

Finding Alberta Beef



Places, Spaces and Stories
about Beef Cattle Farming
and Ranching in Alberta for
Elementary Classrooms

Grade 5

LEARNING PAGES

**Finding Connections to Land,
Agriculture and Ways of Life**



The **Finding Alberta Beef** learning pages encourage students to explore cattle farming and ranching in Alberta. From family farms and ranches, passed down through generations, to new, state-of-the-art feeding and breeding operations, Alberta’s farmers and ranchers are proud of their industry.

The many authentic photos and stories used in these learning pages share the land, resources, experiences and stewardship that are part of Alberta cattle farming and ranching families.

It is our hope that students develop understandings of the ways of life involved in raising cattle and contributing to Alberta’s and Canada’s food system while respecting the different choices that people make about their food. Alberta Beef Producers is proud to support education and provide the **Finding Alberta Beef** resources for teachers and students in Kindergarten to Grade 5 Social Studies, Science and Health/Wellness programs.

Alberta Beef thanks the cattle farmers and ranchers who have shared stories and photos that are used in these resources.

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Every effort has been made to acknowledge sources used in the **Finding Alberta Beef** 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 versions.



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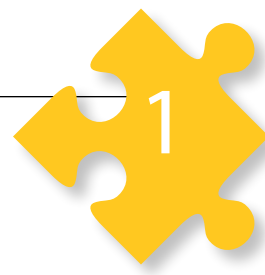
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These **Finding Alberta Beef** learning pages are part of a mini-unit that encourages students to explore Canada’s agricultural communities and the importance of the beef production industry to Alberta’s vitality.

Student learning pages in this resource include photos and stories from current Alberta cattle farms and ranches and some feature fillable fields that allow students to respond and save their work as evidence of their learning.

The food we eat is connected to Canada's natural resources



The food we eat is not just essential to our own wellbeing and health. It is also connected to jobs that people do across Canada, the environment and strong and healthy communities.

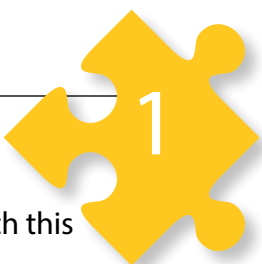
How do you think food gets from the farm to the grocery store – and finally to your plate? The food system involves many different factors and elements. It starts with – and depends on – natural resources. The types of natural resource in an area or region depend on the features of the land, the bodies of water and the climate. Air, water and soil are found everywhere.

Describe or sketch three natural resources you think are most important to food and farming.

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How can you use these examples to write a definition of natural resources?

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Finding Agriculture

Pick **one** agricultural product. Identify the regions of Canada in which this is a top product. Explain why you think this is a top product in these regions.



What agricultural product interests you most?

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In what regions is this an important agricultural product?

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Why do you think this product is grown or raised in this region or regions?

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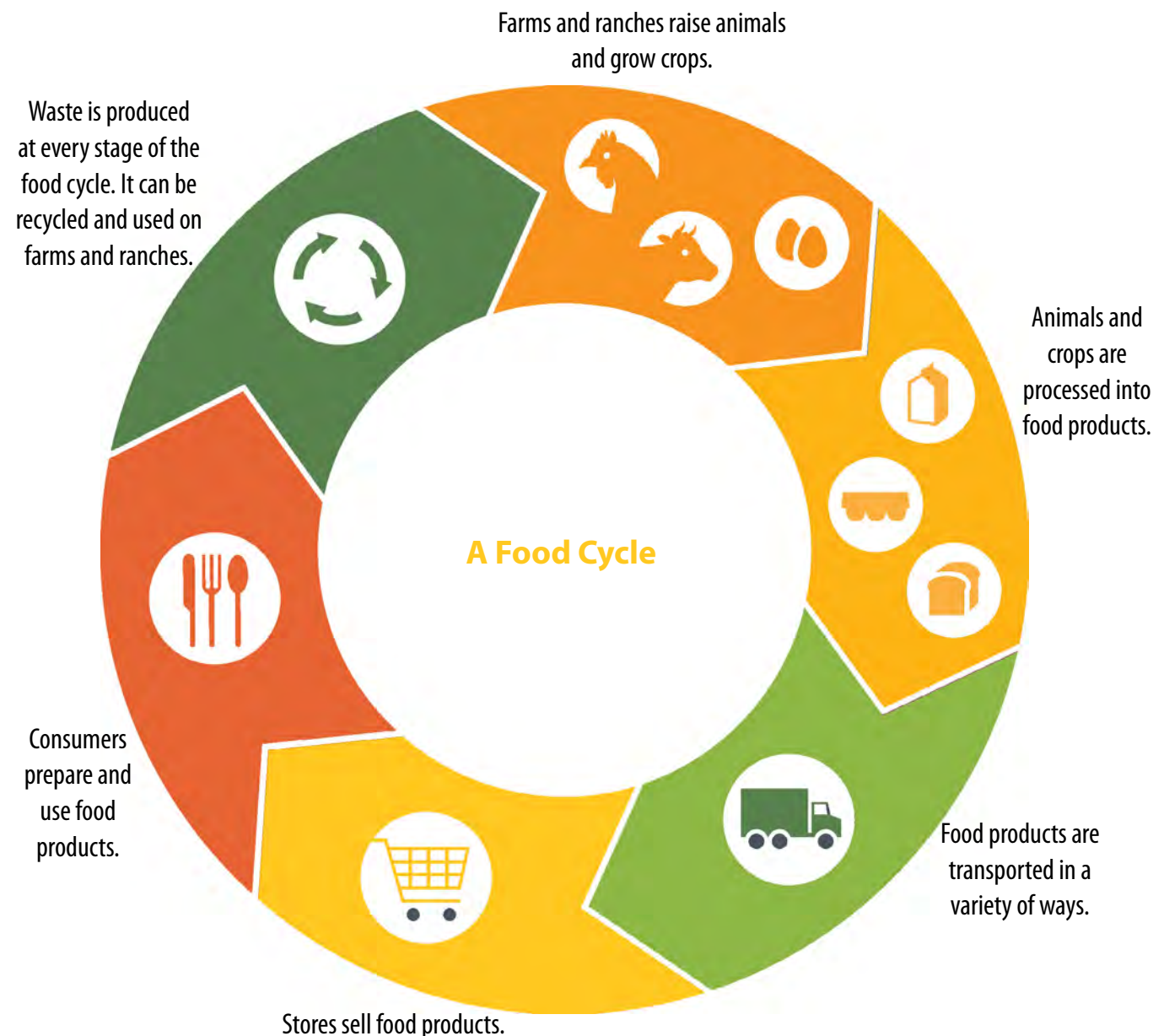
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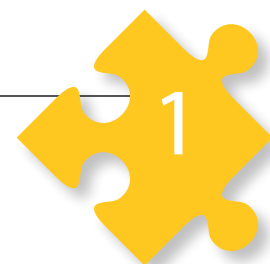
Map from *We Grow a Lot More Than You May Think*. Agriculture and Agri-Food Canada.
www.agr.gc.ca/eng/canadian-agri-food-sector/we-grow-a-lot-more-than-you-may-think/?id=1251899760841

Farming and the Food System

Food starts with farmers and natural resources. However, it involves many other human activities that make up what we call a **food system**. Just as you might take a journey from your home to another place, food also takes a journey from farms and ranches to our plates.

This journey is called a food system. It starts with natural resources like soil, water, land, animals and vegetation. Animals are raised and crops are grown. These animals and crops pass through the hands of food processors, packagers, transporters and sellers. The food system is a cycle.





Each of the following places or people have a role in a food system.

How do these roles fit in the food cycle diagram? Choose two roles and describe how they are part of the food system.

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- Trucks, trains and ships are used to transport food from one place to another.
- Factories prepare and package food or other agriculture products.
- Grocery store owners sell the food products.
- Restaurants prepare and sell food.
- People buy food at stores or restaurants. Some people also grow or raise their own food.
- Health workers, like nutritionists, can study the nutritional benefits of different food products.
- Governments can provide support to farmers and the environment.
- Scientists can develop new or improved ways to use and protect natural resources.

