Helping Farmers Succeed

Canola: A Canadian Crop with Big Impact

Learn more at www.ccg.ca or on @ccga_ca
Canadian Canola Growers Association is the national voice of Canada’s 43,000 canola farmers.

For more than 30 years, CCGA has been at the forefront of driving change for canola farmers. The association represents these farmers on national and international issues, and is a leader in agriculture policy development and advocacy, focusing on the most important policy issues affecting canola farmers: transportation, trade, risk management, biodiesel, sustainability, pesticide registration, seed innovation, farm labour and more. **We drive change to help farmers succeed.**

CCGA is an Advance Payments Program (APP) administrator, regarded for its innovation in delivering financing services to approximately 10,000 farmers across Western Canada every year. When the association was formed in 1984, CCGA became one of the first administrators to offer farmers access to cash advances for non-traditional commodities such as canola. Over 30 years later, CCGA has expanded its cash advance administrator portfolio to include 45 commodities, including all major field crops and livestock types.

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1 The Advance Payments Program is a federal loan guarantee program which provides agricultural producers with access to low-interest cash advances. The program is part of Agriculture & Agri-Food Canada’s suite of business management programs and is made available to Canadian farmers through producer groups across Canada.
Canola’s History

In just a few short decades, canola has become one of the world’s most important oilseed crops and one of Canada’s great agricultural innovation success stories. Canola generates the highest on-farm cash receipts from crops across the country at $8 billion in 2015, and the industry generates over $19 billion in economic wealth every year.

Canola seed is crushed for its oil and high-protein animal feed, called “meal.” The oil is low in saturated fats and has a unique balance of polyunsaturated and monounsaturated fats, giving it an international reputation for its quality and heart-healthy characteristics. The meal is recognized as an excellent high-protein feed for livestock.

Canola’s Timeline

1974
TOWER, Canada’s first canola variety, was released.

1979
Farmers planted 8.4 million acres of canola. That same year, Japanese imports of Canadian canola seed exceeded 1 million tonnes for the first time.

1995
The first herbicide-tolerant canola variety was released, allowing canola to be grown using more sustainable methods.

1978
“CANOLA” was trademarked by Canada’s oilseed industry. The new term differentiated the product from rapeseed.

1980s
The crop continued to grow in popularity as the U.S. and other markets began importing the crop.

2 Herbicide-tolerant canola can withstand being sprayed with herbicides that eliminate yield robbing weeds. This change has allowed farmers to reduce the amount of active ingredients from herbicide used on their canola crops.
Canola was first developed by Canadian scientists in the 1970s. Using traditional plant breeding techniques, scientists were able to remove undesirable components from rapeseed, a crop highly adaptable to Canadian growing conditions, to develop a new high-quality edible oilseed that grew well in Canada’s more northerly conditions.

2007
The canola industry has set ambitious production targets to keep canola’s success moving forward. In 2007, industry sets target of 15 million tonnes of seed by 2015.

2013
Industry achieves goal set in 2007 two years early. Shortly after, the industry launched its new target: 26 MMT and 52 bushels/acre by 2025.

2003
HIGH-OLEIC CANOLA OIL is introduced, a more shelf-stable product for the food market, one that expands canola oil’s uses in packaged baked goods and other food products.

2016:
Farmers planted over 19 MILLION ACRES of canola with yields of 42.3 bushels per acre in 2016.
How We Use Canola

Crushing canola seed produces two primary products: oil and meal. Compared to many other oilseed crops, canola has an extremely high oil content at about 44%. This characteristic makes canola an excellent source for cooking oil.

