Small farms along the route supplied roadhouses with hay to augment the delivery of oats, and the roadhouse operators themselves tended gardens.

Farms developed along the Yukon and Stewart rivers, where growing conditions were favourable and transportation of goods was reliable and relatively inexpensive. Several woodcutters cut wood for the paddlewheelers in winter and became farmers in the summer. The market demand remained high for fresh, home-grown produce over the next decade, and farmers worked hard to meet it.

Next week's article continues the story of Yukon's vegetable farmers and market gardeners into the twentieth century. This article is part of a series commissioned by the Yukon Agricultural Association and funded by Growing Forward 2, an initiative of the governments of Canada and Yukon.

Harvest swoon: The lean years of Yukon farming

Miche Genest Friday November 25, 2016

Submitted Photo/Yukon News

Between 1901 and 1911 the Yukon's population fell from 27,000 to 8,500, but as the population shrank, the demand for local produce increased and farmers could make a profit. As the local food supply increased new technologies developed.

Between 1901 and 1911 the Yukon's population fell from 27,000 to 8,500, but as the population shrank, the demand for local produce increased and farmers could make a profit. As the local food supply increased new technologies developed.

In 1901 farmers on Mosher Island built a storehouse over frost-free cellars to house between 25 and 30 tons of root and other vegetables over the winter. In 1908, another farmer ventilated his root cellar to keep the temperature at 3C. That winter, turnips, carrots and parsnips sold in Dawson for 10 cents a pound and onions for 12 cents a pound.

In 1915 there were 48 homesteads on 4,500 acres, nearly all of it under cultivation. Dawson was still the largest Yukon market, and most farms were located within 65 kilometres of the city. But there were farms and market gardens scattered throughout the territory, from Burwash Landing to Carcross to north towards Dawson.

In 1916 the North-West Mounted Police reported that the Yukon was importing fewer vegetables, "as the growing of them in the north is past experimental with the possible exception of potatoes." Farmers had sold an estimated 500 tons of potatoes, celery and cabbages were larger and more

flavourful than those from outside, and it was possible to buy “any native-grown vegetable at any time of year.” In 1919 the extensive menu at the Arcade Café in Dawson featured items such as Chicken El Dorado with Klondike Celery, Moosesteak a la Chieftan with potatoes Tim O’Brien, and Peel River caribou chops and Yukon green peas. Local food had made its way not only to local households, but to local restaurants too.

By the 1920s increased mechanization and a shrinking population resulted in less demand for forage and feed crops in the Yukon, and several farms were abandoned during this period. However, vegetable farmers continued to thrive near Dawson. Carcross area farmers produced beef and vegetables for the community. And in 1928, hay and vegetable production near Mayo was well established.

Backyard gardens in many communities continued to provide families with seasonal fresh produce and harvest fairs were held in Mayo, Dawson and Whitehorse. Paddle wheeler menus in the 1930s and 40s featured local meat and vegetables: a menu on the SS Klondike in 1942 offered Dawson City tomatoes, Yukon radishes, Marsh Lake whitefish, boiled brisket of Pelly River beef, stuffed haunch of Carmacks veal, and roast loin of Stewart River moose.

The Yukon’s population continued to shrink, and by 1941, the number of farms had decreased to 26 and the area under cultivation shrank to 511 acres. But in 1942, the building of the Alaska Highway heralded the beginning of a new era of road transport and cheaper shipping costs. The paddle wheelers continued to travel the rivers, providing farms along the river valleys with access to cheap transport, until the North Klondike Highway from Whitehorse to Dawson was completed in the early 1950s.

In 1954, Dick and Hugh Bradley purchased and continued operating the historic farm on Pelly River. However, others were not as fortunate. With shrinking markets, loss of river transport, and improved transport for cheaper goods up the Alaska and North Klondike Highways, many farmers found there was little incentive to stay in business. In the 1960s, farming activity in the Yukon dropped off considerably, and by 1971 there were only 12 farms in the Yukon, the area under cultivation grew to 2,271 acres.

