Chicken Posts

Interesting and Insightful Posts on Chickens, Farming and Food in Alberta

Alberta Chicken Producers

Alberta Chicken Producers invites you to explore what it takes to raise chickens, contribute to Alberta's food supply and protect the environment.

Use the posts in this booklet to learn more about agriculture in Alberta. "Like" the posts that you use for projects or learning assignments by shading the ♡. Shade the ❑ to highlight interesting information you can share with others.

Use the ideas in *Post Your Learning* for projects in your Social Studies, Science, Language Arts, Math or Art classes.

Find the **colour** words in each post with the chicken icon. Write them in the top row of boxes below. Once you have found the words, unscramble them to find the answer to this question:

Why do chickens like to stay close to each other?

Post Your Learning

Community Quest

Identify the human activities, products and natural resources that are involved in chicken farming. Share what you've learned about the importance of agriculture to Alberta's communities.

Responsibility Tour

How could you use what you have learned about chickens, farms and farming to design a tour of a chicken farm? How can you use the tour to illustrate how farmers can take responsibility for their animals and the environment?

Model It

Create a floor plan of a chicken barn, with measurements that show the area and perimeter of the barn.

Food Choices

Reflect on the following questions. How does agriculture in Alberta give you healthy food choices? What do you consider to be a healthy food? Why? Why are good food choices important to you?

Growth Cycles

Compare the growth cycle of a chicken with another animal. What similarities and differences did you find?

Waste Not

How do chicken farmers deal with waste? How can the disposal of waste produced by agricultural activities affect everyone?

Photo Evidence

Explore each photo in this booklet. Make a list of the human activities and geographic features that you see. How do these human activities compare to other types of human activities in regions across Alberta and Canada?

Farm Stories

Use the photos and information in this booklet to create a first-person story about a day in the life of a farmer or farm family. Find out how many chicken farms in Alberta are run by families.

Explore the possibility of interviewing a chicken farmer or member of a farm family to gather more information.

What comes from farms?

Food, building materials, clothing and even some fuels come from Canada's farms. These farms come in all types and sizes, ranging from small family farms to large ranches.

Family farming is the main type of farming in many countries around the world. Family farms produce about 80 percent of the world's food! They raise plants and animals for food, fibre and fuel. All Alberta chicken farms are family farms!

FROM OUR FARMS

We use plants and animals everyday

Canada has just over 2800 chicken farmers. Most **of** the fresh chicken that is sold in Alberta is raised in Alberta. And all of the fresh chicken you see in grocery stores across Canada is Canadian.

The chicken industry is important. It involves more jobs than you may think, including farmers, nutritionists, veterinarians, business managers, food scientists and computer programmers.

What does the word "agricultural" mean to you? Write or draw what comes to mind in each square.

Crop farms in Alberta include wheat, canola, barley and oats. The seeds that these crops produce are used for different types of foods.

Crops like canola are used for both food and fuel. Oil is pressed from the canola seed and is used for cooking oil and **biofuel** – fuel made from plants!

Forage crops, like hay, alfalfa, grass and clover, are grown to feed animals. These crops can be harvested and stored. Forage crops are also grown on pastures where animals can graze and feed.

Sheep farmers in Alberta raise sheep for their wool. Beef and chicken farmers raise animals for food.

Make a list or draw the plant and animal products that you could use in a typical day. How can your list help you explain why agriculture matters to Alberta and Canada?

Some crops are grown for their fibres. These fibres are used to make items like rope, clothing or paper. Industrial hemp is starting to be grown more in Alberta.

