

POSSIBLE CURRICULUM CONNECTIONS FOR TEACHERS

PRE-VISIT ACTIVITIES

- Have students choose a favourite recipe including a vegetable or meat product that will be discussed during their visit to the Norfolk County Fair. Have them share that recipe with classmates and copy down a recipe that another classmate brought that they think they would enjoy. Classify that meal using the four food groups.
- Discuss the prices of food. For example, have the students determine how much of a favourite meat cut they would need for a meal for their family, and also how much they would need for the entire class. Determine the cost of the meat purchase in both situations.
- Have students choose their favourite meal, whether it is fast food or something they eat at home. Have them write a description of this meal for an alien on another planet. Include in the description the components of the meal, the source of the ingredients, the methods of preparation, a visual description of the meal and an account of the tastes and smells associated with the item or meal.
- In a chart form, have students record what they have eaten in one day. Chart it using the four food groups and use the chart as a tracking form. Extend the activity and track your food consumption for a week.

POST-VISIT ACTIVITIES

- Have students choose a career in agriculture, possibly one they heard about or saw during the visit that they think they would enjoy. Have them write a description explaining why they would excel in this career, education needed, a description of the job, skills needed, tools/equipment used and why they would enjoy the career.

- The following products are derived from beef:

beef soup	candies	soccer ball	insulin	chewing gum
medicine	film	asphalt	candles	computer disks
paints	floor wax	antifreeze	buttons	fabric softeners
car polish	candles	luggage	rubber tires	sporting goods
pet food	cosmetics	shampoo	jello	VCR tape
soap	shoes	shortening	glue	marshmallows
crayons	ice cream	toothpaste	printing ink	leather belts
bandaids	sausage casing			

Have students create a chart with the names of each person in their family. Have them walk around the house and list the items each person owns or uses that originate from beef animals. Have them check the chart and notice who uses the most products derived from beef animals. Reflect on the responses, were they surprised? Consider life without these products and share some consequences this would have on you and others in the classroom.

- Investigate food in other cultures, compare similarities and differences.

- Discuss knowledge of food safety techniques. Have students focus on one area of food safety, for example: salmonella poisoning –describe what causes it, how it can be prevented, symptoms, consequences, etc. Have students create a report in writing that they could read out loud in class.
- Have students write thank-you letters to the **Farm Credit Canada, 421 Queensway Rd W, Unit 4, Simcoe, ON N3Y 2N4** who sponsored the event financially. Have them include what they enjoyed the most, with specific facts and information that they did not know before. We also wish to acknowledge **Vittoria & District Foundation, Box 45, Vittoria, ON N0E 1W0** for also sponsoring this project.
- Have students use geometry to classify shapes they saw at the fair. Have them draw a (3-D) pen for animals. Decide what shape an egg is and the shapes of different cuts of meat. The shapes can be cut out and the students can have a chance to quiz each other by showing shapes to their classmates.
- Create a project that involves the displays and presentations that the students saw at the fair. The research project could include: their favourite part of the day with concentration on one specific element of the day (example: eggs). The student is responsible for doing his/her own research on eggs, collecting material to include in the report, writing clear paragraphs of information and presenting it to the class. For more complex purposes, the students may be required to prepare questions to ask the class after their presentation. Have students discuss their own viewpoints and opinions, proofread and edit their final drafts, focusing on spelling and grammar with minimal assistance from the teacher. This project could initiate students into reading non-fiction material on their own time for research purposes, read independently, interpret written work into their own words, communicate a main idea about a topic and express ideas and opinions on their own or toward a fellow classmate.
- Create word problems that involve agriculture seen at the fair. Example: the price of steak is \$6.89 a pound. If the average steak weighs four and a half pounds, how much will the steak cost?

PRESENTATION INFORMATION

LOCATION: Please bring your student to the Cattle Barn Farm Credit Canada Education Centre **at your schools assigned time.**

IMPORTANT INFORMATION:

1. Please be on time as we are running four of these presentations each morning (Wednesday and Thursday) to accommodate the 1000 students who will be taking part in these tours.
2. Have your students sit in the bleachers located in this area.
3. Approximately 200 or less students will be in each group.
4. Length of presentation is 55 minutes.

PRESENTATION FORMAT:

Each commodity group will have 3-4 minutes maximum to speak to the students on a specific topic. This will be followed by a farmer representing the commodity answering questions from the students (5 minutes maximum).

Commodity groups may include:

- Apple producers
- Egg producers
- Corn, Wheat and Soybean producers
- Pork producers
- Dairy – Milk Producers
- Beef producers
- Organic Farmers
- Vegetable and Herb producers
- Goat and Sheep producers
- Chicken producers



Following the commodity groups, there will be a Cow Milking demonstration.

