



PLANT FACT SHEET



Use with caution

This plant can be harmful if it is eaten raw, in large amounts or without the right preparation. Read the whole fact sheet before use.

Jatropha curcas L.

GENUS *Jatropha* FAMILY Euphorbiaceae

COMMON NAMES Physic nut, Purging nut

EDIBLE PARTS AND USES

Edible parts: Leaves, Honey, Seeds

CAUTION: Fruit and seeds are very poisonous. The nut has been reported as being eaten in Mexico after being boiled and roasted. This however is not recommended. Some kinds have less poison and the embryo should be removed.

The young leaves have been reported as being eaten after cooking. They act as a purge.

DESCRIPTION

A high shrub or small tree. It is deciduous and has a thin crown. It is up to 5-8 m high. It has milky sap. The leaves have 3-5 lobes. They are 6 cm long by 15 cm wide. Flowers are separately male and female on the same plant. They are small and yellowish-green. They are at the ends of the branches. The fruit is a yellow capsule. Plants are pollinated by insects. Seeds are black and 2 cm long by 1 cm wide. They are rich in oil.

HABITAT

It is native to tropical America. It is a tropical and subtropical plant. It is drought resistant. It sheds its leaves during the dry season making it suitable for arid and semi arid regions. It can grow well in areas with annual rainfalls of 300 to 1,000 mm. It is mostly in lower altitudes below 700 m and with annual temperatures above 20° to 28°C. It needs well drained soils but can grow in poor nutrient soils. It can grow in arid places. It suits hardiness zones 10-12. In Sichuan and Yunnan.

PRODUCTION

Cultivation

Plants can be grown from seed or cuttings. Seedlings can be transplanted but it is best to plant cuttings directly where they are to grow. Using cuttings is very easy. Large cuttings should be used. It can be cut back and will re-grow.

Harvesting and Seed Production

Seeds germinate in 10 days. In humid regions near the equator flowering occurs throughout the year. Plants are not affected by daylength. It takes 90 days from flowering to fruit maturity. The tree can continue to produce nuts for 50 years.

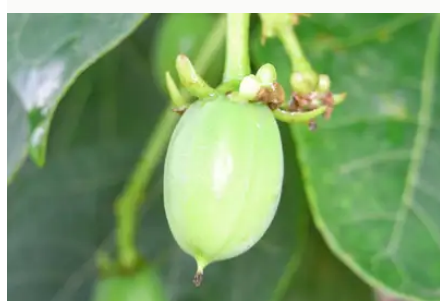
NOTES

It is often used for hedges. Its oil is processed as a diesel fuel substitute. The nut contains a chemical curcin which stops protein being formed. Parts of plants have been used in medicine and for control of insects and plant diseases. It has anticancer properties. Seeds are threaded on strings and burned as candles. There are 100 *Jatropha* species in tropical America.

PICTURES



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)

REFERENCES

- Abbiw, D.K., 1990, Useful Plants of Ghana. West African uses of wild and cultivated plants. Intermediate Technology Publications and the Royal Botanic Gardens, Kew. p 31
- Achigan-Dako, E, et al (Eds), 2009, Catalogue of Traditional Vegetables in Benin. International Foundation for Science.
- Ambasta, S.P. (Ed.), 2000, The Useful Plants of India. CSIR India. p 302
- Barwick, M., 2004, Tropical and Subtropical Trees. A Worldwide Encyclopedic Guide. Thames and Hudson p 232
- Borrell, O.W., 1989, An Annotated Checklist of the Flora of Kairiru Island, New Guinea. Marcellin College, Victoria Australia. p 77
- Bremness, L., 1994, Herbs. Collins Eyewitness Handbooks. Harper Collins. p 110

