

## HISTORY

Oats, a small-grain cereal, were brought to Canada in the early 17th century by European settlers. Oats were an important livestock feed crop for the early settlers on the Prairies, who used horses as the main source of power for farming and transportation. Over the years, oats have become an important crop worldwide.

Today, Canada is a major supplier of oats, making up the majority of world oat trade. Manitoba accounted for 24 per cent of the country's oat production in 2020. Our biggest export markets are the United States, Mexico, and Japan.

## PRODUCTION

Oats grow well with long, warm growing days and adequate moisture. The Red River Valley boasts some of the highest concentrations of oats grown in North America. Oat yields can be as high as 195 bushels per acre!

In Manitoba, oats are grown for four main uses: livestock feed, human consumption, recreation horse feed (pony oat), and forage (eaten by grazing livestock). Although livestock consumption makes up the bulk of oat use globally, the human food market for oats continues to grow as consumers increasingly recognize the nutritional benefits of whole grains. The majority of Canadian oats are used for human consumption.

Oat grains harvested from the field consist of a hard outer hull and an inner kernel. The kernel has three parts: the *bran*, the *germ*, and the *endosperm*. The bran and germ both contain healthy fiber, vitamins, and minerals. The endosperm mostly contains carbohydrates, and some protein.

## PROCESSING

The first step in processing oats is to clean the oat grains and remove the inedible hulls. The remaining kernels are called oat *groats*. These are long and thin with a smooth shiny surface and look like brown rice. They're super nutritious and very chewy, making them a great substitute for rice and a great ingredient in salads. While oat groats can be eaten, they are typically processed into one of the forms below.

### Steel Cut Oats

If you cut oat groats into two or three pieces with a sharp metal blade, you get steel cut oats, also known as Irish oatmeal.



Steel cut oats have a great chewy texture and nutty flavour and are an awesome alternative to rice. They take less time to cook than groats and are usually easier to find in stores.

### Scottish Oatmeal

Scottish oatmeal is produced by stone-grinding the groats which creates broken bits of varying sizes. Some say this results in a creamier porridge than steel cutting.

### Rolled Oats

Rolled oats, sometimes called old fashioned oats, are created when oat groats are steamed and then flattened with a roller to make flakes. They are the most common oats you'll find in the store. These oats absorb a lot of liquid and take about 15 to 20 minutes to cook. They also hold their shape well when cooking. Rolled oats are mainstay ingredients in granola bars and muesli.



**Quick Oats**

Quick oats are made in the same way as rolled oats but the groats are steamed longer and rolled into thinner flakes. These smaller thinner flakes cook in 3 to 5 minutes. They're frequently used in muffins, cookies and bread.

**Instant Oats**

Instant oats have been cut, pre-cooked, dried, steamed and flattened for instant cooking times. These oats, which you usually find in flavoured packages that you can microwave with water for a quick breakfast, are a convenient way to get a healthy helping of oats on the go.

**Oat Flour**

Oat flour is made by grinding oat groats to a fine powder. Oat flour can be used to thicken sauces and gravies or used to make breads and baked goods.

While oat flour is available at the grocery store, it can easily be made at home in a food processor or blender. To make oat flour, process rolled or quick oats to a powder, then sift.

**Oat Bran**

Oat bran is made from the outer layer or bran of the oat kernel or groat. Oat bran is particularly high in insoluble fiber. It is used as a hot cereal and as an ingredient in quick breads, casseroles, and pancakes for added fibre.



There are three significant oat milling operations in Manitoba that produce oat products for the food and pet food industries.

**PRODUCTS AND BY-PRODUCTS****Human Food**

Oats are gaining popularity as a great plant-based protein. Besides breakfast cereals, oats can be made into oat milk and even ice cream! Their natural preservative and antioxidant qualities have been used in products including bread, milk products, fish and olive oil, bacon, and frozen fish and sausage. Oat flour can be used to make a coffee substitute. Oat gum can be used as a thickening and stabilizing agent in ice cream, sauces, and salad dressings.