OTHER AGRICULTURAL DISPLAYS:

1. Under the Grandstand –your group will be able to view vegetables, fruits, field crops, giant pumpkins, apples and beekeeping displays and demonstrations.
2. Cattle Barn (**AFTER PRESENTATIONS ARE DONE AT 1:30PM**) –commodity group displays as well as displays of sheep, pigs, goats, dairy cows, beef cows, chickens, egg incubators, miniature horses, heavy horses and llamas.
3. Chicken Barn –competitive classes of chickens, ducks and rabbits
4. Area between barns and Grandstand –farm machinery displays
5. Junior Fair competitions in the lower level of the Homecraft building (#2)

ADDITIONAL INFORMATION

ADMISSION: The fee of \$1.00 per student and \$5.00 per adult will be sponsored by Farm Credit Canada. Farm Credit Canada has generously offered to cover the costs of admission for this year and **contribute \$100** to the cost of bussing provided you have attended and participated in the program. Any additional group leaders or parent volunteers are free of charge.

BUS PARKING: Buses will park at the Seventh Day Adventist church on South Drive. Please drop the children off at the Pedestrian Gate on South Drive.

WASHROOMS:

1. Under the North and South ends of the Lloyd S. Culver Grandstand
2. Recreation Center
3. Curling Building
4. Cattle and Sheep barn (Aud)
5. Junior Farmers Building

LUNCH: Students can eat their lunch in the following areas:

1. On the picnic tables along the fence by the West side of the race track
2. In the Grandstand seating area
3. On the picnic tables in front of the Band Shell or the grass area beside it

FOOD AND DRINKS:

1. The Midway has a variety of booths.
2. Food booths are located inside and outside the Curling, Commercial, Industrial and Jr. Farmer's Buildings.
3. The Recreation Center has a cafeteria style restaurant.
4. Food booths are also located under the Grandstand and on the West side of the Grandstand in the area encompassing the Cattle and Sheep Barn and Poultry Building.

WHEELCHAIR ACCESS: All buildings are wheelchair accessible.

LOST AND FOUND:

1. Children are advised to speak to a police officer or a fair volunteer wearing a Norfolk County Fair name tag.
2. Go to the Information Booth or the Fair board office to locate lost children if they are not at the pre-assigned area you designated.
3. All found articles are returned to the Fair board office in the East end of the Curling Building.

WARNINGS

1. Students should be warned to be careful around the animals. These animals are from a farm and may be frightened by loud noises or unfamiliar people. Please ask the owners or the adult in charge before touching any animals.
2. Students should also be warned that there may be strange sounds and smells that are all part of the housing of agricultural animals. These new sensory experiences can become a part of the learning experience rather than a detractor.
3. Do not eat or drink in animal areas.

FAIR VOLUNTEERS

These people donate a great deal of time to operate the Norfolk County Fair. You will see them around the various displays wearing Norfolk County Fair badgers identifying themselves. Take time to give them some feedback about the fair. Ask them questions about the exhibits or their role in the fair.

DEFINITIONS

Bay → a reddish brown horse with a black mane and tail

Bedding → material used to cover the floor of stalls and pens where livestock are kept, it is usually straw or wood shavings

Boar → a male pig

Bred → an animal that is safely pregnant

Bridle → the leather harness that fits over a horse's head that is used to control the horse. It may have a bit that fits into the horse's mouth

Broiler → a chicken that is raised for meat at 2-3 kg, sometimes called a fryer

Buck → a male goat

Brooder → a heat source such as a heat lamp used to keep young chickens warm

Candling → the process of shining a bright light through the shell of an egg to check for blood spots and other impurities

Calf → the newborn young of a cattle beast

Chick → a newly hatched chicken

Colt → a young male foal or young horse or donkey

Colostrum → the mother's first milk which is rich in antibodies and vitamins and is needed by the young to have a healthy start to life

Comb → the red fleshy crest on a chicken's head

Creep → an area open for the young animals that is not accessible to the adult females

Crutching → the process of trimming off all excess wool and dirty locks on the rear quarters and udder of the ewe

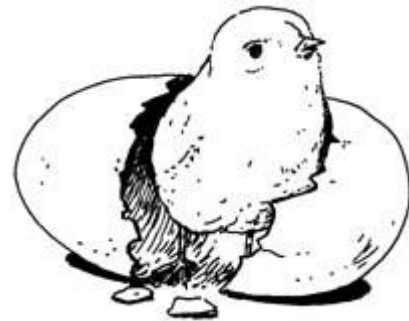
Cud → the regurgitation of swallowed food returned to the mouth

