

Learning Sources



PROJECT Agriculture
Project-Based Learning and
Teaching Series

Change with the Times

Does change always result in progress?



www.albertamilk.com/teacher-resources/

©Alberta Milk 2017

Permission is granted to make copies of any or all parts of this resource for educational, not-for-profit use only.

Readers should be aware that Internet websites offered as citations and/or sources for further information may have changed or disappeared between the time this was written and when it is read. Teachers are cautioned that all websites listed in this resource should be checked for appropriateness and suitability before being provided to, or used with, students.

Every effort has been made to acknowledge sources used in the **PROJECT Agriculture** resources. In the event of questions arising as to the use of any material, we will be pleased to make the necessary corrections in future printings. Please contact Patricia Shields-Ramsay at InPraxis Learning at 780.421.7163.



This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-sa/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.



First Farmers

First peoples lived with great respect for their environments. They made little change to the landscape over thousands of years.

Where they lived had an impact on how they lived. For example, people in the north had a different lifestyle from those in the south. First peoples shared a knowledge of and respect for nature that affected every part of their lives.

“Over thousands of years, each First Nation developed its own methods of surviving on their traditional lands.

The Iroquois Confederacy had sophisticated farming skills and all First Nations relied upon fishing. But every First Nation depended on hunting and trapping. . . . Although resources and environments varied, large game and fur-bearing animals provided the food, shelter and clothing that were vital to survival.”



Harvey McCue and Associates
for Aboriginal Affairs and
Northern Development
Canada (2012). *The Learning
Circle: Classroom Activities on
First Nations in Canada - A
Learning Resource for Ages
12 to 14.*

Many First Nations and Inuit people lived in small, mobile groups. They travelled in regular patterns, based on the four seasons. They travelled throughout **traditional territories**, the lands their ancestors had also occupied.

How can you honour the treaty land on which your community resides?

Seasonal movements allowed people to make the best possible use of all resources available to them. This included hunting and agricultural activities. Bison were very important as a source of food and other materials for some First Nations peoples. Pronghorn antelope, mule deer, elk and prairie birds were also plentiful.

Hundreds of seasonal plants, such as wild turnip and Saskatoon berries, were part of the diet of Plains First Nations. They “farmed” the prairies, collecting these plants and using them for food, medicine, ceremonies and construction materials.



First Nations peoples introduced hundreds of food crops to Europeans, including corn, potatoes, sunflowers, tomatoes and squash. First Nation foods now make up 60 percent of crops that are now grown around the world.

Did it surprise you to know that First Nation foods make up 60 percent of the world's crops? Why or why not?

First Nations peoples had a great knowledge of the natural resources and climate of the prairies. This knowledge was important to their own agricultural practices. It also became important to the agricultural practices of early European settlers and farmers.



First Nations Agriculture



“A team of archaeologists on the banks of the Red River have collected evidence that the First Nations people of the Prairies, long thought to be nomadic, were in fact sophisticated farmers who had villages and the means to plant, grow and store food.”

Watch the video for more information on the CTV News website at www.ctvnews.ca/sci-tech/archeologists-uncover-evidence-of-early-aboriginal-agriculture-on-the-red-river-1.2956128.

Photo Credit: **CBC News** (June 20, 2016). *Anthropology students digging at Lockport site for connections to Aboriginal agriculture: 5-week excavation project looks to unearth clues to first farmers in the Red River valley.*
www.cbc.ca/news/canada/manitoba/anthropology-students-lockport-farmers-1.3644247

Sources: *Traditional Life on the Land: Aboriginal Perspectives on Walking Together: Connection to Land and Aboriginal Reserve Agriculture to 1900* in **The Encyclopedia of Saskatchewan**.

Dario Balca (June 21, 2016). *Archaeologists uncover evidence of early aboriginal agriculture on the Red River.*

CTVNews.ca www.ctvnews.ca/sci-tech/archeologists-uncover-evidence-of-early-aboriginal-agriculture-on-the-red-river-1.2956128



Growing Farms and Communities

Agriculture was the main reason that European settlers came to the land that was later to become Alberta. This means that the history of agriculture is strongly connected to the history of European settlement.

Fur traders grew crops of grains and vegetables near their posts, in flat areas such as those found by the Peace River. Other Europeans, including missionaries, also grew crops and encouraged agricultural activities.

Between 1871 and 1921, the Canadian government made treaties with different First Nations peoples. The government wanted to promote agriculture, settlement and resource development in the west and north.