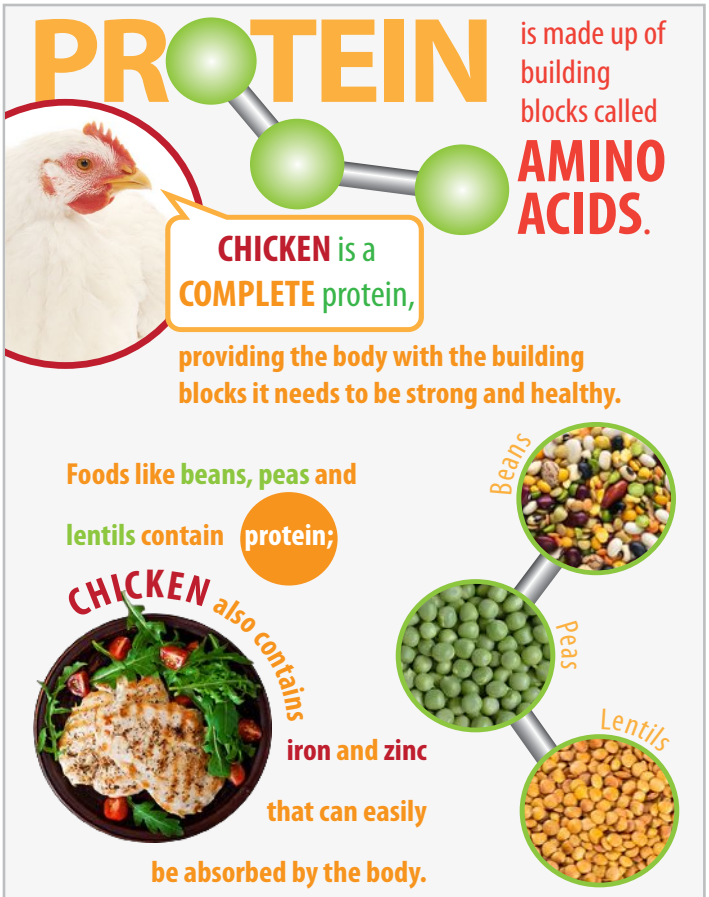
Why is nutrition important?

IF YOU EAT, YOU ARE PART OF AGRICULTURE

Agriculture provides healthy food choices

What is nutrition? **Nutritionists** study how the foods we eat are broken down into nutrients and used in the body. To be our healthiest, we need to give our bodies the right kinds and amounts of food.

What are nutrients? **Nutrients** allow our bodies to make energy for fuel, and build muscles and other body tissues. Nutrients keep the body working properly.



	FAT	CALORIES	PROTEIN
Beans boiled	0.70g	177	**9g**
Lentils boiled	0.56g	170	**13g**
Beef, t-bone lean & fat, broiled	15g	279	**31g**
Porkchop centre cut, lean & fat, broiled	11g	209	**26g**
Chicken breasts & tenders, broiled	9g	189	**26g**

Protein is an important building block for our bones, muscles, tissues, skin and blood. Protein foods come from both animals and plants. Animal proteins include meat, poultry, seafood, dairy and eggs. Plant proteins include beans, peas, soy, nuts and seeds.

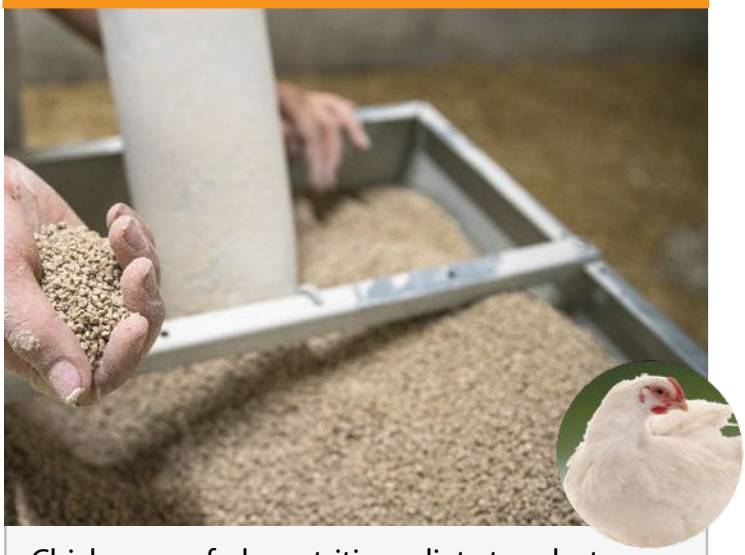
Grains are a source of **carbohydrates**, which give us energy. Whole grains provide **fibre**, which is important to our digestion and a healthy heart.

Bodies need **fats** for energy and organ health. Fats are found in fish, vegetable and plant oils, avocados, nuts, meat and dairy foods.

