

Activity 3: Food, feed and function

Overview

Intermediate-level students will learn about the Census of Agriculture and the difference between food, feed and function. They will investigate current data from the Census of Agriculture and become familiar with some of the agricultural products from their region. They will consider geographic factors that contribute to the success of these products and compare their region's production with that of other regions in Canada.

Estimated completion time:



Suggested grade level:



(Secondary 1 to 3)

Objectives

- Gain awareness of the Census of Agriculture and the information it collects.
- Learn to access and use data from the Census of Agriculture.
- Gain an understanding of the kinds of agricultural products that are produced in their region and the natural resources required for this production.
- Gain an understanding of the kinds of agricultural products that are produced in other regions of Canada and how they compare with what is produced in their region.

Subject-specific learning objectives

Mathematics

- Prepare and evaluate convincing arguments based on data analysis.

Social studies

- Examine the relationship between the economic development of regions and their available resources.
- Demonstrate an awareness of significant geographic factors that affect economic development and quality of life.

Materials

Supplies

- Board or poster paper
- Chalk or marker
- Sticky notes (Post-its)

Handouts

- What is the Census of Agriculture?
- 2016 and 2011 proportion of cropland throughout Canada
- Food, feed and function worksheet

Other

- Highlights and analyses—farm data and farm operator data for 2016 and 2011
 - o English
2016: <https://www150.statcan.gc.ca/n1/pub/95-640-x/95-640-x2016001-eng.htm>
2011: <https://www.statcan.gc.ca/pub/95-640-x/2011001/ha-fsa-eng.htm>
 - o French
2016: <https://www150.statcan.gc.ca/n1/pub/95-640-x/95-640-x2016001-fra.htm>
2011: <https://www.statcan.gc.ca/pub/95-640-x/2011001/ha-fsa-fra.htm>
- Questions from the 2016 Census of Agriculture (*optional*)
 - o English: https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=getInstrumentList&Item_Id=235427&UL=1V&
 - o French: https://www23.statcan.gc.ca/imdb/p3Instr.f.pl?Function=getInstrumentList&Item_Id=235427&UL=1V&

Vocabulary

Census farm: A farm, ranch or other operation that produces agricultural products intended for sale.

Census of Agriculture: A census that takes place every five years and asks questions about every farm, ranch or other agricultural operation in Canada, including questions about land use, crops, livestock, agricultural labour, farm income and land management.

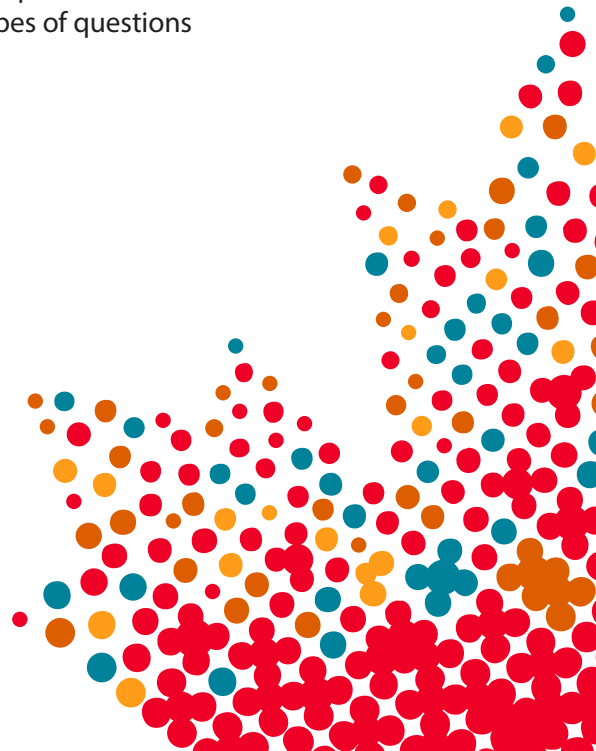
Census of Population: An enumeration of every household and person in Canada, conducted once every five years. Topics include age, marital status, household members and languages spoken.



Data:	Facts that can be studied and considered to form ideas or make decisions.
Enumeration:	The completion of a census questionnaire at home, online, on paper, by telephone, or with the help of an enumerator.
Farm operator:	A person who is at least 15 years old and who is responsible for the day-to-day management decisions made in operating a census farm.
Farm population:	All people who are members of a farm operator’s household who are living on a farm.
Field crop:	A crop that does not include fruits or vegetables, such as hay, grains (e.g., wheat and corn), oilseeds (e.g., flaxseed, canola, soybeans and sunflower), pulses (e.g., dry beans and peas, lentils and chickpeas), potatoes and other crops (e.g., tobacco, ginseng, sugar beets and other spices).
Statistics:	Numerical facts.
Survey:	An activity where a specific group of people is asked a series of questions to find out information.

Part 1: Getting started (25 to 35 minutes)

- 1 On the board or on poster paper, draw a Venn diagram with two components, “Census of Population” and “Census of Agriculture.”
- 2 Give students the **What is the Census of Agriculture?** handout. Read the description as a class, or have students work in small groups to read and summarize their understanding with a partner.
- 3 If time and resources allow, provide students with access to an online or printed version of the **2016 Census of Agriculture questionnaire** so they can see the types of questions asked and investigate the different categories of agricultural products.
 - English: https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=getInstrumentList&Item_Id=235427&UL=1V&
 - French: https://www23.statcan.gc.ca/imdb/p3Instr.f.pl?Function=getInstrumentList&Item_Id=235427&UL=1V&



4 Divide the class into small groups, and provide each group with four sticky notes. Ask groups to number each note from 1 to 4.