Treaty 6, 7 and 8 were signed with First Nations people across different areas of what is now Alberta so the government could offer the land to new settlers. First Nations people were promised their own land, free education, medicine and farming animals and equipment. However, many of these promises were not completely kept.

First Nations people and the government representatives who signed the treaties understood these agreements differently. First Nations people saw the treaties as agreements to share the land and its resources. The government saw the treaties as a way to claim land for settlers and impose Europeans' ways of life on First Nations peoples.

As settlers arrived and started to build homesteads and farms, Alberta's rural ways of life took shape. Early **homesteads** were areas of land that families claimed by building a home and farming the land.



The rush for homestead land resulted in the development of new rural communities. Stores, post offices, churches and community halls were found in these small communities.

Wheat was an important agricultural crop during the time of early settlement. The sale of wheat to communities across Canada and other countries around the world encouraged the growth of many prairie communities.

Dairy farming was also important to Alberta's and Canada's agricultural history. Most early dairy production took place on small family farms.



Cattle Ranches



Agricultural history was also connected to large ranches. Cattle were brought by early European settlers. Most of these cattle were used for beef. In 1896, the government of Canada broke up the large cattle ranches to provide more land for settlement.

Photo Credit: Glenbow Archives NA-237-11



Advertising the West



Photo Credit: Provincial Archives of Alberta A7537

Before Alberta became a province in 1905, it was part of the Northwest Territories. This territory covered a large amount of land in western and central Canada. The Northwest Territories was divided into many districts. The Districts of Athabasca, Alberta, Saskatchewan and Assiniboia covered what is now the province of Alberta.

The government used advertising to persuade farmers to consider making the trip to these western districts. Posters were used to show the fertile land and a rich way of life. Settlers often found that life was not as easy as the advertisements said it would be.

How do you think different types of agricultural activities influenced what was found in early communities? How did these activities change the land?

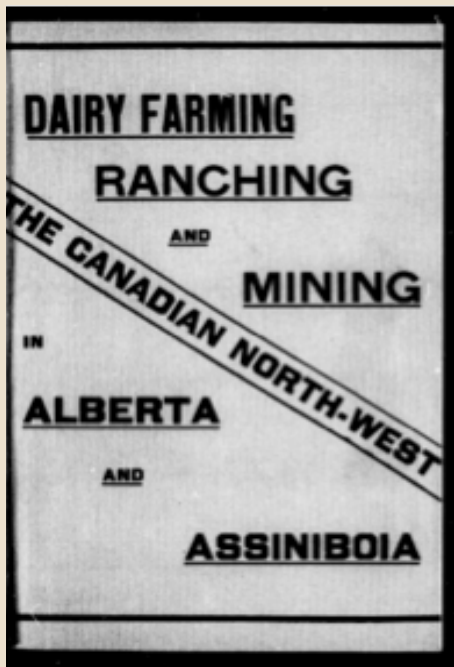


An account by James Ruby, Calgary, November 17th 1888

James Ruby farmed near Calgary in the late 1800s. In a pamphlet about farming in the districts of Alberta and Assiniboia, he wrote about the advantages of dairy farming.

You ask would I advise new settlers in Alberta to begin dairy farming at once?

Most decidedly I do, as it is the surest road to success and wealth. No matter how small his beginning, let him get a few cows, as many as possible, as many as he can milk and properly care for.



For instance (for example), a settler arrives here [with enough resources] to [build] a small house on this 160-acre homestead..., with horses, a **plough** (a tool used to prepare soil for planting crops) and **harrow** [a tool for breaking up and smoothing out soil], and with enough of seed to plant a few acres.

Then, if he has a wife, and \$100 left, let him buy two cows; if more money... more cows — say five cows the first year.

From these he will be able to make butter daily during five months, worth in our market 25 cents.... This will support himself and wife. The milk will also feed three calves and a couple of pigs.

Now, it must be remembered that the care of these should not prevent him from **cultivating** [growing] a good garden and attending to a **goodly** (large) number of **acres** (hectares) of crops besides.

And it must be also remembered... that no matter how **favourable** (pleasant) the season may be, the garden and the cultivated acres may be a failure, but neither hail-storm nor frost affect the **returns** (payments) from properly attended milk cows.

