



What makes the **food** on your plate **sustainable**?

sustainable food and farming

The concept of **sustainable food** has different understandings – there is not one “official” definition. According to the Canadian Centre for Food Integrity, sustainable food is often associated with a positive impact on climate change and the environment.

What does this mean? Most of the food we eat comes from farming. So sustainable food and sustainable agriculture go together naturally.

Sustainability is often associated with the environment. However, sustainability can also involve protecting traditional and modern ways of life. This may include ideas and actions that people can take like:

- ◆ Supporting family farms
- ◆ Increasing access to traditional foods and use of Indigenous knowledge of the land
- ◆ Protecting natural ecosystems and respecting the needs of other species in these ecosystems
- ◆ Providing a balanced range of food choices
- ◆ Providing information about the origins and processes used to produce foods
- ◆ Thinking about the future of food production, including farming, food processing, packaging, transportation and waste
- ◆ Respecting the ways that identity and cultures can be expressed through food choices



What does the idea of sustainable food mean to you? How could you adapt one or two of these action ideas to an action that you could take to support sustainable food?

where Canada grows its food

The food you eat may come from all over the world, but much of it is grown or raised in Canada. Statistics Canada indicates that just over 7 percent of Canada's total land area is agricultural. This means that the land has the soil quality, climate and terrain that can be used for agriculture.

Different types of agriculture are found across Canada. The land used for agriculture is a combination of farms and ranches with cultivated land and grazing land. The mix of farm types varies across provinces and regions.

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What could you hypothesize about the soil quality, climate or terrain based on the main types of farms shown on the map for each province?



Just as there are different types of agriculture, there are also many different types of ecosystems found on this land.

This variety of natural ecosystems includes rivers and streams, wetlands, woodlands and natural grassland. The habitats in these ecosystems support birds, other animals and insects.

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Many species that live in natural ecosystems only occur in areas that are most suitable for farming. What challenges do you think this can cause for farmers?

Map from Agriculture and Agri-Food Canada. What do we produce?
Government of Canada: Online. https://publications.gc.ca/collections/collection_2013/aac-aafc/A22-513-2010.pdf

growing sustainable food

Canadians are interested in sustainability in their food system. This interest includes what food is available to them as well as how that food is produced.

Some choose foods that they consider to be **sustainably produced** - food that has minimal impact on the environment, uses less packaging and/or is grown or raised locally.

The Alberta farmers in the two stories that follow pay attention to sustainability. What sustainable food practices can you identify?

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Alberta farmers have a passion for sustainability

Buying local keeps sustainable farming alive, says Alberta farmers

Allison Ammeter and Greg Sears are both third-generation Alberta farmers, whose families have produced crops here since the early 1900s. Ammeter's farm near Sylvan Lake alternates between peas, barley, canola and wheat.

“What I love about farming is the diversity of tasks, perspectives and challenges it offers,” says Sears. “There is also a great sense of community in agriculture, which includes the privilege of working with your immediate family.”

For Ammeter, it's “the circle of life, from bare ground in the spring through harvest in the fall. I find it incredibly gratifying to do all you can to improve the farm each year, then see the results after a good harvest.”

Both are passionate about sustainable farming. Says Sears, “Sustainable farming is about recognizing and understanding the interactions between our activities and the land, water, air and living systems in which we operate... It's about trying to balance a society's needs for agricultural products with the imperative that our farm will continue to operate for generations to come. We can't be in this for short-term benefit.”

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What practices could you associate with foods that are sustainably produced in each stage of the food system image below?

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Farming on the cutting edge: How Alberta farmers are using technology to produce better & more food

When done right, implementing new technology is a win-win, says grain farmer Chris Allam. His family's Allam Farms grows wheat, canola, peas, fava beans, barley, hay and legumes on 15,000 acres split between Strathcona and Sturgeon County. "Any time you can use something that will make you more efficient and accurate, and ultimately save dollars, that in turn saves the environment," says Allam, "Our farm is focused on stewardship and we realize that this land has to be there for future generations. So, a lot of those technology decisions mesh with all of our goals, be they environmental or financial."

On Allam's farm, the tech innovation starts when the seed hits the scale. Digitized measuring devices allow him to dole out seed, as well as fertilizer and pesticides, with laser precision. This translates to less waste, and less use overall.

Computerized sprayers also help cut waste by segmenting fields using GPS data and other smart features to avoid overlap. In the past, farmers would have to do imprecise eyeball passes of their fields, using fence posts or markers, and there would always be some duplication.... Driving in straight lines and efficient patterns also saves fuel.

Come harvest time, Allam can measure his yield down to the granule thanks to computer-equipped combines that take detailed measurements as they go. The blades also adjust automatically, depending on the texture of the crop, while self-driving features change speed and gear as the land undulates to save gas. Inside his processing facility, the grain dryers are automated and remote-controllable. The list goes on.



What technological innovations might be next for Alberta farmers? Greater use of connectivity and automation, detailed satellite imaging, AI-assisted data analysis, drone imaging—for now, it's hard to say which will deliver a solid return on investment. One thing is certain, it's all in the interest of bringing more and better food to Albertan's supper table. As Allam puts it, "The more I farm, the better food you eat," he says, "And if I can perfect my craft, your food quality goes up."



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In what ways do farm machines and technology contribute to the production of sustainable food? Describe two examples.

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