Cull → to eliminate an animal of low quality from the herd

Dam → the female parent of an animal; a sire is the male parent

Dock → trimming of a lamb or piglet's tail before 10 days of age

Doe → a female goat



Drake → a male duck

Ewe → an adult female sheep

Farrow → a female pig giving birth to a litter of piglets

Feeder → a calf or pig purchased and fed a high energy grain diet to promote rapid growth and meat reproduction

Fertilizer → animal manure or a human-made chemical put on the land to help feed the crop that will grow there

Filly → a newborn female horse or newborn donkey

Fleece → a coat of wool on a sheep – this is the part cut off during shearing

Gander → a male goose

Germination → occurs when a seed begins to develop or sprout

Gilt → a young female pig before she has had her first litter

Gobbler → a male turkey

Gosling → a young goose

G.P.S → Global Positioning System (or Satellite) – a satellite positioned in space to gather information and to direct specific onsite farming operations on individual farms

Grading eggs → the process of classifying eggs according to their quality, cleanliness and size

Grit → sand or gravel that a chicken eats to help digest its food in its crop

Hay → a sun-dried mixture of grass, alfalfa and clovers

Hectare → a metric measurement of an area of land 100m²

Hen → an adult female chicken that lays eggs

Heifer → a female cattle beast that has not yet given birth to a calf

Incubator → an enclosure that keeps eggs at a proper temperature and humidity for hatching

Jack → a male donkey

Jenny → a female donkey

Lactation → the period of time in which a cow produces milk starting with the birth of her calf until she dries up, no longer giving milk

Lamb → a young sheep, either male or female, or the meat of a young sheep

Layer → a chicken raised to produce eggs

Mare → an adult female horse

Paddock → a fenced-in area used to confine farm animals, usually wooden fences so the animals do not get caught as in a traditional wire fence

Pasture → land planted with grass used for the grazing of livestock

Polled → animals that are born without horns

Ram → a male sheep

Roughage → a course, bulky food that stimulates the activity of the intestines

Silage → the whole corn plant, except for the roots, chopped and stored in a silo or wrapped in plastic for animal feed

Sire → the male parent of an animal; a dame is a female parent

Sow → an adult female pig that has produced her first litter

Stallion → an adult male horse

Straw → dried stock from grain plants that is used to keep livestock warm and dry

Tallow → melted down animal fat

Teat → the nipple of an udder where the milk passes through when pressure or suction is applied

Thinning → removing excess fruits and vegetables to increase the size of remaining fruits and vegetables

Wean → the change from a young animal relying on milk from its mother to eating solid food on its own

FARM ANIMAL FAMILIES

ANIMALS	MALE/NEUTER	FEMALE	YOUNG	GROUP
Cattle	Bull/Steer	Heifer/Cow	Calf	Herd
Donkey	Jack	Jenny	Foal	Pace
Horse	Stallion/Gelding	Filly/Mare	Foal-Colt/Filly	Herd
Goat	Buck	Doe	Kid	Herd
Alpaca	Macho	Hembra	Cria	Herd
Mule	Jack	Jenny	Colt	Herd
Rabbit	Buck	Doe	Kit	Warren
Sheep	Ram	Ewe	Lamb	Flock
Swine	Boar/Barrow	Gilt/Sow	Piglet	Drove
Chicken	Rooster/Capon	Pullet/Hen	Chick	Flock
Duck	Drake	Hen	Duckling	Flock
Goose	Gander	Goose	Gosling	Gaggle
Turkey	Gobbler	Hen	Poult	Flock



FARM MACHINERY

Tractor

The tractor is the most frequently used machine on the farm. It has two large wheels at the rear for power and two smaller ones at the front for steering, with a gasoline or diesel engine in the center. Tractors come in many sizes depending on the **pulling power** required. Most tractors have a **three point hitch** system for hooking onto implements and raising them out of the ground. Most tractors have a **power-take-off** shaft at the rear for providing power to other implements. Some tractors have **front-end loaders** for moving manure, dirt and large round hay bales. Some tractors have a cab which encloses the driver from rain, cold, wind and dust. Some modern cabs have air-conditioners and stereos for the comfort of the operators. Most tractors have **hydraulic pumps** that enable the operator to raise and lower machinery from the seat and to raise and lower the front-end loader. New GPS technology allows farmers to plant, fertilize and harvest crops with precision using satellites to provide information to computers on the tractor. This technology allows farmers to improve production and lowers costs.



