

BARLEY



Barley is a cereal grain that is grown in various regions, easy to grow anywhere. Barley is known mainly for its use in **beer** but when the husk and germ are removed it becomes other forms of barley which are used in various recipes. It is also used for **animal feed**.



Nutrition Notes

Barley can assist in regulating blood sugar and digestive health. Barley is a source of niacin, vitamin B, calcium, magnesium, phosphorus, potassium, vitamin A, vitamin E folate, zinc, copper, iron and fibre and can help in lowering blood cholesterol levels.



Did you know?

- That one acre of malt barley makes about 540 cases of beer?
- That tossing salted peanuts in a glass of beer makes the peanuts dance?
- Beer is the second most popular beverage in the world, coming in behind tea?
- Beer is one of the oldest drinks in the world, made with only 4 ingredients; water, barley malt, yeast and hops which are bitter and are used for flavouring.
- Suppose you wear a size 6 shoe. Did you ever wonder what that number means? —In 1324, the king of England decreed that an inch was equal to three barleycorns, or grains of barley. At the time, an



HOPS →

Beer brewing produces several by-products that can be used by other industries.

- During the malting of the barley, rootlets form on the grain and drip off. These can be collected and used for animal feed.
- The hops that are filtered out from the finished wort can also be collected and used again as fertilizer.
- The residual yeast from the brewing process is a rich source of B vitamins. It can be put to use by pharmaceutical companies to make vitamins or drugs, or used as a food additive.

Varieties of Barley

Hulled barley or "whole grain" barley
Barley grits are the hulled, toasted grains
Pot barley is husked and coarsely ground.
Pearl barley kernels are polished (pearled)
Quick barley is an instant form of pearled barley.
Barley flour or meal is composed of ground pearl barley.
Flaked barley resembles rolled oats
Barley water is a traditional restorative for invalids
Barley grass comes from the sprouted barley grain.
Malted barley is used to make beer, confections such as *Maltesers* and *Whoopers*

average man's foot was said to be 39 barleycorns, or 13 inches long. This was called size 13.



Barley is high in protein making it ideal for finishing **feed for animals**



CANOLA

Canola is an oilseed that

belongs to the mustard, broccoli and cabbage family and produces a pretty yellow flower. It is grown best in cooler temperatures which is why the BC Peace grows 95% of all canola in BC.



Canola producers use the **seed portion** of the canola plant to be **crushed into oil or processed into margarine**. The oil may be used

for sautéing, baking, cooking, deep frying, in dressings and various other non-food items.

Canola oil is used to make **biodiesel** for filling up the gas tank of your car!



The **meal** that is leftover after pressing the canola is used as a high protein feed supplement for livestock. It also is used as a high-quality organic fertilizer.



Nutrition Notes



- Canola oil is one of the healthiest oils to cook with in the world with no cholesterol and zero *trans* fat.
- Canola oil is a good source of the omega-3 fat and vitamins E and K.
- One serving of canola oil may help reduce the risk of heart disease, cancer and memory loss.
- Canola oil is light and clear and has a mild flavour that lets spices and herbs shine through in vinaigrettes. It delivers and seals in marinade flavours.
- Canola oil has a high flash point making it great for deep frying. Many health conscious restaurants have made this their oil of choice.
- Canola oil is perfect for baking as it can adapt to any flavour profile. It makes baked goods taste even better.

Saturated fat of common cooking oils

Canola oil-7%
Sunflower oil-12%
Olive oil-15%
Peanut oil- 19%

Who's involved in producing Canola?

- Canola farmer
- Seed growers
- Farm machinery dealers
- Mechanics
- Pesticide dealers
- Fertilizer dealers
- Transport/Trucker
- Airplane pilots for spraying
- Grain Inspectors
- Agronomists
- Truckers, railway workers
- Oil processors and refiners
- Chemists
- Ship Crew members
- Dock workers

bake more with less fat!

Canola Oil Baking Substitution Chart

If a recipe calls for this much solid fat...try making it with this much canola oil.

