

POLLINATOR STRIPS



BRIDGE TO
LAND WATER SKY

What are Pollinator Strips?

Pollinator strips (prairie strips, field boundary habitats, eco buffers, etc.) are strategically placed strips of perennial (often native) vegetation that are integrated into or near crop fields that attract a variety of pollinator species, as well as other beneficial insects.

Studies show that incorporating pollinator strips into farming systems can provide numerous benefits

Pollinator strips established within or alongside crop fields can benefit farmers by enhancing pollination services from native pollinators, leading to increased crop yields. They also provide important ecosystem services, including improved soil water and nutrient retention, reduced erosion, and increased populations of natural enemies that help control insect pests.¹

Although napus canola is self-pollinating, studies show that the extra level of pollination that bees and other pollinators provide can increase yields up to

+15%

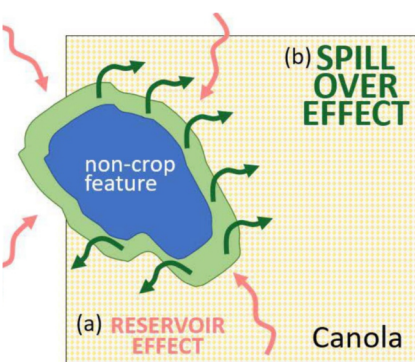
Other self-pollinating crops that have shown significant yield increases due to insect pollination include sunflowers and faba beans.^{2, 3}



A recent Alberta study of 60 million seeded acres of yield data over 5 years³ found that small non-crop areas within or near canola fields serve as a source and a destination for beneficial pollinator and predatory/pest controlling insects such as ground beetles, wolf spider, and several species of wild bees. These areas were shown to have higher canola yields due to pest control and pollination services.

Pollinator strips can be placed in a variety of locations to maximize benefits, including:

- **Near obstacles** such as power lines, wetlands, and irregular field edges to reduce operational inefficiencies with farming around these areas.
- **In areas with consistently low or unpredictable yields**, where pollinator strips can improve land use efficiency, reduce weed pressure, and help slow water and sediment movement on slopes.⁴
- **Along field edges, headlands, and unmowed ditches**, where pollinator activity is often greatest.⁵ Establishing pollinator strips in these areas can enhance habitat while making use of less productive land.



Mass-flowering crops such as canola provide supplemental pollen and nectar, but native flowering plants are the primary source of diverse, high-quality forage. Pollinator strips provide resources before and after crop bloom, helping ensure a continuous supply of pollen and nectar throughout the growing season. Wildflower patches and enhanced non-crop areas also provide valuable habitat and food resources for a variety of pollinator species.⁵

a) A **reservoir effect** (pink) occurs when beneficial insects use non-crop habitats to support their life cycle and sustain populations. (b) A **spill-over effect** (dark green) occurs when beneficial insects move from non-crop habitats to nearby crop fields. Their numbers are highest near these habitats and decline with distance.³

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REASONS WHY POLLINATORS ARE IMPORTANT TO AGRICULTURE

**\$235-\$577
BILLION**

Added to the global economy every year because of pollinators.

87/124

Global leading crops benefit from pollinators.

300%

Increased volume of agricultural production dependent on pollinators in the past 50 years.

5X

More economically valuable than non-pollinated crops.

35%

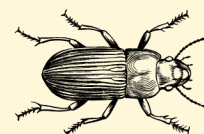
Global agricultural land benefited by pollinators.

Sources: FAO, "The importance of bees and other pollinators for food and agriculture".

In addition to pollinators, beneficial predatory and parasitoid insects provide at least

\$4.5 billion in free pest management

to US farms each year, despite chemical pest-based management.⁶



Establishing Cost-Effective Pollinator Strips

Establishing pollinator strips doesn't have to be costly. Using seed instead of transplants and selecting perennial species over annuals can help reduce establishment costs, labour, and long-term maintenance. Native prairie species to consider include purple prairie clover, goldenrod, wild asters, wild sages, early blue and Canada violets, wild blue flax, green ash, and willows.⁷ Research has also shown that seeding native species alongside oats can improve establishment success and reduce weed pressure,⁵ making pollinator strips a practical cost-effective addition to agricultural landscapes.

References

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Funding for this project has been provided by Agriculture and Agri-Food Canada through the Agricultural Climate Solutions – Living Labs program.