**Canola oil is the world’s healthiest vegetable oil, as it’s very high in essential good fats.**

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<thead>
<tr>
<th>Dietary Fat</th>
<th>Saturated Fat</th>
<th>Polyunsaturated Fat</th>
<th>Monounsaturated Fat</th>
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<td>Safflower oil †</td>
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<td>Coconut oil</td>
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<th>Saturated Fat</th>
<th>Linoleic acid (an omega-6 essential fatty acid)</th>
<th>Alpha-linolenic acid (an omega-3 essential fatty acid)</th>
<th>Oleic acid (an omega-9 fatty acid)</th>
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† High Oleic † Mid Oleic † Trace  

Fats are made up of smaller units called fatty acids. Two fatty acids – Alpha-linolenic acid (ALA) and linoleic acid (LA) – are essential in your diet because your body can’t make them. Canola oil’s attributes are nutritionally ideal too. Omega-3 fatty acid protects against heart attacks and strokes by helping to lower bad cholesterol. Omega-6 fatty acid is important for the brain and essential for the growth and development of infants.

**Canola meal** is the protein-rich product that is left after the oil has been extracted from the seed. It is an excellent nutrient source for cattle, poultry, swine and fish. **When fed to dairy cows, canola meal can increase milk production by one litre per day.**

**Other uses for canola:**

- Canola biodiesel is an excellent renewable fuel. Its low greenhouse gas emissions and exceptional cold weather performance makes it an input of choice for biodiesel in Canada. Canola biodiesel reduces lifecycle greenhouse gas emissions by 90% when compared to fossil fuel.

- Canola oil provides an environmentally friendly alternative to products traditionally made with petroleum. This includes plasticizers, tape, glue, and adhesives.
Thanks to continued innovation and growing demand, Canadian production of canola has more than quadrupled since 1986 from 3.7 million metric tonnes in 1986 to 18.4 million metric tonnes in 2016.
Canada is the world’s #1 exporter of canola. To the left is a comparison of Canada and other canola-producing nations, showing how much canola seed is exported on an annual basis.

**Boosting Yields of Canola**

With enhancements in varieties and farming practices, production has continued to grow over time. The industry has set a goal of achieving 52 bushels/acre by 2025. This will be achieved through innovation in many aspects of the industry including in the seed, in the field and in the way we farm rather than through increasing acres.

**A Key Source of Farm Cash Flow**

Canola has been the number one source of farm revenue from crops for over a decade, making it a key contributor to farm profitability and a major reason why 43,000 farms across Canada grow it. A comparison of farm cash receipts from 2015 is shown.

**#1 Exporter of Canola to the World**

Canada is the world’s #1 exporter of canola. To the left is a comparison of Canada and other canola-producing nations, showing how much canola seed is exported on an annual basis.
Issues Affecting Canola Farmers

TRADE

Canola is a trade powerhouse, exporting 90% of all production with export sales of seed, oil and meal reaching nearly $9 billion in 2015. These exports keep farms successful and support strong rural communities through employment and value-added processing.

With so much production going to export markets – the U.S., Mexico, China, Japan, the EU and other markets – maintaining access to these markets is critical. Open markets and clear trade rules make reliable partners. Trade agreements that provide stable, transparent and predictable access are needed as well as ongoing efforts to fix market access issues as they arise.

Value of select export markets:

- United States: $3.3 billion
- China: $2.6 billion
- Japan: $1.1 billion
- Mexico: $824.2 million
- European Union: $187.8 million

Canada’s Primary Export Markets, 2015 (000 metric tonnes) Source: Statistics Canada, accessed October 2016
TRANSPORTATION

Canola is well travelled – moving from the farm to port, to global destinations. Over 90% of canola grown in Canada is exported, and rail is the only practical means to move it to port. Therefore, the industry relies on efficient, predictable and timely rail service. When railways can’t deliver on service, farmers are directly affected.

Looking at where canola is grown, rail transportation is needed to move grain west to ports in Vancouver, and east to ports in Thunder Bay. The average tonne of Canadian grown grain travels 1,520 km to reach a Canadian port.