Explore the **farming and food cards**. On **each** card, identify the natural resources and types of human activities – or jobs – you think are involved in making this food product available for you to buy and eat.

Choose a food product from **one** of the farming and food cards or make your own using the blank card. Use the **cycle diagram** to show how this food product moves through the food system.



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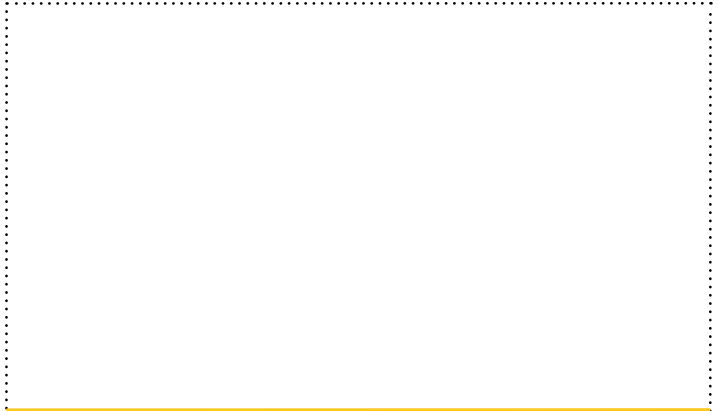
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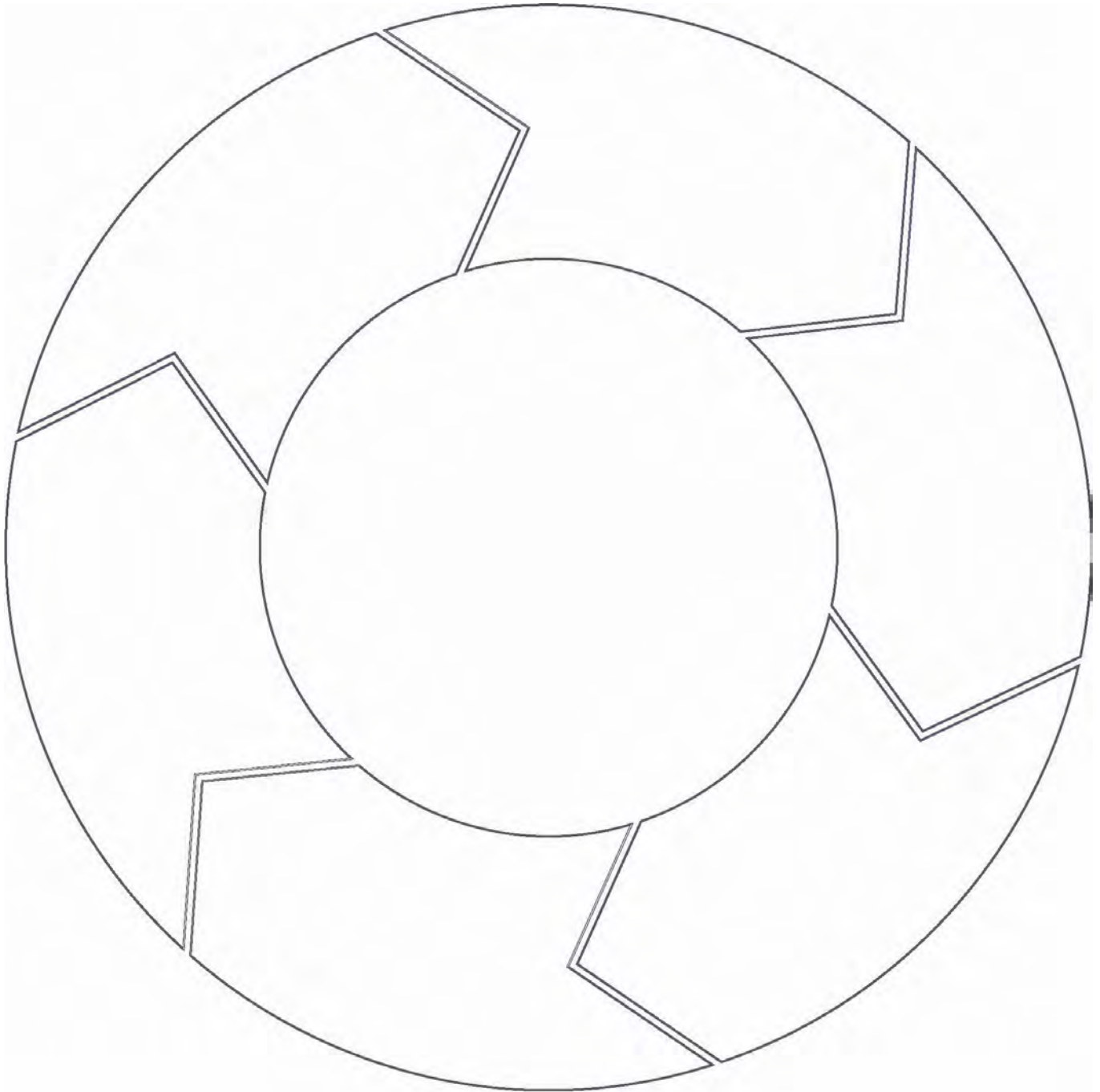
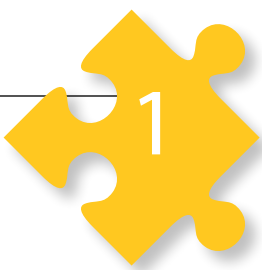
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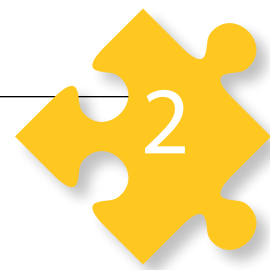
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The land sustains rural communities and ways of life on cattle farms and ranches



Alberta cattle farmers and ranchers have close relationships with the environment of the interior plains region. They depend on the natural resources and physical features in this region. This is the reason that most of Canada’s cattle farming is found in Alberta.

How do you think the experiences and practices of these ranchers might compare to other farms and farmers in different regions of Canada? Think about this as you explore these stories.

The Weder Family

Christoph and Erika Weder always made sure that their ranch was managed in harmony with the environment and with nature. It was important to the Weders that they considered the impact of their actions on the next generation. They used practices that minimized the impacts to the land and – more importantly – left it in better shape than it was when they began managing it.

When the Weders moved to the Peace Country in 2003 and started Spirit View Ranch, they described how they named their ranch. “The Spirit River is kind of the namesake of the Spirit View Ranch. It kind of fits in well with our philosophy, and the spirit we have for it.”

In 2013, the Weder family moved further west to a new ranch close to Hudson’s Hope, British Columbia. They named their new ranch Venator Ranches, meaning “gladiator,” as there is always something they believe they are fighting for. They describe their ranch’s location as being at the edge of agriculture or the beginning of the wilderness.... depending on a person’s perspective. The headwaters of the Peace River are west of the ranch. Venator Ranch is home to Angus beef cows and bison cows, alongside all sorts of wildlife.

In what regions of Canada are the two ranches owned by the Weder family? What are the main characteristics of the land in each region?

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How do you think the Weders are influenced by the land and resources in each region?

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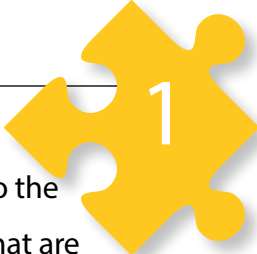
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The Spirit View Ranch was north of Rycroft in Alberta. It is bordered by the Spirit River to the south and the Peace River to the north. The ranch consisted of **perennial forage cover**, plants that are seeded to provide a dense cover for grazing. The pastures on their ranch had alfalfa and meadow brome stands. There was native grassland on the south and north facing slopes of the riverbanks, and large areas of aspen boreal parkland forest and grassland.



What evidence can you find of the connections that the Weder family has to the land? How does the land sustain their way of life?

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What actions have they taken to protect wetlands on their ranch?