Plow

The plow is pulled by the tractor to turn the ground over. This covers over any plant material on the ground and brings fresh soil to the surface. The plow consists of a series of **mouldboards** mounted on a heavy drawing bar that is attached to the tractor. The number and width of the **furrows** (the number of mouldboards on the plow) will determine the size of tractor needed to pull it through the field. Farmers tend to plow in the fall after the crops have been harvested. They like to leave the ground rough so the frost will break down the particles of soil over the winter.

Cultivator

The cultivator has a series of sharp **teeth** mounted on spring arms which are pulled over the field to prepare the ground for seeding in the spring. Cultivators come in various widths from 3 to 24m. After the crop has begun to grow, cultivators can also be used to control weeds in the field and to further mix the soil.

Disk Harrow

A disk harrow consists of several gangs of round metal **disks** mounted on a box frame and pulled over the soil to prepare it for seeding or to till grain stubble after harvest. The frames raise out of the soil for transporting the disk harrows.

Corn and Grain Planter

Planters consist of a box mounted over a set of disks to plant seeds in predefined row spacing. A hose runs from the box to each of the disks to carry the seeds. Corn rows are spaced from 7.5cm to 10.16cm apart. Corn planters come in 4,6,8,12 or 24 rows. Grain rows are spaced 1.5cm to 3.56cm apart and the planter itself can range from 3.18m to 13.7m long. Fertilizer is usually applied on or beside the seed rows. Planters are pulled by a tractor to apply seed and fertilizer to the field in the spring. **Minimum tillage or no-till drills** can also be used to seed directly into last year's crop residue so that spring tilling is not necessary.

Haybine

Haybines cut **hay** (alfalfa, clovers, grasses), then pass it through rollers to crush the stalks and deposit the hay in a neat **windrow** for natural drying by the wind and sun. These rows are then gathered up by the **hay baler**.

Hay Baler

Balers gather alfalfa, clover and grasses that have been cut into windrows in the field and allowed to dry naturally by the sun and wind and compact them into either square bales or round bales with **twine or net wrapping** wrapped around them. Square bales weigh about 25kg and round bales weigh between 250-1000kg. Some square balers have **bale throwers** at the back of the machine that throw the bales into wagons with sides. Many of these wagons can hold at least 200 bales. Bales are then stored under cover and fed to livestock over the winter months. These balers can also be used to bale straw to be used as bedding.

Combine

A combine moves through a field of grain or corn and separates the kernels from the stock. In the case of grain, the entire plant is cut close to the ground and taken through the combine where the kernels are separated from the plant stalks. The kernels are stored in a tank on the combine while the plant stalks and chaff are expelled through the back of the combine into windrows on the field. The plant stalks and chaff are called straw. In the case of corn, the combine pulls the cob from the plant, separates the kernels from the central cob, stores the kernels in the tank and expels the waste cob from the back of the machine. The kernels are emptied into a **grain wagon** for transporting to **storage bins** near the barn. Combines come in many different sizes from 4.6m to 9.2m wide.



Grain Wagon

The grain wagon is a metal box mounted on four wheels and is usually made of four high metal sides with one side sloping at 45 degrees so that the grain it carries will flow out an opening into a **grain auger** for elevation into a **storage bin**.

Grain Auger

The grain auger is a long tube mounted on one set of wheels. Inside the tube is a metal auger that is driven by a pulley or gear at the top. The auger takes in grain at the bottom where it is open and empties it at the top. The grain auger is used to elevate grain from the ground to the top of a grain bin at the farm or to lead trucks from a grain bin.

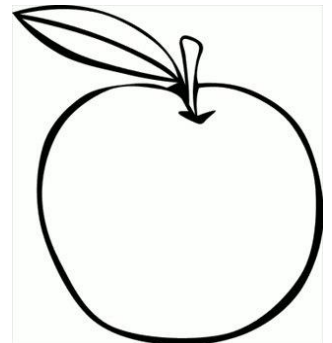
Manure Spreader

Manure spreaders are used to carry animal waste from the barn and spread it on the fields as fertilizer. Spreaders are usually loaded from the storage pile with a tractor and loader and towed with another tractor to the field. The **power-take-off** from the tractor is used to drive the **apron** and the **beaters** at the back of the spreaders so that the manure is easily spread over the field. The manure is then **plowed under** or worked into the soil using a **disk** or **cultivator**.



DID YOU KNOW?