Major ports where canola is exported (2015-16):

- **Vancouver**: 7,017,000 tonnes
- **Prince Rupert**: 2,211,300 tonnes
- **Thunder Bay**: 1,376,300 tonnes
ENVIRONMENT

Today more than ever, people are interested in where their food comes from and whether it was produced in an environmentally sustainable way.

Canola has an excellent story in this regard. The way canola is farmed results in substantial benefits for the environment. Here are some examples.

Reducing herbicide usage.

Building soil and sequestering carbon.

Using less fuel.

Young, fragile canola can be easily overtaken by quick-growing weeds, so weed control is essential for growing a canola crop. Prior to “herbicide-tolerant” canola, farmers would use up to four different weed treatments before and after planting the crop. With today’s herbicide-tolerant varieties, farmers often use only one or two weed treatments and those they use are considered safer.

By seeding canola without tilling or turning the soil, farmers continually add organic matter to their soil and keep greenhouse gases like carbon in the ground, instead of releasing it into the atmosphere. Every year, 2.64 million tonnes of greenhouse gases stay out of the air we breathe thanks to conservation tillage. These tillage practices are growing in popularity, too, with 80% of canola farmland in 2011 seeded this way.

The combination of conservation tillage and growing herbicide-tolerant canola means canola farmers are making fewer passes over their fields and using less fuel. Farmers who use zero-tillage practices, use one-third less fuel than those who farm with conventional tillage practices. Zero-tillage is when farmers grow their crops without turning the soil for planting or weed control.
Agriculture Policy

CCGA undertakes policy development on issues affecting canola farmers. CCGA’s policy team works to affect change on behalf of Canada’s canola farmers through our research on and development of robust policy approaches.

This includes some of the topics discussed earlier, but also areas like business risk management and crop inputs.

BUSINESS RISK MANAGEMENT

Every farmer deals with different types and levels of risk – whether it’s flooding, hail, insects, weeds, prices, or markets – farmers need to have a set of tools to manage these risks before they affect the farm.

At CCGA, we believe farmers should have a variety of risk management tools available that work for the demands of their farm. This way, they can build a strategy that works for their individual operation.

CROP INPUTS

To meet evolving weather, disease and pest pressures, farmers must have access to efficient and cost-effective seed varieties, pesticides and crop nutrients. To do so, regulations based on credible science are needed. Canada’s regulatory system allows for the development of new seed varieties and crop inputs in a responsible way, while maintaining a competitive, predictable environment for investment in innovation.

Farmers’ access to these products often depends on what is happening in our export markets. As such, the government’s work internationally in promoting science-based regulations is important to farms’ competitiveness.
WHAT ABOUT BIOFUELS?

Canola is a high-quality, domestically-sourced, sustainable biodiesel input. Canola biodiesel can play a key role in reducing greenhouse gas (GHG) emissions in transportation fuel. For instance, production and use of canola-based biodiesel can reduce lifecycle greenhouse gas emissions by 90%, compared to conventional petroleum diesel.*

In 2015, the equivalent of 1.8 million tonnes of Canadian canola seed was used in the production of biodiesel in Canada, the U.S. and the E.U.

*Using GHGenius – the lifecycle analysis tool housed within the federal government
Canola’s Impact on Economy

Canola may be grown primarily in Western Canada, but its economic impact is felt by all Canadians. Some highlights include:

- **$19.3 billion/year** contributed to Canadian economy.
- Canola industry employs **249,000 Canadians**, plus thousands more in markets where canola is exported.
- Provides **$12.5 billion** in employee wages.
- **Diverse job market:** seed development, farming, canola seed handling, transportation, crushing and refining.

**IMPACT BY VALUE CHAIN SEGMENT**

Three-year average, 2009 - 10 to 2011 - 12

- **$13.3 billion**
- **$442 million**
- **$1.1 billion**
- **$206 million**
- **$1.6 billion**
- **$348 million**
- **$525 million**
- **$1.7 billion**

*Increased milk production or cost savings when canola meal is used in feed.*