

Father Pandosy planted this apple tree in 1859. It was still standing in 1950.

Photo courtesy of the Kelowna Museum

Garden of Eden: The History of Apple Orchards In the Okanagan Valley

Okanagan History Vignette



Women picking apples in the Pridham Orchard in Kelowna, 1915

Courtesy of Leathly Collection, Kelowna Museum

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Art Rogers Arrives in the Okanagan

In 1920, seven-year old Art Rogers and his family arrived in Kelowna. They had travelled by train on the Canadian Pacific Railway from Viceroy, Saskatchewan, to Okanagan Landing in British Columbia. Art's family then boarded the *S.S. Sicamous* for the boat trip down Okanagan Lake to Kelowna. It was a long trip from Saskatchewan to British Columbia, but finally they arrived in the Okanagan Valley. Many people called this valley the Garden of Eden because of the hot summers, mild winters, and great growing conditions. Art and his family were ready to start a new life in the Okanagan Valley.

Art's involvement in the apple industry began shortly after he arrived in Kelowna. When he was just eight years old, he worked for an East Kelowna orchardist. His job was to pick up apple tree prunings. Art and his family lived in a house that was located on the orchard. In exchange for Art's labour, the orchardist charged the family less rent.



Art Rogers at 4 years

Art continued to do odd jobs in apple orchards while he was a student. When Art was fifteen years old, he got a steady job in a Kelowna orchard. By this time, there were ten children in the Rogers' family, so earning an income to help the family was more important than going to school. Little did Art know when he was a young boy in the 1920s that he was just beginning a long life in the apple industry.

Early Days in the Apple Industry

The first apple trees were planted in the Okanagan over sixty years before the Rogers' family arrived in Kelowna. Father Pandosy, a priest, had arrived in Kelowna in 1859 to set up a Catholic mission. He was one of the first white settlers in the Okanagan Valley. On the mission property, Father Pandosy planted a few apple trees. He wanted apples just for use at the mission, not for sale. The Okanagan's first commercial orchard did not appear until over 30 years after Father Pandosy planted his first few trees.

Many orchards in the Okanagan Valley started as cattle ranches, like the Postill Ranch outside Vernon and the Ellis Ranch near Penticton. Ranches were popular with early settlers because land was cheap and cattle were easier to care for than apple trees. Cattle could be set free on a ranch to graze and fatten up with very little human care needed. Also, cattle could be walked to the railhead. Fruit farming, on the other

hand, took more physical manpower from start to finish, and transportation was needed to get the fruit to market. It was not until 1892 and the arrival of the Shuswap and Okanagan (S & O) Railway to the Okanagan Valley that commercial fruit farming became a viable business. At long last, fruit and other produce grown in the Okanagan Valley could easily be shipped on the S & O Railway and its connection to the Canadian Pacific Railway's transcontinental train at Sicamous. Once the obstacles of getting the fruit to market were overcome, many cattle ranchers branched out into fruit growing.

Lord and Lady Aberdeen

Lord Aberdeen started some of the earliest commercial orchards in the Valley. Lord and Lady Aberdeen, who had come to British Columbia from Great Britain, were convinced that apples could be grown in the Okanagan Valley. In the early 1890s, Lord Aberdeen bought the 13,000acre (5,261 hectare) Coldstream Ranch near Vernon and the 480-acre (194 hectare) McDougall Ranch in Kelowna. The McDougall Ranch was renamed Guisachan (pronounced GOOSH-a-gun) after Lady Aberdeen's home in Scotland. Lord Aberdeen started by planting 100 acres (40.5 hectares) of apple trees at each location. He then sold the fruit to other settlers in the area. The Aberdeens spent a considerable amount of money and time encouraging others to start fruit farming in the

Okanagan Valley. Lord Aberdeen was so convinced of the profitability of apple growing that he later subdivided some of his Coldstream Ranch into 10 to 40 acre (4-16 hectare) parcels to be sold for commercial orchards. By 1893, he had sold 900 acres (364 hectares). Lord Aberdeen was successful in encouraging middle and upper-class English people to immigrate to British Columbia. In fact, the Coldstream Ranch acquired a British atmosphere because of the many British people who settled there.