- Brown, D., 2002, The Royal Horticultural Society encyclopedia of Herbs and their uses. DK Books. p 246
- Bunderson, W. T. et al, 2002, Common Agroforestry Species in Malawi. Malawi Agroforestry Extension Project, Publication No. 46, Lilongwe. p 5
- Burkill, H. M., 1985, The useful plants of west tropical Africa, Vol. 2. Kew.
- Burkill, I.H., 1966, A Dictionary of the Economic Products of the Malay Peninsula. Ministry of Agriculture and Cooperatives, Kuala Lumpur, Malaysia. Vol 2 (I-Z) p 1288
- Condit, R., et al, 2011, Trees of Panama and Costa Rica. Princeton Field Guides. p 170
- Cowie, I, 2006, A Survey of Flora and vegetation of the proposed Jaco-Tutuala-Lore National Park. Timor-Lests (East Timor) www.territorystories.nt.gov.au p 47
- Dansi, A., et al, 2008, Traditional leafy vegetables and their use in the Benin Republic. Genet Resour Crop Evol (2008) 55:1239-1256
- Etherington, K., & Imwold, D., (Eds), 2001, Botanica's Trees & Shrubs. The illustrated A-Z of over 8500 trees and shrubs. Random House, Australia. p 405
- Flora of Pakistan. www.eFloras.org
- Fowler, D. G., 2007, Zambian Plants: Their Vernacular Names and Uses. Kew. p 26
- Gohre, A., et al, 2016, Plants from disturbed savannah vegetation and their usage by Bakongo tribes in Uíge, Northern Angola. Journal of Ethnobiology and Ethnomedicine (2016) 12:42
- Grandtner, M. M., 2008, World Dictionary of Trees. Wood and Forest Science Department. Laval University, Quebec, Qc Canada. (Internet database <http://www.wdt.qc.ca>)
- Grandtner, M. M. & Chevrette, J., 2013, Dictionary of Trees, Volume 2: South America: Nomenclature, Taxonomy and Ecology. Academic Press p 334
- Hearne, D.A., & Rance, S.J., 1975, Trees for Darwin and Northern Australia. AGPS, Canberra p 78, pl 21
- Heller, Joachim. 1996. Physic nut. *Jatropha curcas* L. Promoting the conservation and use of underutilized and neglected crops. 1. Institute of Plant Genetics and Crop Plant Re-search, Gatersleben/ International Plant Genetic Resources Institute, Rome.
- Henning, R.K., 2007. *Jatropha curcas* L. [Internet] Record from Protabase. van der Vossen, H.A.M. & Mkamilo, G.S. (Editors). PROTA (Plant Resources of Tropical Africa), Wageningen, Netherlands. <<http://database.prota.org/search.htm>>. Accessed 16 October 2009.
- Henty, E.E., 1980, Harmful Plants in Papua New Guinea. Botany Bulletin No 12. Division Botany, Lae, Papua New Guinea. p 60, Pl. 18
- Heyne, K., p 937
- Kermath, B. M., et al, 2014, Food Plants in the Americas: A survey of the domesticated, cultivated and wild plants used for Human food in North, Central and South America and the Caribbean. On line draft. p 455
- Kew Plants of the World On line
- Kintzios, S. E., 2006, Terrestrial Plant-Derived Anticancer Agents and Plant Species Used in Anticancer research. Critical Reviews in Plant Sciences. 25: pp 79-113
- Kiple, K.F. & Ornelas, K.C., (eds), 2000, The Cambridge World History of Food. CUP p 1833
- Krishen P., 2006, Trees of Delhi, A Field Guide. DK Books. p 154
- Latham, P., 2004, Useful Plants of Bas-Congo province. Salvation Army & DFID p 158
- Lazarides, M. & Hince, B., 1993, Handbook of Economic Plants of Australia, CSIRO. p 141
- Makkar, H. P. S. et al, 1998, Edible provenances of *Jatropha curcas* from Quintana Roo state of Mexico and effect of roasting on antinutrient and toxic factors in seeds. Plant Foods for Human Nutrition 52: 31-36
- Manandhar, N.P., 2002, Plants and People of Nepal. Timber Press. Portland, Oregon. p 278
- Mapes, C. & Basurto, F., 2016, Biodiversity and Edible Plants of Mexico. Chapter 5 in R. Lira, et al. (eds.), Ethnobotany of Mexico, Ethnobiology, Springer. p 93
- Martin, F.W. & Ruberte, R.M., 1979, Edible Leaves of the Tropics. Antillian College Press, Mayaguez, Puerto Rico. p 49, 79, 192
- Mot So Rau Dai an Duoc O Vietnam. Wild edible Vegetables. Ha Noi 1994, p 272
- Ochse, J.J. et al, 1931, Vegetables of the Dutch East Indies. Asher reprint. p 278
- Peekel, P.G., 1984, (Translation E.E.Henty), Flora of the Bismarck Archipelago for Naturalists, Division of Botany, Lae, PNG. p 312, 311
- Piedra-Malagón, E. M. et al, 2022, Edible native plants of the Gulf of Mexico Province. Biodiversity Data Journal 10: e80565 p 19
- Pietersen, S., et al, 2018, Floristic Diversity and Cultural Importance in Agroforestry Systems on Small-Scale Farmer's Livelihoods in Central Veracruz, México. Sustainability 2018, 10, 279, su10010279 p 13

Full reference list (16 more) at <https://www.echocommunity.org/en/resources/94f4d863-cbc0-446a-8f48-fe062ed2bc6d>

PROVIDED BY Food Plants International

French, B.R. & Maynard, A.R. Food Plants International Database. Food Plants International

LICENCE CC BY-NC-SA 3.0

ONLINE FACT SHEET <https://www.echocommunity.org/en/resources/94f4d863-cbc0-446a-8f48-fe062ed2bc6d>