Despite its promise of a speedy and efficient link to the south, the Alaska Highway was slow to improve and the supply of seasonal fresh produce continued to be spotty. Mark Wykes, who grew up in Whitehorse and today runs the local Your Independent Grocer franchise, recalls eating a lot of canned vegetables in his youth. He jokes that the local food scene at that time was “powdered milk.” He says, “Meat and so on were taken care of but from a highly perishable vegetable standpoint, we suffered up here.”

Wykes’s family, like many in those years, grew a backyard garden. In the absence of fresh produce coming up the highway, householders turned to growing it themselves.

In the meantime, the farming sector struggled. In 1975 the federal Department of Indian and Northern Affairs put a moratorium on release of land for agricultural purposes in the Yukon (and NWT) citing the

lack of a territorial agriculture policy, the need for research into suitability of the land, and the First Nations land claims processes that was then getting underway.

However, despite the uncertainty, several farmers whose names are still well-known today started up their operations in the 60s, 70s and 80s — the Drurys, the Dowdells, the Buergees, and several others. In 1974, the Yukon Agriculture and Livestock Association — now the Yukon Agricultural Association — began to speak for the local farming sector. In 1982, a territorial Agricultural Development Council was created through legislation, and shortly afterwards land around Yukon communities was made available for agriculture applications.

In 1991 there were 137 farms in the Yukon, distributed along the river valleys, where soil and climate are most friendly to agriculture and water is readily accessible, in five regions: Dawson-Mayo, Kluane, Pelly-Faro-Carmacks, Watson Lake and Whitehorse. Seventy per cent of the farms were within 100 km of Whitehorse — a shift from the previous century, when the majority of farms were clustered near Dawson. Farmers need to be close to the market, and to off-farm job opportunities, since most farmers don't make a living from farming.

In 2011, the last year for which census data is available, there were 130 farms in the Yukon (down from 148 in 2006), but the picture has changed. The dominant crop is still hay, but there has been steady growth in vegetable, fruit and berry production. Fresh produce is the fastest growing sector in Yukon agriculture for both small and large scale operations. As well as growing grain, Yukon Grain Farm sells a significant amount of locally-grown potatoes, carrots, beets and cabbage to major Yukon retailers. Smaller farms and acreages also support big yields. Haskap berries are now becoming the largest domestic berry crop and experimentation continues to expand the diversity of what can be grown here.

We're eating it up. Local markets are hungry for fresh produce, and over the past two decades, consumers, communities, farmers, retailers and government have evolved creative ways to not only grow food, but to get it to us, including farmer's markets, community gardens, and traditional and alternative retail models.

We'll look at how producers and vendors are working together to grapple with that centuries-old challenge, providing a secure supply of fresh, homegrown food.

This article is part of a series commissioned by the Yukon Agricultural Association and funded by Growing Forward 2, an initiative of the governments of Canada and Yukon.

Finish your vegetables: Yukon's community gardeners grow fresh, local produce

Friday December 9, 2016

Government of Yukon/Agriculture branch

Tomatoes, corn and peppers are grown in a greenhouse in Carmacks.

Miche Genest

Special to the News

In its recently released local food strategy, the Yukon government's agricultural branch calls backyard and community gardens "an important part of food sovereignty and sustainable local food production," and lays out a strategy for supporting those gardens.

Already, the branch encourages the development of farmers markets, First Nation and community gardens and greenhouses with start-up funding and training. For backyard gardeners, the branch will set up an online link for sharing tools and supplies, finding compost, and learning where plots of idle land suitable for gardening are located.

But community gardens and greenhouses are also a form of grassroots support — they often end up becoming informal resource centres for backyard gardeners. Alice Boland, who has been with the Little Salmon Carmacks Greenhouse and Farm Operations project since it started in 2000-2001, says as people become more interested in eating healthily, she is seeing more backyard gardens in Carmacks. "A lot of people are starting to grow vegetables. They come to see me for advice, and I go out and help them whenever I can."

