



SPARK questions about **agriculture** HISTORIES

project

AGRICULTURE

How has **innovation** influenced **farming** and **food**?

Farming and food choices have been affected by changing technologies and practices.

the way our food is produced has changed over time

Farming has been transformed by innovations since it first existed.

Some innovations include technologies like tractors, computers, selective breeding and genetic changes in crops and animals. Other innovations involve machines like ploughs and seed drills and practices like no-till, crop rotation and fallow. If these terms do not mean a lot to you, all of them have to do with agriculture.

For example, satellite data is now being used to accurately predict the date of flowering in canola plants. This helps farmers decide when to apply fungicides to prevent a disease that destroys the plants.



I will use information and **INVESTIGATE FURTHER** questions to help me identify a project question I want to investigate for an **agriculture HISTORIES** project.

I will identify what I need to know more about.



INVESTIGATE FURTHER

In what ways have changing technologies resulted in opportunities and challenges for ways of life and the environment?

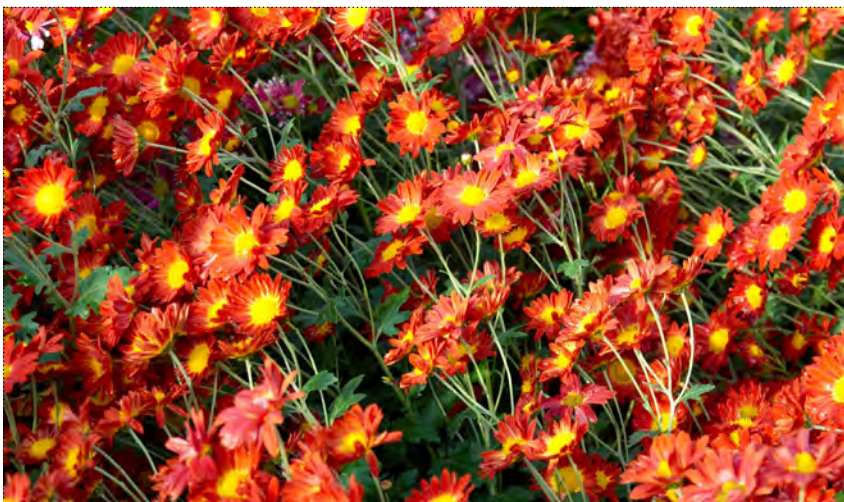
In the 1800s and 1900s, synthetic chemical pesticides were developed and used. **Pesticides** are substances used to manage diseases, insects and weeds. Over the years – as new farming practices, technologies and substances were researched and developed – many of these synthetic pesticides were banned.



Before synthetic pesticides were developed, farmers in ancient societies used extracts from natural sources and plant combinations, hand weeding and the application of smoke or dirt to get rid of pests.

Natural pesticides also include minerals mined from the ground, such as **pyrethrin**, a natural insecticide that can be extracted from chrysanthemums. Other natural pesticides include ingredients like soaps, lime-sulfur and fermented vinegar.

Agriculture in the Classroom Canada. Organic and Synthetic Pesticides: Online. <https://aitc-canada.ca/Portals/0/adam/snapAG/Yorj9INyzEOLVXiQHtgVNA/Link/Organic%20or%20Synthetic%20ENG.pdf>



Many of these ancient practices form part of traditional knowledge that is still used today – by Indigenous people and more recently, by both conventional and organic farmers.



INVESTIGATE FURTHER

How can practices used in the past be applied to farming and food production today?

How does organic farming have its roots in the past?

Today, precision farming uses technology to analyze fields for their moisture content, monitor crop growth and check plant health. Monitors on farm equipment like tractors, harvesters and combines gather information so farmers can get the best harvest possible.



In the 1800s and early 1900s, farmers used horses or oxen for almost everything – from plowing fields to pulling threshing machines. Gas fueled tractors made farming more efficient and changed both seeding and harvesting practices.



Wheat, canola and pulses are all important field crops in Canada today. Inventions like Red Fife and Marquis Wheat varieties are part of Canada's history, as is the invention of canola. Pulses are actually an ancient crop. However, **pulses** – the dry edible seeds of legume plants – are being used in new and innovative food and drink products. Research into plant varieties and growing conditions continue to innovate crop production.



INVESTIGATE FURTHER

How have innovations in agriculture affected what daily life looked like in the past compared to what it looks like today?