Fruits and vegetables are an important part of healthy daily food choices. They provide vitamins, minerals, fibre and water. They can also protect against some diseases.

Water plays an important role in our bodies. It carries nutrients to cells, helps get rid of body waste, regulates our body temperature, protects our organs and so much more!

CHICKENS NEED NUTRITION TOO!



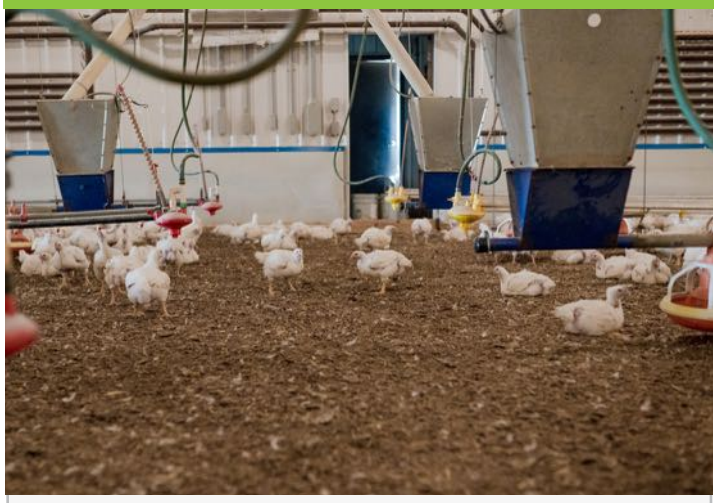
Chickens are fed a nutritious diet at each stage of their lives. Chicken feed is made of grain, grain byproducts and protein sources. These protein sources include canola meal, soybean meal, bone meal and vegetable fats. **Bone meal** is made from ground animal bones.

Chicken feed changes as the chickens grow, but it never contains added hormones or steroids. **Hormones** are chemical substances made by the body. They control things like growth, body function and emotions. Hormones can also be artificially produced. A **steroid** is a type of hormone.

So, even if you see a label on chicken in the store that says "hormone-free," **all** chickens in Canada are raised without added hormones or steroids.

Create a plate and fill it with healthy foods that give you proteins, carbohydrates and fats. Check your plate to see if you have included foods from each food group!

What's in a chicken barn?



Chickens are raised in climate controlled barns to protect them from winter weather, hot summers, predators and disease.

Bedding is used on the floor of barns. It is made with either straw or wood shavings. Chickens have access to fresh water and feed throughout the barn.

