

WHY BIODIVERSITY MATTERS FOR FARMS AND AGRICULTURE

USEFUL FACTS

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There are 5 main causes of biodiversity loss: habitat loss, climate change, pollution, invasive species, and over-harvesting¹

More than 1/3 of global food crops require animal pollination¹

More than 6000 plants have been grown for food, but only 9 crops contribute the majority (66%) of global food production²

Almost 50% of the global ice-free land area is utilized for crop or livestock production³

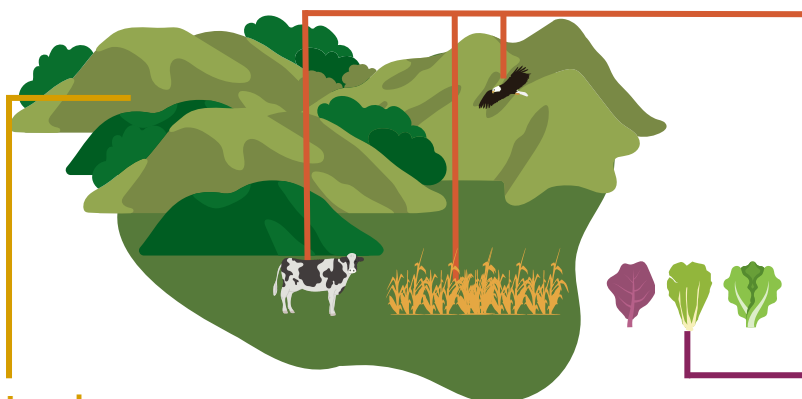
Canada has set a goal to protect 30% of land and ocean areas for biodiversity conservation by 2030⁴

Since the 1900s, ~75% of crop genetic diversity has been lost as farmers switch to high-yielding varieties²

Agrobiodi-what?

“Agro” means on farm and biodiversity refers to all the different types of life present in an area. Agrobiodiversity includes the different crops grown on a farm and all the other “wild” species too (plants, animals, insects, fungi, bacteria). How a farm is managed influences the agrobiodiversity present on farm, which can have positive or negative (or both) impacts on crops and livestock.

Types of Agrobiodiversity



Landscape

The different types of habitats present and their size

Organismal





The different types of species present

- **Planned** — the different types and varieties of crops grown and livestock raised
- **Unplanned** — the “wild” species that occur on a farm that aren’t actively managed

Genetic

The diversity of genes present (e.g. multiple crop varieties)

Agrobiodiversity can Benefit Agriculture by:

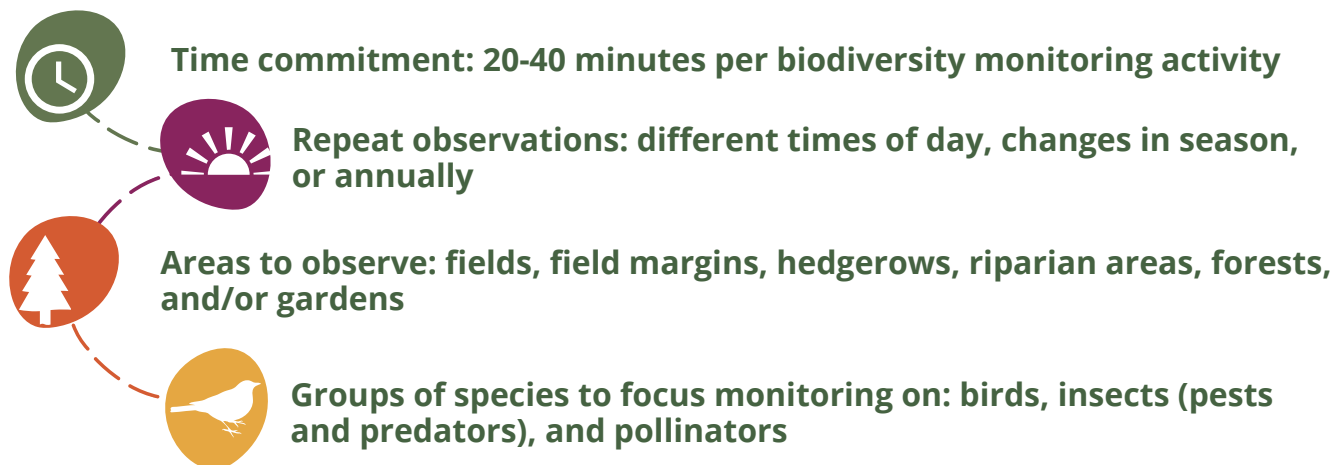
- ↑ Increasing soil formation and retention → healthier soils, reduced inputs 
- ↑ Increasing nutrient cycling and storage → more fertile soils, reduced fertilizer use 
- ↓ Reducing pest populations → reduced pesticide usage 
- ↑ Increasing pollination → higher crop yields, reduced need for non-native honeybees 

Why Measure or Monitor Agrobiodiversity?

1. Keeping a record of biodiversity monitoring on-farm can help you apply for grants that support biodiversity conservation
2. Understanding biodiversity on-farm can inform farm management for pest, pollinators, weeds, and diseases
3. Tracking changes in agrobiodiversity can help farms be resilient and adapt to changing conditions

How can I Measure Agrobiodiversity?

Agrobiodiversity monitoring requires observation and identification of the organisms present. iNaturalist is a participatory monitoring smart phone application that helps in identifying and recording species. These observations can then be contributed to a centralized database for use in scientific research projects. See our series of factsheets on monitoring agrobiodiversity at bcfoodweb.ca for more information!



1. United Nations. (2019, May 6). *UN report: Nature's dangerous decline 'unprecedented'; species extinction rates 'accelerating'*.
2. Food and Agriculture Organization. (2019). *The state of the world's biodiversity for food and agriculture*.
3. United Nations Environment Programme (2021). *Making peace with nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies*.
4. Government of Canada. (2022, December 9). *Government of Canada recognizing federal land and water to contribute to 30 by 30 nature conservation goals*.

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