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# Ziziphus jujuba - Mill.

3

Common Name	Jujube
Family	Rhamnaceae
Synonyms	Z. sativa. Z. vulgaris. Z. zizyphus. (L.)Karsten. Rhamnus zizyphus.
Known Hazards	Caution in diabetics on allopathic medication [301].
Habitats	Dry gravelly or stony slopes of hills and mountains[74].
Range	E. Asia - China, Japan.
Edibility Rating 🏾 🕕	ěěěě
Medicinal Rating 🕕	
Care ()	<b>*</b> 4 ᠔



# Summary

# Physical Characteristics

Ziziphus jujuba is a deciduous Tree growing to 10 m (32ft) by 7 m (23ft) at a fast rate.

It is hardy to zone (UK) 6. It is in flower from Apr to May, and the seeds ripen in October. The flowers are hermaphrodite (have both male and female organs) and are pollinated by Insects. The plant is self-fertile.

USDA hardiness zone : Coming soon

Suitable for: light (sandy), medium (loamy) and heavy (clay) soils, prefers welldrained soil and can grow in nutritionally poor soil. Suitable pH: acid, neutral and basic (alkaline) soils and can grow in very alkaline soils. It cannot grow in the shade. It prefers dry or moist soil and can tolerate drought.

# Habitats

Woodland Garden Secondary; Sunny Edge; Dappled Shade; Hedge;

# **Edible Uses**

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Edible Parts: Edible Uses: Coffee

Fruit - raw or cooked[1, 2, 3, 100, 158]. Mealy and sweet[46]. A sourish-sweet flavour[174]. The fruit can be eaten fresh, dried like dates or cooked in puddings, cakes, breads, jellies, soups etc[183]. The dried fruit has the nicest taste[11, 132]. The fruits are often left to become wrinkled and spongy, which increases their sweetness, and are then eaten fresh or cooked[238]. The dried fruit can also be ground into a powder. This powder is used in the preparation of 'kochujang', a fermented hot pepper-soybean paste that resembles miso[183]. Fruits are about 13mm in diameter[194] and contain one or two seeds[238]. Average yields from wild trees in the Himalayas are 9.5kg per year[194]. The fruit contains about 8.7% sugars, 2.6% protein, 1.4% ash, 1.7% pectin and 1.3% tannin[194]. The fruit is about 25mm long, though it can be larger in cultivated varieties[200]. The fruit can be used as a coffee substitute[183]. Leaves - cooked. A famine food, they are only used when all else fails[179]. A nutritional analysis is available[218].

# Composition

Figures in grams (g) or miligrams (mg) per 100g of food.

Fruit (Dry weight)

- 350 Calories per 100g
- Water : 0%
- Protein: 7.3g; Fat: 1.2g; Carbohydrate: 84g; Fibre: 4g; Ash: 3g;
- Minerals Calcium: 130mg; Phosphorus: 168mg; Iron: 3.5mg; Magnesium: 0mg; Sodium: 12mg; Potassium: 1050mg; Zinc: 0mg;
- Vitamins A: 125mg; Thiamine (B1): 0.1mg; Riboflavin (B2): 0.18mg; Niacin: 2.8mg; B6: 0mg; C: 300mg;
- Reference: [218]
- Notes: The figures given here are the median of a range given in the report.

# **Medicinal Uses**

Plants For A Future can not take any responsibility for any adverse effects from the use of plants. Always seek advice from a professional before using a plant medicinally.

Anodyne; Antidote; Astringent; Cancer; Diuretic; Emollient; Expectorant; Hypnotic; Narcotic; Pectoral; Poultice; Refrigerant; Sedative; Skin; Stomachic; Tonic.