Lord and Lady Aberdeen and their children

Photo courtesy of the Kelowna Museum

After the success of the Aberdeens, fruit growing was seen as being a profitable business in the Southern Interior. People from all over the world came to the Okanagan. However, many immigrants who started growing apple trees in the 1890s were greenhorns. They came to the Okanagan Valley to make their fortune in orcharding, but they knew little about growing apples. Soon they realized that fruit tree farming was a tough business. They faced many hardships like various insect problems, poor irrigation techniques, cold winter freezes, unsuitable fruit varieties, low fruit prices, and poor transportation methods. In addition, many of the newcomers did not realize they had to wait four to six years for their trees to bear fruit. Some gave up growing fruit trees. They either began growing other crops, or they sold their land. Early orchardists with extra money in the bank were better able to withstand the high start-up costs of fruit growing.

The Need for Education

With all the new orchardists, it quickly became obvious that education programs were needed. So, in 1910, packing schools were set up in British Columbia to teach people how to work in the fruit industry. The course cost \$1.00 and was two weeks long. Students were taught how to grade apples for size and colour and how to pack the fruit into boxes so that the fruit would not bruise during transport. Several different packing styles were used based on the size of the apples. The square packing style could hold the most apples, up to 250

apples in a box. But the more apples per box, the more likely the apples would bruise. The fruit schools proved to be so popular that a permanent school, called the Government Fruit Packing School, was opened in Kelowna in February 1913.



McIntosh apple tree in full bloom. Art Rogers' orchard, East Kelowna.

The early orchardists were also not very knowledgeable about the different varieties of apples. Often apple varieties were chosen just because the owner had heard of them growing well in other parts of Canada, the United States, or Europe. But many of the first varieties

were not suitable for the Okanagan Valley. Even in 1905, the local fruit growers were encouraged to select and grow just one of the hardy varieties of good apples. One early variety, the McIntosh, is still grown today. Apple varieties also came in and out of favour. In the 1910s, there were mostly Jonathans and McIntoshes. Then the Jonathans lost popularity, so many orchardists cut down their Jonathan trees. Years later, the Jonathans became popular again. The same thing is happening today. The McIntosh apple is falling out of favour, and many fruit tree farmers are cutting down their McIntosh trees. What will be the fate of the noble McIntosh?

Another major change in orchard practices is the switch to dwarf varieties of trees. In the old days, most trees were over twenty feet high, and orchards could only contain about 100 full-sized trees per acre. Now, the majority of trees planted are dwarf varieties. These dwarf trees do not grow much higher than seven or eight feet, making them especially easy to prune, spray, and pick. In addition, 600 to 800 dwarf trees can be planted per acre. Dwarf trees give more apples per acre, and usually, more apples mean more profits for the growers. The miniature trees also start producing fruit within two to three years of planting, compared to the old, full-sized varieties that took four to six years. However, dwarf trees are unable to support their own weight, so

orchardists must support them with expensive posts and wire. Still, the number of acres in dwarf apple trees increases every year.

Technological Changes

Technological changes have also brought improvements to the apple industry and helped to increase yields. Holes for apple trees used to be dug by hand. In 1958, when Art Rogers planted his 6 ½ acre (2.6 hectare) orchard, he dug over 600 holes by hand. Now, a post-digging machine digs the holes. At the turn of the last century, most orchard work was done manually with the help of horses. Now gas-powered tractors do most of the work. In the past, spraying was all done by hand.



Spraying in an early orchard

Photo courtesy of the Kelowna Museum

Today, there is a mechanized sprayer with an engine and pump, and the operator barely has to touch the pesticide at all. All the picking and pruning used to be done by people on ladders. Now some orchardists use a girette, a machine developed by Ted Thornton of Oliver in 1956, which is used for picking and pruning.



A girette in Art Rogers' orchard used for picking and pruning

The technological advances to sorting and packing are significant as well. In the early days, apples were sorted and packed by hand, usually right at the orchard. Now sorting and packing are high-tech operations. The main sorting and packing company in the Okanagan Valley is the BC Fruit Packers Cooperative (BCFPC) in Kelowna and Summerland. Two-thirds of all Okanagan apples are now sorted and packed by the BCFPC. Apples are mechanically sorted for colour, size, and grade. A computer judges the redness of the apple. The redder the apple, the better the grade. Apples with little colour are separated from those with more colour. A mechanized conveyor belt also sorts the apples by size. A combination of humans and machines sort the apples into grades: extra fancy, fancy, C grades, and culls. The lower grades are made into juices and other prepared foods. The fancier grades are sold in the Okanagan Valley and around the world as fresh apples. After all the sorting is done, workers at the packing house place the apples onto corrugated cardboard trays that are then put into boxes for shipping. On one busy day at the BCFPC packing house in Kelowna, the workers sorted and packed 10,000 forty-pound (18-kilogram) boxes, or over 400,000 pounds (181,440 kilograms) of apples!



