



PLANT FACT SHEET

Mirabilis jalapa (L.) Thunb.

GENUS *Mirabilis* FAMILY Nyctaginaceae

COMMON NAMES Four O'Clock Plant

EDIBLE PARTS AND USES

Edible parts: Leaves, Seeds - spice, Flowers - colouring, Vegetable, Root - tea

The leaves are cooked and eaten as an emergency food only.

The flowers give a red dye used for food colouring. It is used with seaweed cakes and jellies.

The seeds are crushed and used as a pepper substitute.

DESCRIPTION

A bushy herb. It can grow as an annual plant but it can keep growing from year to year from the thick tuberous root. It grows to 60-200 cm high and spreads to 60 cm wide. The stem is short, thick and branching. The leaves occur opposite one another. They are green and oval or sword shaped. They taper to the tip. They are 6-9 cm long by 1-4 cm wide. The lower leaves have leaf stalks while the upper leaves do not. The flowers are like tubes and expand towards the top forming a funnel shape. They are 6 cm long by 3 cm wide. They are red, white, yellow or purple. They have a scent. The flowers open in the afternoon. The flowers occur in clusters at the ends of branches. The fruit are almost round, black nuts.

HABITAT

A tropical and subtropical plant but also in warm temperate areas. It will grow on most soils. It needs an open, sunny position. It is damaged by drought or frost. In Nepal it grows up to 1800 m altitude. It suits hardiness zones 8-11. In Yunnan.

PRODUCTION

Cultivation

Plants are grown from seed. Seed should be soaked in warm water overnight before planting. Seedlings can be transplanted. Plants can also be grown from the thick root tuber or by splitting the roots. Plants should be spaced 30-45 cm apart.

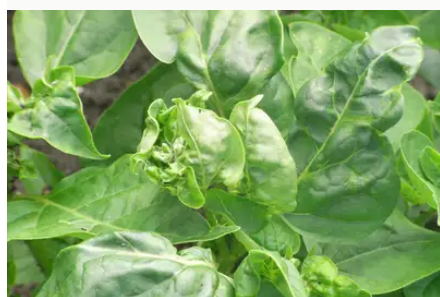
NOTES

It has a range of medicinal uses. There are about 50 *Mirabilis* species.

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

- Ambasta, S.P. (Ed.), 2000, *The Useful Plants of India*. CSIR India. p 375
- Bodkin, F., 1991, *Encyclopedia Botanica*. Cornstalk publishing, p 703 (Drawing)
- Borrell, O.W., 1989, *An Annotated Checklist of the Flora of Kairiru Island, New Guinea*. Marcellin College, Victoria Australia. p 115
- Bremness, L., 1994, *Herbs*. Collins Eyewitness Handbooks. Harper Collins. p 192
- 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 1504
- Burnie, G.(Ed.), 2003, *Annuals and Bulbs*. The Gardener's Handbooks. Fog City Press. p 191
- Cooper, W. and Cooper, W., 2004, *Fruits of the Australian Tropical Rainforest*. Nokomis Editions, Victoria, Australia. p 374
- Cronin, L., 1989, *The Concise Australian Flora*. Reed. p 29
- Cundall, P., (ed.), 2004, *Gardening Australia: flora: the gardener's bible*. ABC Books. p 899
- Dansi, A., et al, 2008, *Traditional leafy vegetables and their use in the Benin Republic*. Genet Resour Crop Evol (2008) 55:1239-1256
- Facciola, S., 1998, *Cornucopia 2: a Source Book of Edible Plants*. Kampong Publications, p 161
- Flora of Australia Volume 49, Oceanic Islands 1, Australian Government Publishing Service, Canberra. (1994) p 74
- Flora of China @ efloras.org Volume 5
- Flora of the Guianas.
- Hani Medicine of Xishuangbanna, 1999, p 499
- Heywood, V.H., Brummitt, R.K., Culham, A., and Seberg, O. 2007, *Flowering Plant Families of the World*. Royal Botanical Gardens, Kew. p 230
- Hibbert, M., 2002, *The Aussie Plant Finder 2002*, Florilegium. p 197
- Hossain, U. & Rahman, A., 2018, *Study and quantitative analysis of wild vegetable floral diversity available in Barisal district, Bangladesh*. Asian J. Med. Biol. Res. 2018, 4 (4), 362-371
- <http://www.botanic-gardens-ljubljana.com/en/plants>
- Hussey, B.M.J., Keighery, G.J., Cousens, R.D., Dodd, J., Lloyd, S.G., 1997, *Western Weeds. A guide to the weeds of Western Australia*. Plant Protection Society of Western Australia. p 184 (Photo)
- 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 541
- Kew Plants of the World Online

