



MODERN **farming**

Did you know that farmers are getting older? The average age of farmers in 2016 was 55. However, the number of women farmers and farmers who are under the age of 35 increased for the first time since 1991.

On some farms, younger people are working with older farmers. These **multi-generation partnerships** may occur on family farms as well as on larger farms that have been formed by combining smaller family farms.

Some people are worried that the family farm is disappearing in Alberta. They think we will lose an important way of life if fewer young people decide to stay in the family business of farming.



Families that Farm Together



All dairy farms in Alberta are family farms. The Crozier family farm is located north of Edmonton. The family work closely with animal nutritionists and veterinarians to make sure the animals get the best food and are well looked after.



School's Out for Summer



Farming practices have influenced our school system. In the past, many families depended on all family members to plant and harvest crops. School was scheduled to allow for time for children to help with planting and harvesting.

Photo Credit: City of Edmonton Archives EA-600-1197

Young people who have many choices for work and education might not want to continue working on the family farm. It can be difficult – but not impossible – for young people to get into farming if they don't have a family member who is willing to pass along the land, the equipment and the experience that is needed to become a successful farmer.



What do you think the future of family farms will be? Why do you think this?

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The Impact of Technology

The cost of buying the land and equipment needed to run a dairy farm can be a challenge for smaller farms. A robot that automatically milks cows can cost close to \$300 000 for each machine. One machine can milk up to 60 cows each day.

These robotic machines are called voluntary, or automated, milking systems (VMS). A voluntary milking system allows the cows to decide when they will be milked. The technology in these systems allows farmers to track information about each individual cow to make sure she is healthy and producing high quality milk. This allows the farmers to focus on other areas of farming.

A VMS does not mean that there are not jobs to be done. However, it does mean that the farmer can focus on other tasks such as improving cow comfort or growing quality feed for their cows.

Other types of technologies, like electronic tags or trackers that work something like a fitbit, can help monitor individual cows and watch for any signs of sickness or injury.

Alberta's dairy farmers see innovations like robotics in a positive way. More jobs are created as new technologies are used by more and more farmers. Other jobs are created by the need for people who can create and support the technology.

Find a video that shows a voluntary milking system on the project AGRICULTURE website at www.projectagriculture.ca/elementary in a carousel tile for the **more THAN JUST farming** topic.



A Day in the Life of a VMS



A voluntary milking system runs 24 hours a day, seven days a week. Some cows prefer to be milked twice a day, while others may prefer to be milked three to four times a day. A VMS will let them come to be milked when they prefer it.

The farmer will set permissions on the system to allow how frequently or infrequently the cow can be milked. The cows are attracted to the system with a grain treat. They learn to walk through a gate to hook up to the VMS. Many cows come for milking at the same times each day!

Other types of technology can provide additional types of benefits for a farmer.

- ◆ The internet provides news, market process and information. It can also provide a way for a farmer to stay connected with other farmers.
- ◆ Smartphones can be used to map and pinpoint GPS areas on a field that need nutrients or have a pest problem. Voluntary, or automated, milking systems can also be controlled by a smartphone.
- ◆ Video cameras that are linked to smartphones can be used to check on calves and cows.



There's an App For That



“The use of smartphones is increasing and along with it is the need for applications. Some companies are hiring people to design applications for their products. For example, someone working for a seed company may develop an application that lets farmers plug in their personal information to receive recommendations on which seeds to purchase for their farms. Robotic, GPS and soil probe companies each employ many different people for their work. Jobs exist to design the technology, sell and market to farmers, install the machines and maintain and service them.”

Ontario Agri-Food Education Inc. (2014). *All About Food: Exploring Canada's Food System*.



Farm Drones



Some types of technology help keep track of the weather. Other technologies are used to help with practices like making sure crops are planted in straight rows and that animals are fed and watered properly. Drones can be used to watch over crops and animals.



Why do you think farmers look for and use new or improved technologies on their farms?

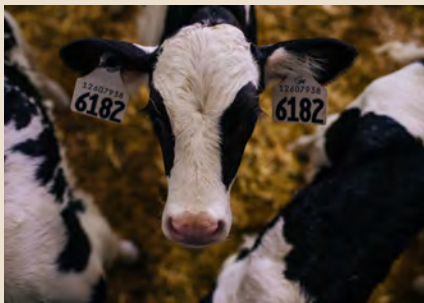
An Increasing Demand for Food

It is estimated that world food demand will double by 2050. Technology, science, research and innovation has helped increase the amount of food that one farmer can produce.

It has also resulted in increases in the amount of food one plant or animal can provide. For example, cows today produce more milk than they did 50 years ago. A farmer in 1900 produced enough food for 10 people. Today's farmer feeds over 120 people.



Food Production



Food production means the process of taking raw ingredients, such as grains, eggs or milk, and changing them into food items like cheese, bread, oils or yogurt.



Do you think the growing demand for more food could result in the invention of new technology? Why do you think this?