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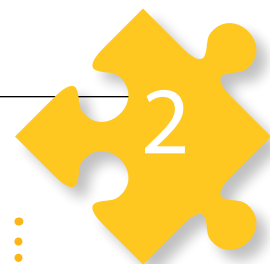
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Ducks Unlimited helped the Weders restore over 100 wetlands throughout the ranch that helped to preserve **biodiversity**, which is the variety of species in an ecosystem. The wetlands are a great habitat for ducks and geese and retain moisture. The moisture helps to grow a healthy forage cover. 150 bird species, 45 mammals, seven amphibians and one reptile species inhabited the ranch.

Most of the water supply is surface water in the Peace Country. Therefore, major dugouts were constructed and long pipeline systems delivered water to the watering sites used by cattle. Three solar powered watering systems were used in the more remote areas of the ranch. Important riparian areas were fenced off to limit access and minimize impact. **Riparian areas** refer to the land the borders a body of water.



The upland habitats and boreal forest on the ranch were fenced off. These areas were only grazed by the cattle or a short period of time. If ducks or migratory birds were nesting, they were not used for grazing.

“The earth is not just habitat for wildlife and birds. It’s our habitat too and we have to look after what we have in front of our doorstep. We want to make sure we keep it, we preserve it, we look after it and that’s what we do,” says Erika.

The Taillieu Family

Farmers and ranchers know their land. They work within the habitats on their land to preserve, protect and improve it, while producing safe and healthy food in way that also protects their quality of life.

Gerry and Cheryl Taillieu, with their son Grant and daughter Amy, began ranching at Tomahawk Cattle Ranch in 2001. They knew the land on their ranch needed improvements. The land has a large area of **lakebed**, the bottom of a lake, that was drained in the 1960s. This lakebed is now used mainly by the cattle for winter grazing.



“We’re kind of in the center of what used to be called Low Water Lake. Because it’s so fragile we’ve decided to start using it mainly in the winter. It grows a huge volume of feed,” said Gerry.

How do you think all farmers and ranchers have to balance protection of the environment with their ability to make a living?

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What natural habitats would you expect to find on a cattle ranch in the interior plains region, like the Weder’s and Taillieu’s Alberta ranches?

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Gerry and Grant run the cattle herd. They have used careful farming practices to make overgrazed pastures healthy again. They do not use machinery, ploughs or seed. Electric fencing is used to control access to the area when cattle graze on hay bales.

In the summer, the cattle are never left on the fields for long periods of time. This leaves some of the natural grass on the field. The grass grows back faster and in increased quantities.



Bale grazing is used to maintain and improve the health of the soil. It helps reduce evaporation of water from the surface and helps the soil hold onto more water. It also reduces run-off, which is the flow of water that occurs when there is a lot of stormwater, meltwater or water from other sources on the surface. Run-off takes important soil nutrients with it.

“The trick is finding the way where you can fit what you’re trying to do within that landscape without trying to change the landscape,” said Gerry.

Plant diversity has increased tremendously through the grassland and the wooded areas. The Taillieu’s have found that as they graze the lake bottom only during the winter season, more species of grasses continue to grow there.

Wildlife numbers have also increased over the last 11 years with ungulates – hooved animals like deer – and other large predators and birds. Another benefit of winter grazing of the lakebed is increased opportunities for birds to nest.

The protection of water sources on the ranch are also very important. Natural water sources have been protected and improved. Four portable solar watering units have been placed on the land.



Grant and Gerry use farming practices that focus on the land, grass and water. They believe that when all three are looked after, it's best for the cattle, the wildlife and the ecosystem as a whole.



What practices are used to protect wetlands and water sources on the ranch?

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How do you think the land, grass and water are interdependent in the interior plains region?

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Deer Creek Ranch Families

Since the 1900s, cattle ranching has been part of the land that Deer Creek Livestock is found on today. A group of families who appreciated the rich history of the ranch purchased it in 2011 from the Gilchrist family, the original owners. The Deer Creek Livestock group continues environmental protection practices that were started by Tom Gilchrist.

Why is collaboration important to the Deer Creek Livestock ranch?

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What actions have the ranchers taken to protect wetlands on their ranch?

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Each member of the group, which includes Jeff Smith, James Bekkering, Richard Visser, Gateway Livestock and the Turner family, bring different skills and work collaboratively to run the ranch.

The group is focused on the importance of the environment. Their values, vision and promise is to traditionally raise beef while caring for the land and water.



“We have over 100 different wildlife species on the ranch. We depend on the environment to ranch, and with that, our customers depend on us to maintain this environment,” said Jeff Smith. “All of us... have the same drive, the same goals and the same vision.”

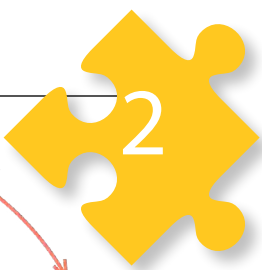
The ranch families also work closely with MULTISAR, an organization that partners with landowners to conserve grassland species at risk, assess soil conditions and monitor the health of the range. They have added hawk poles and installed solar fencing and watering sites. The poles attract hawks, an at-risk species, to help naturally control the ground squirrels or gophers, which are considered pests on crop land.



Cows and Fish, a group focused on riparian habitat management, has worked with the ranching families to measure and support the health of riparian areas.

Milk River runs directly through the ranch in southeastern Alberta. The solar panel watering systems pump water away from the river to keep cattle off the banks, and solar fencing is used to isolate grasslands and control grazing.

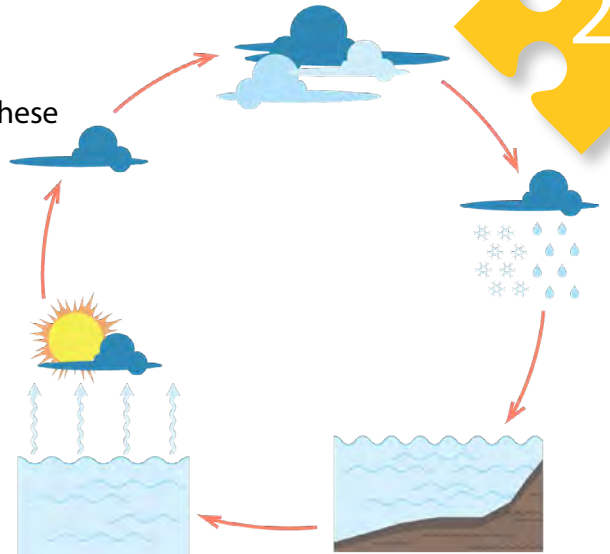
“We’re blessed with water and on dry years we can utilize it for irrigation but that also means we have to protect it. We have to be stewards of the environment no matter what we do. We want to leave the land and where we live a better place for the next generation,” said James Bekkering.



