Sustainability: Facts on Canola Farming and the Environment

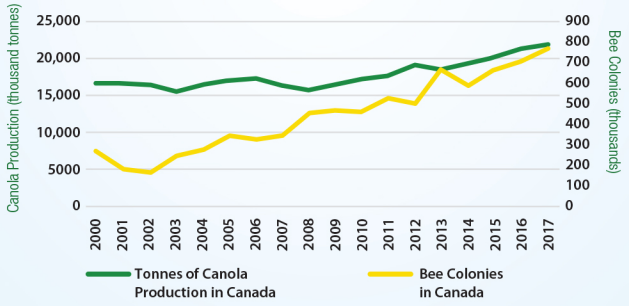
Canola fields are habitat for an incredible diversity of beneficial insects such as bees, butterflies, spiders, wasps and beetles. These diverse insect groups help increase crop yields and provide a natural check on insect pest populations. Farmers use a wide range of tools such as crop rotations and detailed field scouting to protect these valuable allies.

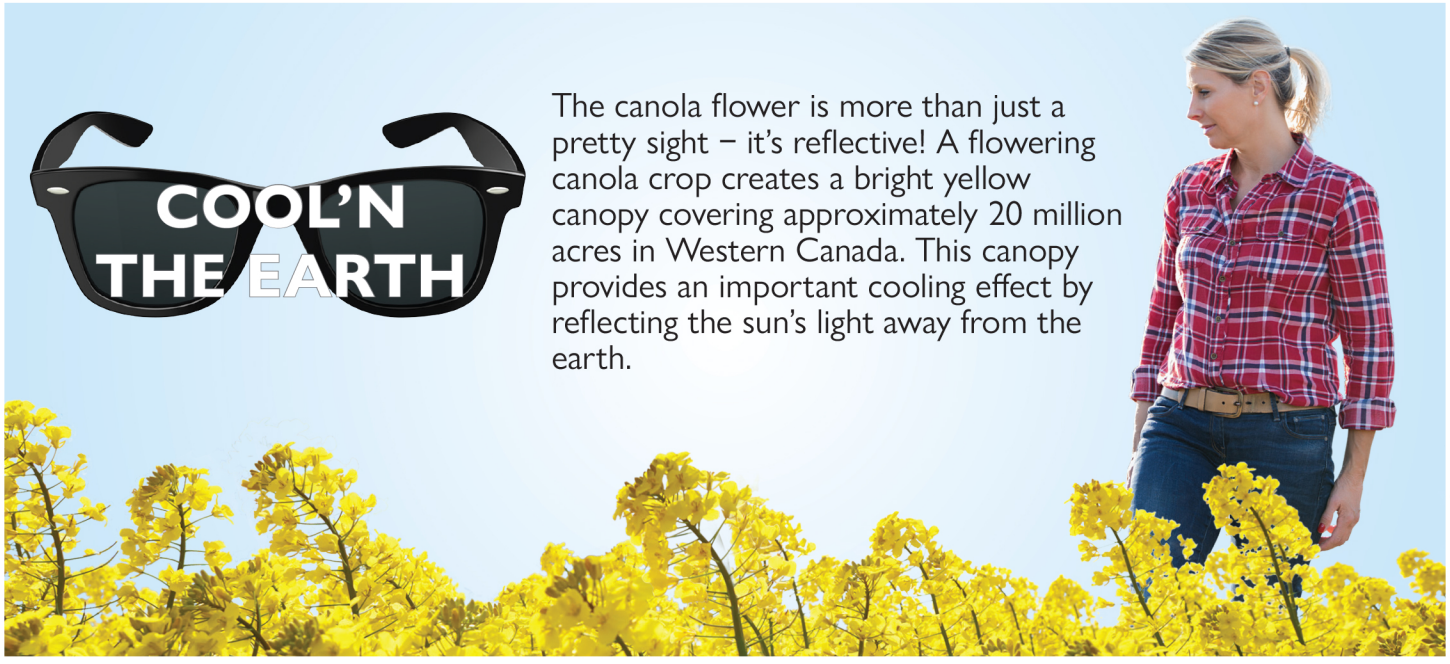
SUPPORTING BIODIVERSITY

Did you know canola fields provide habitat for over 2,000 beneficial insects, including native pollinators and honeybees? New technologies, such as seed treatments, allow farmers to target pests that damage canola seedlings, while allowing other beneficial insects to flourish.