[These activities will result in] **cooperative dairy farming** (when farmers work together and combine their resources), when the **creamery** (a place where dairy products like butter and cheese are made) will be established in the town. In this creamery, a... butter-maker... will produce from the best cream of Alberta the best creamery butter... in the world.

Source: Dairy Farming, Ranching and Mining in Alberta and Assiniboia. Accessed from Internet Archive: p. 39.

www.archive.org/details/cihm_30354



Trains, Towns and Agriculture

Did you know that some Alberta towns established before 1940 were planned by railway companies? If you look at a map of Alberta, you may notice that many Alberta communities can be found along train tracks and crossroads.

These towns were created so that rural homesteaders and farmers would be close to a centre where they could bring their crops and other agricultural products.

After the Canadian Pacific Railway was finished in 1885, small farms started to spring up all over the Northwest Territories and the Districts of Alberta, Saskatchewan and Assiniboia. The government believed that more settlement in the West would mean more food for all people living in Canada. The government also believed that the people who settled in the West would buy goods made by people who were living in the East.

What evidence can you find of railway routes in your community? How do you think these routes affected the growth of your community?

"Town Layout." *Atlas of Alberta Railways*. University of Alberta Press, 2005.



Main Street, Alberta



This 1927 photo of the village of Hughenden, Alberta shows Main Street from the view of the railway station.

Photo Credit: **Glenbow Archives** NA-1534-1



Railway Avenue



This 1948 photo shows the town of Redwater, Alberta at the corner of Railway Avenue and Main Street.

Photo Credit: Glenbow Archives NA-2497-9

Many of these early Alberta communities had similar features. They were sometimes so similar that people thought they all looked the same. What do you think the author of the quote below meant when he referred to the “repetition of technology?”

“Prairie towns all look alike: identical grain elevators, identical banks, identical railway stations, a main street that is called Main Street and a road along the tracks called Railway Avenue—when you’ve seen one, as they say, you’ve seen ‘em all. . . . The towns do not reflect the people who live in them but rather the repetition of technology.”

H. Roberston. *Grass Roots*. Toronto: James Lewis and Samuel, 1973.

What features do you think are common to prairie villages and towns? How do you think agricultural activities influenced the types of buildings found in communities?

What do you think could happen to a railway town if its railway line is abandoned? What do you think could happen to a town if its grain elevator is gone?



Growing Cooperative Communities

In 1895, the government of Canada started a program to promote the growth of dairy farming in the west. The government encouraged the development of **creameries**, places where dairy products like butter and cheese are made, as well as cheese factories.

Creameries had an important influence on the growth of many Alberta communities in the first three decades of the 1900s. They provide one example of ways that people in communities cooperated with each other to improve their ways of life.



Alberta's First Creamery



The photo shows an aerial view of the first Creamery in Alberta. Big Hill Spring Creamery was located 9.5 kilometres from Cochrane, Alberta. Read the story that follows to find out more.

Photo Credit: Provincial Archives of Alberta A3993



Cochrane's farming landscape has gone through change

The one thing constant in this world is change. Cochrane has seen more than its fair share of change, even though we cherish our history and try to keep the past alive. We will not forget our hard-working dairy farmers and how they managed without the convenience of refrigeration in the early days.

D.M. Ratcliffe (later Brealey's Creamery) built a creamery at the present site of Big Hill Springs Provincial Park in the 1890s, even though it was difficult to access with the surrounding steep hills. The clear, cold water served as a refrigerant for the cream and it was the first operation in Alberta to produce butter. . .

Because of the difficult trails getting into Big Hill Springs, with some farmers losing their hard-earned load, a farmers' association was formed, opening the Cochrane Creamery on Highway 1A and Centre Avenue where the Shell service station used to be located. In 1921 it was moved west, north of Highway 1A on the banks of Big Hill Creek. . . .

In 1975, the Cochrane Creamery was closed and the building sold. At this point, our agricultural industry changed its 80-year history drastically. Ranching, grain and hay operations had taken the place of small mixed farming.

"Years ago there were dairy cows on every quarter section farm. Farmers raised pigs, chickens, milked their cows; women baked their own bread and had a big garden; they were all very self-sufficient and yet had lots of time to socialize. . . ."

Today, Marg Chalack still owns the property on which her son David is operating Rocky Mountain Holsteins with two other partners and says, "We are the only dairy farm left within a 30 mile radius of Calgary."

Marg added, "The oil companies coming in created much of this change. They paid well and young people were no longer available for weekend work. It's a new world out there, no neighbourhood mix. Everyone is in such a hurry and has no time to socialize, except for social media."