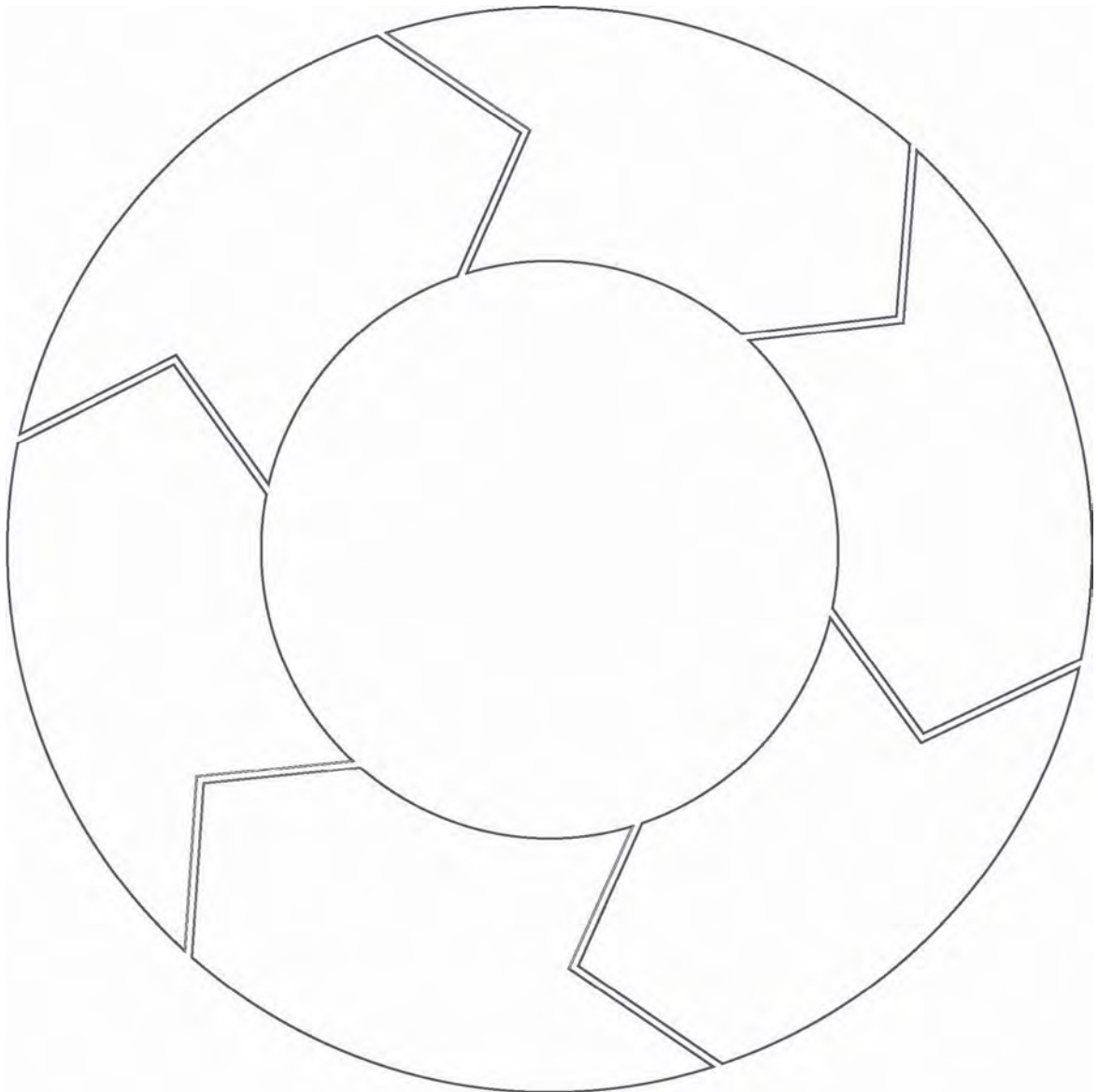
Water Cycles

The water cycle is important to the cattle ranchers in these stories. A water cycle involves:

- Water sources
- Evaporation
- Cloud formation
- Condensation
- Precipitation with rain and snow



Match these concepts to the water cycle image. Then, find examples in the stories you just explored. Create a cycle diagram that shows what a water cycle would look like on a farm or ranch.



Diverse ways of living with the land sustains the food system

How does the idea of **diversity** apply to the food system? Think about these ideas:

- The different types of farms and ranches that produce food
- The features of the land that are important to different types of farms and ranches
- The natural resources that farmers and ranchers depend upon
- The variety of food products that make their way to stores and restaurants in Canadian communities

Diversity also refers to the variety of plant and animal species in ecosystems. This is called **biodiversity** and it also applies to agriculture. A larger number of plant species means that there can be a greater variety of crops.

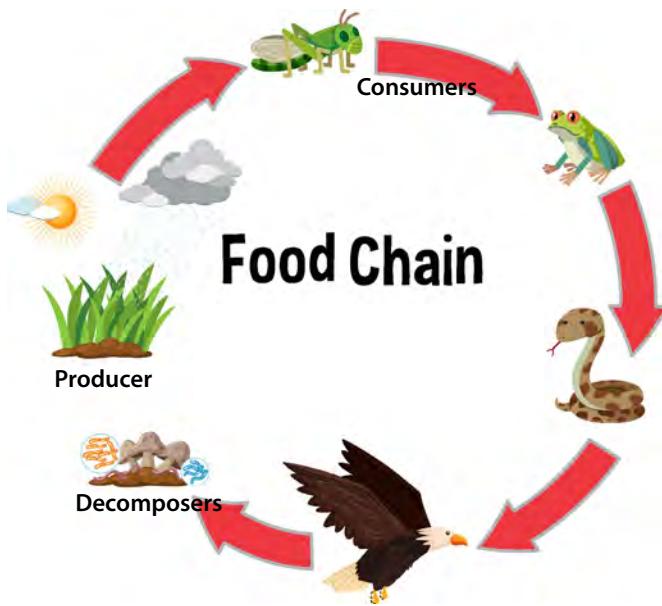
Different animal species used in agriculture can have features that let them thrive in different types of environments. Biodiversity provides benefits to farmers and ranchers. Therefore, it also benefits the food system.



How did the land shape the food system in Canada's past?

Plants, animals and the environment within which they live create an **ecosystem**. Every living and non-living thing maintains the ecosystem by transferring energy through a food chain. The food system that you learned about earlier is very similar to a food chain.

A food chain is made up of three groups: **producers**, **consumers**, and **decomposers**. They interact with each other in an ecosystem to get the energy they need.



- A food chain shows who is eating, or consuming, who. There are many food chains in an ecosystem.
- Usually a food chain begins with plant. They are at the bottom of the food chain. Plants get their energy from the sun.
- Animals get energy from eating plants. Other animals eat the plant eating animals. These are called **predators**.
- Decomposers use waste made by animals in the ecosystem. They also feed on dead plants and animals.

- Energy is transferred through the food chain.

First Nations people recognized that everything in nature is connected. This idea is often described as the “circle of life.” First Nations saw the complexity and interrelatedness of all living things in the environment.

In order to survive life on the land, First Nations peoples were aware of everything around them, from weather changes to animal activity. They knew that damage to any element in a food chain could affect the whole ecosystem and break the circle of life. These ideas have carried over to the present.

In the late 1800s, most of Canada’s population was located in the eastern provinces of Quebec, Ontario, Nova Scotia, Prince Edward Island and New Brunswick. Agriculture was a main activity in these areas, but the government believed that Canada needed to attract farmers to settle the west in order to survive.

In 1899, the government created a publication called **Canada West** to attract settlers to the what are now the three prairie provinces. Most of the articles, covers, and photographs focused on farming the interior plains region. Each issue also included a section on British Columbia that emphasized fruit and berry growing as well as mixed farming.

How do you think Indigenous ways of living with the land are similar to or different than what you have learned about cattle farming and ranching?

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What types of farming and ranching can you identify on the Canada West poster?

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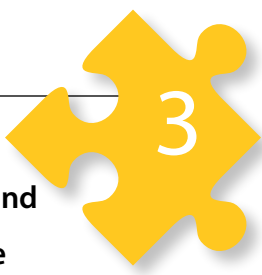
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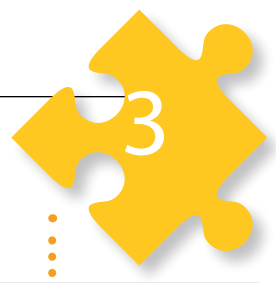
“Canada – The New Homeland” (MIKAN 2958967) Library and Archives Canada Online. www.collectionscanada.gc.ca



Consider the events that are described on this timeline. **What does the timeline tell you about the influence that location and natural features in a region of Canada might have had on the diversity of agricultural activities?**

Look for evidence of the influence of natural resources and features. Beside the timeline, identify the region each event takes place in and list the types of farms that were part of Canada's development. Compare these agricultural events from the past to the food products Canadian farmers and ranchers produce today. Add a sketch to some timeline boxes.

	1860s	Harvey Farrington opens the first Canadian cheese factory in 1863. By the end of the 1860s, there are over 200 in Ontario.
	1860s	Agriculture in Quebec agriculture begins to change from wheat production to a focus on dairy and livestock. Dairy farms becomes most important by the start of the 1700s.
	1872	The <i>Dominion Lands Act</i> is passed, based on land negotiated with Indigenous people through treaties. This opens much of western Canada for settlement. Plots of land are granted in exchange for a \$10 fee and a commitment for three years to improve the land and build a permanent home.
	1873	The MacDougall family arrives in Morleyville, Northwest Territories. With them, they bring the first herd of livestock to inhabit what will become Alberta.