**Animal Food**

Oats are an important grain in many horse, cattle and poultry diets. Oat straw makes great bedding for cattle, horses, sheep, and rabbits.

**Cosmetics**

Oats can soothe dry or itchy skin and be used as a skin cleanser or exfoliant to remove dead skin cells. Oat protein can help add and retain moisture. These properties make oats a common ingredient in many skincare products like soaps, lotions, and shampoos.

**Additives**

Oats have many industrial uses. Oat hulls are used to make solvent for dyes, paints, and the nylon industry. The starches in oats are used to make adhesives. Oats can be used as an oil spill dispersant because of their ability to absorb oil, then emulsify and disperse it efficiently. Oat flour when converted into starch acetates, is used in the production of biodegradable plastics.





## NUTRITION

Oats, one of the world's healthiest grains, can contribute greatly to a healthy diet and lifestyle.

Oats are a *functional food* (a food product which provides specific nutritional and health benefits). Oats help prevent heart disease and cancers, enhance immune response to infection, and stabilize blood sugars. They've also been used to treat rheumatism, chronic neurological pain, insomnia, stress, anxiety, and depression.

The *beta-glucan* in oats, which is a form of soluble dietary fibre, is reported to lower blood cholesterol, help control diabetes, reduce heart disease, stimulate the immune system, and possess antioxidant attributes.

Oats are one of the best sources of *Inositol*, which helps maintain blood cholesterol level. It also contains very high levels of calcium, potassium, and magnesium, coupled with Vitamin B-complex. All these vitamins and minerals are essential for the nervous system.

The *complex carbohydrates*, high fibre and *protein* content found in oats can leave you feeling full for hours after a meal, helping with appetite control. The *soluble fibre* in oats absorbs water, helps slow and even reverse the process of atherosclerosis, or hardening of the arteries, and manages high blood pressure. Eating a diet with enough soluble fibre (5 to 10 grams per day) can slow or prevent the absorption of *LDL*, or "bad," cholesterol by allowing it to be carried out of the body as waste, rather than entering the bloodstream. The *insoluble fibre* in oats, which doesn't dissolve in water, is important for bowel health and can help to normalize bowel movements.

Oats are rich in iron, with a half cup dry oats providing about 20 per cent of your daily iron. Iron helps your body use energy more efficiently, leaving you feeling more awake and energized.

A half cup of dry oats is a good source of the following vitamins and nutrients: calcium, copper, folate, iron, manganese, phosphorus, potassium, vitamins B<sub>1</sub>, B<sub>3</sub>, B<sub>5</sub>, B<sub>6</sub> and E, and zinc.

## ENVIRONMENT

Oats are great for crop rotations on farms because they boast one of the lowest carbon footprints of Canadian cereals.



## FARMER PROFILE



### JENNETH JOHANSON Lac du Bonnet, Manitoba

"Oats were one of the very first solid foods I fed to my three children. I chose oat cereal because oats are a nutritional powerhouse recommended by many doctors for their health benefits. No wonder I love growing oats! It's very rewarding knowing that I grow some of the best oats in the world that feed families and contribute to healthy lifestyles."

**INDUSTRY IN MANITOBA**

**Production:** 695,100 acres of seeded area, producing 1.12 million metric tonnes (2020)

**Number of Producers:** 2,500 (2020)

**Value to Economy:** \$169 million in cash receipts (2020)

**DID YOU KNOW?**

One bushel (or 15.5 kg) of oats makes 50 boxes of Cheerios (350 g box) or 8.6 kg of oatmeal.

**INDUSTRY IN CANADA**

**Production:** 3,841 metric tonnes over a five-year average

- Canada produces over 50% of world's oat grain exports
- Canada's oat sector has grown to an \$8 billion industry
- 80-90% of annual Canadian oat exports go to the United States
- Canada represents over 70% of global oat exports each year
- Canada has about 90% of the Mexican oat market share

**CAREERS**

- » Farmer
- » Agriculture loan specialist
- » Mill operator
- » Marketing specialist
- » Food processor
- » Researcher
- » Agronomist
- » And so many more

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