1. In 1950, it took thirteen weeks to produce a 2kg chicken. Today with modern farm practices it only takes six weeks.
2. Egg productivity rose from about 160 eggs per hen in the early 1950s to over 300 eggs today.
3. Half as many dairy cows are needed to meet our dairy needs today compared to 40 years ago.
4. In 1990, each farmer fed only 12 people and about 50 cents of every dollar was spent for food. Since then, on average each Canadian farmer now feeds more than 120 people. Food prices are among the worlds lowest, with food costing only about 12.5 cents of every dollar earned. New farming methods have helped make this possible.
5. A busy bee hive containing 75,000 bees only has one queen bee.
6. One beef cow provides enough meat for 1500 hamburgers. Have you eaten 1500 hamburgers?
7. One farm combine costs as much as many people pay for a house.
8. An average dairy cow produces about 63 glasses of milk each day. To do this, she will eat up to 45 kg of grain, hay and grass and drink 130-160 litres of water a day. This is enough water to fill a bathtub.
9. To gather 500g of honey, a bee must fly a distance equal to more than three times around the world. Could that be where the expressions “busy as a bee” and “worker bee” came from?
10. Cows spend as much as eight hours a day chewing their food, or “ruminating”.
11. Many different varieties of apples are grown in Ontario. However, Ontario is most known for the McIntosh variety. Other varieties include Northern Spy, Red and Golden Delicious, Empire, Ida Red and Spartan varieties.
12. It takes nature approximately 500 years to accumulate 30cm of organic soil, often used for growing vegetables.
13. A sheep shearer can shear a sheep in less than three minutes.
14. Turkeys are a variety of pheasants and fossil evidence indicates that turkeys roamed North America as long as 10 million years ago. Archaeological evidence indicates turkeys were confined, if not domesticated by Native Americans as long as 2000 years ago.
15. There are 29 different breeds of pigs that are raised for pork. The Yorkshire, Landrace, Duroc and Hampshire breeds are the most popular breeds on Canadian farms.
16. To most people, the term milk is synonymous with cow’s milk; but on a worldwide basis, more people drink goats’ milk than milk from cows.



QUESTIONS AND ANSWERS

1. What are the most popular breeds of dairy cows in Ontario?

Holstein, Guernsey, Jersey, Ayrshire, and Brown Swiss.

2. What are the most popular breeds of beef cows in Ontario?

Hereford, Angus, Shorthorn, Limousin, Simmental, Charolais, and Main Anjou.

3. Why don't beef cows give milk?

They do, but only enough to feed their own calves. Beef cattle breeders select animals that convert feed into muscle (meat) more efficiently than into milk.



4. The animals all look alike. How does a farmer tell them apart?

Each animal with more than one colour has a unique pattern of hair. Farmers use drawings or photographs of these unique patterns on the Official Registration Papers (like a birth certificate) for purebred animals. For day to day identification, dairy cattle usually have a numbered tag hanging from a neck chain or leather strap. Beef cattle usually have a numbered ear tag or sometimes a brand on their hip. Pigs will frequently have notches in their ears. Some animals have a tattoo on their ear or lip.

5. What do dairy cattle eat? How is it different from beef cattle?

A large 550kg Holstein dairy cow in heavy milk production will eat as much as 25kg of roughage (corn silage, haylage, and/or dry hay), 20kg of ground or rolled grain, 5kg high protein concentrate and 80 litres of water to produce 35 litres of milk per day. A 450kg beef animal will eat 20kg of roughage (corn silage, haylage, and/or dry hay), 15kg of rolled grain (barley and/or oats) and drink 30 litres of water to gain (on average) 1.5kg of weight per day.

6. How old are beef steers and heifers when they are sold for meat?

Usually 15 to 20 months old.

7. Why do people milk goats?

Goat milk has very small fat globules that are evenly distributed throughout the milk so it is naturally homogenized. It has a unique flavour that is favoured by many nationalities around the world. Some people find it easier to digest than cows' milk. Goats can produce up to three litres of milk per day on much less feed than a cow.

8. Do all cows have horns?

No, some are born polled, that is, they have no horns. In most cases, farmers choose to "dehorn" or remove the horns from the young calves when they are very small. This is done to prevent injury to both the farmer and the other cows. The horn buds can be removed with very little pain when the calf is small by using chemicals or a hot iron.

9. When does a cow begin to give milk?

A heifer or young female cow is not able to make milk until she is at least two years old and has given birth to a calf. Dairy cows make more milk than their calves will ever need so humans use the extra milk for food. After a heifer or a cow has a calf or "freshens" she will be milked for 305 days

(10 months). However, approximately 90 days after her calf is born, the cow is bred again to have another calf. She is pregnant for nine months. Two months before her calf is due, the farmer stops milking her so she will stop producing milk. The cow is then “dry”. When she has another calf, she again produces milk. A cow may have a production life of as long as ten years. The average Ontario dairy cow produces 6000 litres of milk per year for six to eight years.