What perspectives about change are presented in this story?



Markerville Creamery



The Markerville Creamery was constructed in 1902 in the **hamlet** [a small village] of Markerville. It was established as part of a **cooperative association** [a business formed when farmers work together and combine their resources] of community farmers. An ice house was built close by in 1902.

The Markerville Creamery was the first creamery west of the Red Deer River. It was an important source of money for many farmers in central Alberta.

Photo Credit: Glenbow Archives NC-4-41



Donalda Cooperative Creamery Association



The Donalda Cooperative Creamery Association was formed in 1937. Many farmers and creamery owners formed cooperative associations so they could work together.

The Creamery was moved to this building in 1954. It still used the technology and equipment from the 1920s and 1930s. This equipment included a **Babcock Tester**, which was used to measure the fat content in milk. It also included a cream tester, a **centrifuge** [a machine that rotates at high speeds to separate liquids from solids], bottle holders, scales, a cream can washer and butter churns.

Photo Credit: Canada's Historic Places: Alberta Culture and Community Spirit, Historic Resources

Management <http://www.historicplaces.ca/en/rep-reg/image-image.aspx?id=16522#i1>



Cheese Coops



The Ridge Valley Coop Cheese Factory operated at Crooked Creek in the South Peace area between 1939 and 1948.

Farmers had a **surplus** [an amount that is more than what is used or needed] of milk and no market for it, when they heard from friends and relatives in Linden, Alberta where people made money by selling milk to a cheese factory.

These farmers formed a cooperative in 1937. Members could pay in cash or by exchanging milk for work like logging, sawing lumber or building. . .

The cheese factory was built beside the Deep Creek, in which a dam was built to maintain a water supply. The water was filtered through sand and gravel leading to a well. The water supply was also of great importance because steam heat was needed to make cheese. In high water, the dam was often damaged and needed repair. (Sometimes) beavers moved in and took on the repair job.

Much could be said about the early hardships of the cooling and delivering of milk. Without deep wells for real cold water and no electricity, it was hard to cool milk fast and keep it good. Many of the milk shippers had ice houses. Ice was taken out and added to the tubs or barrels where the milk cans were cooling. Often milk was hauled by wagon and by buggy.

Cheese was made daily. The money from the sale of milk and cheese was the only real cash **income** [money that is received from providing a product or service] many farmers received. Cheese from the factory was sold to Horne and Pittfield Wholesalers. Cheese was also sold to other small grocery stores and to individual customers.

Adapted with permission from Fran Moore, "Pass the Cheese, Please." *Telling Our Stories*. South Peace Regional Archives, Volume 1, Issue 4, September 1, 2010: p. 6.

Photo Credit: South Peace Regional Archives



Cities and Farms



Rural and Urban



A mix of urban and rural communities makes up much of Alberta's landscapes. What title would you give to this photograph?



Home Delivery



Milk was delivered by horse and buggy for many years. This photo shows the Woodland Dairy delivery wagon in 1935.

Bringing Farm Products to Cities

First by horses and later by truck, the days of door-to-door delivery lasted nearly 70 years in Edmonton. Coal, milk, bread, ice, groceries, laundry, and a whole lot more were delivered right to the houses of citizens. In the days before drive-throughs and suburban malls, many people didn't own vehicles, and the convenience of having goods delivered right to your door was hard to beat.

One of the first dairies to operate **commercially**, or as a business, in Edmonton was the West End Dairy, which was located by 1899 at what is now at 110th Street and 99th Avenue.

In 1911, Warren Huff started a commercial dairy from his farm. By the 1920s, it was called Jasper Dairy. The dairy continued to operate until 1966, when it moved to Jasper Place and was sold to the Safeway Corporation.



City Dairies



Edmonton City Dairy & Barns (E.C.D. Co. Ltd.) was started by Warren Prevey around 1926. The building was known by a 15-metre high 7 258 kilogram steel plate milk bottle that was built on special order in New York City, assembled in Edmonton, and hoisted into place on the roof.

It served not only as a local landmark but also as the **condensers**, which converted steam into water for the dairy's refrigeration system.

The dairy later became known as Silverwood Western Dairies but the earlier name could still be seen on the bottle, which remained on the roof until 1977, when the building was demolished. The Edmonton City Dairy bottle was removed and eventually made its way to the Edmonton Exhibition Grounds as part of its Bonanza Park.

