Flax

History

Flax has been grown since the beginnings of civilization, and people all over the world have celebrated its usefulness throughout the ages. Historians weave the magic of flax into ancient history. Records show that the human race has eaten this seed since early times.

Cultivated flax is of two types: one type is grown for the seed, and the other for fibre production. In North America, it is primarily the oilseed varieties which are produced commercially. Flax on the North American continent dates back almost 400 years to 1617 when Louis Hébert, the first European to farm in Canada, brought it to New France. With time, flax production expanded and moved westward across the continent. By 1875, European settlers were seeding the unbroken Western Prairie with flax brought from their homelands. Flax flourished in the clean environment, and production in the new land advanced.

The coming of two world wars increased demand for flax as a source of oil for many products in the home and factory. Following the Second World War, commercial production in North America expanded substantially.

Throughout the 1950s and 1960s, flax products were widely used throughout the world. Oil-based coatings beautified and protected wooden and concrete surfaces, and durable linoleum became a popular flooring material. During this time, flax also formed part of people's diets.

In parts of the world, flax breads and other baked goods are commonplace. Similarly, farmers and animal breeders feed flax to their livestock for maintenance of healthy coats and to improve animals' digestion.

Production

Flax is an oilseed which has a short tap root system from which fibrous roots grow. Flax is grown mainly in the cool, Northern climate of the Western Canadian Prairies. Flax is adapted to brown and dark brown soils of the Prairies. Flax flowers are blue and bloom longer when the weather is cloudy.

Growing flax can present "the straw problem." Flax straw has a significant percentage of long tough stem fibres that decay slowly over time. This makes it difficult to incorporate flax straw into the soil after harvest since the fibres wrap themselves around and/or plug disks, wheels, and shovels. In the past, the only way to cope with flax straw was to drop it in windrows after the combine and then burn it directly or harrow or rake it into piles and then burn it. More recently, straw choppers on the largest new combines have been used to effectively chop and spread flax straw; this only works if the straw is relatively short. The straw has also been used as animal bedding, duck nesting sites, lining for drainage ditches, horticultural mulch, or as a fuel source in "bale burners."

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Processing

Flaxseed is processed into a variety of diverse products from bakery products and nutritional supplements to linseed oil for paints and linoleum.

Flax straw processing companies extract flax fibre for use in the production of specialty papers (i.e., paper for cigarettes, currency, bibles, prayer books, artwork, stock and bond certificates, etc.) and can produce fibres to replace the fibreglass presently used to make automotive parts like dashboards and headliners.

Nutrition

Canadian flax is a high quality food. Flax contains the omega-3 fatty acid, alpha-linolenic acid (ALA), fibre, and lignans. Health experts prescribe these nutrients and other compounds for better health.

About 42% of flax seed is oil, and more than 70% of that oil is polyunsaturated fat, a healthy fat. Flax also contains 57% of the important omega-3 fatty acid, ALA. Flax seed contains soluble and insoluble fibre. Soluble fibre can lower blood cholesterol levels, while insoluble fibre moves the stool through the colon more quickly, helping bowel movements.

Flax seed is also one of the richest plant sources of lignans, providing up to 800 times more lignans than most other foods in a vegetarian diet. Lignans are phytoestrogens – compounds that have been shown in laboratory studies of animals to help protect against certain kinds of cancer, particularly cancers of the breast and colon, by blocking tumor formation.

The protein found in flaxseed is very similar to that of soybean protein, which is considered one of the most nutritious plant proteins; this is due to the type of amino acids present, which are the building blocks of protein. Flaxseed contains numerous "essential amino acids", which the body cannot produce and therefore must obtain from the diet.

Eating whole or ground flax

Both whole and milled flaxseed are rich in dietary fibre, lignans, protein, and the essential fatty acid, ALA. Careful chewing will break the seed coat of whole flaxseed to allow the release of nutrients contained within, whereas milled flaxseed is already pre-ground. Ground flax seed provides more nutritional benefits than whole seed. That's because flax seeds are very hard, making them difficult to crack. Grinding flax seeds breaks them up, making them easier to digest when eaten. Then the body can profit from all of the flax nutrients. If whole flax seeds remain unbroken, they may pass undigested through the body, reducing the nutritional advantage of eating flax seed in the first place.

All vegetable oil products require some care in handling and storing. Once you grind flax seed, there is greater risk of it developing an off-flavour and taste. That's why it's best to grind whole flax seed as you need it. This ensures its freshness. After grinding, you should refrigerate it in an airtight, opaque container. Ground flax seed handled this way will keep for up to 90 days.

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Flaxseed Oil: Flaxseed oil results from the pressing of oil from the seed. Flaxseed oil provides more ALA (approximately 55 – 58%) on a per weight basis in comparison to whole or milled seed (approximately 15 – 18%).

By-Products

The use of flax in food products is growing rapidly in North America. Here are just a few examples of flax products:

- Breads
- Animal Feed
- Linseed Oil
- Linoleum
- Paper Products
- Cereals
- Crackers
- Energy bars
- Flaxseed Meal
- Muffin Mixes
- Cookies
- Omega-3 Eggs
- Pasta
- Pancakes
- Clothing
- Pet Food
- Printer Ink
- Oil Based Paint

Industry in Saskatchewan

Production: 393,000 tonnes (2018)

Number of Producers: 5,600 (2018)

Value to Economy: $197,673,000 in farm cash receipts (2018)

Industry in Canada

Production: 489,500 tonnes (2018)

Number of Producers: 6,600 (2018)

Value to Economy: $230.166,000 in farm cash receipts (2018)