1880s

The cream and cheese industry begins and grows quickly in Ontario, Quebec and the Atlantic provinces.



1880s

Large-scale cattle ranching becomes economically important in what will become the provinces of Saskatchewan and Alberta.



1880s

The building of railways means that prairie grain is more easily transported to British Columbia, and allows large communities to develop. However, this reduces most of the grain farming in BC. Specialized farming, like fruit in the Okanagan Valley and dairy in the lower Fraser Valley, start to grow.



1894

The *Northwest Irrigation Act* is passed. This act gave control over water use to the government, which helps to deal with the severe dryness that has damaged the prairies.



1896

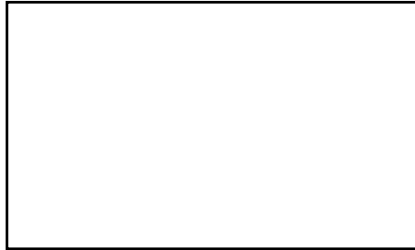
Clifford Sifton, Minister of the Interior under Prime Minister Laurier, encourages settlers to rapidly settle the unused farmland of the prairies.





1920s

The export of Nova Scotia apples is threatened as other nations and larger provinces began to increase their production.



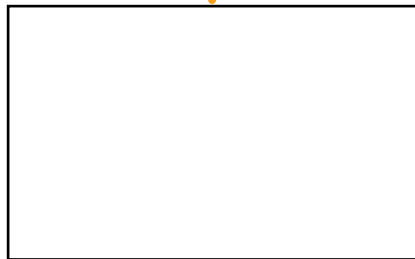
1920s

The seed potato leads to a huge boom for agriculture in Prince Edward Island. The size of these farms nearly doubles and yields of potatoes triple.



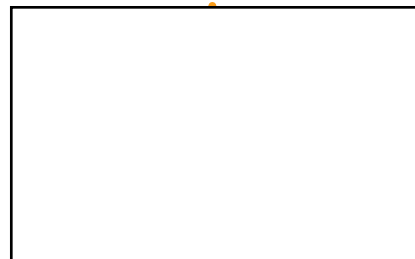
1920s

Quebec soil is frequently depleted of its natural nutrients. Farmers do not have enough money to purchase fertilizer and cannot get support from banks or government.



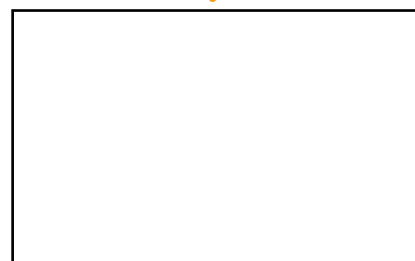
1930s

The Great Depression hits. There is severe drought and a crash in grain prices. Many farmers are bankrupt. The prairie provinces, which depend on agriculture, are affected the most.



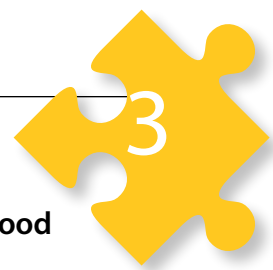
1930s

Many farmers begin using shelter belts and more sustainable farming practices in an effort to protect their crops from droughts and swings in the prices of wheat.



1930s

Farmers in Alberta and Saskatchewan begin growing mustard crops. Canada will go on to become the world's largest exporter of mustard.



Making Inferences

How have diverse ways of living with the land and using natural resources shaped the food system? Identify **three** facts in the first column of the **triple t-chart**. Describe a connection you can make between the land, natural resources and the food system in the second column. Explain why you made this connection in the third column.

Fact	What this fact made me think about connections between the land, natural resources and the food system	Why I think this

The information in the timeline comes from the article *History of Agriculture: Evolution of Canadian Agriculture Since Confederation*: Farms.com Online. www.farms.com/reflections-on-farm-and-food-history/history-of-canadian-agriculture

Cattle farming and ranching activities can help protect habitats like those found in wetland ecosystems

Cattle farmers and ranchers – and cattle – have an important relationship with the environment.

Beef cattle are often raised on land that cannot be used to grow grain or vegetable crops. Cattle eat grasses that people can't digest. If these lands were used for crops, the natural habitats and wildlife could be greatly damaged or destroyed. Grazing cattle on this type of land more than doubles the land area that can be used to produce food in Canada.

The same rangelands and pasture that cattle graze on play a big role in maintaining plant biodiversity, wildlife habitats and watersheds. A **watershed** describes an area of land that contains streams and rivers that all drain into a single larger body of water, such as a large river, a lake or an ocean.

Cattle grazing and also reduce soil erosion and greenhouse gases.



Pasture lands are the **habitat**, or home, for many species of Canadian wildlife, including some species that have been identified as being at risk. Burrowing owls, swift fox, greater prairie chicken, sage grouse, black-tailed prairie dogs and loggerhead shrikes are all animal species that are at risk of disappearing. These species like pastures that have not been used for crops as their habitat.

However, the swift fox is an example of a species that may not be at risk soon. Their habitat is preserved by livestock grazing, which is allowing this animal species to come back.

Wetlands are found on many Alberta cattle farms and ranches. A wetland prevents flooding by holding water like a sponge. This keeps the level of rivers and lakes stable and helps to filter and purify the surface water.



Cattle production is an effective and efficient way to provide protein. Cattle convert crop products, like grass and hay, into meat products.



Research Links

Find information about wetlands from **Ducks Unlimited** by going to www.ducks.ca/our-work/wetlands/.

Find out more about **riparian areas, water management and grazing practices** on the **Cows and Fish** website. Go to <http://cowsandfish.org/riparian/riparian.html>.

Find information and videos about beef cattle and perspectives on environmental issues from the **Canada Beef** website. Go to <https://canadabeef.ca/whycanadianbeef/>.

Find some facts about **pasturelands, soil and greenhouse gas** and the way that cattle convert grass and grains into food as part of the food chain in the **Greenhouse Gas Emissions** infographic from **Alberta Beef** at <https://irp-cdn.multiscreensite.com/f1ef9cf3/files/uploaded/609.pdf>.

Becoming an Expert

Use the **research links** to find out more about the risks and benefits of cattle farming and ranching to ecosystems and wetlands. Your research should focus on the following two questions.

- **How can agriculture and food production cause risks for natural ecosystems, including wetland ecosystems?**
- **What steps are farmers and ranchers taking to protect the natural ecosystems of the land they use?**

Become an expert in **one** of these topic areas:

- Cattle in the food chain
- Riparian areas
- Grazing practices
- Soil and nutrients
- Water management

Cut out the expert card for your topic and paste it on the top of the **retrieval chart** that follows. Organize your research in the retrieval chart.

- In the first column, answer the questions on your card.
- In the second column, describe the risks that agriculture can pose to ecosystems and wetlands.
- In the third column, describe examples of practices or activities that farmers and ranchers can use to protect or conserve ecosystems and wetlands.

Cattle in the Food Chain

Cattle are **ruminant** animals, which means they can digest plants that are not edible to people. Cattle have a four-chambered stomach. The grass that they eat is stored in the first stomach chamber and broken down into balls of cud. The balls of cud are brought back into the mouth, chewed and then swallowed again. The food is then digested by the other stomach chambers. This digestive process enables cattle to convert coarse vegetation into high quality protein.

- How do cattle depend on grassland and pasture ecosystems?
- What role do cattle play in a food chain that is part of a farm or ranch ecosystem? How could you show this role in a food chain diagram?

Riparian Areas

Riparian areas are “green zones” of plants found next to streams, wetlands, lakes and sloughs. A variety of plant and animal species are found in riparian areas. These areas also work as natural protectors of the environment. **Shelterbelts**, or rows of trees and shrubs, can reduce soil erosion and act as a filter for pollutants in riparian areas.

