

Coffee

Coffea arabica, *Coffea canephora* or *Coffea robusta*, *Coffea liberica*.

(a) *Coffea robusta*



(b) *Coffea arabica*



Common names	Kahveh, caffè, qahwah, Kaffa,
Origin	Native to tropical and southern Africa and tropical Asia that belongs to Rubiaceae family.
Description	A coffee bean is a seed of the coffee plant. Usually two seeds are found inside the red or purple fruit often called a cherry. Even though they are seeds, they are called 'beans' because of their resemblance to true beans.

Growth Habitat	A coffee plant prefers rich soil and mild tropical temperatures, with lots of rain and shaded sun. Soil, climate and altitude affect the flavor of the beans.
Foliage	Dark-green, waxy leaves growing opposite each other in pairs. The leaves of the Robusta trees are much larger than those of the Arabica.
Flowers	The flowers are sometimes very small, white, highly scented with a jasmine-like fragrance and very numerous; while at other times, when the weather is not hot and dry, the flowers are very large, but not so numerous. The flowers of the Robusta trees are generally much larger than those of the Arabica.
Fruits	Coffee trees produce berries, called coffee cherries that change from green to bright red or purple when ripe. Round to oval in shape. Inside are two, bluish-green coffee beans covered with a silver skin. The fruits of the Robusta trees too are much larger than those of the Arabica and thus more caffeine content.
Soil	The best soils to cultivate coffee are loamy, structurally granular, well aerated, moderately permeable, and offer a good effective depth of 80cm and a pH of 5 to 5.5.
Pruning	Prune the tree to 2m in height and 1/3 of the branches every 2 to 4 years after harvest time.
Fertilization	Since the coffee hulls and pulp are rich in nutrients, many people often use coffee grounds as fertilizer. One 60 kg bag of coffee contains 1,026 g of nitrogen, 60 g of phosphorous, 918 g of potassium, 162 g of calcium, 90 g of magnesium, 72 g of sulfur, 0.96 g of boron, 0.80 g of copper, 3.6 g of iron, 1.2 g of manganese, 0.002 g of molybdenum, and 0.72 g of zinc.

Propagation	Cultivars of arabica and robusta coffee are generally propagated by seed. Grafting and rooted cuttings are also used for propagation.
Harvest	Selective harvesting can be done by handpicking the ripe cherries and leaving others to ripen to be harvested at a later date or stripping the tree of all cherries when the majority of the cherries are ripe. Mechanical harvesting is done by vibration or by brushes.
Nutritional Properties	235ml of brewed coffee from grounds is very low in saturated fat, cholesterol and sodium. It is a rich source of antioxidants, very good source of riboflavin and pantothenic acid and it has small quantities of potassium, magnesium and manganese.
Health Benefits	<ul style="list-style-type: none"> • All-cause mortality In women, coffee consumption significantly decreases all-cause mortality for those drinking 3 cups per day compared to those who consume no coffee. • Reduced risk of Alzheimer's disease and Dementia Several studies comparing moderate coffee drinkers with light coffee drinkers, found that those who drank more coffee were significantly less likely to develop Alzheimer's disease later in life. • Reduced risk of gallstone disease Drinking caffeinated coffee has been correlated with a lower incidence of gallstones and gallbladder disease in both men and women. • Reduced risk of Parkinson's disease A study comparing heavy coffee drinkers (3.5 cups a day) with non-drinkers found that the coffee drinkers were significantly less likely to develop Parkinson's disease later in life.

- **Cognitive performance**

Many people drink coffee for its ability to increase short-term recall. Also, in all tests of simple reaction time, choice reaction time, incidental verbal memory, and visuospatial reasoning.

- **Caffeine and analgesics**

Coffee contains caffeine, which may increase the effectiveness of gastrointestinal uptake of some painkillers.

- **Antidiabetic**

Coffee intake may reduce one's risk of diabetes mellitus type 2 by up to half.

- **Liver protection**

Coffee can also reduce the incidence of cirrhosis of the liver and has been linked to a reduced risk of hepatocellular carcinoma, a primary liver cancer that usually arises in patients with preexisting cirrhosis.

- **Cancer**

Coffee consumption is also correlated in Africa to a reduced risk of oral, esophageal, and pharyngeal cancer. Researchers found that coffee drinkers were 50% less likely to get liver cancer than nondrinkers. Another study found a correlation between coffee consumption (both regular and decaffeinated) and a lower risk of aggressive prostate cancer.

- **Cardioprotective**

A 2009 prospective study in Japan following nearly 77,000 individuals aged 40 to 79 found that coffee consumption, along with caffeine intake, was associated with a reduced risk of dying from cardiovascular disease.

	<ul style="list-style-type: none"> • Laxative / diuretic Coffee is also a powerful stimulant for peristalsis and is sometimes considered to prevent constipation. However, coffee can also cause excessively loose bowel movements. • Antioxidant Coffee contains polyphenols such as flavan-3-ols (monomers and procyanidins), hydroxycinnamic acids, flavonols and anthocyanidins. These compounds have antioxidative effect and potentially reduce oxidative cell damage. • Gout Coffee consumption contributes to a decreased risk of gout in men over age 40. In a large study of over 45,000 men over a 12-year period, the risk for developing gout in men over 40 was inversely proportional with the amount of coffee consumed.
Commercial Uses	Coffee grounds have been used to grow Pearl Oyster mushrooms, a fertilizer for acid-loving plants and flowers, cat-repellent for gardens and combined with a little olive oil, an excellent skin exfoliator.
Food Suggestion	<p>Mysore Coffee</p> <ul style="list-style-type: none"> • 400ml of fresh milk (boiled and reduced to 200ml) • 3 tsp Nescafe Gold • 2 tsp brown sugar • Garnishing: • 1 stick cinnamon • 1 crushed green cardamom seed • 1 tablespoon of whipped cream with a drop of orange essence and 2 drops of lime juice <p>Boil 400ml of fresh milk and reduced to half. Add 3 teaspoons of Nescafe Gold and 2 teaspoons of brown sugar and stir until sugar melts.</p>

	Top with whipped citrus cream and sprinkle crushed cardamom seed on the cream. Place the cinnamon stick in the glass and use as a stirrer.
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