Almond

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Almond
 Almond flowers
Scientific classification
Kingdom: Plantae Division: Magnoliophyta Class: Magnoliopsida Order: Rosales Family: Rosaceae Subfamily: Prunoideae Genus: *Prunus* Subgenus: *Amygdalus* Species: ***P. dulcis***
Binomial name
Prunus dulcis (Mill.) D. A. Webb

Sweet almonds **Nutritional value per 100 g**	
Energy 580 kcal 2420 kJ	
Carbohydrates	20 g
- Dietary fibre	12 g
Fat	51 g
- saturated	4 g
- monounsaturated	32 g
- polyunsaturated	12 g
Protein	21 g
Riboflavin (Vit. B2)	0.8 mg 53%
Percentages are relative to US RDI values for adults.	

The **Almond** (*Prunus dulcis*, syn. *Prunus amygdalus*, or *Amygdalus communis*) is a small deciduous tree belonging to the subfamily Prunoideae of the family Rosaceae. An *almond* is also the fruit of this tree. It is classified with the peach in the subgenus *Amygdalus* within *Prunus*, distinguished from the other subgenera by the corrugated seed shell.

The fruit lacks the sweet fleshy outer covering of other members of *Prunus* (such as the plum and cherry), this being replaced by a leathery coat, called a hull, which contains the edible kernel, commonly called a nut, inside a hard shell. In botanical parlance, the reticulated hard stony shell is called an endocarp, and the fruit, or exocarp, is a drupe, having a downy outer coat.

The tree is a native of southwest Asia. The domesticated form can ripen fruit as far north as the British Isles. It is a small tree, growing to 4-9 m tall. The leaves are lanceolate, 6-12 cm long, and serrated at the edges. The flowers are white or pale pink, 3-5 cm diameter with five petals, produced in early spring before the leaves.

Contents

Origin and history

The wild form of domesticated almond grows in the Mediterranean region in parts of the Levant. Almonds must first have been taken into cultivation in this region. Before cultivation and domestication occurred, wild almonds were harvested as food and doubtless were processed by leaching or roasting to remove their toxicity. Domesticated almonds appear in the Early Bronze Age (3000–2000 BC) of the Near East, or possibly a little earlier. A well-known archaeological example of almond is the fruits found in Tutankhamun's tomb in Egypt (c. 1325 BC), probably imported from the Levant.

Production

Global production of almonds is around 1.5 million tonnes, with a low of 1 million tonnes in 1995 and a peak of 1.85 million tonnes in 2002 according to Food and Agriculture Organization (FAO) figures (pdf file). Major producers include Greece, Iran, Italy, Morocco, Portugal, Spain, Syria, Turkey, and the world's largest producer, the United States. In Spain, numerous commercial cultivars of sweet almond are produced, most notably the Jordan almond (imported from Málaga) and the Valencia almond. In the United States, production is concentrated in California, with almonds being California's sixth leading agricultural product and its top agricultural export. California exported almonds valued at 1.08 billion dollars in 2003, about 70% of total California almond crop.

Pollination

The pollination of California's almonds is the largest annual managed pollination event in the world, with close to one million hives (nearly half of all beehives in the USA) being trucked in February to the almond groves. Much of the pollination is managed by pollination brokers, who contract with migratory beekeepers from at least 38 states for the event.

Sweet and bitter almonds

There are two forms of the plant, one (often with white flowers) producing sweet almonds, and the other (often with pink flowers) producing bitter almonds. The kernel of the former contains a fixed oil and emulsion. As late as the early 20th century the oil was used internally in medicine, with the stipulation that it must not be adulterated with that of the bitter almond; it remains fairly popular in alternative medicine, particularly as a carrier oil in aromatherapy, but has fallen out of prescription among doctors.

The bitter almond is rather broader and shorter than the sweet almond, and contains about 50% of the fixed oil which also occurs in sweet almonds. It also contains the enzyme emulsin which, in the presence of water, acts on a soluble glucoside, amygdalin, yielding glucose, cyanide and the essential oil of bitter almonds or benzaldehyde. Bitter almonds may yield from 6 to 8% of prussic acid (also known as hydrogen cyanide). Extract of bitter almond was once used medicinally but even in small doses effects are severe and in larger doses can be deadly;[1] the prussic acid must be removed before consumption.

The nut of the tree has also been used as a preventative for alcohol intoxication. Folklore claims that almonds are poisonous for foxes.

Almond oil

"Oleum Amygdalae", the fixed oil, is prepared from either variety of almond and is a glyceryl oleate, with a slight odour and a nutty taste. It is almost insoluble in alcohol but readily soluble in chloroform or ether. It may be used as a substitute for olive oil.

The sweet almond oil is obtained from the dried kernel of the plant. This oil has been traditionally used by massage therapists to lubricate the skin during a massage session, being considered by many to be an effective emollient.