Apples heading to juice plant. Oliver Packing House, 1950.

Photo courtesy of the Kelowna Museum

Orchard Profits and Problems

The profitability of orchards has fluctuated over the last 110 years. For example, the Depression years of the 1930s hurt the Okanagan fruit growers. Many people around the world could no longer afford to buy fresh, imported fruit. As a result, British Columbian apples were not selling as well as they had before, and prices dropped. First grade apples were selling for only 20 cents per 35-pound (15.9 kilogram) box! Okanagan orchardists were not even earning enough to recover their costs. But they agreed they were not going to just give away their fruit. Their slogan was "a cent a pound or on the ground." This meant they would rather let their apples fall to the ground and rot than sell them for less than one cent per pound! Besides the fluctuation in apple prices, there were three other major obstacles that caused problems for Okanagan fruit growers: lack of water, poor weather, and bothersome bugs.

Irrigation Then and Now

Early Okanagan fruit growers realized that they needed an effective irrigation system if they were to be successful. There was not enough rainfall in the Okanagan, at least in the South and Central Okanagan, to support orchards. Many people may ask, "Why didn't they

use water from Okanagan Lake to irrigate the orchards?" But in the early days, there was not the technology to pump large quantities of water out of the lake onto the orchards. So, the orchardists had to develop other ways to irrigate their land.



Irrigation system with flumes, pipes, and ditches.

Photo courtesy of the Kelowna Museum

Early irrigation consisted of damming creeks at higher elevations and then using pipes and flumes made of wood to carry water to the orchards. Ditches were dug between the rows of apple trees so the water could flow directly to the tree roots. This method wasted a great deal of water because of leakage from the pipes and evaporation from the open ditches. Later, pipes were made of steel or cast iron which did not waste as much water. Nowadays, most orchardists use plastic underground pipes. These pipes are connected to pressurized irrigation district water lines. The pressurized system forces water through the pipes, and then the water is available to the sprinklers on demand. Some orchards still have 10 to 12 foot high (3 - 3.7 metres) sprinklers that spray water on top of the trees. Other orchardists have installed the most recent irrigation method—the microjet system. With the microject system, plastic sprinkler pipes extend just 12 inches (30.5 centimetres) above the ground spraying a light mist to individual trees. This misting system is more cost effective because there is not much water lost to evaporation. With increasing water costs, orchardists continually strive to conserve water.

The Importance of Weather

Weather is always a concern for orchardists. Late spring frosts, cold rainy summers, strong winds, and freezing winters can all affect the quality of the fruit. Fortunately, the bank of clouds that generally hangs over the Okanagan Valley in the winter prevents the killing of fruit trees. The clouds tend to keep the valley warmer. However, even with the cloud cover, on average there is a killing frost every seven years in the Okanagan Valley. Sometimes, an extreme winter can bankrupt an

orchardist. For example, many North Okanagan orchardists went out of business after the severe winter of 1949-50 killed the majority of their fruit trees. In fact, the Salmon Arm apple industry really never recovered after that winter.

Codling Moths

If lack of water and extreme weather conditions were not enough, orchardists have also had to deal with insects. One of the main pests that apple farmers have to deal with today is the codling moth. The damage caused by this moth is twofold. The larva, or moth worm, burrows its way into the apple, leaving a trail of chewed material in its wake. This chewed material is called frass. The frass ends up on the outside of the apple making it unsightly and undesirable to eat. Secondly, the burrowing damage done by the larvae frequently causes the fruit to drop to the ground prematurely. These damages have cost orchardists millions of dollars over the years.

The codling moth has been in the Okanagan Valley for about 80 years. It is thought that the codling moth was brought to Canada from Europe. In the 1920s, there were very few codling moths in the Okanagan, and the orchardists and the government wanted it to stay that way. The government was so concerned about the spread of the codling moth that government workers would go from orchard to orchard

spraying all the apple trees. In those days, the spray was made from arsenic of lead, which is now known to be poisonous to both animals and humans. Art Rogers remembers that just after he and his family arrived in Kelowna, there was a government reward available to anyone who found a codling moth grub or chrysalis. But unfortunately, the codling moth gained a foothold in the Okanagan Valley. By the 1930s, Art remembers finding up to 6,000 codling moth chrysalises in just one sweep of the orchard! Every year orchardists spend a great deal of money spraying their trees to kill the codling moths as well as other pests.

