Pulses

What are pulses?

Pulses are the dry seed of a legume. Pulses include:

Dried beans and peas

Chickpeas

Lentils

Other legumes include soybeans, peanuts, as well as fresh beans and peas. Soybeans and peanuts are not pulses because they are higher in fat whereas pulses have no fat. All pulses are legumes but not all legumes are pulses.

Where did pulses come from?

Dry beans have been grown by man for millennia and are grown and eaten in most countries of the world today. It is estimated that there are over 400 different types of dry beans grown throughout the world. In Ontario, about 1,000 farmers grow nine different types of beans.

Did you know?

- Beans are very versatile food items! They can be made into burgers, cakes, drinks, pies, fudge, muffins, jewelry, furniture (bean-bag chairs), toys, and musical instruments.
- Canada is the world's #1 producer of lentils!
- Canada is one of the largest pulse producers in the world and the largest exporter, with over 80% of pulses grown in Canada, shipped around the world.
- The four main types of pulses grown in Canada are dry peas, lentils, chickpeas and beans.

Joke Corner

Q. What did the lentil say to the pea?
A. How've you bean?

Q. What kind of beans don't grow in the garden?
A. Jelly beans

How do pulses grow?

Most pulses are planted from seed in the early spring. They grow throughout the summer and are harvested in the late summer or fall. Growing pulses is helpful for the environment. As part of the legume family, growing pulses improves the quality of farmland by returning nitrogen to the soil through a process called nitrogen-fixing. When the plant dies, the fixed nitrogen is released which fertilizes the soil and makes it available to other plants. As a result, pulses are a beneficial crop to manage and balance soil nutrients.

Check out this 5.53-minute video from Ontario Beans: From Field to Fork
https://www.youtube.com/watch?v=3-eWdBqq3jg&t=349s

Reflective Activity?

Growing Bean Sprouts

Students will **observe the germination of a plant from a seed**, and explore what factors are needed for growth. Planting seeds in a clear cup or bag provides a demonstration for how the roots, stems and leaves develop.

Check out these links for complete instructions on sprouting beans:

- https://www.scholastic.com/parents/school-success/learning-toolkit-blog/germinate-seeds-and-watch-them-sprout-windowsill.html
- https://www.scienceworld.ca/resource/bean-garden/

Additional activities:

- Record the beans' germination by drawing and measuring them each day.
- What happens if you do the same experiment, but put one bag of beans in a window, and another one in a dark closet?
- Plant more than one type of bean or seed to compare how quickly they grow.

Check out this 3-minute time-lapsed **Sprouting Bean video** from Aeon and watch the kidney bean as it sprouts, breaks through the soil's surface and springs upward into a plant.