Continuing a tradition that stretched back to its very beginnings, Silverwood's Dairy continued to deliver milk by horse and wagon well into the 1950s. **Milk chutes**, or two-way openings to the outside and inside of a house, were popular design features of homes right into the 1960s, typically located right next to back doors.

Adapted with permission from Lawrence Herzog, *The days of door-to-door delivery. It's Our Heritage*, Vol. 28, No. 10, March 11 2010.

Photo Credits: **Glenbow Archives** ND-3-6981b and ND-3-6100b

What evidence of technology can you find in these stories? Describe two examples and explain if and how this technology is used differently today.



Early Agricultural Communities and Neighbourhoods



This photo shows milkers at the Hays Farm in about 1940. This dairy farm was located in what is now the city of Calgary. The Haysboro neighbourhood in Calgary is found on land that was owned by Harry Hays.

The Hawkwood neighbourhood in Calgary was named for a dairy farming family who came to Alberta from England in 1913.

In Edmonton, 111th Street was once a country road between two sections of land. It separated two farms that were located north of present day 71st Avenue. The Rife Dairy Farm was east of the road. The Calder Dairy Farm was west of the road.

The Wilson family lived in a farm house at 109th Street and 66th Avenue in Edmonton from 1925 until 1991. The farm house still stands, and is listed on the Alberta Community Development Historical Building inventory. Mr. Wilson operated Wilson's Dairy on this site from 1925 until 1939.

Photo Credit: Glenbow Archives PA-3131-137



Early Supermarkets



This photograph shows Lindahl's Supermarket and drugstore in Westlock around 1952.

In the mid 1900s, supermarkets started to spring up in cities. Although some supermarkets were started in the 1930s, the Depression and World War II prevented them from growing. By the 1950s, urban communities were ready for them.

- Supermarkets were large stores and often found on the outskirts of cities where there was available land for the store and parking.
- Shoppers picked their own items from shelves instead of a grocer filling an order for them.
- Prices were kept lower because the supermarkets bought large quantities. This affected farmers, who increased their production to provide more food products. Most food was now ordered from large companies, instead of small, individual farms.

Photo Credit: Provincial Archives of Alberta A13305

Can you find evidence in your community that helps you understand how it changed over time? Describe one example.



The Face of Progress

Like many other human activities, farming has changed since early homesteads were established. These changes also affected the growth of communities.

Do you think agriculture is important to the future of your community? Why or why not?

Fast Facts about Change in Agriculture

In 2014, there were almost 206 000 farms in Canada that produced materials and products. These materials and products range from grains and oilseeds to vegetables, fruits and animals.

However, the number of farms across Canada is decreasing. In 1921, there were over 700 000 farms. In 1981, there were over 300 000 farms.

Although the number of farms is decreasing, the size of farms is going up.

As farm size increases, farming needs more than a single farmer and part-time family help. This means that skilled farm workers are needed. Not all communities have enough workers.

The total number of dairy farms has also decreased over time. However, the size of the farms and the number of dairy cows on a farm has increased. Dairy farmers have learned to use technology and better farming methods to increase their production of milk.



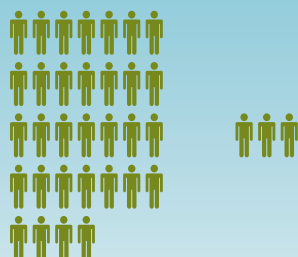
Changes in Farming

MORE THAN A CENTURY OF CHANGES TO CANADIAN FARMING

Over the past 110 years, there have been big changes in farming in Canada. Today, a decreasing number of farmers are working on fewer, larger farms to produce more food for a growing Canadian population.

FEWER FARMERS

Number of Farmers (Millions)



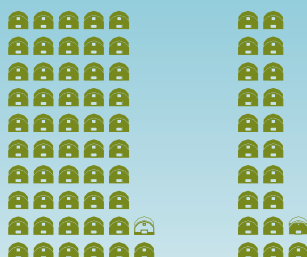
3.2
1901

▼ 91%

0.3
2011

FEWER FARMS

Number of Farms (1,000s)



511
1901

▼ 60%

206
2011

LARGER FARMS

Average Farm Size (Acres)