Solid Fat	>	Canola Oil
1 cup (250 mL)	>	¾ cup (175 mL)
¾ cup (175 mL)	>	⅔ cup (150 mL)
½ cup (125 mL)	>	⅓ cup (75 mL)
¼ cup (50 mL)	>	3 Tbsp (45 mL)
1 Tbsp (15 mL)	>	2 tsp (10 mL)
1 tsp (5 mL)	>	¾ tsp (4 mL)

Not only will you eliminate trans and reduce saturated fats; you will also reduce the total amount of fat in the recipe by about 20 to 25%!
This conversion works well for cakes, loaves and muffins recipes.

PEAS

The less water you use when cooking peas, the less vitamin C is lost. Steaming helps to conserve the vitamin.

Peas (*Pisum Sativum*) are a cool season, annual crop planted in rotation with other crops, are a part of the **legume family** and are a good source of protein. They also help the soil through their **nitrogen** fixing nodules on their roots that stay in the ground after harvest.



For thousands of years **yellow** and **green** peas were eaten in soups or porridges made from the dried pea known today as the field pea.

Nutrition Notes

Peas are a good source of Vitamin A, vitamin C, folate, thiamine(B1), iron, and phosphorus. As pulses they are rich in protein, carbohydrate and fibre and low in fat. Half a cup of frozen peas is only 5% of the daily value for sodium and are good for your heart.

Q. What do you call an angry pea?
A: Grump-pea.

Did you know?

- The world record for eating peas is held by Janet Harris of Sussex who, in 1984, ate **7175 peas** one by one in 60 minutes by using chopsticks!
- The United Kingdom has a pea etiquette: The proper way to eat them is to squash them on the back of a fork?
- In the time of Elizabeth 1 who reigned in 1558, peas were imported from Holland and were considered a **great delicacy** because they were so expensive?
- Just one serving of freshly frozen garden peas contains as much vitamin C as 2 large apples, more fiber than a slice of whole meal breads and more thiamine than a pint of whole milk?
- A **100 calorie** serving of peas (about 3/4 cup) contains **more protein** than a **whole egg** or a tablespoon of peanut butter and has less than one gram of fat and no cholesterol?

Varieties of Peas

Green Peas are nestled within large, bulging, grass green pods that are round and sweet. The green pea pods are tough, do not have a very good flavour, and therefore, are not eaten.

Yellow Peas: Have an earthier flavour than green peas and is best to eat them split.

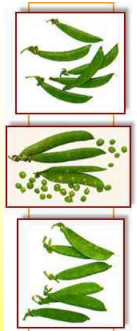
Snow Peas (Chinese Pea Pods) and sugar snap peas are more often found fresh, but many companies are now selling them frozen.

These peas are eaten raw or uncooked with the pod intact. Snow peas supply less protein and are lower in B vitamins than green shelled peas because they are eaten when their seeds are still immature. However, snow peas provide almost twice the calcium, 100% of the Recommended Daily Dose of vitamin C, and slightly more iron than green peas.

Pease Porridge: Hot, Cold, or in the pot 9 days old?

The peas pudding dish baked in the United Kingdom, also called Pease porridge, as in the nursery rhyme, mostly uses yellow split peas cooked together with veggies and a ham bone.

The cook would make a large pot of the pudding, so on the first day they would eat the porridge **hot**. After that a little water would be added into the porridge, stirred, & eaten **cold** until it was all gone; often lasting **nine days!!**



WHEAT

Types of Wheat:

Hard Wheat is higher in gluten and therefore makes the best bread.



Soft Wheat, with its lower gluten content, is better for cakes and pastries.



Durum wheat, high in gluten producing proteins. Used for making flat breads, macaroni and other pastas.



Wheat is a part of the **Grass** family. This grass is referred to as a **cereal grain** and grown for its edible **seeds**.

A wheat seed begins to sprout in about a week. When the wheat is grown and golden in colour, and the kernels are hard and ripened, it is ready to be harvested.

Wheat can tolerate harsh weather and is a main **staple food** worldwide.



Nutrition Notes

*Wheat germ contains antioxidant and anti-aging properties that are good for skin, nails and hair.

*Fights muscular dystrophy and neuron-muscular problems.

*It lowers bad cholesterol levels and blood pressure

*Repairs tissue damage and helps minerals and nutrients to reach our cells.