Almond syrup

Historically, almond syrup was an emulsion of sweet and bitter almonds usually made with barley syrup (orgeat syrup) or in a syrup of orange-flower water and sugar.

Grocer's Encyclopedia notes that *"Ten parts of sweet almonds are generally employed to three parts of bitter almonds"*, however due to the cyanide found in bitter almonds, modern syrups generally consist of only sweet almonds. *This article incorporates text from the public domain 1911 edition of The Grocer's Encyclopedia.*

Culinary uses

Almonds (in the shell and out of it)

While the almond is most often eaten on its own, raw or toasted, it is used in some dishes.

in Baklava. There is also almond butter, a spread similar to peanut butter, popular with peanut allergy sufferers and for its less salty taste.

The sweet almond itself contains practically no carbohydrates and may therefore be made into flour for cakes and biscuits for low carbohydrate diets or for patients suffering from diabetes mellitus or any other form of glycosuria. A standard serving of almond flour, 1 cup, contains 20 grammes of carbohydrates, of which 10 g is dietary fibre, for a net of 10 g of carbohydrate per cup. This makes almond flour very desirable for use in cake and bread recipes by people on carbohydrate-restricted diets.

Almonds can be processed into a milk substitute simply called almond milk; the nut's soft texture, mild flavour, and light colouring (when skinned) make for an efficient analog to dairy, and a soy-free choice, for lactose intolerant persons, vegans, and so on. Raw, blanched, and lightly toasted almonds all work well for different production techniques, some of which are very similar to that of soymilk and some of which actually use no heat, resulting in "raw milk" (see raw foodism).

Almond extract is also a popular substitute for vanilla extract among people with diabetes. Sweet almonds are used in marzipan, nougat, and macaroons, as well as other desserts. Almonds are a rich source of Vitamin E, containing 24 mg per 100 g.[2] They are also rich in monounsaturated fat, one of the two "good" fats responsible for lowering LDL cholesterol.

In China, almonds are used in a popular dessert when they are mixed with milk and then served hot.

Cultural aspects

The almond is highly revered in some cultures.

The tree grows in Syria and Israel, and is referred to in the Bible under the name of "Shaked", meaning "hasten". In Israel the tree flowers in January. The application of "Shaked" or "hasten" to the almond is similar to the use of the name "May" for the hawthorn, which usually flowers in that month in Britain. Among the Hebrews it was a symbol of watchfulness and promise due to its early flowering, symbolizing God's sudden and rapid redemption of His people after a period when he seems to have abandoned them; in Jeremiah 1:11-12, for instance. In the Bible the almond is mentioned ten times, beginning with Genesis 43:11, where it is described as "among the best of fruits". In Numbers 17 Levi is chosen from the other tribes of Israel by a rod that brought forth almond flowers. According to tradition, the rod of Aaron bore sweet almonds on one side and bitter on the other; if the Israelites followed the Lord, the sweet almonds would be ripe and edible, but if they were to forsake the path of the Lord, the bitter almonds would predominate. The almond blossom supplied a model for the menorah which stood in the Holy Temple, "Three cups, shaped like almond blossoms, were on one branch, with a knob and a flower; and three cups, shaped like almond blossoms, were on the other...on the candlestick itself were four cups, shaped like almond blossoms, with its knobs and flowers" (Exodus 25:33-34; 37:19-20). Similarly, Christian symbolism often uses almond branches as a symbol of the Virgin Birth of Jesus; paintings often include almonds encircling the baby Jesus and as a symbol of Mary.

The word "Luz", which occurs in Genesis 30:37, and which some translations have as "hazel", is supposed to be another name for the almond. In India, consumption of almonds is considered to be good for the brain, while the Chinese consider it a symbol of enduring sadness and female beauty.

Alleged health benefits

Edgar Cayce, a man regarded as the father of American holistic medicine, also highly favored the almond. In his readings, Cayce often recommended that almonds be included in the diet. Sometimes the consumption of almonds was portrayed as a key therapeutic agent, used to improve the complexion, improve eliminations through the colon, and even to prevent cancer. Recent research further associates almonds in lowering the blood presence of HDLs (high-density lipoproteins) and LDLs (low-density lipoproteins) equally with the statin drug line.

Etymology

The word 'almond' comes from Old French *almande* or *alemande*, late Latin *amandola*, derived through a form *amingdola* from the Greek *amugdale*, an almond; the al- for a- may be due to a confusion with the Arabic article *al*, the word having first dropped the a- as in the Italian form *mandorla*; the British pronunciation *ar-mond* and the modern French *amande* show the true form of the word.

References

1^ Cantor, Doug, Fleischer, Jeff; Green, John and Isreal, David L (July/August 2006). "The Fruit of the Matter". mental floss 5 (4): 12.

2^ White G. "Vitamin E and Minerals: Nutrition from Nuts." AllAboutVision.com. Retrieved August 20, 2006.