- Why are riparian areas important?
- How are they connected to people and animals in a watershed, an area of land that drains into a common body of water?
- What role can shelterbelts play in a riparian area? Why is this role important?

Grazing Practices

Across Canada, about 68 million hectares of land is classified as “agricultural land.” Of that agricultural land, about 24 percent is grassland that has never been used for growing crops. Another 6 percent is pasture land. Canadian grasslands grow best when they are cut back from time to time. If they overgrow, tall dead grass can choke out some plant species. Controlled cattle grazing helps keep grasslands healthy.

Intensive grazing involves grazing cattle on smaller fields and moving them so the plants have a chance to grow back. **Rotational grazing** allows cattle to graze in larger fields, moving less often, while still allowing plants an opportunity to regrow.

- What are some grazing practices that cattle ranchers use?
- What effect do these practices have on the environment?

Soil and Nutrients

Cattle ranches represent some of the strongest and healthiest ecosystems in the world. They can coexist with many wildlife, landscapes and habitats. Cattle use land that is not suitable for growing crops because it is too dry, wet, rocky, cold or hilly.

Some of this land is grassland, with natural plant vegetation. Plants need nutrients to grow. Nutrients, such as nitrogen, phosphorous and potassium are found in soil but need to continually be replenished. Manure contains these nutrients and decomposes naturally. Cattle manure can fertilize plants and improve soil quality.

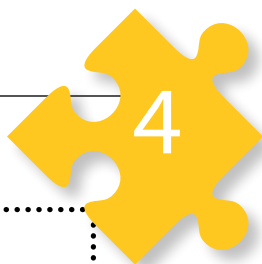
- What are the advantages of using manure to replenish plant nutrients?
- What are the disadvantages?
- How are nitrogen, phosphorous and potassium helpful?

Water Management

Cattle are healthier when they have access to clean water. Clean water produces 23 percent greater weight gain for cattle. There is also a 25 percent chance that cattle who drink water directly from surface water, such as a pond, will contaminate it. If given a choice, cattle will avoid water fouled by even small amounts of manure.

Also, animal manure in water encourages algae growth, which can be harmful to fish. Some ranchers pipe or pump surface water to watering troughs for cattle to drink from.

- **What are some water management practices that cattle ranchers can use?**
- **What effect do these practices have on the environment?**



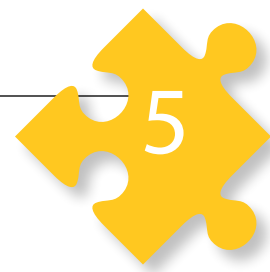
My Research

My Expert Topic Card

My topic questions	Risks that agriculture can pose to ecosystems and wetlands	Examples of practices or activities that farmers and ranchers can use to protect or conserve ecosystems and wetlands



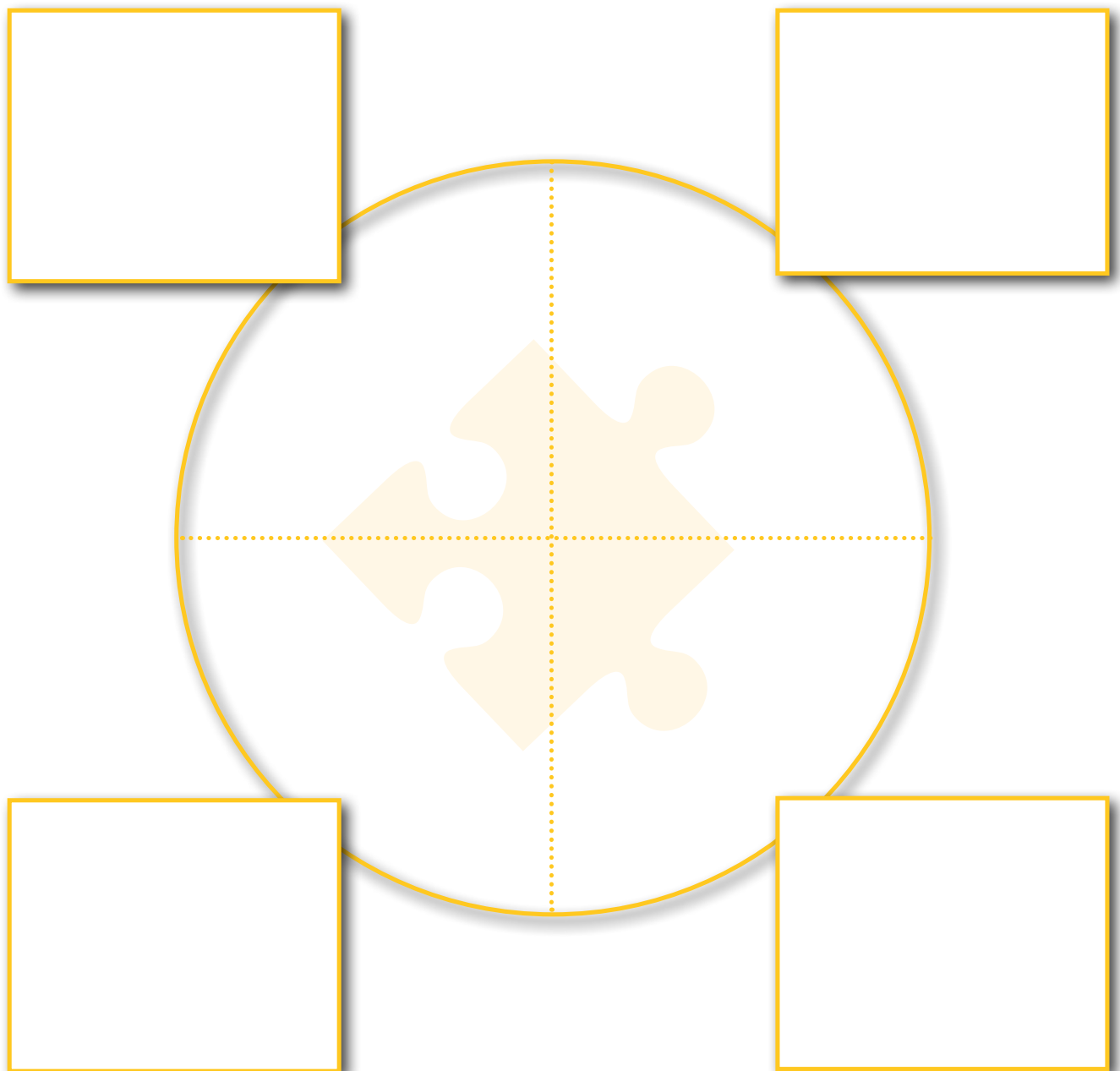
My topic questions	Risks that agriculture can pose to ecosystems and wetlands	Examples of practices or activities that farmers and ranchers can use to protect or conserve ecosystems and wetlands



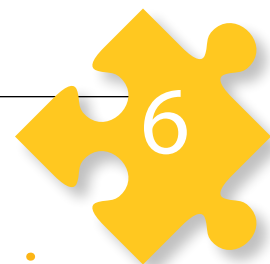
Cattle farming and ranching is connected to other human activities

How is cattle farming and ranching connected to jobs and activities beyond farms and ranches? Think about what you have learned about the whole food system.

- Use the **inside circle** to identify four different jobs that are part of the food system that provides beef products.
- Then, use descriptive words and phrases to describe their connection to cattle farming and ranching in the **outside boxes**.



Food availability and accessibility influences food choices



Canada's agriculture and food industries have changed greatly over the past 100 years. The way that food is grown and raised, processed, sold and prepared has changed with more knowledge and understanding about nutrition, food safety and healthy food production practices.

Improved transportation and connections with other countries have made it easier to bring different and fresh foods to communities. However, people have also become more interested in local foods.

What do you like most to eat? What do you think most influences your food choices?

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All food production requires land, water and energy. The environmental impact of any food is influenced by different factors. These factors include where the food comes from, how it is grown or raised, how it is packaged and how it is transported and distributed and are all part of the food system.

Beef comes from cattle and provides one source of protein in a diet. Proteins are part of every cell in your body. They are necessary to build and repair muscle. Proteins are also an important part of many of our body's systems, including our immune and circulatory systems.