237
1941

▲ 228%

778
2011

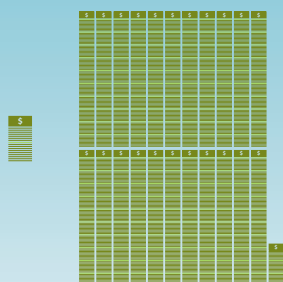


Source: Statistics Canada, www.statcan.gc.ca

* Using current dollar values, not accounting for inflation

HIGHER VALUED FARMLAND

Value of 1 Acre of Farmland (\$)*



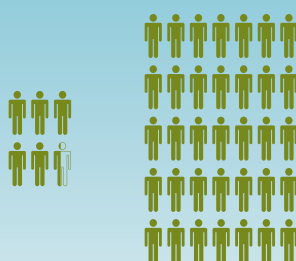
17
1941

▲ 13,000%

2,227
2013

MORE PEOPLE TO FEED

Canada's Population (Millions)



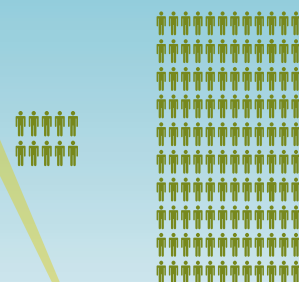
5.4
1901

▲ 548%

35
2014

FEEDING MORE PEOPLE

People Fed By One Farmer



10
1901

▲ 1,100%

120+
2011



Used with permission from Farm and Food Care Canada (2016). *The Real Dirt on Farming*: pp. 2-3. www.realdirtontfarming.ca/assets/docs/PDFs/2016-DIRT-ENG.pdf

In 1931, one out of every three Canadians lived on a farm. In 2014, one out of every 50 Canadians lived on a farm.

The total population of Canada is increasing. More and more people are moving to cities and towns, which are becoming larger in size. Cities and towns now cover much of the land that was once used to farm.

Farms are still owned by families. Over 98 percent of farms in Canada are family farms.

Farm families are getting smaller. In 1971, the average size of a farm family was 4.3 people. In 2011, the average size of a farm family was 2.9.

In 1900, one farmer produced enough food for 10 people. Today, that same farmer feeds more than 120 people. New and better technology equipment plays a big role.



Changing Populations

	1921	1931	1941	1951	1956	1961	1966
Total population in Canada (x 100 000)	88	104	115	140	160	182	200
Farm population in Canada (x 100 000)		33	32	29	27	21	20

	1971	1976	1981	1986	1991	1996	2011
Total population in Canada (x 100 000)	215	229	243	252	272	288	327.5
Farm population in Canada (x 100 000)	16	13	12	10	9	9	6.5

What patterns do you see in the population charts? Describe two patterns.

The average age of farmers has gone up. Fewer young people are involved with farming.

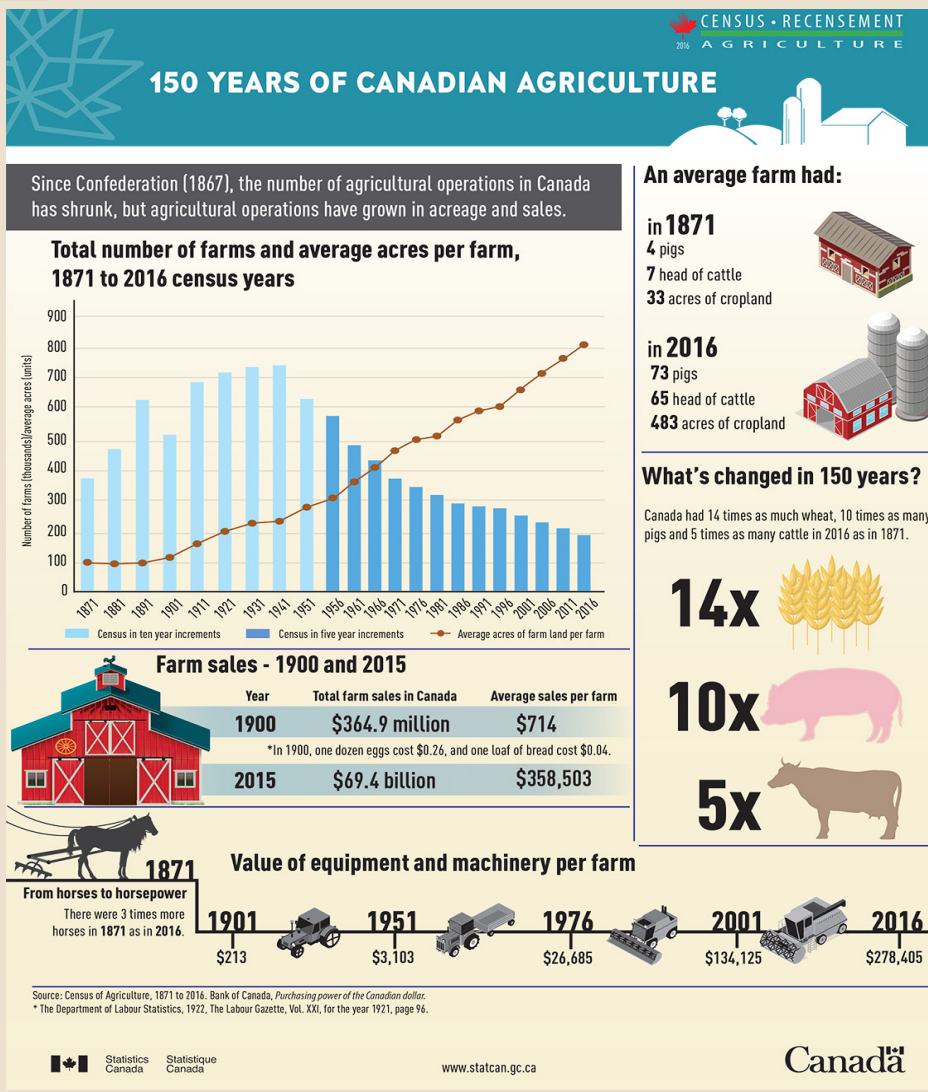
In 1900, 50 cents of every dollar earned was spent on food. In 2014, Canadians spent just over 10 cents of every dollar on food.