Ask groups to write their answers, on separate sticky notes, to the following questions for the Census of Population, the Census of Agriculture, or both.

1. What is the importance of this/these census(es)?
2. Who might contribute to this/these census(es)?
3. Who benefits from this/these census(es)?
4. How do you think this/these census(es) contribute to Canada overall?

5 Have students place their sticky notes in the relevant section of the Venn diagram.
As a class, compare and analyze the results.

Part 2: Activity (60 to 75 minutes)

6 On the board or on poster paper, draw a simple diagram to illustrate the concepts of food, feed and function.



Explain that agricultural products can be used for **food** (consumed by people), **feed** (consumed by livestock) or **function** (consumed to make materials, for recreation or for decoration). Demonstrate these concepts through a scenario in which all three are used.

Corn is a good example of a crop grown in many provinces of Canada that is consumed by people and by livestock, and that is used in many different materials.

- **Food:** A lot of people enjoy eating corn on the cob at their summer barbecues.
- **Feed:** Corn is part of the daily feed that farmers give their beef and dairy cattle.
- **Function:** Corn is used in many materials that can be found in your house, such as paint, wallpaper, cement used for foundations, soap, and toothpaste. It is even found in antibiotics like penicillin.



7 Put students in small groups and have them identify scenarios where crops or other agricultural products can be used for **food, feed** and **function**. If they need examples of agricultural products, provide students with access to an online or printed version of the **2016 Census of Agriculture questionnaire**:

- English: https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=getInstrumentList&Item_Id=235427&UL=1V&
- French: https://www23.statcan.gc.ca/imdb/p3Instr.f.pl?Function=getInstrumentList&Item_Id=235427&UL=1V&

Ask one person per group to present their group's findings to the class and explain why each concept is important to the overall consumption lifecycle.

8 Distribute the **2016 and 2011 proportion of cropland throughout Canada** handout, or display the relevant data for applicable regions where all students can view them. Divide the class into groups of four to six and assign a province to each group.

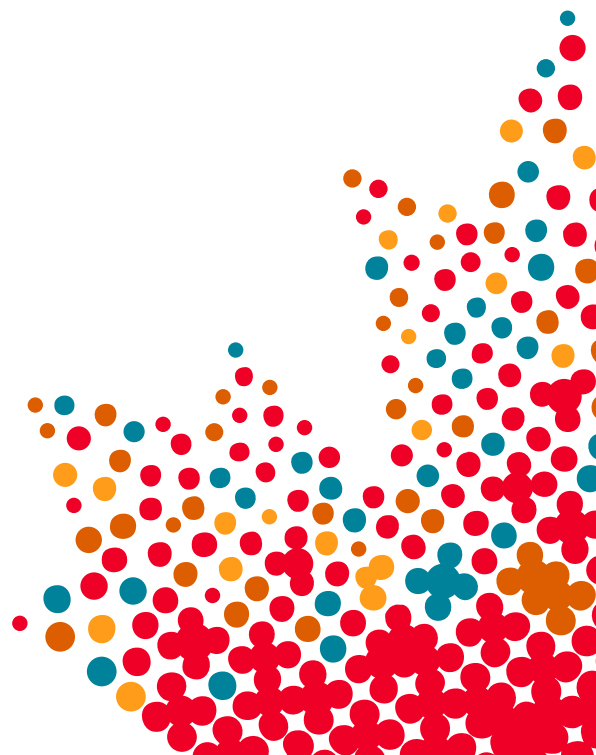
9 Ask groups to use Statistics Canada data to provide a snapshot of their region by completing the questions on the **Food, feed and function worksheet** handout.

To consolidate, ask groups to present their findings to their peers. As a class, compare the results between regions and analyze them. What is different from one region to another? What is similar?

Part 3: Consolidation of learning (10 minutes)

10 Answer the following discussion questions as a class.

- Why is the Census of Agriculture important?
- How does the Census of Agriculture benefit Canada?
- How does the consumption lifecycle affect your life?



Modifications

If students require additional support, try the following:

- Instead of having students work in small groups, complete the activities as a class.
- For the **Food, feed and function** activity, assign groups a particular type of crop and provide access to online or printed resources with background information about how those crops are grown and produced.
- If students are new to Canada, make a list of agricultural products grown in their home country. Students who live in urban areas may benefit from a trip to the local supermarket or a search through their refrigerators at home to investigate where the produce they eat is grown. As a class, talk about why these products may or may not be grown in Canada. Discussion points may include differences in climate or other environmental factors, or differences in preference and demand.

If students require an additional challenge, try the following:

- Ask them to complete a more in-depth investigation into the production of a particular agricultural product and its economic impact on a given region. Use online resources, including Statistics Canada's **farm and farm operator data from the 2016 Census of Agriculture**:
 - o English: <https://www150.statcan.gc.ca/n1/pub/95-640-x/95-640-x2016001-eng.htm>
 - o French: <https://www150.statcan.gc.ca/n1/pub/95-640-x/95-640-x2016001-fra.htm>This could include research into jobs created, profits generated and the ecological impact of production.

Next steps

To continue this activity, try the following:

- Have students research the natural and human-made resources required to produce a given crop and create a “web” or “chain of connections” from seed to consumption. This chain should include themselves or their families, if appropriate.
- Arrange for guest speakers who work in agriculture and in the production, distribution and marketing of local products, or take students on a field trip to a business or organization that supports local agriculture. In either case, the focus should go beyond the farm to encompass other community members who earn their livelihood by producing or using these products.
- Complete the same activity with agricultural production related to livestock in a region of Canada, or extend this comparison to another country.