10. What does it mean to say that a cow is a “ruminant”?

All cows have four stomachs. These stomachs allow them to eat grass and hay, which humans cannot completely or easily digest. Cows swallow grass and hay without chewing it completely. It goes into the **reticulum** or first stomach where it is stored and broken down into balls or a “cud” and any bits of metal or stones are trapped. When the cow has eaten its fill, it rests and “chews the cud or ruminates” by bringing a ball of cud back into its mouth and chewing it to a pulp. The cow swallows it again and it goes into the second stomach or the **rumen** where the food is stored and reduced in size and fermented (digested) by microbes or tiny organisms. From the rumen it goes into the third stomach, or the **omasum** which strains the pulp and sends back any undigested food to the rumen. The rest passes into the fourth stomach or the **abomasum**, where digestion is completed. The abomasum is also known as the “true stomach” because it is like a human stomach.

11. What diseases do cattle get? Who treats sick animals?

Calves are very susceptible to scours and pneumonia; flies in the summer can cause “pink eye”; an injured foot can develop into “foot rot”; dairy cows get mastitis in their udder; cattle can swallow a piece of wire which punctures the wall of their reticulum (often called hardware disease). In addition, they can suffer heart attacks and strokes. The farmer and the veterinarian work together to prevent sickness and treat it when it happens.

12. How do you care for a newborn calf?

A good mother cow takes the best care of her calf, but it is necessary for the farmer to provide a clean, dry place for the birth. The cow licks her calf dry and her licking stimulates it to get up and suck from the mother’s teats, usually within 20-30 minutes. This first milk, called the colostrum, is rich in antibodies and vitamins and is needed by calf to get a good start in life. The farmer will also dip the end of the umbilical cord in disinfectant to prevent infection and keep the udder of the cow clean. Cows normally have just one calf, but twins and triplets are possible.

13. How many lambs does a ewe produce and where are they born?

One or two is most common, three is not unusual, and four to six is possible depending on the breed of sheep. Lambs are usually born in some type of shelter with lots of clean straw, particularly when the weather is cold. The farmer will make sure that newborn lambs get milk from their mothers soon after birth and that the mothers clean the lambs quickly. The farmer may help her if there are more than two lambs. A ewe has two teats to feed her lambs so more than two can create competition.

14. How do you identify good hay for the livestock?

It is nice and green, not mouldy or dusty. It smells nice and has plenty of leaves left on the stock.

15. How often do you feed the animals on a farm?

Cattle and horses are usually fed twice a day, morning and evening, with extra hay to “nibble at” during the day and night. Sheep usually have hay most of the time with grain once a day prior to breeding and lambing. Livestock that graze outside in the summer will eat whenever they are hungry.

16. How do you tell the age of a horse?

The age of a horse is determined by the wear on its teeth.

17. What is the difference between English and Western riding?

There are differences in the kind of equipment you use as well as the style of riding. Western is usually associated with ranches, cattle, and roping. English is usually associated with jumping and hunting.

18. Why do pigs roll in the mud?

They do not have sweat glands so they do roll in the mud to keep cool.

19. What colours can pigs be?

Their skin can be black, red or white, depending upon the breed.

20. How many piglets are born to one sow?

A sow (a female pig) will have between eight and fourteen piglets at one birth. The piglets are usually given protection in another part of the pen under a heat bulb so that the mother will not lie on them.



21. What do turkeys eat?

Turkeys are fed a mixture of corn, wheat and soybeans that are ground up to look like granola pellets. The birds grow quickly so farmers spend a lot of time adjusting feeding rations to match the growth stages of the birds to reach the required market weight. Young turkeys (poults) are fed a “starter” mixture; then as they grow the feed is changed to a “grower” mixture. Each type of feed includes protein, energy, fibre, fat and other elements such as calcium, phosphorous, magnesium and vitamins. Water is always provided throughout the barns so they may drink freely. Turkeys drink two litres of water for every kilogram of feed they eat.

22. What is a market garden?

A market garden is one where vegetable are grown to be sold fresh to the consumer, either at a roadside stand, pick-your-own, a farmers market, or a grocery store.

23. Why would a farmer decide to grow vegetables rather than grain or cattle?

Some areas of the province have the right type of soil and climate to produce vegetables profitably. They are also close enough to a large population of consumers.