Changing interests and “tastes” of people who buy dairy products have also resulted in change. Different types of dairy products, such as yogurt, frozen yogurt, flavoured milks, dairy desserts, gourmet ice cream flavours and special cheeses, have become more popular over the past 20 years.

People are also increasingly concerned about health and nutritional value of the foods they eat. Organic dairy products, including fluid milk, are also becoming more popular.



150 Years of Change



Infographic from Statistics
Canada. [www.statcan.
gc.ca/pub/11-627-m/11-
627-m2017018-eng.htm](http://www.statcan.gc.ca/pub/11-627-m/11-627-m2017018-eng.htm)



Growing Agriculture

Agriculture: Canada's Success Story

The story of Canadian agriculture is one of a vital and forward-thinking industry that cares about the environment, animal welfare and producing safe, healthy food for a growing world. The facts tell the story:

Canadian families own
Canada's farms

98%
of farms
are family farms

Source: The Real Dirt on Farming II, Farm & Food Care Ontario, 2010

Agriculture is a growing industry

Canada is one of only a handful of countries capable of producing enough food to feed itself – and help feed a global population currently growing by 75 million people a year.

The world will need
60% more food by 2050
and Canadian agriculture will
help fill that demand

Source: CropLife Canada



A positive voice for Canadian agriculture
AgMoreThanEver.ca




Agriculture
more than ever

Infographic used with permission from Agriculture More Than Ever. www.agriculturemorethanever.ca/resources/ag-proud-photos/

Technology allows farmers to produce the same amount of plants or animals with fewer people. These larger farms also mean that some rural people now live further away from an urban community.

The future farmer will probably supervise his or her farm from a computer. On some of these farms, remote-controlled machinery will prepare the soil and plant the crops. These machines will check to make sure crops get enough water and fertilizer. As the crops grow, other machines will eliminate pests or disease that threaten them, then gather in the harvest and send it off to market.

On dairy farms, technology is also important. Farmers use new technologies like automatic cow-sorting devices. More and more, dairy producers use robots to milk cows.

What examples of change can you find in the two infographics? Which example do you think has the strongest effect on ways of life? Why do you think this?

Would you consider changes in agriculture to be progress? Why or why not?

Information and statistics from **Farm & Food Care** (2014). *Real Dirt on Farming*. www.journey2050.com/wp-content/uploads/2015/03/2014-DIRT-ENG.pdf; **Statistics Canada** (2012). *2011 Census of Agriculture Highlights and Analysis*. www.statcan.gc.ca/eng/ca2011/ha#a1-1-4; **Canadian Dairy Commission** (2016). *Production*. www.cdc-ccl.gc.ca/CDC/index-eng.php?id=3801.