Jujube is both a delicious fruit and an effective herbal remedy. It aids weight gain, improves muscular strength and increases stamina[254]. In Chinese medicine it is prescribed as a tonic to strengthen liver function[254]. Japanese research has shown that jujube increases immune-system resistance. In one clinical trial in China 12 patients with liver complaints were given jujube, peanuts and brown sugar nightly. In four weeks their liver function had improved[254]. Antidote, diuretic, emollient, expectorant[11, 61, 174, 178, 194]. The dried fruits contain saponins, triterpenoids and alkaloids[279]. They are anodyne, anticancer, pectoral, refrigerant, sedative, stomachic, styptic and tonic[4, 176, 218]. They are considered to purify the blood and aid digestion[240]. They are used internally in the treatment of a range of conditions including chronic fatigue, loss of appetite, diarrhoea, pharyngitis, bronchitis, anaemia, irritability and hysteria[176, 238, 279]. The seed contains a number of medically active compounds including saponins, triterpenes, flavonoids and alkaloids[279]. It is hypnotic, narcotic, sedative, stomachic and tonic[147, 176, 218]. It is used internally in the treatment of palpitations, insomnia, nervous exhaustion, night sweats and excessive perspiration[176, 238]. The root is used in the treatment of dyspepsia[218]. A decoction of the root has been used in the treatment of fevers[4, 240]. The root is made into a powder and applied to old wounds and ulcers[240]. The leaves are astringent and febrifuge[4, 218]. They are said to promote the growth of hair[218]. They are used to form a plaster in the treatment of strangurg[240]. The plant is a folk remedy for anaemia, hypertonia, nephritis and nervous diseases[218]. The plant is widely used in China as a treatment for burns[218].

# **Other Uses**

Charcoal; Fuel; Hedge; Hedge; Wood.

Plants can be grown as a hedge[178]. Wood - dense, hard, compact, tough. Used for turnery, agricultural implements etc[74, 146, 158]. It makes an excellent fuel[146] and a good charcoal[158].

# **Cultivation details**

Succeeds in most soils so long as they are well-drained[3, 200]. Prefers an open loam and a hot dry position[1, 3]. Succeeds in an alkaline soil[200]. Plants are fast growing, even in poor soils[146]. Plants are hardy to about -20°c[200]. Another report says that they are hardy to about -30°c when fully dormant[160]. The jujube is often cultivated in warm temperate zones for its edible fruit, there are many named varieties[50, 183]. The trees need a hot dry summer if they are to fruit well, which rather restricts their potential in a country like Britain[238, K]. The tree spreads by root suckers and self-sowing, often forming dense thickets. Where the climate suits it, the plant can escape from cultivation and become an invasive and problematic weed[274]. Trees are resistant to most pests and diseases[160]. Responds well to coppicing[146]. Trees form a deep taproot and should be planted into their permanent positions as soon as possible[200]. Fast growing and quick to mature, it can fruit in 3 - 4 years from seed[200].

# Propagation

Seed - best sown in a cold frame as soon as it is ripe. Stored seed requires 3 months warm then 3 months cold stratification[113]. Germination should take place in the first spring, though it might take another 12 months. Prick out the seedlings into individual pots when they are large enough to handle and grow them on in a cold frame for at least their first winter. Plant out in early summer. Root cuttings in a greenhouse in the winter[200]. Best results are achieved if a temperature of 5 - 10°c can be maintained[238]. Cuttings of mature wood of the current season's growth, November to January in a frame[238]. Division of suckers in the dormant season's growth, November to January in a frame[238]. Division of suckers in the dormant season's growth.

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Expert comment

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Botanical References 1150200

# Links / References

[K] Ken Fern Notes from observations, tasting etc at Plants For A Future and on field trips.

[1]**F. Chittendon.** RHS Dictionary of Plants plus Supplement. 1956 Comprehensive listing of species and how to grow them. Somewhat outdated, it has been replaces in 1992 by a new dictionary (see [200]). [2]Hedrick. U. P. Sturtevant's Edible Plants of the World.

Lots of entries, quite a lot of information in most entries and references.

[3]Simmons. A. E. Growing Unusual Fruit.

A very readable book with information on about 100 species that can be grown in Britain (some in greenhouses) and details on how to grow and use them.

[4] Grieve. A Modern Herbal.

Not so modern (1930's?) but lots of information, mainly temperate plants.

[11]Bean. W. Trees and Shrubs Hardy in Great Britain. Vol 1 - 4 and Supplement.

A classic with a wealth of information on the plants, but poor on pictures.

#### [46] Uphof. J. C. Th. Dictionary of Economic Plants

An excellent and very comprehensive guide but it only gives very short descriptions of the uses without any details of how to utilize the plants. Not for the casual reader.

# [50]? Flora Europaea

An immense work in 6 volumes (including the index). The standard reference flora for europe, it is very terse though and with very little extra information. Not for the casual reader.

# [61] Usher. G. A Dictionary of Plants Used by Man.

Forget the sexist title, this is one of the best books on the subject. Lists a very extensive range of useful plants from around the world with very brief details of the uses. Not for the casual reader.

#### [74]Komarov. V. L. Flora of the USSR.

An immense (25 or more large volumes) and not yet completed translation of the Russian flora. Full of information on plant uses and habitats but heavy going for casual readers.

# [100] Polunin. O. Flowers of Europe - A Field Guide.

An excellent and well illustrated pocket guide for those with very large pockets. Also gives some details on plant uses.

[113] Dirr. M. A. and Heuser. M. W. The Reference Manual of Woody Plant Propagation.

A very detailed book on propagating trees. Not for the casual reader.

[132]Bianchini. F., Corbetta. F. and Pistoia. M. Fruits of the Earth.

Lovely pictures, a very readable book

[146]Gamble. J. S. A Manual of Indian Timbers.

Written last century, but still a classic, giving a lot of information on the uses and habitats of Indian trees. Not for the casual reader.

#### [147]? A Barefoot Doctors Manual.

A very readable herbal from China, combining some modern methods with traditional chinese methods.

[158]Gupta. B. L. Forest Flora of Chakrata, Dehra Dun and Saharanpur.

A good flora for the middle Himalayan forests, sparsly illustrated. Not really for the casual reader.

# [160]Natural Food Institute, Wonder Crops. 1987.

Fascinating reading, this is an annual publication. Some reports do seem somewhat exaggerated though.

[174]Kariyone. T. Atlas of Medicinal Plants.

A good Japanese herbal.

[176]Yeung. Him-Che. Handbook of Chinese Herbs and Formulas.

An excellent Chinese herbal giving information on over 500 species. Rather technical and probably best suited to the more accomplished user of herbs.

#### [178] Stuart. Rev. G. A. Chinese Materia Medica.

A translation of an ancient Chinese herbal. Fascinating.

[179]Reid. B. E. Famine Foods of the Chiu-Huang Pen-ts'ao.

A translation of an ancient Chinese book on edible wild foods. Fascinating.

[183]Facciola. S. Cornucopia - A Source Book of Edible Plants.

Excellent. Contains a very wide range of conventional and unconventional food plants (including tropical) and where they can be obtained (mainly N. American nurseries but also research institutes and a lot of other nurseries from around the world.

#### [194] Parmar. C. and Kaushal. M.K. Wild Fruits of the Sub-Himalayan Region.

Contains lots of information on about 25 species of fruit-bearing plants of the Himalayas, not all of them suitable for cool temperate zones.

[200] Huxley. A. The New RHS Dictionary of Gardening. 1992.

Excellent and very comprehensive, though it contains a number of silly mistakes. Readable yet also very detailed.

# [218]Duke. J. A. and Ayensu. E. S. Medicinal Plants of China

Details of over 1,200 medicinal plants of China and brief details of their uses. Often includes an analysis, or at least a list of constituents. Heavy going if you are not into the subject.

[238]Bown. D. Encyclopaedia of Herbs and their Uses.

