



## **BC Dairy Farms Spotlight**



### Technology and Careers on the Dairy Farm

Students will learn about different technologies and jobs on BC Dairy Farms. They will do this by activating their thinking through brainstorming, completing questions while viewing and then digging deeper into a dairy farm technology or dairy farm career of their choice by completing a research poster.

#### **Subject Levels/ Suggested Grade**

ADST: Food Studies 9

Food Studies 10-12

Culinary Arts 10-12

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Grade and Subject	Curricular Competencies	Content Connections
ADST: Food Studies 9	<ul style="list-style-type: none"> <li>Evaluate the personal, social, and environmental impacts.</li> <li>Evaluate how the land, natural resources, and culture influence the development and use of tools and technologies.</li> </ul>	<ul style="list-style-type: none"> <li>Health, economic, and environmental factors that influence availability and choice of food in personal, local, and global contexts.</li> </ul>
Food Studies 10	<ul style="list-style-type: none"> <li>Evaluate the influences of land, natural resources, and culture on the development and use of tools and technologies.</li> </ul>	<ul style="list-style-type: none"> <li>Food trends, including nutrition, marketing, and food systems.</li> <li>Simple and complex global food systems and how they affect food choices, including environmental, ethical, economic, and health impacts.</li> </ul>
Food Studies 11	Critically evaluate how competing social, ethical, economic, and sustainability considerations impact choices of food products, techniques, and equipment.	
Food Studies 12	Critically evaluate how competing social, ethical, economic, and sustainability considerations impact choices of food products, techniques, and equipment.	
Culinary Arts 10	<ul style="list-style-type: none"> <li>Explore the impacts of culinary decisions on social, ethical, and sustainability considerations.</li> <li>Evaluate the influences of land, natural resources, and culture on the development and use of culinary ingredients, tools, and technologies.</li> </ul>	<ul style="list-style-type: none"> <li>Food products available locally via agriculture, fishing, and foraging.</li> </ul>
Culinary Arts 11	<ul style="list-style-type: none"> <li>Analyze and evaluate how land, natural resources, and culture influence the development and use of culinary ingredients, tools, and technologies</li> </ul>	<ul style="list-style-type: none"> <li>B.C. agricultural practices.</li> </ul>
Culinary Arts 12	<ul style="list-style-type: none"> <li>Examine and critically evaluate how culinary decisions impact social, ethical, and sustainability considerations.</li> <li>Analyze and evaluate how land, natural resources, and culture influence the development and use of culinary ingredients, tools, and technologies.</li> </ul>	<ul style="list-style-type: none"> <li>Social, economic, and environmental effects of food procurement decisions.</li> </ul>

## Teacher Background

The majority of dairy farms in BC are made up of dairy cattle, more commonly called dairy cows. As with all mammals, it is the female dairy cow that produces milk. BC dairy farmers raise several breeds of dairy cows. The main dairy breeds in BC are the black and white Holsteins, red and white Ayrshires, tan/black Jerseys, Brown Swiss, and brown and white Guernseys. Holstein cows are amazing milk producers: one cow can produce up to 9,500 litres of milk in one year. That's enough to fill over 100 glasses in one day.

BC dairy farmers produce around 700 million litres of milk annually, with the average cow producing 35 litres of milk every day (2023).

Nearly all BC dairy farms are family owned and operated, with an average herd size of 135 milking cows. BC dairy farmers use many technologies to make their jobs easier and to produce the highest quality milk with the fewest environmental impacts.

### Materials

- Computer/Projector with access to the Internet
- Whiteboard
- Video: [BC Dairy Farms: Technology and Jobs](#)
- BC Dairy samples (cheese, milk, ice cream, yogurt)
- Student handouts:
  - *Video Viewing Guide*
  - *Dairy Farm Technology Poster Handout* (Access online [here](#))
  - *Dairy Farm Careers Poster Handout* (Access online [here](#))
- Personal devices (iPad/Chromebook/laptop) with access to the Internet

### Procedure

Hook:

1. Have some BC dairy samples out for the students to taste (small cups of milk, small pieces of cheese, small samples of yogurt or ice cream).
2. As they are sampling ask students: Have you ever thought of how these dairy products get from the farm to your plate?
3. Ask students if they can think of any tools/technology that are used on the dairy farm. Record any ideas on the whiteboard.