24. What farm commodities is Norfolk County the leading grower of?

According to data from Statistics Canada's 2006 Census of Agriculture, Norfolk County is the leading grower of many farm commodities in Ontario and Canada. Norfolk County is number one grower in apples, asparagus, cabbage, sour cherries, cucumbers, pumpkins, Saskatoon berries, shallots, green onions, squash, zucchini, strawberries, sweet corn and other specialty vegetables. Norfolk County is number two grower in Ontario of cauliflower, mushrooms and peppers. Norfolk is number three grower of fruits, berries, greenhouse flowers, tomatoes and nuts. In addition to the crops listed above, Norfolk County is also the number one grower of peanuts, sweet potatoes and ginseng in Canada.

25. What is the difference between a winter crop and a spring crop?

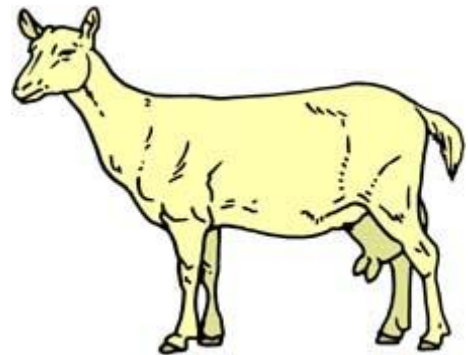
Winter crops are planted in late August or early September. The crop begins to grow before the winter freeze, developing the root system. In the spring, the established plants will grow very quickly and the crop will be ready to harvest in July. Typical winter crops are rye and winter wheat. Spring crops are sown in May - June and harvested in August – September.

26. What can be extracted from a bushel of corn?

A typical bushel of corn weighs about 25.4kg and contains approximately 72,800 kernels. Most of the weight is from the starch, oil, protein and fibre with some natural moisture. From a bushel of corn, you can extract 14.53kg of starch or 14.97kg of sweetener or 11.37 litres of fuel ethanol, 5.17 kg of gluten feed, 1.36 kg of gluten meal and a 700 mL bottle of corn oil.

27. What are the differences between a goat and a sheep?

Genetically goats have 60 chromosomes while sheep only have 54 chromosomes. However, there are easier ways to detect differences in these animals just by looking at them. A goat's tail is erect or upright in most breeds while sheep's tails always hanging down. Male goats (and some females) have beards, but sheep do not. Sheep and goats act differently too. Goats are browsers, meaning that they prefer to feed on shrubs, bushes & trees while sheep are grazers –consistently feed at ground level. Goats are less tolerant to rain than sheep and will seek shelter quickly. Also, when goats are young, they will practice “lying out” behaviour (kids are left in groups while the does feed). Lambs, however, will almost stay constantly by the side of the ewes when they are young.



28. Is there a difference between white and brown eggs?

No, there are NO nutritional differences between white and brown eggs. The difference is the breed of hen which lays the egg. The most common laying hen in Canada is the White Leghorn, a small bird which lays white eggs. The Rhode Island Red hen lays brown eggs.

RECIPES

ONTARIO APPLE AND CHEESE CRISP

5 cups	apple slices	1.25L
1 tbsp	lemon juice	15 mL
¾ cup	white sugar	175 mL
¼ tsp	cinnamon	1 mL
¼ tsp	salt	1 mL
½ cup	flour	125 mL
¼ cup	butter	50 mL
⅓ cup	grated cheddar cheese	150 mL

With adult supervision...

Preheat oven to 350°F. Butter an 8 inch (1.2 L) baking dish. Place the sliced apples in the baking dish. Sprinkle with lemon juice and ¼ cup of the sugar.

Mix cinnamon, flour, salt and remaining ½ cup sugar. Cut in butter until mixture is granular. Stir in the cheese and spread over the apples. Bake in a preheated oven until apples are tender, 35-40 minutes.

CHOCOLATE ZUCCHINI LOAF

3	eggs	
1 cup	vegetable oil	250 mL
2 cups	white sugar	500 mL
2 cups	unpeeled grated zucchini	500 mL
1 ½ tsp	vanilla	7.5 mL
3 cups	flour	750 mL
2 tsp	baking soda	10 mL
1 ½ tbsp	cinnamon	22.5 mL
2 tbsp	cocoa	30 mL
¼ tsp	salt	1 mL
1 cup	nuts (optional)	250 mL