The government has now introduced the Sterile Insect Release (SIR) program to try to eliminate the codling moth. In the SIR program, scientists irradiate codling moths to make them infertile. The moths are then released to breed with other moths. But the infertile moths cannot reproduce, so there are no offspring, and the number of moths decrease. The SIR program has had some success in the South and Central Okanagan Valley. In the Osoyoos-Oliver area, over 95 percent of the orchards had no codling moth damage in 2000. However, the codling moth has not yet been exterminated completely, so orchardists must continue spraying to kill the moths in their trees.

Rising Costs

The costs of fruit farming continue to increase, but unfortunately orchardists' income has not risen accordingly. Therefore, many orchardists are now cutting down their trees. In the 1970s in the Okanagan Valley, there were over 10,000 hectares (24,710 acres) planted in fruit trees. By 2001, that number had dropped to about 7,200 hectares (1,779 acres). Part of this reduction is due to the fact that the prices fruit farmers are getting for their apples are not rising with their costs. For example, in the early 1900s, orchardists earned a few cents for each pound (.45 kilogram) of apples. In 2000, they were only getting 5 or 6 cents a pound for some varieties. There are government programs in place to help the orchardists, but many fruit tree growers are still opting out of the orchard business altogether. Apple farmers in the Okanagan have encountered many obstacles over the past century. But most orchardists have been hardy individuals who have overcome many hurdles to help make the Okanagan Valley the apple bin of British Columbia.

The Continuing Story of Art Rogers

Art Rogers was one of those hardy orchardists. From 1920 to 1958, he worked for other orchardists doing whatever jobs were assigned to him. He enjoyed the orchard life so much that he saved his

money, and in 1958 he bought 13 acres (5.3 hectares) of land in East Kelowna. He planted 6 ½ acres (2.6 hectares) in apples and left 6 ½ acres in pasture. Over the next 40 years, on his own acreage, Art was involved in all aspects of apple growing: planting, pruning, picking, spraying, and packing. Art and his wife, Laurie, did most of the work on the orchard themselves. Art would do the pruning



Art Rogers, 1965

and spraying, and both of them would do the picking. They grew several varieties of apples, like Spartan, McIntosh, Fuji, Gala, and Jonigold. Since the apples matured at different times, Art and Laurie were able to keep up with the picking schedule. With just 6 ½ acres (2.6 hectares) in apples, Art realized he could not make enough money to live off the orchard profits, so both he and Laurie found work in town. They worked full time yet still looked after all the chores on their own orchard. In 1975, they leased the land to someone else. Art was 63 years old and ready to retire. However, even in the year 2000, Art and Laurie helped pick apples on their land. There was a shortage of pickers, and all

hands were put to work. Art, at 86 years of age, and Laurie, a few years younger, still had the stamina to pick apples.

Art and Laurie Rogers are typical of the people who have played an important role in the history of apple orchards in the Okanagan Valley. Art was asked, "What have you liked and disliked about growing apples?" He replied, "I have enjoyed everything. I have no regrets after 80 years in the apple industry." It is because of hardy people like the Rogers that the apple industry has endured in the southern interior for over 140 years. Art thinks the future of apple growing in the Okanagan



Art and Laurie Rogers, 1998.

depends on active support from the public. "People, especially residents of British Columbia, must make an effort to buy BC apples if the industry is to survive." Small and large orchardists alike deserve support and applause from all Okanagan Valley residents. The orchardists' majestic apple trees truly make the Okanagan Valley the Garden of Eden.

Glossary

burrows	digs into something
chrysalises	insects in a cocoon state
corrugated	wrinkled or ridged or grooved
fluctuation	the rise and fall of something, like prices
flumes	inclined channels for carrying water
greenhorns	inexperienced individuals
grub	a soft thick wormlike insect
infertile	unable to produce offspring
irradiate	expose to radiation
larva	the wingless often wormlike form in which insects hatch from the egg; plural – larvae
pesticide	chemicals used to kill insects, rodents, or weeds
prune	to cut off unwanted parts of a tree
railhead	end of a railway line
slogan	a saying or a phrase that expresses the feelings of a group of people
stamina	active strength
viable	workable, able to be profitable
yields	products, or returns on an investment