When the greenhouse project started up, Boland attended Yukon College's master gardening course. She trained at Yukon Gardens in Whitehorse, at Kathy Kruse's garden in Mayo, and she learned on the job, first under the supervision of Chris Gall, and then as supervisor herself.

"You never stop learning," she says. "You learn new things, new plants. This job never gets boring, there's always something different."

The greenhouse started small but is now 45 metres long and 12 metres wide. Here Boland and her crew grow everything from corn, melons and pumpkins to carrots, beans and kale, peas, cabbage, cauliflower, broccoli and other cold-hardy vegetables grow outside, and there's a potato field across the river. The project also includes cold storage facilities for root vegetables.

Boland stresses that the Little Salmon-Carmacks greenhouse isn't a community garden in the sense that people come in and garden themselves. "We grow it for the people," she says. Food is distributed for free to community members with diabetes or on a lower income, and Boland encourages kids to come into the greenhouse, see what's growing, and have a snack. The kids call her "Aunty Alice."

The school bus stops right in front of the greenhouse and Aunty Alice calls them over. "I give them carrots, and tomatoes, some cucumber or zucchini or lettuce — they love lettuce — and you know, they're so happy."

Kids are at the centre of Kluane First Nation's brand-new community garden and greenhouse in Burwash Landing, too.

"It isn't a community garden yet," says co-ordinator Sandy Johnson. "What we have at this point is a greenhouse and a tiny little garden that I do with daycare and day camps in the summer." There is a vision for a larger greenhouse, with vertical planting and hydroponics, and perhaps a revenue-generating scheme so the green house is more sustainable, but plans are on hold until the First Nation works out the kinks with geothermal heating from a warm spring.

In the meantime, Johnson and her kids grow vegetables in the 2.5 metre feet by three metre greenhouse and in the garden. They've got kale and marigolds in planters in front of the rec centre — the recreation board paid for the planters, and said the kids could grow vegetables as long as they grew flowers too.

Getting kids into the garden this young, "plants a seed" Johnson says. "I always tell people we're growing gardeners. This year daycare started all of their own seeds, and looked after them in the window of the daycare." Now the kids water their plants faithfully, even the two-year olds. "They can handle a watering can," says Johnson.

She has been teaching the kids how to cook, so that they use the produce that they're growing. "We've done kale chips and wonton soup and stuff like that — cause a lot of [kids] don't always get to taste those kinds of things."

There's no grocery store in Burwash, though is there a small convenience store in nearby Destruction Bay. Fresh produce is scare, and to stock up, community members have to drive to Whitehorse, a six-hour round trip. Johnson says the community sees the benefit of the greenhouse. "The kids get to take cucumbers and tomatoes home, and lettuce. The leftover produce goes to the First Nation office and people come and get some if they want it."

As a community, Burwash Landing is historically familiar with gardening. "People were introduced to growing things very early here. The Dickson family had a homestead at the mouth of the Kluane River, and had a huge garden down there." Louis and Eugene Jacquot, too, had a big garden near the beginning of the 19th century. In a 2006 interview with Daniel Tlen, elder Jimmy "Copper" Joe recalled, "[The Jacquots] showed our people how to put in a big garden and everybody worked in that big garden and shared what they grew."

But the First Nations experience of gardening and farming in the Yukon was not always a happy one. Many First Nations people remember being forced to work in the school garden at residential schools. For them, working in their own community garden has become a way of healing past wounds.

Gardening initiatives can contribute to a community's health and wellness but the development of greenhouses and field vegetables can also lead to an increase in the scale of local food production. To follow this growing trend, next week's article will highlight new farming and agriculture programs on First Nations territories.

This article is part of a series commissioned by the Yukon Agricultural Association and funded by Growing Forward 2, an initiative of the governments of Canada and Yukon.

Farming helps First Nations reconnect with the land

Friday December 16, 2016

Tr'ondëk Hwëch'in photo

The Tr'ondek Hwech'in's farming initiatives are a link back to the land, says Dexter McRae, the First Nation's director of human resources, education and training.