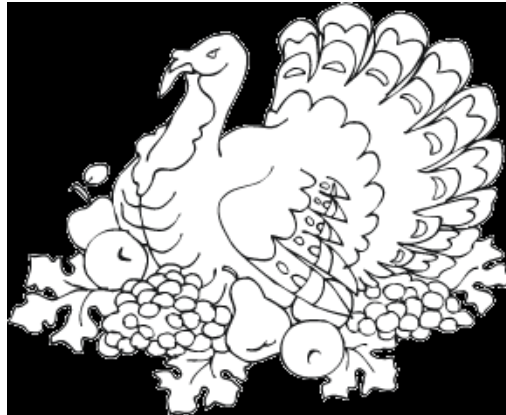
Combine eggs, oil and sugar. Stir in zucchini and vanilla. Blend flour, baking soda, cinnamon, cocoa and salt in a separate bowl. Add a little at a time to the egg mixture. Blend well. Pour into 2 loaf pans. Bake at 325°F for 60 minutes.

LEMON ROSEMARY TURKEY FINGERS

½ cup	mayonnaise	125 mL
1 tbsp	lemon juice	15 mL
1 pound	turkey breast, cut in strips	500 g
1 cup	dry bread crumbs	250 mL
3 tbsp	grated parmesan cheese	45 mL
1 tbsp	dried rosemary, crumbled	15 mL
2 tsp	grated lemon rind	10 mL
½ tsp	paprika	2 mL
½ tsp	salt	2 mL
¼ tsp	garlic powder	1 mL
¼ tsp	pepper	1 mL

Dipping Sauce

¼ cup	chilli sauce	50 mL
¾ cup	jellied cranberry sauce	175 mL



Turkey Fingers:

In a small bowl, mix together the mayonnaise and lemon juice; brush over turkey strips to coat.

In a separate bowl, mix together breadcrumbs, parmesan and seasonings.

Dip turkey strips in crumbs to coat and place on lightly greased baking sheet. Bake at 350°F, 3 to 4 minutes on each side. Serve with warm dipping sauce, plum sauce or mayonnaise.

Dipping Sauce:

In a small saucepan, over medium-low heat, mix together cranberry and chilli sauces; heat until hot.

Makes: 4 servings

ADDITIONAL TEACHER RESOURCES

CANADIAN MEAT GOAT ASSOCIATION

<http://www.canadianmeatgoat.com/>

-activity book available to download under "CMGA YOUTH"

CHRISTMAS TREE FARMERS OF ONTARIO

<http://www.christmastrees.on.ca/>

-virtual tree farm

-activities and teachers guide available under "EDUCATION" (hard copies of teachers guide can be obtained by e-mailing Christmas Tree Farmers of Ontario)

DAIRY FARMERS OF CANADA

<http://www.dairyfarmers.ca/>

-provides information about the dairy industry statistics in Canada, dairy nutrition and more

DIRECT FROM NORFOLK COUNTY – KNOW WHERE YOUR FOOD COMES FROM

<http://www.norfolkfarms.com/>

-provides excellent information about agriculture grown in Norfolk County under "RESOURCES"

ECOLOGICAL FARMERS ASSOCIATION OF ONTARIO

www.efao.ca

-education kit available under "RESOURCES"

FOODLAND ONTARIO

<http://www.foodland.gov.on.ca/>

-interesting food facts and great links to many other resources

GRAIN FARMERS OF ONTARIO

www.gfo.ca

-consumer resources located under "ABOUT US" provide various resources about corn, wheat and soybeans

ONTARIO AGRI-FOOD EDUCATION INC.

www.oafe.org

-lots of teachers resources available to be ordered

-downloadable resources are also available

ONTARIO BERRY GROWERS' ASSOCIATION

www.ontarioberries.com

-information available about raspberries, strawberries, blueberries and Saskatoon berries

ONTARIO FARM ANIMAL COUNCIL (OFAC)

www.ofac.org

-great downloadable resources for teachers under “Ag Aware Toolkit” including Teachers Toolkit and The Real Dirt on Farming

ONTARIO FARM FRESH MARKETING ASSOCIATION

www.ontariofarmfresh.com

-downloadable colouring pages and recipes available on the website

ONTARIO MAPLE SYRUP PRODUCERS’ ASSOCIATION (OMSPA)

www.ontariomaple.com

-good educational resources all about maple syrup

ONTARIO SHEEP MARKETING AGENCY

www.ontariosheep.org

-downloadable teacher’s guide

-“kid’s corner” features great educational links and Sheep Activity Book

SOCIETY OF ONTARIO NUT GROWERS

www.songonline.ca

-information about nut trees which are grown in Ontario

TURKEY FARMERS OF ONTARIO

www.ont-turkey.on.ca

-resources available to order from Ontario Agri-Food Education website (listed above)