Research Links

Watch **Agriculture: then and now - Food accessibility** from **Agriculture and Agri-Food Canada** at www.agr.gc.ca/eng/about-us/publications/discover-agriculture/videos-agricultural-products-and-progress/agriculture-then-and-now-food-accessibility-video/?id=1490789847100.

How has the accessibility of food changed? How have these changes resulted in different or more food choices?

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What are the most popular sources of protein for Canadians?

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How do the sources of protein that you choose compare to those chosen by Canadians?

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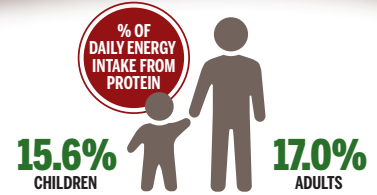
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How much protein do Canadians consume? This infographic has the most recent statistics from Statistics Canada.

Protein sources in the Canadian diet

Protein is a source of energy. Children get 15.6% of their daily energy intake from protein; for adults, it's 17.0%. Sources of protein include meat, poultry, fish and shellfish, eggs, dairy products, nuts and seeds, and legumes.



% of Canadians who eat these sources of protein on any given day*



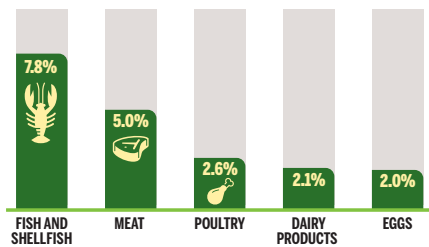
*Excluding soups (ready-to-serve, canned, condensed, or dehydrated), baby food products, fats (e.g., butter and animal fat), and plant based beverages (e.g., soy milk, coconut milk, and almond milk). Meat includes red meat and processed meat.


1.6%
OF CANADIANS

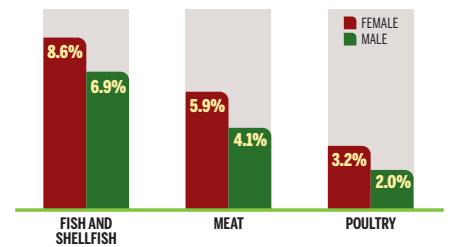
exclude fish and shellfish, meat, and poultry from their diet.

Canadians living in large urban areas are more likely to exclude fish and shellfish, meat, and poultry from their diet (1.9%) than those living in small urban or rural areas (0.6%).

 *More Canadians exclude fish and shellfish from their diet than any other sources of protein.*



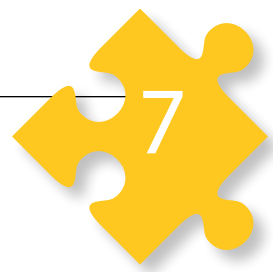
 *Women and girls are more likely to exclude fish and shellfish, meat or poultry from their diet.*



This infographic is from Statistics Canada at www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2018004-eng.htm.

Includes household population aged 1 and over in the 10 provinces.
Source: 2015 Canadian Community Health Survey – Nutrition.

ISBN: 978-0-660-25398-5
Catalogue number: 11-627-M



Cattle farming and ranching provides healthy food choices

Cattle provide many Canadians with food. Meat products contain nutrients that are essential for health. Lean meats, including beef, can help you meet your body's need for protein, vitamins and minerals.

Beef is a complete protein. This means that all essential protein building blocks, called **amino acids**, are found in beef.

Beef also provides a healthy source of dietary fats. Fat is an important nutrient for normal body functions and energy. Fat helps our body absorb fat-soluble vitamins such as A, D, E and K. Some fats are essential, because our body cannot make these fats. It is recommended that an adult's diet have 20 to 35 percent of total calories from fat.

This infographic is provided by Canada Beef.
www.canadabeef.ca

BEEF Full of Surprises

FATS & FIGURES

- Only **6%** of the fat in the Canadian diet comes from fresh beef¹
- 49%** of the fat in beef is the same healthy fat found in **olive oil**⁴
- A serving of beef provides **only 170 calories** of a typical 2000 calorie daily diet⁴

NO NEED TO "chicken out" ON BEEF!

Compare the **FAT** in beef and chicken¹

Meat	FAT
Steak (75 g cooked sirloin steak, trimmed of visible fat)	3.9g
Chicken (75 g cooked light chicken meat, skinless)	3.4g

BEEF IS BIG ON PROTEIN, LEAN ON CALORIES⁵

Item	Calories
75 g cooked beef, trimmed of visible fat	170
102 almonds	714

WHO KNEW?

"Fast food and sweetened baked goods are the top two contributors of fat to our diets!"

"That accounts for a whopping 1/4 of our fat intake."

BEEF HAS 2X MORE IRON THAN CHICKEN²

Meat	IRON
Steak (75 g cooked sirloin steak, trimmed of visible fat)	2mg
Chicken (75 g cooked chicken meat, skinless)	1mg

MEDITERRANEANS EAT MEAT TOO

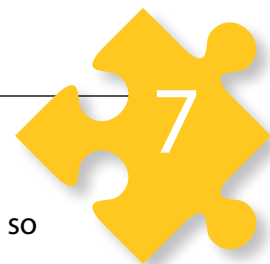
Comparing red meat in the Mediterranean Diet to intakes in Canada⁶

Region	Male (g/day)	Female (g/day)
CANADA	101	55
MEDITERRANEAN	91	53

References:
 (1) Health Canada, Canadian Nutrient File, 2010. Values for food codes: beef (#6146), chicken (#592).
 (2) Health Canada, Canadian Nutrient File, 2010. Values for food codes: 75 g beef (#6146) 2.1 mg iron, 75 g chicken (#592) 0.9 mg iron.
 (3) Calculations based on data from Statistics Canada, Canadian Community Health Survey 2.2, Nutrition, 2004, and Health Canada, Canadian Nutrient File, 2010.
 (4) Health Canada, Canadian Nutrient File, 2010. Average for 75 g steaks (#6174) and 75 g roasts (#6168).
 (5) Health Canada, Canadian Nutrient File, 2010. Values for food codes: average for 75 g steaks (#6174) and 75 g roasts (#6168), and almonds (#2534).
 (6) Red meat eaten by Canadians and people from Mediterranean countries average: Spain, Italy, Greece. Mean daily intake, red plus processed meat (g). Wyse L et al. Red Meat in the Diet: An Update. British Nutrition Foundation Nutrition Bulletin March 2011; 36:34-77.
 (7) Statistics Canada, Canadian Community Health Survey 2.2, 2004.

For educational purposes only. For more information, visit beefinfo.org

CANADIAN BEEF



Where do each of these foods come from? How can you find this information?

Handwriting practice box with 10 horizontal dotted lines.

Would any of these foods have been available 100 years ago? Why or why not?

Handwriting practice box with 10 horizontal dotted lines.

Label Search

Using food labels can help you compare and choose products so you can make an informed choice. Food labels provide information you can use to make informed choices about foods and drinks at the grocery store and at home. Food labels can help you:

- Compare and choose foods more easily
- Know what ingredients a food product contains
- Choose foods with a little or a lot of the nutrients that are of interest to you

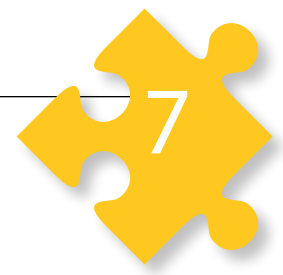
Identify **two** foods that would be part of a healthy meal that you would eat. Make sure one of these foods is a source of protein. Fill in the **nutrition fact tables** for these two foods.

