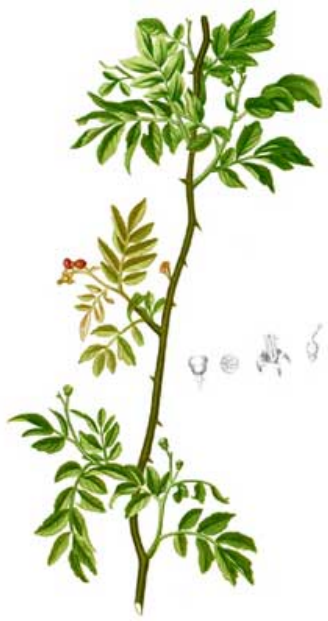
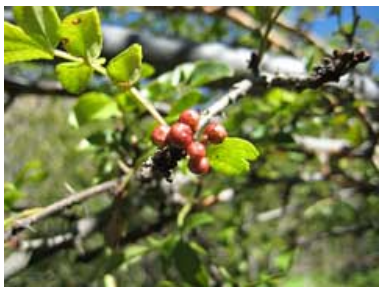
Zanthoxylum piperitum - (L.)DC.

Common Name	Japanese Pepper Tree
Family	Rutaceae
USDA hardiness	5-9
Known Hazards	None known
Habitats	Scrub and hedges in hills and mountains in Japan[58, 184].
Range	E. Asia - N. China, Japan, Korea.
Edibility Rating	
Medicinal Rating	
Care	



commons.wikimedia.org/wiki/File:Zanthoxylum_sp_Blanco1.23.png



flickr.com/photos/rduta/

Summary

Physical Characteristics

Zanthoxylum piperitum is a deciduous Shrub growing to 2 m (6ft) by 2 m (6ft). It is hardy to zone (UK) 6. It is in flower from Apr to June. The flowers are dioecious (individual flowers are either male or female, but only one sex is to be found on any one plant so both male and female plants must be grown if seed is required)The plant is not self-fertile.
Suitable for: light (sandy), medium (loamy) and heavy (clay) soils and prefers well-drained soil. Suitable pH: acid, neutral and basic (alkaline) soils. It can grow in semi-shade (light woodland) or no shade. It prefers moist soil.

Synonyms

Fagara piperita.

Habitats

Woodland Garden Sunny Edge; Dappled Shade;

Edible Uses

Edible Parts: Leaves.
Edible Uses: Condiment.

Seed - cooked. It is ground into a powder and used as a condiment, a pepper substitute[1, 2, 11, 34, 183]. The fruit can also be used[116]. It is often heated in order to bring out its full flavour and can be mixed with salt for use as a table condiment[183]. The ground and dry-roasted fruit is an ingredient of the Chinese 'five spice powder'[238]. The bark and leaves are used as a spice[2, 105, 238]. Young leaves - raw or cooked. They are used in soups or as a flavouring in salads[177, 179, 183].

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.

Antibacterial; Antifungal; Antiperiodic; Antitussive; Carminative; Diuretic; Parasiticide; Stimulant; Stomachic.

Antiperiodic, antitussive, carminative, diuretic, parasiticide, stimulant[178]. The fruit contains a essential oil, flavonoids and isoquinoline alkaloids[279]. It is anthelmintic, antibacterial, antifungal and stomachic[279]. It inhibits the synthesis of prostaglandin and, in larger doses, is toxic to the central nervous system[279]. It is used in Korea in the treatment of tuberculosis, dyspepsis and internal parasites[279]. The resin contained in the bark, and especially in that of the roots, is powerfully stimulant and tonic[82].

Other Uses

Parasiticide.

None known

Cultivation details

Easily grown in loamy soils in most positions, but prefers a good deep well-drained moisture retentive soil in full sun or semi-shade[1, 11, 200]. A very ornamental plant[1], it is hardy to about -15°c[184]. Flowers are formed on the old wood[206]. The bruised leaves are amongst the most powerfully aromatic of all leaves[245]. Dioecious. Male and female plants must be grown if seed is required. Self-sown seedlings have occasionally been observed growing in bare soil under the parent plant[K].

Propagation

Seed - best sown in a greenhouse as soon as it is ripe in the autumn. Stored seed may requires up to 3 months cold stratification, though scarification may also help[113]. Sow stored seed in a cold frame as early in the year as possible. Germination should take place in late 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 their first winter. Plant them out in early summer. Cuttings of half-ripe wood, July/August in a frame. Root cuttings, 3cm long, planted horizontally in pots in a greenhouse. Good percentage[78]. Suckers, removed in late winter and planted into their permanent positions[113].

Related Plants

Latin Name	Common Name	Edibility Rating	Medicinal Rating
Zanthoxylum ailanthoides		2	1
Zanthoxylum alatum	Winged Prickly Ash	3	2
Zanthoxylum americanum	Prickly Ash - Northern, Common pricklyash, Northern Prickly Ash	2	3
Zanthoxylum beecheyanum		2	1
Zanthoxylum bungeanum		2	3
Zanthoxylum clava-herculis	Hercules Club. Prickly Ash - Southern, Hercules' club, Southern Prickly Ash	2	3
Zanthoxylum coreanum		1	1
Zanthoxylum nitidum		0	2
Zanthoxylum planispinum	Winged Prickly Ash	3	2
Zanthoxylum schinifolium		2	2
Zanthoxylum simulans	Szechuan Pepper, Chinese-pepper, Prickly Ash	3	2

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Expert comment

Author

(L.)DC.

