

OBJECTIVE:

- Students will explore a variety of current topics in agriculture.

DESCRIPTION:

The *Canadian Agriculture Scavenger Hunt for Facts* activity first has students apply prior knowledge to make predictions about a variety of current topics in agriculture. Then, students work collaboratively to check and correct predictions by exploring the science-based **snapAg** resources from Agriculture in the Classroom - Canada.

MATERIALS NEEDED:

- snapAg sheets (snapAg includes 50+ engaging one-pagers on a variety of topics in agriculture. These can be printed off and placed around the classroom, or students can view them online at <https://aitc-canada.ca/en-ca/learn-about-agriculture>
- *Canadian Agriculture: Scavenger Hunt for Facts* worksheet included in this guide



ACTIVITY DIRECTIONS

1. Distribute copies of the *Canadian Agriculture Scavenger Hunt for Facts* worksheet.
2. Activate:
 - a. Have students use their prior knowledge to predict independently, in pairs, or as a class whether each statement on the worksheet is True, False, or they are Unsure.
 - b. Record their predications in the 'Before' column on the worksheet.
 - c. Share and discuss predictions.
3. Acquire:
 - a. Distribute one set of snapAg info sheets around the classroom, or have students go to: <https://aitc-canada.ca/en-ca/learn-about-agriculture> to view online.
 - b. Students will collaborate to find the facts needed for the scavenger hunt.
 - c. Students record their new knowledge by completing the "After" column on the worksheet.
4. Apply:
 - a. Have students rewrite any false statements to make them true.
 - b. Review the worksheet as a class to share and discuss what they learned



CANADIAN AGRICULTURE: SCAVENGER HUNT FOR FACTS

INSTRUCTIONS:

1. In the 'Before' column, circle your predictions of whether each statement is true (T), false (F) or unsure (U).
2. Use the snapAg sheets to research agriculture facts. Then in the 'After' column, record whether each of the statements is true (circle T), false (circle F).
3. For each false statement rewrite it so it becomes a true statement.

| | BEFORE | AFTER |
|---|--------|-------|
| 1. Dairy cows need milking 2-3 times per week | T F U | T F |
| 2. Factory Farms are large operations with many animals | T F U | T F |
| 3. Antibiotics are used to treat disease and prevent animal suffering | T F U | T F |
| 4. Biosecurity includes procedures to prevent farmers and farm visitors from getting sick | T F U | T F |
| 5. Canada's animal welfare policy recognizes The Four Freedoms to describe the welfare needs of animals | T F U | T F |
| 6. In Canada, food is tested for antibiotics to make sure it is safe to eat | T F U | T F |
| 7. Hormone free food has fewer health risks | T F U | T F |
| 8. Pasturelands used for grazing remove greenhouse gases from the air | T F U | T F |
| 9. All animal agricultural products and by-products are used for food | T F U | T F |
| 10. Globally, beef is the primary source of animal protein in human diets | T F U | T F |
| 11. 78 different fruit and vegetable crops are commercially grown in Canada | T F U | T F |
| 12. 80% of Canadian Farms are family owned | T F U | T F |
| 13. All milk sold in Canada has added vitamin D to help the body absorb protein | T F U | T F |
| 14. White and brown eggs have the same nutritional value | T F U | T F |
| 15. All eggs sold in Canada are antibiotic and hormone free | T F U | T F |

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|--|-------|-----|
| 16. Food additives are used to reduce food waste | T F U | T F |
| 17. Food loss and waste generates 5% of our global GHG emissions | T F U | T F |
| 18. A diet rich in whole grains has been shown to reduce the risk of heart disease | T F U | T F |
| 19. Organic beef must be strictly grass fed which makes it more nutritious | T F U | T F |
| 20. Dr Louis Pasteur developed pasteurization -- heating to a high temperature, then cooling rapidly - in 1862 to make milk safe from bacteria | T F U | T F |
| 21. It is illegal to sell raw milk products in Canada | T F U | T F |
| 22. No-till farming is a serious cause of soil erosion on modern farms | T F U | T F |
| 23. Crop rotation is a strategy used by farmers to keep the soil and ecosystem healthy | T F U | T F |
| 24. New technologies are used to increase yields, but are worse for the environment | T F U | T F |
| 25. The majority of irrigated farm land in Canada is located in Alberta | T F U | T F |
| 26. Eating lots of fruits and vegetables, whether grown with or without pesticides, reduces cancer risk | T F U | T F |
| 27. Organic growers do not use pesticides | T F U | T F |
| 28. GMO wheat is difficult for humans to digest | T F U | T F |
| 29. Seedless watermelons are an example of a GMO | T F U | T F |
| 30. Genetically engineered crops allow farmers to produce more food while reducing the impact on the environment | T F U | T F |
| 32. Genetic engineering is used to produce insulin and some vaccines | T F U | T F |
| 33. Most foods have had their genes modified by humans | T F U | T F |
| 34. GMO foods are less nutritious than non-GMO foods | T F U | T F |