Nutrition Facts

Amount	% Daily Value % valeur quotidienne
Calories/ Calories	
Fat/ Lipedes g	%
Saturated/ saturés g	%
+ Trans/ trans g	
Cholesterol g	
Sodium/ Sodium g	%
Carbohydrate/ Glucides g	%
Fibre/ Fibres g	%
Sugars/Sucres g	
Protein/ Protéines g	
Vitamin A/ Vitamine A	%
Vitamin C/ Vitamine C	%
Calcium/ Calcium	%
Iron/ Fer	%
Vitamin D/ Vitamine D	%

Nutrition Facts

Amount	% Daily Value % valeur quotidienne
Calories/ Calories	
Fat/ Lipedes g	%
Saturated/ saturés g	%
+ Trans/ trans g	
Cholesterol g	
Sodium/ Sodium g	%
Carbohydrate/ Glucides g	%
Fibre/ Fibres g	%
Sugars/Sucres g	
Protein/ Protéines g	
Vitamin A/ Vitamine A	%
Vitamin C/ Vitamine C	%
Calcium/ Calcium	%
Iron/ Fer	%
Vitamin D/ Vitamine D	%



Beef provides nutrients important to the body. One serving of cooked lean beef provides:

- Protein requirements for growth and development. Protein helps build and repair muscles and bones. It builds antibodies that fight infection.
- Enough vitamin B¹² to exceed requirements. Vitamin B¹² keeps the body's nerve and blood cells healthy.
- An excellent source of zinc and niacin. Zinc and niacin build healthy bones and convert food into energy.
- A source of iron, thiamine and riboflavin. Iron keeps red blood cells healthy so they can transport oxygen to the body's cells. This produces energy for body cells. Thiamine helps the body's cells change carbohydrates into energy. Riboflavin helps the body break down carbohydrates, proteins and fats to produce energy, and it allows oxygen to be used by the body.
- Vitamin D. This vitamin helps the body absorb calcium, which produces strong bones and teeth.

What nutrients do the foods you identified with your food labels provide?

Based on these nutrients, what benefits does each food choice provide?

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Healthy eating patterns encourage healthy food choices

Making healthy food choices can help you develop a healthy eating pattern. A healthy eating pattern helps you improve your overall health.

The term eating pattern refers to what you eat and drink on a regular basis. In a healthy eating pattern, all the foods and drinks work together to:

- Help you feel good
- Maintain your health
- Meet your nutritional needs

You can develop a healthy eating pattern by regularly eating:

Whole grain foods such as:

- Quinoa
- Wild rice
- Whole grain pasta

Vegetables and fruits such as:

- Apples
- Carrots
- Broccoli

Protein foods such as:

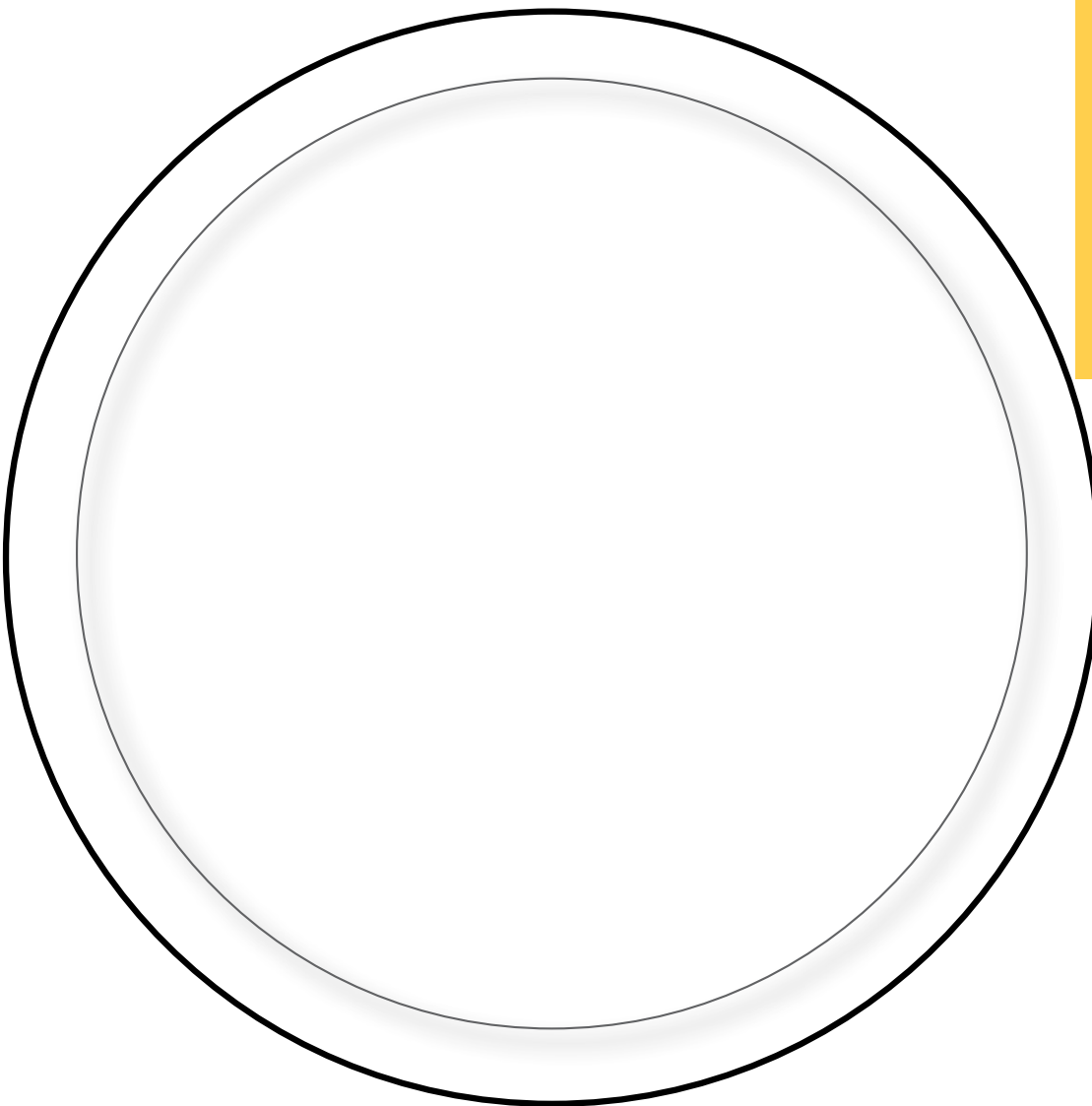
- Legumes
- Lean meats
- Lower fat yogurt



The best healthy eating patterns include foods that reflect your food choices related to:

- Taste
- Culture
- Budget
- Lifestyle

Fill the plate with at least **four** different food choices. Choose at least one food from the three main food types in **Canada's Food Guide**.



Research Links

You can find the average kilograms of food items consumed by Canadians in a year on the **Statistics Canada** website.

Go to www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210005401.









Pick a food from the drop down menu called "Commodity."

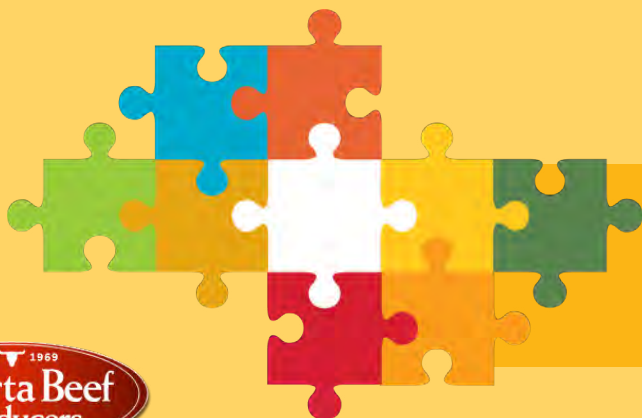
Find the 2018 statistic of kilograms per person, per year for that food item.

Add the statistic to your plate.

How do your yearly food choices compare?

- Pick **one** of the foods in the chart.
- Calculate your average by following the directions in the top row of the chart. You may have to estimate the amount of a food you eat in kilograms or litres.
- Fill in the rest of the chart with examples from your classmates.

Food Choices	Eating Patterns Amount I eat in a day = _____ (in kg or litres) Multiply by 365 = _____
Milk and dairy 	
Whole wheat breads 	
Fruits 	
Vegetables 	
Fats and oils 	
Beans or nuts 	
Meats or poultry 	
Eggs 	



www.albertabeef.org/consumers/resources