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Proximity of canola to semi-natural habitats affects pollination, yields

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Honeybee feeding on canola nectar—note the pollen balls on its legs. Photo by Mariana Paola Ma

Honeybee feeding on canola nectar—note the pollen balls on its legs. Photo by Mariana Paola Mazzei.

Pollinating insects are declining worldwide, and most human-consumed fruits and seeds depend on them to be produced. Insect visitation in many crops like canola leads to an increase in pollen deposition and better yields. Current agricultural practices (including higher mechanization and use of agrochemicals) have changed the landscape, decreasing semi-natural habitats and biodiversity.

For the first time, the influence of both pollinators and semi-natural habitats on the canola yields in Argentina is evaluated in a new *Crop Science* study. The authors analyzed the consequences of excluding flowers from their pollinators at different distances from semi-natural habitats. Plants close to semi-natural habitats presented more pollen carried by insects, and consequently had approximately 35% higher yields

(higher number of fruits and heavier seeds) than plants at larger distances or isolated from insects. The honeybee was the most frequent pollinator, but other native insects were registered for the first time in canola (flies, butterflies, and wasps).

This research shows that semi-natural habitats can act as a source of pollinators. Simplified agroecosystems do not always guarantee good yields of crops with flowers visited by pollinators. This type of research is important to establish policies that encourage the protection of biodiversity in semi-natural areas nearby crop fields.

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Mariana Paola, M., José Luis, V., & Leonardo, G. (2021). Semi-natural habitats and their proximity to the crop enhances canola (*Brassica napus*) pollination and reproductive parameters in Argentina. *Crop Science*. **https://doi.org/10.1002/csc2.20450** (in press)

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