Body:

1. Handout *Video Viewing Guide* to students to use while watching. Have them complete the pre-viewing question before starting the video.
2. Show [BC Dairy Farms: Technology and Jobs](#) and ask students to use the *Video Viewing Guide* as they watch and reflect at the end.
3. After viewing and time to complete the *Video Viewing Guide*, ask: What technologies were mentioned in the video which help make farmers jobs easier and contribute to a well-managed dairy herd and farm? (ear tags, robot milker, tanker trucks, robot feeder, drones, GPS tractor systems)
4. Make a list on the whiteboard of technologies on the dairy farm.
5. Have students choose one of the technologies from the list and then use personal devices to research the dairy farm technology they have chosen.
6. Have students use the information they find to complete the *Dairy Farm Technology Poster Handout*.

7. Also ask: What careers were mentioned in the video that are needed to help make a dairy farm run successfully? (herdsperson, milker, dairy nutritionist, genetic advisors, veterinarians)
8. Make a list on the whiteboard of careers mentioned on a dairy farm.
9. Have the students choose one of the careers from the list and then use personal devices to research the dairy farm career they have chosen.
10. Have students use the information they find to complete the *Dairy Farm Careers Poster Handout*.

Note: You could also allow students to choose which poster they would like to complete or have half the class work on one and half the class on the other.

Closing:

1. Have students share their posters with another class to teach them about the technology and/or career they researched.

### Extension Activities

- [Read about the BC Dairy Industry and Technology](#)
- [Dairy Famers of Canada Technology Video](#)
- [GrowBC Dairy Story](#)
- [BC at the Table Resource Guide](#)
- [Explore post-secondary opportunities for working in the dairy industry](#)
- [Fresh Story Milk Intermediate](#)

### Credit

- BC Dairy Farms Video: Technology and Jobs: <https://vimeo.com/user1663027>
- Dairy Farm Technology Poster Online: [https://www.canva.com/design/DAFuidTT2SQ/FkfD9p5qnLZ79LjbfIU8lg/view?utm\\_content=DAFuidTT2SQ&utm\\_campaign=designshare&utm\\_medium=link&utm\\_source=publishsharelink&mode=preview](https://www.canva.com/design/DAFuidTT2SQ/FkfD9p5qnLZ79LjbfIU8lg/view?utm_content=DAFuidTT2SQ&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink&mode=preview)
- Read about the BC Dairy Industry and Technology: <https://bcdairy.ca/technology-in-the-dairy-industry/>
- Dairy Famers of Canada Technology Video: <https://www.youtube.com/watch?v=pUNnD24M4LY&t=115s>
- GrowBC Dairy Story: <https://bcaitc.ca/index.php/resources/grow-bc-dairy-story>
- BC at the Table Resource Guide: <https://bcaitc.ca/index.php/resources/bc-table-dairy-resource-guide>
- Explore post-secondary opportunities for working in the dairy industry: <https://www.ufv.ca/agriculture/>
- Fresh Story Milk Intermediate: <https://bcaitc.ca/resources/2020-fresh-story-milk-intermediate>

## Video Viewing Guide

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Pre Viewing: One Question I have about Dairy Farming

ONE important task on a dairy farm:

TWO technologies that have changed over time:

THREE jobs talked about:

Post- Viewing: One Question I still have

DEFINITION:

TMR: Dairy cows are fed a total mixed ration (TMR) that contains all the feeds and nutrients the cow needs.

# Dairy Farm Technology Poster



A large, empty, rounded rectangular box with a red border, intended for a drawing or image.



Name: \_\_\_\_\_ Class: \_\_\_\_\_

What was used before:

How does it help the farmer?

Interesting Facts:

Picture

Disadvantages:

Advantages:

References:

# Dairy Farm Careers Poster



Name: \_\_\_\_\_ Class: \_\_\_\_\_

Why I think this career is interesting:

How does this career help on the dairy farm?

Tasks this career does on the dairy farm:

Career Statistics

Skills needed for this career:

Where you would get training for this career:

References: