# Jujube

For the artificial candy, see jujube (confectionery).

"Jujubee" redirects here. For the person, see Jujubee (drag queen).

"Chinese date" redirects here. For traditional Chinese calendar dates, see Chinese calendar. For modern expression of dates in Chinese, see Dates in Chinese.



Zizipi	nus	111	juba

Scientific classification		
Kingdom:	Plantae	
(unranked):	Angiosperms	
(unranked):	Eudicots	
(unranked):	Rosids	
Order:	Rosales	
Family:	Rhamnaceae	
Genus:	Ziziphus	
Species:	Z. jujuba	

#### Binomial name

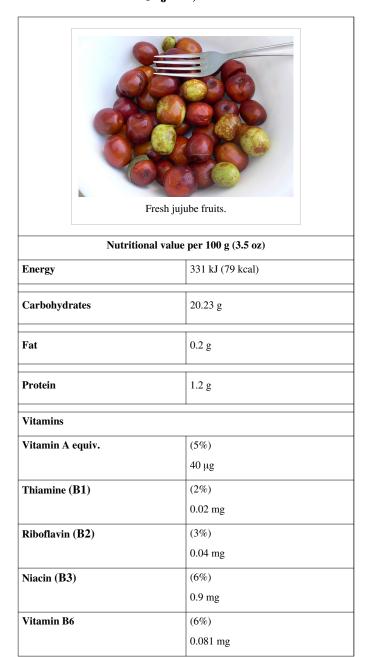
Ziziphus jujuba Mill.

#### **Synonyms**

- Paliurus mairei H. Lèv.
- Rhamnus jujuba L.
- · Rhamnus soporifera Lour.
- Rhamnus zizyphus L.
- Ziziphus jujuba (L.) Lam.
- Ziziphus jujuba (L.) Gaertn.
- Ziziphus mairei (H. Lèv.) Browicz & Lauener
- · Ziziphus nitida Roxb.
- Ziziphus orthacantha DC.

- · Ziziphus poiretii G.Don nom. illeg.
- Ziziphus rotundata DC.
- Ziziphus sativa Gaertn.
- Ziziphus soporifera (Lour.) Stokes
- Ziziphus spinosa (Bunge) Hu ex F.H. Chen
- · Ziziphus tomentosa Poir.
- Ziziphus trinervia Roth nom. illeg.
- · Ziziphus vulgaris var. inermis Bunge
- · Ziziphus vulgaris var. spinosa Bunge
- Ziziphus zizyphus (L.) H.Karst.
- Ziziphus zizyphus (L.) Meikle
- Zizyphon jujubum St.-Lag.

### Jujube, raw



Trace metals  Calcium  (2%) 21 mg  Iron (4%) 0.48 mg  Magnesium (3%) 10 mg  Manganese (4%) 0.084 mg  Phosphorus (3%) 23 mg  Potassium (5%) 250 mg  Sodium (0%) 3 mg  Zinc (1%) 0.05 mg  Other constituents  Water  77.86 g  Link to USDA Database entry [1]  • μg = micrograms • mg = milligrams • IU = International units  Percentages are roughly approximated using US recommendations for adults. Source: USDA Nutrient Database [2]	Vitamin C (83%)		
Trace metals			
Calcium         (2%)           21 mg           Iron         (4%)           0.48 mg           Magnesium         (3%)           10 mg           Manganese         (4%)           0.084 mg           Phosphorus         (3%)           23 mg           Potassium         (5%)           250 mg           Sodium         (0%)           3 mg           Zinc         (1%)           Other constituents           Water         77.86 g           Link to USDA Database entry [1]           •         Units           •         µg = micrograms • mg = milligrams           •         IU = International units   Percentages are roughly approximated using US recommendations for adults.			
Iron	Trace metals		
Name   Company   Compan	Calcium	(2%)	
Magnesium   (3%)   10 mg		21 mg	
Magnesium         (3%)           Manganese         (4%)           Phosphorus         (3%)           23 mg           Potassium         (5%)           250 mg           Sodium         (0%)           3 mg           Zinc         (1%)           0.05 mg           Other constituents           Water         77.86 g           Link to USDA Database entry [1]           •         using us recommendations in units           Percentages are roughly approximated using US recommendations for adults.	Iron	(4%)	
Manganese		0.48 mg	
Manganese  (4%) 0.084 mg  Phosphorus  (3%) 23 mg  Potassium  (5%) 250 mg  Sodium  (0%) 3 mg  Zinc  (1%) 0.05 mg  Other constituents  Water  77.86 g  Link to USDA Database entry [1]  • units • µg = micrograms • mg = milligrams • IU = International units  Percentages are roughly approximated using US recommendations for adults.	Magnesium	(3%)	
Phosphorus  (3%) 23 mg  Potassium  (5%) 250 mg  Sodium  (0%) 3 mg  Zinc  (1%) 0.05 mg  Other constituents  Water  77.86 g  Link to USDA Database entry [1]  •   units  µg = micrograms • mg = milligrams  IU = International units  Percentages are roughly approximated using US recommendations for adults.		10 mg	
Phosphorus(3%) 23 mgPotassium(5%) 250 mgSodium(0%) 3 mgZinc(1%) 0.05 mgOther constituents77.86 gWater77.86 gLink to USDA Database entry[1]•Units • $\mu g = \text{micrograms} \bullet \text{mg} = \text{milligrams}$ ••Units • $\mu g = \text{micrograms} \bullet \text{mg} = \text{milligrams}$ ••IU = International units	Manganese	(4%)	
Potassium  (5%) 250 mg  Sodium  (0%) 3 mg  Zinc  (1%) 0.05 mg  Other constituents  Water  77.86 g  Link to USDA Database entry [1]  • units • ug = micrograms • mg = milligrams • IU = International units  Percentages are roughly approximated using US recommendations for adults.		0.084 mg	
Potassium       (5%)         250 mg         Sodium       (0%)         3 mg         Zinc       (1%)         0.05 mg         Other constituents         Water       77.86 g         Link to USDA Database entry [1]         • Units         • μg = micrograms • mg = milligrams         • IU = International units         Percentages are roughly approximated using US recommendations for adults.	Phosphorus	(3%)	
Sodium  (0%) 3 mg  Zinc  (1%) 0.05 mg  Other constituents  Water  77.86 g  Link to USDA Database entry [1]  • μg = micrograms • mg = milligrams • μg = micrograms • mg = milligrams • IU = International units  Percentages are roughly approximated using US recommendations for adults.		23 mg	
Sodium  (0%) 3 mg  Zinc  (1%) 0.05 mg  Other constituents  Water  77.86 g  Link to USDA Database entry [1]  • Units • μg = micrograms • mg = milligrams • IU = International units  Percentages are roughly approximated using US recommendations for adults.	Potassium	(5%)	
3 mg		250 mg	
Zinc       (1%)         0.05 mg         Other constituents         Water       77.86 g         Link to USDA Database entry [1]         • Units         • μg = micrograms • mg = milligrams         • IU = International units         Percentages are roughly approximated using US recommendations for adults.	Sodium	(0%)	
Other constituents  Water  77.86 g  Link to USDA Database entry  Units  µg = micrograms • mg = milligrams  IU = International units  Percentages are roughly approximated using US recommendations for adults.		3 mg	
Other constituents  Water  77.86 g  Link to USDA Database entry [1]  Units  µg = micrograms • mg = milligrams  IU = International units  Percentages are roughly approximated using US recommendations for adults.	Zinc	(1%)	
<ul> <li>Water 77.86 g</li> <li>Link to USDA Database entry [1]</li> <li>Units</li> <li>μg = micrograms • mg = milligrams</li> <li>IU = International units</li> <li>Percentages are roughly approximated using US recommendations for adults.</li> </ul>		0.05 mg	
Link to USDA Database entry [1]  • Units • µg = micrograms • mg = milligrams • IU = International units  Percentages are roughly approximated using US recommendations for adults.	Other constituents		
<ul> <li>Units</li> <li>μg = micrograms • mg = milligrams</li> <li>IU = International units</li> </ul> Percentages are roughly approximated using US recommendations for adults.	Water	77.86 g	
<ul> <li>μg = micrograms • mg = milligrams</li> <li>IU = International units</li> </ul> Percentages are roughly approximated using US recommendations for adults.	Link to USDA Database entry [1]		
• IU = International units  Percentages are roughly approximated using US recommendations for adults.			
Percentages are roughly approximated using US recommendations for adults.			
for adults.	• IU = International units		
Source: USDA Militient Database			

## Jujube, dried



Nutritional value	e per 100 g (3.5 oz)	
Energy	1,201 kJ (287 kcal)	
Carbohydrates	73.6 g	
Fat	1.1 g	
Protein	3.7 g	
Vitamins		
Vitamin A equiv.	(0%)	
	0 μg	
Thiamine (B1)	(18%)	
	0.21 mg	
Riboflavin (B2)	(30%)	
	0.36 mg	
Niacin (B3)	(3%)	
	0.5 mg	
Vitamin B6	(0%)	
	0 mg	
Vitamin C	(16%)	
	13 mg	
Trace metals	1	
Calcium	(8%)	
	79 mg	
Iron	(14%)	
	1.8 mg	
Magnesium	(10%)	
	37 mg	
Manganese	(15%)	
	0.305 mg	
Phosphorus	(14%)	
	100 mg	
Potassium	(11%)	
	531 mg	
Sodium	(1%)	
	9 mg	
Zinc	(2%)	
	0.19 mg	
Other constituents		
Water	19.7 g	
[2]		
Link to USDA Database entry [3]		

Units
 μg = micrograms • mg = milligrams
 IU = International units
 Percentages are roughly approximated using US recommendations for adults.
 Source: USDA Nutrient Database [2]

**Ziziphus jujuba** (from Greek  $\zeta \zeta \zeta v \varphi o v$ , zizyfon<sup>[4]</sup>), commonly called **jujube** (sometimes jujuba), **red date**, **Chinese date**, **Korean date**, or **Indian date** is a species of *Ziziphus* in the buckthorn family (Rhamnaceae), used primarily as a shade tree that also bears fruit.



### **Description**



It is a small deciduous tree or shrub reaching a height of 5–12 metres (16–39 ft), usually with thorny branches. The leaves are shiny-green, ovate-acute, 2–7 centimetres (0.79–2.76 in) wide and 1–3 centimetres (0.39–1.18 in) broad, with three conspicuous veins at the base, and a finely toothed margin. The flowers are small, 5 millimetres (0.20 in) wide, with five inconspicuous yellowish-green petals. The fruit is an edible oval drupe 1.5–3 centimetres (0.59–1.18 in) deep; when immature it is smooth-green, with the consistency and taste of an apple, maturing brown to purplish-black and eventually wrinkled, looking like a small date. There is a single hard stone similar to an olive stone.

#### **Distribution**

Its precise natural distribution is uncertain due to extensive cultivation, but is thought to be in southern Asia, between Lebanon, Iran, Pakistan, India, Bangladesh, Nepal (called as Bayar), the Korean peninsula, and southern and central China, and also southeastern Europe though more

likely introduced there.[]

This plant has been introduced in Madagascar and grows as an invasive species in the western part of this island.

### **Nomenclature**

The species has a curious nomenclatural history, due to a combination of botanical naming regulations, and variations in spelling. It was first described scientifically by Carolus Linnaeus as *Rhamnus zizyphus*, in *Species Plantarum* in 1753. Later, in 1768, Philip Miller concluded it was sufficiently distinct from *Rhamnus* to merit separation into a new genus, in which he named it *Ziziphus jujube*, using Linnaeus' species name for the genus but with a probably accidental single letter spelling difference, 'i' for 'y'; for the species name he used a different name, as tautonyms (repetition of exactly the same name in the genus and species) are not permitted in botanical naming. However, because of Miller's slightly different spelling, the combination correctly using the earliest species name (from Linnaeus) with the new genus, *Ziziphus zizyphus*, is *not* a tautonym, and was therefore permitted as a botanical name; this combination was made by Hermann Karsten in 1882. <sup>[5]</sup> In 2006, a proposal was made to suppress the name *Ziziphus zizyphus* in favor of *Ziziphus jujuba*, and this proposal was accepted in 2011. *Ziziphus jujuba* is thus the correct scientific name for this species.

#### Vernacular names

Jujube fruit is called "bor" in Marathi, "ber" in Hindi, *kul* in Bengali, *barai* in Bangladesh, *ilanthappazham* or *badari* in Malayalam, *ilanthai pazham* in Tamil-speaking regions, "Yelchi Hannu" (مونط معنه) in Kannada and "Regi pandu" in Telugu. It is called zinzell in Malta. In Vietnamese, the fruit is called "táo tàu," which translates to "Chinese apple. "In Urdu it is called "UNNAB" (عُناب).

### **Cultivation and uses**



Ziziphus jujuba, written in Monbusho chant lyrics. It is now located in General Nogi's residence.

Jujube was domesticated in South Asia by 9000 BC.<sup>[6]</sup> Over 400 cultivars have been selected.

The tree tolerates a wide range of temperatures and rainfall, though it requires hot summers and sufficient water for acceptable fruiting. Unlike most of the other species in the genus, it tolerates fairly cold winters, surviving temperatures down to about -15 °C (5 °F). This enables the jujube to grow in mountain or desert habitats, provided there is access to underground water through the summer. The species *Ziziphus jujuba* grows in cooler regions of Asia. Five or more other species of *Ziziphus* are widely distributed in milder climates to hot deserts of Asia and Africa.<sup>[7]</sup>

In Madagascar, jujube trees grow everywhere in the western part of the island, from the north all the way to the south. It is widely eaten by free ranging zebus, and its seeds grow easily in zebu's feces. It is an invasive species, threatening mostly protected areas.

#### Culinary use

The freshly harvested as well as the candied dried fruits are often eaten as a snack, or with coffee. They are available in either red or black

(called hóng zǎo or hēi zǎo, respectively, in Chinese), the latter being smoked to enhance their flavor. In China and Korea, a sweetened tea syrup containing jujube fruits is available in glass jars, and canned jujube tea or jujube tea in the form of teabags is also available. Although not widely available, jujube juice and jujube vinegar (called 枣醋 or 红枣醋 in Chinese) are also produced; they are used for making pickles (কুলরে আচার) in West Bengal and Bangladesh.

In China, a wine made from jujubes, called hong zao jiu (红枣酒) is also produced. Jujubes are sometimes preserved by storing in a jar filled with *baijiu* (Chinese liquor), which allows them to be kept fresh for a long time, especially through the winter. Such jujubes are called *jiu zao* (酒枣; literally "spirited jujube"). These fruits, often stoned, are also a significant ingredient in a wide variety of Chinese delicacies. In Korea, jujubes are called daechu (대추) and are used in Daechucha teas and samgyetang.

In Lebanon, Jordan and other Middle Eastern countries the fruit is eaten as snacks or alongside a dessert after a meal. Template: Citation needed - is this meant to refer to the date palm?

In Persian cuisine, the dried drupes are known as *annab*, while in neighboring Azerbaijan it is commonly eaten as a snack, and are known as *innab*. These names are clearly related, and the Turks use a similarly related name, "hünnap". *Ziziphus jujuba* grows in northern Pakistan and is known as Innab, commonly used in the Tibb Unani system of medicine. There seems to be quite a widespread confusion in the common name. The Innab is *Z. jujuba*: the local name Ber is not used for Innab. Rather Ber is used for three other cultivated or wild species i.e. *Z. spina-christi*, *Z. mauritiana* and *Z. nummularia* in Pakistan and parts of India and is eaten both fresh and dried. Often the dry fruit (Ber) was used as a padding in leather horse-saddles in parts of Baluchistan in Pakistan. The Arabic names Sidr is used for *Ziziphus* species other than *Z. jujuba*.

Traditionally in India, the fruits are dried in the sun and the hard nuts are removed. Then, it is pounded with tamarind, red chillies, salt, and jaggery. In some parts of the Indian state of Tamil Nadu, fresh whole ripe fruit is crushed with the above ingredients and dried under the sun to make cakes called *ilanthai vadai* or "Regi Vadiyalu" (Telugu).

In Madagascar, jujube fruits are eaten fresh or dried. People also use those fruits to make jam.

In Italy ther'is an alcoholic syrup called brodo di giuggiole. [8]

#### Medicinal use

The fruits and seeds are used in Chinese and Korean traditional medicine, where they are believed to alleviate stress, <sup>[9]</sup> and traditionally for antifungal, antibacterial, antiulcer, anti-inflammatory, sedative, <sup>[10]</sup> antispastic, antifertility/contraception, hypotensive and antinephritic, cardiotonic, antioxidant, immunostimulant, and wound healing properties. <sup>[11]</sup> The jujube-based Australian drink 1-bil avoids making specific stress-related claims, but does suggest drinking 1-bil "when you feel yourself becoming distressed". <sup>[12]</sup>

A controlled clinical trial found the fruits helpful for chronic constipation. <sup>[13]</sup> In another clinical trial, Zizyphus jujuba was proved to be effective against neonatal jaundice.

In Persian traditional medicine it is used in combination with other herbal medicines to treat colds, flu and coughing. Template: Citation needed - are you sure this isn't the date palm?

Research implies jujube fruit has nootropic and neuroprotective properties.