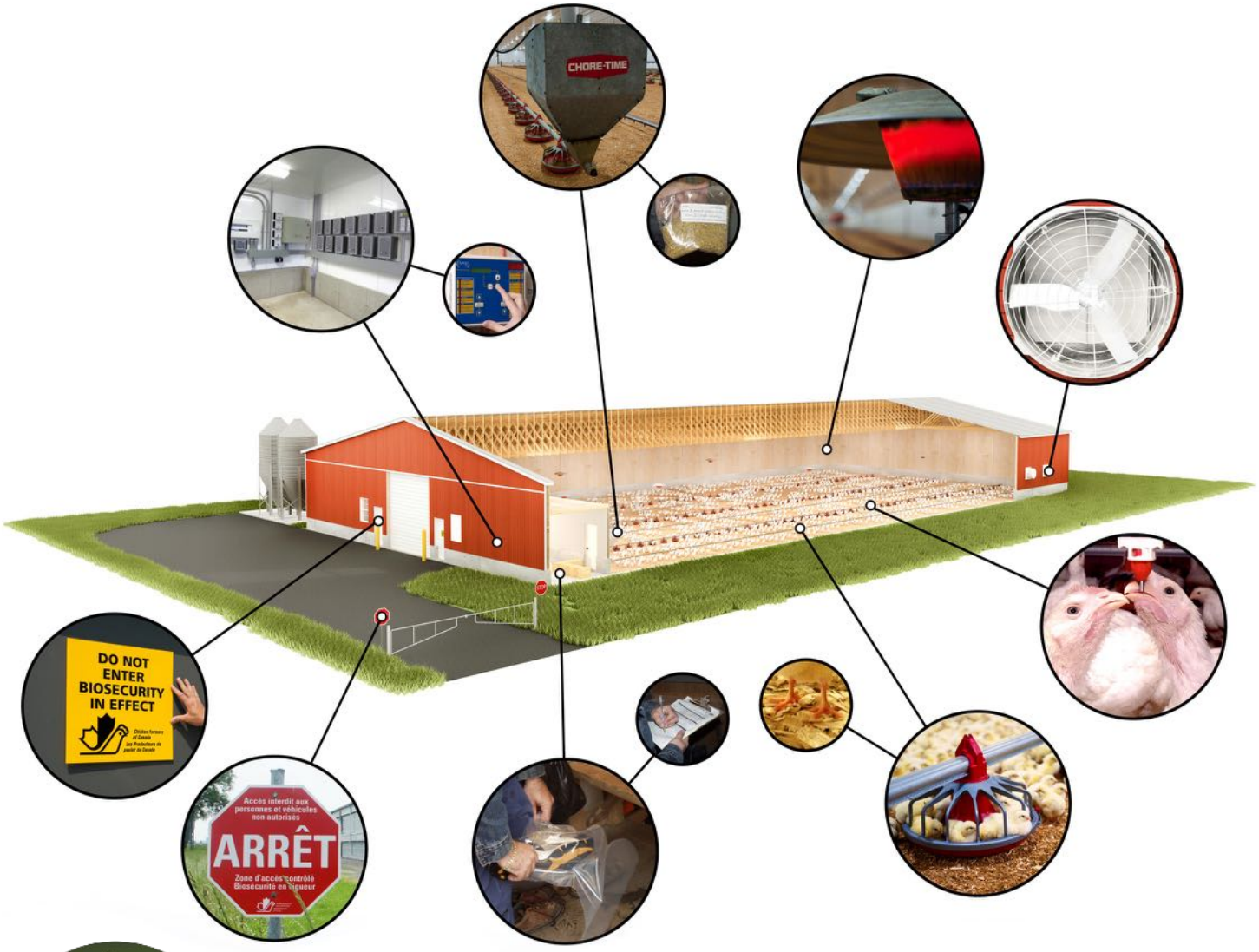
Proper ventilation is also important. Fans and air intakes draw fresh air through the barn. If the temperature changes, or if a fan fails, farmers have an alert system that dials their cell phone to notify them if they are away from the barn.

BIRDS ARE FREE TO ROAM THE BARNS

Barn conditions are important to chicken farmers

Chickens raised for meat are called **broilers**. These chickens are free to run (or roam) large areas and have access to feed and water 24 hours **a** day. This is called **free-run**.

Why is it important to understand how food, like chickens, are raised? Find four examples of technology and science in chicken barn photos. Use these examples to explain how technology and science contributes to our food supply.



Take a virtual tour of a chicken farm at www.farmfood360.ca/en/chickenfarms/chickenfarm/

1. Computerized monitors are used to check and control the heat, humidity and ventilation in the barn.
2. Feed and water lines are always kept clean.
3. Heat lamps are sometimes used to keep the temperature comfortable for the chickens.
4. Fans are used in the barn to help circulate the air.
5. A crank or pulleys can be used to raise the feed and water lines in the barn so they are at the right height as the chickens grow. The chickens can access food and water whenever they are hungry and thirsty.
6. Bedding is put down for the birds to roam on. This bedding can be made of wood shavings or straw.
7. Chicken farmers follow biosecurity rules, like putting boot covers on before they enter the barn. Biosecurity procedures protect animals from disease and pests.
8. Biosecurity and safety rules are followed by anyone permitted to enter the barn.

What about waste?

WASTE NOT

There's more to chicken manure than just waste

A clean barn is important for healthy chicken flocks. **Flock** is the word that is used to describe groups of chickens! The average chicken farm in Alberta raises six flocks each year.

What do you do to recycle? Share two examples.

Scientists have found a micro-algae that helps reduce greenhouse gas. This micro-algae also likes chicken manure!

Micro-algae is a plant-like organism that needs light, water, carbon-dioxide and nutrients. It grows in lakes each summer.