ANSWER KEY

1. Dairy cows need milking 2-3 times per week. **F**
Dairy cows need milking 2-3 times per day. **(Dairy Cows)**
2. Factory Farms are large operations with many animals. **F**
Factory Farms don't exist. All farms, large or small are farms not factories. **(The Myth of Factory Farms)**
3. Antibiotics are used to treat disease and prevent animal suffering. **T (Antibiotics - #1 in a series of 3)**
4. Biosecurity includes procedures to prevent farmers and farm visitors from getting sick. **F**
Biosecurity includes procedures to prevent livestock and crops from getting sick. **(Biosecurity)**
5. Canada's animal welfare policy recognizes The Four Freedoms to describe the welfare needs of animals. **F**
Canada's animal welfare policy recognizes The Five Freedoms to describe the welfare needs of animals – Freedom:
 - from hunger, malnutrition and thirst
 - from fear and distress
 - from physical and thermal discomfort
 - from pain, injury and disease
 - to express normal patterns of behavior**(Welfare or Rights?)**
6. In Canada, food is tested for antibiotics to make sure it is safe to eat. **T (Antibiotics in Food)**
7. Hormone free food has fewer health risks. **F**
No food is hormone free. There are no scientific studies that indicate eating beef produced with hormones has any negative effects on human health. **(Hormones)**
8. Pasturelands used for grazing remove greenhouse gases from the air. **T (Carbon Sequestration)**
9. All animal agricultural products and by-products are used for food. **F**
Animal agricultural products and by-products are used for many purposes other than food including glue, beauty products, clothing. **(Farm Animals)**
10. Globally, beef is the primary source of animal protein in human diets. **F**
Globally, fish is the primary source of animal protein in human diets. **(Aquaculture in Canada)**
11. 78 different fruit and vegetable crops are commercially grown in Canada. **F**
120 different fruit and vegetable crops are commercially grown in Canada. **(Horticulture in Canada)**
12. 80% of Canadian Farms are family owned. **F**
97% of Canadian Farms are family owned. **(The Myth of Factory Farms or Today's Farms)**
13. All milk sold in Canada has added vitamin D to help the body absorb protein. **T (Dairy in Your Diet)**
14. White and brown eggs have the same nutritional value. **T (Eggs)**
15. All eggs sold in Canada are antibiotic and hormone free. **T (Eggs)**
16. Food additives are used to reduce food waste. **T (Food Additives)**
17. Food loss and waste generates 5% of our global GHG emissions. **F**
Food loss and waste generates 8% of our global GHG emissions. **(Food Waste)**
18. A diet rich in whole grains has been shown to reduce the risk of heart disease. **T (Gluten)**
19. Organic beef must be strictly grass fed which makes it more nutritious. **F**
Organic beef must be fed only organically produced feed including grass or grain from organically produced crops. There is no meaningful difference in nutrition of grass-fed and grain-finished beef. **(Grass-fed or Grain-finished beef?)**

20. Dr Louis Pasteur developed pasteurization – heating to a high temperature, then cooling rapidly - in 1862 to make milk safe from bacteria. **T (Milk Pasteurization)**
21. It is illegal to sell raw milk products in Canada. **T (Milk Pasteurization)**
22. No-till farming is a serious cause of soil erosion on modern farms. **F**
No-till farming prevents soil erosion on modern farms. (Conservation Tillage)
23. Crop rotation is a strategy used by farmers to keep the soil and ecosystem healthy. **T (Crop Rotation)**
24. New technologies are used to increase yields but are worse for the environment. **F**
New technologies are used to increase yields and make farming safer and more environmentally friendly. (Grain Farm Technology)
25. The majority of irrigated farmland in Canada is located in Alberta. **T (Irrigation)**
26. Eating lots of fruits and vegetables to help prevent cancer is more important to our health than the possible presence of small amounts of pesticide residue. **T**
27. Organic growers do not use pesticides. **F**
Organic growers use pesticides listed on the permitted substances list of organic pesticides. **(Organic and Synthetic Pesticides)**
28. GMO wheat is difficult for humans to digest. **F**
There is no GMO wheat available today and a GMO wheat that is difficult for humans to digest would be not be commercially viable or would it be approved by the Canadian Food Inspection Agency. (What are GMOs?)
29. Seedless watermelons are an example of a GMO. **F**
Seedless watermelons are an example of a hybrid. (Technically speaking since GMO stands for genetically modified organism and seedless watermelon have been modified by cross breeding they are a GMO but they are not genetically engineered.) (Advanced Plant Breeding)
30. Genetically engineered crops allow farmers to produce more food while reducing the impact on the environment. **T (GMOs and the Environment)**
31. Genetic engineering is used to produce insulin and some vaccines. **T (Genetic Engineering and Human Health)**
32. Most foods have had their genes modified by humans. **T (The History of Plant Breeding & Advanced Plant Breeding & GMO Foods)**
33. GMO foods are less nutritious than non-GMO foods. **F**
There is no nutritional difference between a GMO and a non-GMO food. (What are GMOs)