



Grains of Saskatchewan

Student will learn how the integration of other grains into the prairie farming economy has benefited Saskatchewan's culture and economy.

Outcomes:

RW4.2 Investigate the importance of agriculture to the economy and culture of Saskatchewan.

Indicators:

RW4.2 e Identify agricultural products used in daily life in Saskatchewan.

Questions to Guide Inquiry:

1. What other crops besides wheat are important to the Saskatchewan economy?
2. What daily products are made from Saskatchewan grains?
3. What is some important vocabulary to know and be able to use when discussing Saskatchewan crops?



About
45 minutes

Teacher Background

The grain industry is very important to the Saskatchewan and Canadian economy. Saskatchewan farmers grow a variety of cereal grains including wheat, barley, oats, canaryseed, rye, and triticale. Cereal grains are an excellent source of carbohydrates and protein. Whole grain products provide fibre.

"Pulse" is the term for the edible seeds of legumes (plants with a pod), which include dry peas, beans, lentils, and chickpeas. Saskatchewan is the heart of Canada's pulse industry. It produces:

- 99% of the Canadian lentil crop.
- 80% of the Canadian pea crop.
- 88% of the Canadian chickpea crop.

Canada is the world's leading lentil, pea, and chickpea exporter. There are over one hundred special crop processors in Saskatchewan. The Crop Development Centre at the University of Saskatchewan is recognized worldwide as a leader in pulse research.

MATERIALS NEEDED:

- * Assortment of grains
- * Handout 11.1
- * Access to Foundations of Agriculture
- * Internet

Specialty crops grown in Saskatchewan (in very small amounts) include borage, coriander, caraway, and fenugreek.



Oilseeds grown in Saskatchewan include canola, flax, mustard, and sunflowers. Oilseeds are grown primarily for their oil, which is used for human consumption and industrial purposes. Canola was developed from rapeseed thirty years ago and today canola is the second largest crop grown in Saskatchewan. Canada's canola industry adds 13.8 billion dollars in economic activity to the Canadian economy. More than 52,000 Canadian farmers grow canola and depend on it to generate between one third and one half of their revenues.

More information is found in Student Handout 11.1

Before Activity

Bring a number of grains into the classroom and pass them around. Have students handle them. Ask students which (if any) they can identify. (The responses will vary according to the student demographic).

During Activity

Activity One

Distribute "Saskatchewan Grains Story" (Handout 11.1) to students. Invite students to read the passage. When they are finished they are to complete the chart which appears at the end. Students will compare their chart with a partner, making any changes he/she believes necessary. Have students hand in the charts.

Activity Two

With their partner, students are instructed to visit www.agriculture.gov.sk.ca/crops. Instruct students that there are two tasks associated with the visit to the website.

1. Study the pictures of barley, oats, and canola.
2. Find the answers for the following three questions. (The answers are found in the paragraph beside each picture).
 - a. Why is Saskatchewan a good location to grow barley?
 - b. What industry in the United States imports a lot of Saskatchewan oats?
 - c. Canola did not exist thirty years ago. True or False?

After Activity

A number of words appear in italics in the reading "Saskatchewan Grains Story" (Handout 11.1). Invite students to use each in an original sentence. Instruct them that their sentence should clearly show the meaning of the word. The definitions are discussed with their partner and then each student submits the sentences.

The words are: crop, import, diversify, malt, livestock, weed, edible, export, and varieties.

Note: You can order the "Saskatchewan Seed Kit" with samples of 14 different grains commonly grown in Saskatchewan through www.aitc.sk.ca.

Including pulses in the rotation is good for the land because pulse crops add nitrogen to the soil.



Assessment

Teacher Checklist

- ✓ Could students find the appropriate information to complete the chart?
- ✓ Could students find correct answers to the three questions about barley, oats, and canola?
- ✓ Were students able to generate significant questions?
- ✓ Were students able to respond to others' questions?
- ✓ Could students use vocabulary meaningfully?

Farmers rotate different crops through their land to minimize disease & insect problems and to effectively manage pesticide use.

Lesson Resources

The Ministry of Agriculture site contains information on the agriculture industry in Saskatchewan. www.agriculture.gov.sk.ca/crops

Cross Curricular Connections

ELA

Use the vocabulary in sentences.

Further Investigation

Students will be directed to the crop name word search at Kids' Korner. (See www.agriculture.gov.sk.ca/types_of_crops_ws)

Complete activities in the AITC Learning Kit: Crops in Saskatchewan Kit and By-Products Game.

Science

Label the different plants and their parts.

Arts Education

Create an illustration of a crop on a seed package. Display the packages in the classroom.

Quality Saskatchewan crops are used to create leading edge health products that are consumed domestically as well as exported globally.



Saskatchewan Grains Story

Wheat is no longer the major **crop** grown on the Prairies. One reason is that many countries that used to **import** wheat from Canada are now growing their own wheat crops, so they do not buy as much from Canada as they once did. Farmers now look for other crops besides wheat to plant. They need to **diversify**. They need to choose some other crops to grow and sell.

Barley is a crop that is grown for livestock feed or malting (making beer). Although farmers make much more money selling their barley for **malt**, only the best quality barley is accepted. The rest of the barley is sold to feed livestock.

Oats is another crop that is grown for both humans and **livestock**. Oats are very nutritious and many people eat oats in cereals and granola bars. Similar to barley, the poorer quality oats is used to feed livestock, not people.

Rapeseed was once considered to be a **weed**. The seed from the rapeseed plant came across the ocean mixed in with the precious seeds of wheat. It was discovered that it did have a use though. The seed produced oil that could be used in steam engines; however, the oil could not be used in the newer diesel engines. Also, it was not **edible** oil. It could not be eaten by humans or livestock. It looked like



Barley



Canary seed



Oats



rapeseed was going to be treated like a weed once again. Then scientists worked on removing some of the bad characteristics of rapeseed. A new plant, canola, was the result.

Canola really started to take over the fields in the 1980s. It is one of the best edible oil products in the entire world. Doctors want people to use it because it is healthier for people than many other oil products. Many think it is one of the healthiest oils in the entire world. It is a crop that is in high demand. Saskatchewan farmers grow and **export** a great deal of canola. The testing and further improvement of canola continues today.

Many farmers are planting other crops as well to make their farms more valuable. Some of these crops include: peas, lentils, flax, canary seed, mustards, sunflowers, chickpeas, wild rice, and even some specialty crops like coriander and corn. Agricultural research and science has made this possible by inventing crop **varieties** that can survive the tough growing conditions on the Canadian Prairies.



Canola



Flax



Wild rice



Grain	Uses	Any Other Information?
Barley		
Oats		
Canola		