A very well presented and informative book on herbs from around the globe. Plenty in it for both the casual reader and the serious student. Just one main quibble is the silly way of having two separate entries for each plant.

[240] Chopra. R. N., Nayar. S. L. and Chopra. I. C. Glossary of Indian Medicinal Plants (Including the Supplement).

Very terse details of medicinal uses of plants with a wide range of references and details of research into the plants chemistry. Not for the casual reader.

[254] Chevallier. A. The Encyclopedia of Medicinal Plants

An excellent guide to over 500 of the more well known medicinal herbs from around the world.

[274]Diggs, Jnr. G.M.; Lipscomb. B. L. & O'Kennon. R. J Illustrated Flora of North Central Texas

An excellent flora, which is also available on-line.

[279] Medicinal Plants in the Republic of Korea

An excellent book with terse details about the medicinal uses of the plants with references to scientific trials. All plants are described, illustrated and brief details of habitats given.

# [301]Karalliedde. L. and Gawarammana. I. Traditional Herbal Medicines

A guide to the safer use of herbal medicines.

# **Readers comment**

Elizabeth H.

Andrew Ricketts Tue Oct 15 13:41:15 2002 I believe there are several cultivars: Li, Nikitkij 93, Shui men, Small, So tsao, Tajan czao. Found in a nursery catalogue in Australia. Also there is a book on

pdfcrowd.com

## Jujubes by Meyer.

#### Elizabeth H.

imtiazkassana Fri Dec 5 09:36:21 2003

Its usefulness is highlighted in our Holy Quran.kassana.

#### Elizabeth H.

saima kamal Sun May 29 15:07:32 2005

my comment is that 1 person done work on this and separate alkaloids from it bt it does not contain hydrocarbons.how it is possible

#### Elizabeth H.

a\_vilker@list.ru Fri Dec 16 2005

I try to introduce this kind in conditions of city of Kharkov (Ukraine). For the winter I cover leaves, but by the spring a plant frozen up to a level of a ground, and in the summer intensive grows. Flowering and fructification did not observe. I wish to raise its winter hardiness.

#### Elizabeth H

#### Ulla Thorpe Sat Aug 12 2006

Today the 12/8/2006 I visited a farm in Jerez de la Frontera (Spain) and found this beautiful tree for the first time in my life, (I am 62 Years old), I was surprised when seeing this tree, tasted the fruits (it was full of them), the taste is almost like apples, never too late to experiment something new!!And finding your site was fantastik, seens I like to know more about things.

#### Elizabeth H.

#### Andy Charles Tue Oct 10 2006

I love these fruits, recently I tried some that were dried but very moist. I have dried them but they were not moist at all. Does anybody know the trick to make them moist when drying? Thanks, Andy arichker@gmail.com I

#### Elizabeth H

# Diriba Nigusie Fri Nov 10 2006

I love this fruit and want to introduce its improved cultivars (Gola, Seb Umran, Ponda) Where shall I have

#### Elizabeth H.

gadi ramon Sun Jan 27 2008

Hi guys I'd like to have some stick from this type of ziziphus. There is also posibility to exchenge with types of figus carica thank you Gadi

#### Elizabeth H.

Cris Sat Jun 7 2008

Do you know where we can buy a small tree in California ?

#### Elizabeth H.

#### Andi Wed Dec 31 2008

Hello, I'm looking for a Ziziphus jujuba of short stature and good fruits for my garden. Any recommendation for a cultivar and a nursery sending the recommendation to central europe (Zone 7b)? andic a t xmail d o t net

## Elizabeth H.

#### assad Sun Aug 9 2009

Dear Sir/Madam I am enquiring about a certain product that i wish to purchase and was wondering if you will be able to help, i am in the United Kingdom and wish to purchase small tree's of the ZIZIPHUS SPINA CHRISTI also known as jujube, sidr and lote. please let me know if you can help me as i wish to buy ASAP

#### **QR Code**



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