Botanical References

1158200

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.

[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.

[34]**Harrison. S. Wallis. M. Masefield. G.** The Oxford Book of Food Plants.
Good drawings of some of the more common food plants from around the world. Not much information though.

[58]**Ohwi. G.** Flora of Japan. (English translation)
The standard work. Brilliant, but not for the casual reader.

[78]**Sheat. W. G.** Propagation of Trees, Shrubs and Conifers.
A bit dated but a good book on propagation techniques with specific details for a wide range of plants.

[82]**Sargent. C. S.** Manual of the Trees of N. America.
Two volumes, a comprehensive listing of N. American trees though a bit out of date now. Good details on habitats, some details on plant uses. Not really for the casual reader.

[105]**Tanaka. T.** Tanaka's Cyclopaedia of Edible Plants of the World.
The most comprehensive guide to edible plants I've come across. Only the briefest entry for each species, though, and some of the entries are more than a little dubious. Not for the casual reader.

[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.

[116]**Brooklyn Botanic Garden** Oriental Herbs and Vegetables, Vol 39 No. 2.
A small booklet packed with information.

[177]**Kunkel. G.** Plants for Human Consumption.
An excellent book for the dedicated. A comprehensive listing of latin names with a brief list of edible parts.

[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.

[184]**Phillips. R. & Rix. M.** Shrubs.
Excellent photographs and a terse description of 1900 species and cultivars.

[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.

[206]**Larkcom J.** Oriental Vegetables
Well written and very informative.

[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.

[245]**Genders. R.** Scented Flora of the World.
An excellent, comprehensive book on scented plants giving a few other plant uses and brief cultivation details. There are no illustrations.

[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.

Readers comment

Elizabeth H.
Thomas Tue Feb 10 09:44:39 2004

I've found in french literature (cf biblio at the end) the following info : - the powdered dried fruit is named shichimi in Japan and used on food. - Young leaves are used in soups, accompany the miso paste (japanese paste of soja beans) - The flower buds are kept in the soja sauce and rice wine.

Bibliog : - Lesley Bremnes, Les plantes aromatiques et mÃ©dicinales, Bordas Nature, 1996 - B. Boullard, Les plantes mÃ©dicinales du monde, Ed. Estem, 2001

Any other details about the plant is welcome! Thank you for the incredible site! Thomas

Elizabeth H.
mona Mon Jun 6 02:10:39 2005

would anyone know where in the US this might be available through mail order. Thanks, Mona

Elizabeth H.
Dr. H. Gamo Tue Jun 14 03:51:04 2005

This plant and its seed and spice" sansho" has been prohibited by FDA. I would like to know the reason. FDA might concern some chemical component. Note that sansho is an imporrtant spice for some Japanese dish.

Elizabeth H.
Carlo Brini Thu Sep 9 15:16:55 2004

what about xantossilin, an isomer of cantatidin? I read that is found in Japanese pepper. Are there any chemical relationship with the cantaridin produced by the spanish fly (Lytta vescicatoria?)

Elizabeth H.

Anton Callaway Sun Dec 9 2007

As far as I understand, the ban on sansho has been lifted if the material is heated to at least 70 degrees C before shipment. The ban was originally put in place to prevent the spread of citrus canker, a devastating bacterial disease of citrus. Zanthoxylum is also a host of this disease. This genus is in the same family as Citrus.

Elizabeth H.

Dinga Bell Wed May 7 2008

The FDA has banned "sansho" because they haven't carried out tests on it. Therefore it is suspect. But there is abso;utely no reason for their suspicion other than they are suspicious of everything that is not native to the USA. Which includes about 300,000,000 people? The last comment was mine, but the rest is from FDA source...?

Elizabeth H.

Kelly Sat Dec 6 2008

You can get it mail order in the US as a plant though "One Green World" (www.onegreenworld.com) it is under the Ornamentals and More section. Have fun. Kelly

Elizabeth H.

Stephen Butler Sun Oct 25 2009

Be careful! I chewed some raw seeds of Zanthoxylum piperitum, some of the seed lodged in my throat and it went into a spasm of swallowing to remove it - I could not breathe properly for 5 mins as I was swallowing so hard and fast. Eventually recovered, but only after being on my hands and knees for ten minutes.

Marcus W.

May 22 2012 12:00AM

My zanthoxylum piperitums have been steadily growing from the cute little spindles they were in spring of 2011 when I received them. One of mine was attacked by spider mites and I sprayed it with a pesticide to kill them. Both plants leafed out as expected and are busy growing new branches/root complexes. I am hopeful they will bloom either next spring or the spring of 2014. I currently use the spring leaves (not too much), called kinome in Japan, as a gift to a friend who runs a sushi bar and is from Japan. He says kinome is very hard to find here.

Renata T.

Jan 8 2014 12:00AM

Actually this plant IS self-fertile. On every plant there are BOTH male and female flowers, although every flower is either male or female.

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