



ONFARM Factsheet:

Above-Ground Biodiversity & Pollinators



WILTON
CONSULTING GROUP

Above-Ground Biodiversity & Pollinators

The relationship between native pollinators and Ontario farms is of mutual benefit: farmland can provide nesting and foraging habitat for native pollinators, and the pollinators, in turn, provide pollination services for crops. Pollinators include invertebrate species such as bees, moths, butterflies, flies, and beetles.

Ontario is home to 420 species of bees. Some common bees to Ontario include:

- Western Honey Bee
- Common Eastern Bumble Bee
- Two Spotted Bumble Bee
- Squash Bee



Many Ontario Crops Benefit from Pollination

Table 1. Examples of crops grown in Ontario that benefit from pollinators. Adapted from: Chan, S., and N. Raine. [Factsheet 1: Introduction to Native Pollinators on Farms in Ontario.](#)

Orchard fruits	Apples	Pears	Peaches	Plums
Berries	Strawberries	Raspberries	Cranberries	Blueberries (highbush and lowbush)
Vine crops	Pumpkins	Zucchini	Watermelons	Squash
Vegetable crops	Tomatoes	Peppers	Green beans	Kidney beans
Field crops	Canola	Sunflowers	Some soybean varieties	
Forage crops grown for seed	Alfalfa	Red clover		

Many Ontario crops provide good quality pollen and nectar for wild pollinators. These crops include:

- Buckwheat ➤ Legumes ➤ Asparagus ➤ Herbs ➤ Rhubarb

Did You Know?

Supporting pollinator habitat can benefit your farm in several other ways:

- ✓ Seed production in hay, canola, and other vegetable crops.
- ✓ Supporting wild pollinators, like native bees, can reduce the need to pay for honeybee pollination services.
- ✓ Native bees can be more efficient pollinators in some crops than honeybees.

For more information on the benefits of pollinator habitat and what you can do to support pollinator habitat on your farm, please see [Factsheet 2: Creating Pollinator Habitat on Ontario Farms](#).

Ways Farmers Can Support Pollinators

Farmers can support pollinators by creating pollinator-friendly habitats on their farms. Habitats can include a planted variety of flowering plants as well as any of the crops mentioned above and/or cover crops that will be available throughout the season for pollinators. These crops can act as a secondary cash crop, provide erosion control, or capture nitrogen.

Pollinator habitat also includes natural lands on farms that can provide nesting and overwintering habitat. For example, rock piles, standing deadwood, deciduous trees and hedgerow plants can all support pollinator habitat. For pollinators to survive on the farm, they need foraging, nesting, and overwintering habitat.

Pollinator habitats also provide habitats, food sources, and corridors for birds and small mammals.

Operation Pollinator

The [Ontario Soil and Crop Improvement Association](#) (OSCIA) and [Syngenta Canada](#) have partnered since 2018 to deliver [Operation Pollinator](#). The program is an international biodiversity program aimed at helping restore pollinators in agriculture landscapes. Farmers redirect a minimum of one acre of land that has lower productivity, or is marginal, to the establishment of pollinator-friendly habitats. To date, this partnership has fostered the creation of 50 sites covering 113 acres across Ontario.

A diverse seed mix is vital in pollinator-friendly habitats.



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What is ONFARM?

From 2019 through 2023, the On-Farm Applied Research and Monitoring (ONFARM) program completed extensive soil health and water quality analysis on 33 farm sites on representative soils and landscapes across southern Ontario. This network of sites and newly established cooperator partnerships helped to build a stronger understanding of beneficial management practices (BMPs) and their effect on soil health and water quality on Ontario farmland.

“ONFARM has very engaged cooperators who are committed to environmental stewardship on the farm, which makes them perfect for Operation Pollinator. A lot of the cooperators are leaders who share best practice knowledge in their communities, which is an added benefit.”

Erin McGregor, Stewardship and Policy Manager, Syngenta Canada

2022 Operation Pollinator seed mix:

- Alsike clover
- Birdsfoot trefoil
- Common milkweed (*optional*)
- Groundbreaker radish
- Phacelia
- Red clover
- Sunflower
- Timothy
- Yellow and white sweet clover

For more information on each of the species listed above, check out the [seed mix factsheet](#).

Operation Pollinator and ONFARM

In 2022, Operation Pollinator was offered to ONFARM cooperators, and 10 individuals enrolled. Cooperators must keep land out of production for a minimum of one year and are encouraged to maintain the site permanently. [Spear](#) [Seeds](#) provides the seed mix.

By the end of 2023, the hope is to have a total of 57 sites seeded in Ontario.



Native pollinators and Ontario farms can have mutually beneficial relationships.





Norm Lamothe – Woodleigh Farms Ltd

Norm Lamothe is a Peterborough County farmer and ONFARM cooperator. In 2022, he was looking for a way to increase diversity on his farm and got involved with Operation Pollinator. Norm has planted a total of three acres of pollinator habitat across two sites of marginal land on his farm. Norm's experience with the program has been excellent, and he has observed an increase in birds and honeybees on his farm, he says.



How Can You Get Started?

If you are interested in establishing your own pollinator habitat on your farm, remember to start small.

Consider a site that is low yielding or currently not in agricultural use. "For example, farmers participating in Operation Pollinator have used decommissioned gravel pits, or areas of fields that were prone to erosion to convert to pollinator habitat," says Samantha Lyon, a Programs Analyst at OSCIA.

Next, you need to select your seed mix. Operation Pollinator's seed mix can serve as a great starting point as a high-quality, robust mix of flowering plants. You should consider seeds you have easy access to and plant a diverse mix that will bloom at different times, to provide habitat and food for pollinators throughout the year. Consider also including native plant species in your mix.

Make sure you prepare the seedbed for planting, too.

Finally, "be patient as you are setting up your pollinator habitat on your farm," says Lyon. "While some ONFARM cooperators have seen changes in a short period, it can take a few years to establish and crowd out any weed species that were already growing at the site."

Ultimately, "with a little bit of work and time, you will start to see the benefits of the pollinator-friendly habitat," says McGregor.

"It doesn't take a lot of space to attract some diversity. It takes a little bit of work to set the site up and maintain it, so don't jump in with both feet. If you have a little corner or path, work it up and put some seed down. Adding diverse plant species will improve biodiversity."

- Norm Lamothe



Start small when you establish a pollinator habitat on your farm.

Want to Learn More?

If you are interested in learning more about [ONFARM](#), you can check out the most recent [technical reports](#), and watch recordings of previous [Forums](#). For more information on biodiversity and pollinators, see the following resources:

- [Native Pollinators on Farms in Ontario](#)
- [Creating Pollinator Habitat on Farms in Ontario](#)
- [Pollinator Health](#)
- [Ontario Biodiversity Council](#)
- [Pollinator Conservation in Farm Settings](#)