Ziziphin, a compound in the leaves of the jujube, suppresses the ability to perceive sweet taste. The fruit, being mucilaginous, is very soothing to the throat and decoctions of jujube have often been used in pharmacy to treat sore throats. Wikipedia: Citation needed

#### Other uses

The jujube's sweet smell is believed to make teenagers fall in love, and as a result, in the Himalaya and Karakoram regions, boys take a stem of sweet-smelling jujube flowers with them or put it on their hats to attract girls. Wikipedia: Citation needed

In the traditional Chinese wedding ceremony, the jujube was often placed in the newlyweds' bedroom as a good luck charm for fertility, along with peanuts, longan, and chestnuts, punning on an invocation to "have an honored child soon". Wikipedia: Citation needed

In Bhutan, the leaves are used as a potpourri to help keep homes smelling fresh and clean. It is also used to keep bugs and other insects out of the house and free of infestation. Wikipedia: Citation needed

In Japan, the *natsume* has given its name to a style of tea caddy used in the Japanese tea ceremony, due to the similar shape, and also to nightlights ( $† " \lor " \lor " )$ , again due to the similarity between the shape of the bulb and the fruit. Wikipedia: Citation needed

In Korea, the wood is used to make the body of the *taepyeongso*, a double-reed wind instrument. The wood is also used to make Go bowls, beads, and violin parts. Wikipedia: Citation needed

In Vietnam, the jujube fruit is eaten freshly picked from the tree as a snack. It is also dried and used in desserts, such as *sâm bổ lượng*, a cold beverage that includes the dried jujube, longan, fresh seaweed, barley, and lotus seeds. Wikipedia: Citation needed

A jujube honey is produced in the middle Atlas Mountains of Morocco. Wikipedia: Citation needed

In Madagascar, jujube trees are a good wood for charcoal, the second main source of cooking energy. Wikipedia: Citation needed

#### Pests and diseases

Witch's brooms, prevalent in China and Korea, is the main disease affecting jujubes, though plantings in North America currently are not affected by any pests or diseases.<sup>[14]</sup>

#### References

- [1] http://ndb.nal.usda.gov/ndb/search/list?qlookup=09146&format=Full
- [2] http://ndb.nal.usda.gov/ndb/search/list
- $[3] \ http://ndb.nal.usda.gov/ndb/search/list?qlookup=09147\&format=Full$
- [4] ζίζυφον (http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04. 0057:entry=zi/zufon), Henry George Liddell, Robert Scott, A Greek-English Lexicon, on Perseus Digital Library
- [5] Clarke, D. L. (1988). W. J. Bean Trees and Shrubs Hardy in the British Isles, Supplement. John Murray ISBN 0-7195-4443-2.



(Ziziphus jujuba) Foliage at Hyderabad, India

- [6] Gupta, Anil K. "Origin of agriculture and domestication of plants and animals linked to early Holocene climate amelioration", *Current Science*, Vol. 87, No. 1, 10 July 2004, 59. Indian Academy of Sciences.
- [7] S. Chaudhary. "Rhamnaceae" in: S. Chaudhary (Edit.). Flora of the Kingdom of Saudi Arabia. Vol II (Part One) 2001.
- [8] brodo di giuggiole (http://www.quoquo.it/la-galleria-dei-beni-culturali/178-la-pastinaca-di-santu-pati)
- [9] Mill Goetz P. "Demonstration of the psychotropic effect of mother tincture of Zizyphus jujuba" Phytotherapie 2009 7:1 (31-36)
- [10] Jiang J.-G., Huang X.-J., Chen J., Lin Q.-S., "Comparison of the sedative and hypnotic effects of flavonoids, saponins, and polysaccharides extracted from Semen Ziziphus jujube", *Natural Product Research* 2007 21:4 (310-320)
- [11] Mahajan R.T., Chopda M.Z. "Phyto-pharmacology of Ziziphus jujuba mill A plant review" Mahajan R.T., Chopda M.Z. *Pharmacognosy Reviews* 2009 3:6 (320–329)
- $[12] \ \ Information \ on \ 1-mil \ from \ the \ company's \ website \ (http://www.1-bil.com/about.html)$
- [13] Naftali T., Feingelernt H., Lesin Y., Rauchwarger A., Konikoff F.M. "Ziziphus jujuba extract for the treatment of chronic idiopathic constipation: A controlled clinical trial" *Digestion* 2008 78:4 (224-228) (https://www.ncbi.nlm.nih.gov/pubmed/19142004)
- [14] Fruit Facts: Jujube (http://www.crfg.org/pubs/ff/jujube.html)

## **Further reading**

• Fruits of Warm Climates. Julia. F. Morton, Yan Lin Aung, FL: 1986.

## **External links**

 $\bullet \quad Nutritional\ data\ for\ the\ jujube\ (http://www.nutritiondata.com/facts-B00001-01c20VA.html)$ 

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