Chicken manure contains the nutrients that the algae needs to grow. When the micro-algae is fed with liquefied chicken manure, it grows by leaps and bounds!

As the algae grows, it uses carbon dioxide and produces oxygen. **Carbon dioxide** is a gas that contributes to the greenhouse effect.

Chicken litter is a mix of manure and used bedding material from the barn. It is recycled!

The chicken litter as many of the nutrients that are essential for good plant growth. This makes is an excellent fertilizer for crops, gardens and composting.

The government plays a role in the disposal of manure. Farmers must follow strict rules that tell them how to store and transport manure.

Many chicken farmers in Alberta use manure on their own farms or sell it to neighbours.

Some farmers use or sell the manure as biomass fuel for energy, such as generating electricity. **Biomass fuel** is made by separating the methane gas in the manure from the liquid and solid waste.

Other farmers sell the manure for fertilizer.

All chicken barns are carefully cleaned within 24 hours after a flock leaves. Everything is cleaned with hot water and disinfectant. **Disinfectants** kill bacteria. These practices help prevent disease.

Crops are grown with the help of fertilizers. The straw left over when the crops are harvested is used for new bedding in chicken barns. Explain why this is an example of recycling.

CHICKENS ARE CONCERNED ABOUT CLEAN

Chickens stay clean and healthy by having dust baths! They dig themselves into dry, loose material, like dirt, sand or shavings. The dust coats their feathers and absorbs moisture and oils.

When they are finished, chickens shake out the dust and dirt and groom their feathers. This keeps each **feather** clean and flexible.

Is biosecurity for the birds?

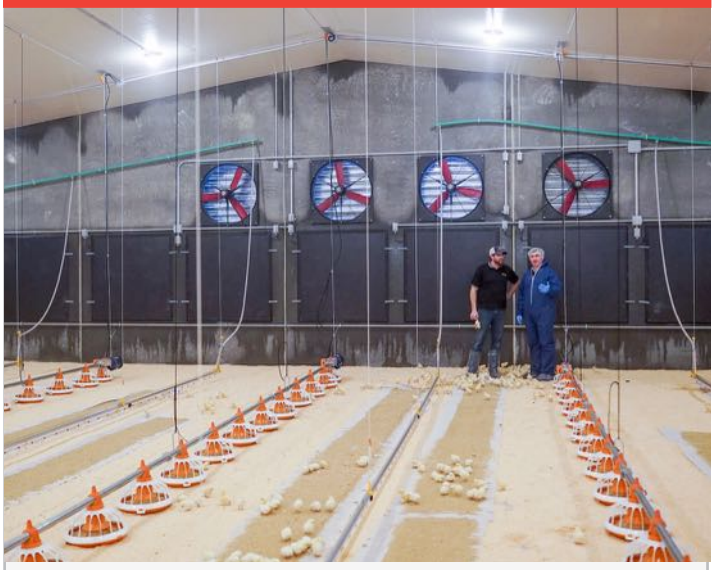
ANIMAL CARE

Biosecurity practices protect animals from diseases caused by a virus, bacteria or other organisms

Biosecurity refers to the steps that are taken to stop organisms that are harmful to people, animals and plants from entering or spreading in an environment. Good biosecurity practices protect both farmers and the chickens.

Most chickens in Canada are raised indoors. This protects the **birds** from predators like foxes, hawks and weasels. It reduces the chances of the birds being exposed to disease.

Chicken farmers in Alberta follow *On-Farm Food Safety and Animal Care Programs*. All farmers must carefully monitor and keep records of barn conditions and bird health. They also keep track of all people who come to the farm.



Anyone who enters a chicken barn must remove their footwear and put on special boots or place plastic booties on their feet. They must also wear clean barn overalls and hair covers. They wash their hands with soap and water.

All equipment and vehicles are cleaned and disinfected before they are used on the chicken farm.

These are **biosecurity practices**. These practices keep the barn clean and make sure that no viruses, bacteria or disease-causing organisms are accidentally passed on to the chickens.

♡ ❑

Biosecurity is important to the safety of our food supply.

Farmers believe that food safety begins on the farm. Clean and safe conditions for animals and biosecurity practices make sure that the animals, food and people are healthy.