A SWEET RELATIONSHIP

Canola is an ideal food source for honeybees, while honeybees can have a positive impact on canola production. Canola farmers work closely with beekeepers to protect bees and this mutually beneficial relationship. Over several decades, canola seeded acres and honeybee colonies have shared a linear increase in numbers.





The canola flower is more than just a pretty sight – it's reflective! A flowering canola crop creates a bright yellow canopy covering approximately 20 million acres in Western Canada. This canopy provides an important cooling effect by reflecting the sun's light away from the earth.

Fact sheet source: "Canola's Sustainable Future", available at ccga.ca/policy/Documents/Sustainability-201909.pdf

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Canola farmers take pride in how they care for their most valued resource, their land. By adopting leading-edge innovations, farmers are able to produce more canola per acre while maintaining the existing farmland footprint. New plant traits such as herbicide tolerance have helped farmers switch to no-tillage practices and farm more efficiently and sustainably.

BUILDING HEALTHIER SOILS

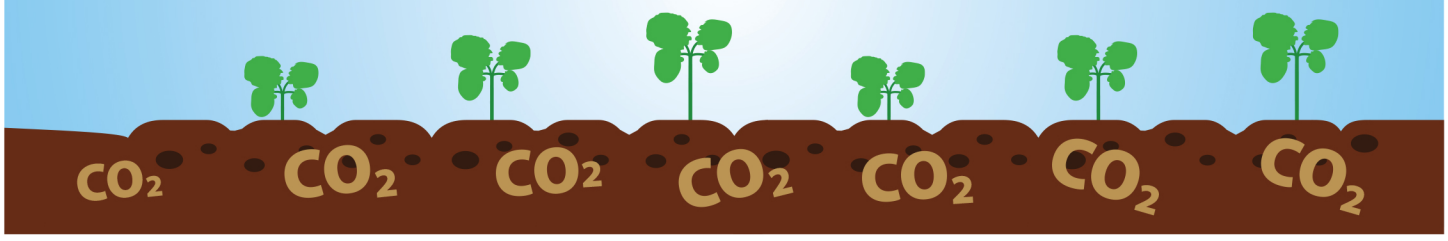
One of the greatest challenges in growing canola is competition from weeds. Farmers used to rely on tilling the soil to remove weeds from their fields. It dried out the soil, leading to erosion and reduced fertility. With herbicide-tolerant canola, farmers can forgo tillage and use smaller amounts of herbicide to control weeds, keeping our soil moist and fertile. Today's herbicide-tolerant varieties have allowed farmers in Canada to reduce the amount of herbicide they use by 20% since 1996.[1]

LOWERING EMISSIONS

The combination of conservation tillage and growing herbicide-tolerant crops means Canadian farmers are making fewer passes over their fields and using less fuel. Conservation tillage practices have resulted in 126-194 million fewer litres of diesel fuel used on Canadian farms each year, reducing GHG emissions by about 450,000 to 750,000 tonnes per year.[2]

SEQUESTERING CARBON

In 1991, 7% of Western Canadian farmland was seeded with no-till practices. By 2016, this number had grown to 65%.[3] When soils are left untilled, they sequester greenhouse gases. Low-till and no-till farming help Canadian farmers sequester 11 million tonnes of greenhouse gases in their fields every year[4]. 70% of this sequestration has been due to canola.



[1]Graham Brookes and Peter Barfoot, "Environmental impacts of genetically modified (GM) crop use 1996 – 2015: Impacts on pesticide use and carbon emissions" (2017) 8 GM Crops & Food 117 – 147
[2]RIAS Inc, *The Value of Plant Science Innovations to Canadians*, Prepared for CropLife Canada (Ottawa, 2015)
[3]CANSIM Tables 004-0010 and 004-0205, Statistics Canada
[4]Environment and Climate Change Canada, *National Inventory Report: 1990-2015, Greenhouse Gas Sources and Sinks in Canada*, (Ottawa: Environment and Climate Change Canada, 2017)