*Improves muscular energy,
*Helps people exercise harder and longer

*Helps the body to adjust during stress.

*Rich in omega-3 fatty acids, wheat germ gives people a good mood

*It helps in stop some kinds of birth defects.

*Is a good source of fibre, it improves bowel function, reduces the risk of developing heart disease & diabetes

*prevents weight gain.

*It alleviates premenstrual and menopausal symptoms.

*It fights colon cancer

*prevents constipation

*improves digestion.



Did you know?

- It takes a combine 9 seconds to harvest enough wheat to make about 70 loaves of bread?
 - **One bushel of wheat makes enough flour for 73 one pound loaves of bread?**
- 1 Bushel= 35.2 litres
or 9.3 gallons
- Wheat farmers make about 5 cents from each loaf of bread sold?
 - **One acre of wheat can produce enough flour to furnish a family of four with bread for nearly 10 years?**
 - More foods are made with wheat than any other cereal grain?
 - **Wheat flour is an ingredient in some liquorice?**
-
- Canadians eat about 75 acres of pizza per day?
 - **Canada is the largest world producer of high protein milling wheat, as the weather is ideal for growing it?**
- The BC Peace River grows 95% of the wheat and (99.9%) of that is hard wheat?



FLAX

42% of the flaxseed is oil and 70% of that is "good fat".

Flax is grown for its seeds and its fibers. Flax fiber is soft, lustrous and flexible; The best grades are used for **linen fabrics** such as damasks, lace and sheeting.

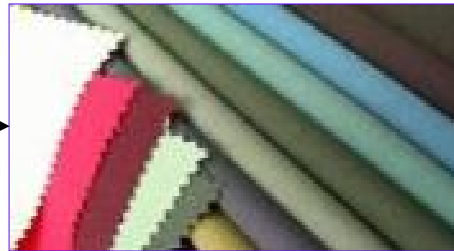


When eaten daily, flax is good for:

- managing weight
- cholesterol
- diabetes
- cancer
- constipation
- inflammation
- heart disease
- menopausal symptoms
- an immune booster
- fighting "the blues"



Linens



Flax seeds



Flaxseed oil also called **linseed oil** - commercial oils and solvent-processed flax seed oil has been used for centuries as a **drying oil** in painting and varnishing, as it dries very quickly.



Coarser grades are used for the manufacturing of **twine and rope**.



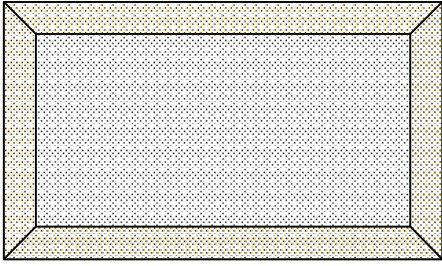
Flax fiber is also a raw material for the high-quality paper industry for the use of **printed banknotes** and **rolling paper for cigarettes**.



Also makes **dye, paper, medicines, fishing nets, hair gels, and soap**.



Flax straw being prepared for spinning



OATS

The common oat plant (*Avena sativa*) is a species of cereal grain grown for its **seed**.



People that have Celiac Disease are allergic to the gluten that is in wheat flour. Celiacs may use oat flour as a substitute for wheat flour in their baking.

Oats may also be harvested as a "green feed" that is made into **Silage**. Some farmers roll up the green oats into bales and preserve them by 'pickling' them. Others store the prepared silage in a tightly packed pile in a pit. Farmers often use this option if the weather has been too wet to bale, as this feed does not need to be dried.



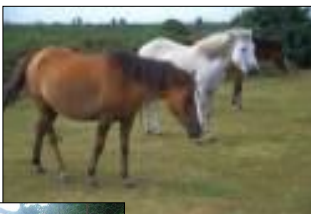
When eaten every day, oats help in:

- dental health for children
- absorbing cholesterol
- preventing heart disease
- controlling glucose and insulin levels
- reducing the risk of cancer
- losing weight
- giving steady nerves
- prevent celiac disease
- making better athletes
- living to be very old
- healing



Oatmeal

Oats are for people to eat as oatmeal and rolled oats



Mostly oats are used as food for farm animals



Oat straw is typically used for animal bedding