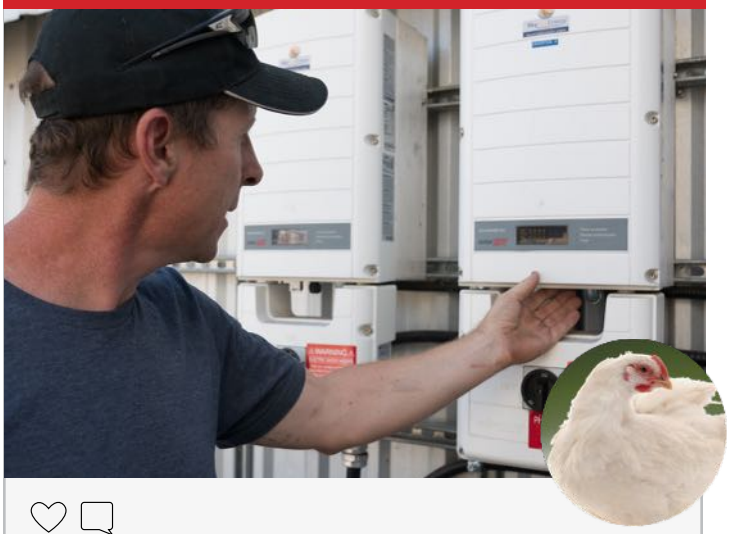
Think about when and why you wash your hands! Is this a biosecurity practice? Why? What other biosecurity practices do you use at home?

How do biosecurity practices affect food safety? How do they protect the environment?

What does responsibility mean to a farmer?

HAND IN HAND

Farmers take responsibility for the health of their animals, the land, soil and water



Farmers check the **flock** several times a day to examine the bird's health and make sure all equipment is working properly.

They follow strict rules for the care and handling of the birds.

All farmers are certified every year under the *Animal Care Program* in Alberta. This means they must follow requirements and responsibilities for the care of their animals.

Farmers use technology to carefully watch over the health and safety of their animals.

On chicken farms, computers are used to control heat, fans, lights and other equipment in the barn.

If there is a problem, the computer sends an alarm to the farmer's cell phone. The chickens are watched around the clock.

Farmers use sustainable practices to reduce the impact of agricultural activities on the environment, protect animal health and make sure food is safe.

- High-efficiency lighting in barns reduces the amount of electricity that is used.
- Manure storage containers are covered and lined so nothing can contaminate the land and water sources.
- Biofuels are used to provide heat. **Biofuels** are made from plant and animal sources such as trees, agricultural wastes and crops like corn and canola.

What do you think the daily responsibilities of a farmer look like? Think like a chicken farmer and make a list that shows what you think their daily schedule looks like.

Or, interview a chicken farmer to find out what they do to meet their responsibilities in a typical day.

How does a chicken grow?

GROWING CYCLE

Chickens grow from chick to broiler in less than 39 days

An egg takes 3 weeks to hatch. In a hatchery, eggs are stored on large racks in rooms that are carefully controlled for temperature, air quality and humidity. Every few hours, the eggs are automatically turned. This is called **incubation**. During the last three days of incubation, the eggs are transferred to hatching trays.

Day old chicks arrive at broiler chicken farms from the hatchery. The temperature in the barn is warm.

A special brown paper is laid on the floor of the barn. This paper is **biodegradable**, which means it will break down. Feed is placed on the paper until the chicks are big enough to reach the feed pans.

Chicks begin to eat and drink within a few minutes of arriving in the barn. These chicks are in the "**brooding**" phase. This means that they are starting to grow and look different. Their light yellow down is being replaced by feathers.

The broilers are fully grown between 35 and 39 days. They weigh about 2.2 kg. The broilers are picked up to be taken to a processing plant.

After 5 weeks of age, a chick is called a **broiler**. Chickens continue to roam the barn freely. However, chickens are social animals and like to stay **together** in groups.

Once the chick's down is replaced by feathers, the temperature in the barn is gradually lowered. The chicken's feathers keep them naturally warmer.

Chicken Posts was created for Alberta Chicken Producers by InPraxis Learning. Find more information and resources on the Alberta Chicken website at **www.chicken.ab.ca/education**.