Miche Genest

Special to the News

Interest in the future of sub-arctic agriculture is growing exponentially. The use of new technologies and renewable energy might one day make year-round farming possible in some of the coldest climates on Earth.

But northern agriculture is not a just a frontier of high technology. It's also an opportunity for Yukon's First Nations.

How does a hunter-gatherer society come to embrace gardening and farming? In some ways, the answer is simple: food security, healthy living, and self-sufficiency.

But gardens and farms also bring the community back to the land to engage with its traditional territory in a relationship that links the past and the present.

Dexter McRae, the director of human resources, education and training with the Tr'ondek Hwech'in in Dawson City, says the First Nation's farming initiative in its traditional territory is a way to blend influences of Southern culture on their people, and to maintain the best of both worlds.

"First Nations in general have always yearned to get back to the land and pursue traditional cultural pursuits, being outdoors, respecting the land, the air, the water," McRae says. Though farming is not an obvious first choice, it provides a way to meet that need.

In 2014, the Tr'ondek Hwech'in signed a memorandum of understanding with Yukon College to develop a sustainable, year-round teaching and working farm on its traditional territory. The long-term goal is to develop several plots of land within the traditional territory, but for now the focus is on 37 hectares on the Klondike River just outside of Dawson. The area was used as farmland until the mid-1900s (known as the Strachan Farm) and a dairy operation run by the Fournier family in the early 1900s.

For the last 40 years the land has been fallow, used occasionally by TH for general assemblies. TH has named the site Nan kak nizhi' tr'enohshe gha etr'ehoh'ay, or "On the land we learn to grow our food" and as of June 2016 the farm school was up and running.

Twelve fully-equipped wall tents housed 20 students from four First Nations, ranging in age from 16 to 62. Students ploughed, harrowed and seeded four acres of land by the end of May. Each student had a research plot, for which they chose their own seeds and plants. They reported their findings back to the group, feeding their expertise back into the project. Students received approximately 400 hours of classroom instruction and did 600 hours of fieldwork, for which they were paid.

It was a good first year, MacRae says. "2016 was hugely successful with respect to student learning and produce development," he says. "Thousands of pounds of potatoes, carrots, beets and other vegetables were grown. Yukon College is working to enhance the farm school curriculum in the 2017 season and a number of 2016 students are keen to return next summer."

Research is another major component of the farm project. Yukon College's goals include developing innovative approaches to year-round northern Yukon farming, exploring energy sources such as geothermal energy, and finding opportunities to provide work experience for college students. The Yukon College Cold Climate Innovation centre is working to design and build a made-in-the Yukon greenhouse that will be able to produce vegetables year-round, and MacRae hopes it will be up and running next year.

For TH, another important aspect of the project is incorporating traditional medicinal plants into the farm, even transplanting berries from the wild, so that elders who can't go out picking in the bush anymore will have access to an activity vital to their wellbeing.

Eventually, TH sees itself having a leadership role in establishing markets on behalf of all Klondike region farmers, reaching into Old Crow and Fort MacPherson to provide those communities with fresh produce.

“It would be natural for us to help with that market expansion on behalf of other farmers, [to encourage] our fellow First Nations to buy their excess pork,” McRae says. “There’s also the possibility of a farm-gate store, or a community supported agriculture initiative, as long as such initiatives don’t infringe on local farmers.”

With the farm school and the eventual working farm, says McRae, TH is part of a community of citizens, residents and farmers with a goal of fresh food in the Klondike, recognizing that food security is important to everyone.

The rest of Canada is watching the project with keen interest. Maclean’s magazine and CBC have recently featured stories about the school’s program, an ambitious, innovative local agriculture initiative that models the ways in which a community North of 60 can contribute to its own food security.

This article is the last of a series commissioned by the Yukon Agricultural Association and funded by Growing Forward 2, an initiative of the governments of Canada and Yukon. If you are looking for more information about what is produced on local Yukon farms, please visit http://www.yukonag.ca/guide