- Kuhnlein, H. V., et al, 2009, Indigenous Peoples' food systems. FAO Rome p 194
- Lautenschläger, T., et al, 2018, First large-scale ethnobotanical survey in the province of Uíge, northern Angola. *Journal of Ethnobiology and Ethnomedicine* (2018) 14:51
- Lazarides, M. & Hince, B., 1993, Handbook of Economic Plants of Australia, CSIRO. p 164
- Li, D. et al, 2017, Ethnobotanical survey of herbal tea plants from the traditional markets in Chaoshan, China. *Journal of Ethnopharmacology*. 205 (2017) 195-206
- Lu De-quan, Nyctaginaceae. *Flora of China*
- Manandhar, N.P., 2002, Plants and People of Nepal. Timber Press. Portland, Oregon. p 320
- Masoodi, H. U. R. & Sundriyal, R. C., 2020, Richness of non-timber forest products in Himalayan communities—diversity, distribution, use pattern and conservation status. *Journal of Ethnobiology and Ethnomedicine* 16:56
- Morley, B.D., & Toelken, H.R., (Eds), 1983, Flowering Plants in Australia. Rigby. p 171
- Paczkowska, G. & Chapman, A.R., 2000, The Western Australian Flora. A Descriptive Catalogue. Western Australian Herbarium. p 412
- Parham, B. E. V., 1972, Plants of Samoa. New Zealand Department of Scientific and Industrial Research. Information Series. No. 85 p 100
- Peckel, P.G., 1984, (Translation E.E.Henty), Flora of the Bismarck Archipelago for Naturalists, Division of Botany, Lae, PNG. p 172, 173
- Pham-Hoang Ho, 1999, An Illustrated Flora of Vietnam. Nha Xuat Ban Tre. p 716
- Plants for a Future database, The Field, Penpol, Lostwithiel, Cornwall, PL22 0NG, UK.
<http://www.scs.leeds.ac.uk/pfaf/>
- Plants of Haiti Smithsonian Institute <http://botany.si.edu/antilles/WestIndies>
- Recher, P, 2001, Fruit Spirit Botanical Gardens Plant Index. www.nrg.com.au/~recher/seedlist.html p 6
- Satyavani, S., Satyavathi, K., Devi Soundarya, S., B Padal, S., 2015, Wild Edible plants Used for Indigenous Community of North -Coastal Andhra Pradesh, India, *BMR Phytomedicine* 2 (1).1-7
- SHORTT,
- Smith, A.C., 1981, Flora Vitiensis Nova, Lawaii, Kuai, Hawaii, Volume 2 p 263
- Sp. pl. 1:177. 1753
- Sujanapal, P., & Sankaran, K. V., 2016, Common Plants of Maldives. FAO & Kerala FRI, p 177
- Sukarya, D. G., (Ed.) 2013, 3,500 Plant Species of the Botanic Gardens of Indonesia. LIPI p 1124
- Tanaka,
- Thaman, R. R., 1987, Plants of Kiribati: A listing and analysis of vernacular names. Atoll Research Bulletin No. 296
- Thaman, R. R., 2016, The flora of Tuvalu. Atoll Research Bulletin No. 611. Smithsonian Institute p 103
- Torre, de la, L., et al, 2008, Enciclopedia de las Plantas Útiles del Ecuador. Herbario QCA. Pontificia Universidad Católica del Ecuador. p 471
- Uphof,
- Valder, P., 1999, The Garden Plants of China. Florilegium. p 374
- WATT,
- World Checklist of Useful Plant Species 2020. Royal Botanic Gardens, Kew
www.efloras.org Flora of China

Full reference list (2 more) at <https://www.echocommunity.org/en/resources/55f21344-33d0-46ac-9945-228cfc94769d>

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/55f21344-33d0-46ac-9945-228cfc94769d>