

LOCAL NAMES

English (wild jujube); Hindi (jhahrberi)

BOTANIC DESCRIPTION

Zizyphus nummularia is a thorny small bush or a shrub 6-8 m, with widely divaricating, flexuosus, pale-purplish stems and grey velvety stipular prickles in pairs. The branches are widely divaricate, purplish in colour and with a velvety surface. The lateral roots system is deep and extensive.

Leaves alternate, simple, ovate or orbicular, 2.5 cm long, deep green and shining above, densely tomentose beneath and white, serrate, 3- to 5-veined from the base. Stipules frequently spinescent, dark brown; one short, hooked, bent downwards while the other is 1 cm and straight.

Flowers small, bisexual, pentamerous, pale yellow, in axillary heads, or cymes; petals may be absent; stamens inserted beneath the cone-shaped disc; ovary enveloped by the disc, 2- to 4-chambered.

Fruits a red or black fleshy drupe, globose, less than one cm diameter.

Seed smooth, brownish, shining and soft, usually 2 contained in hard stones of the fruit.

BIOLOGY

It flowers in the rainy season (July to September) while fruiting takes place in November to December. Leaves fall in January-March, and are simultaneously replaced with new ones

ECOLOGY

It is found on most ecological habitats such as hills, ravines or plains including cultivated fields

BIOPHYSICAL LIMITS

Altitude: up to 1700 m altitude

Mean annual rainfall: 100-1000 mm

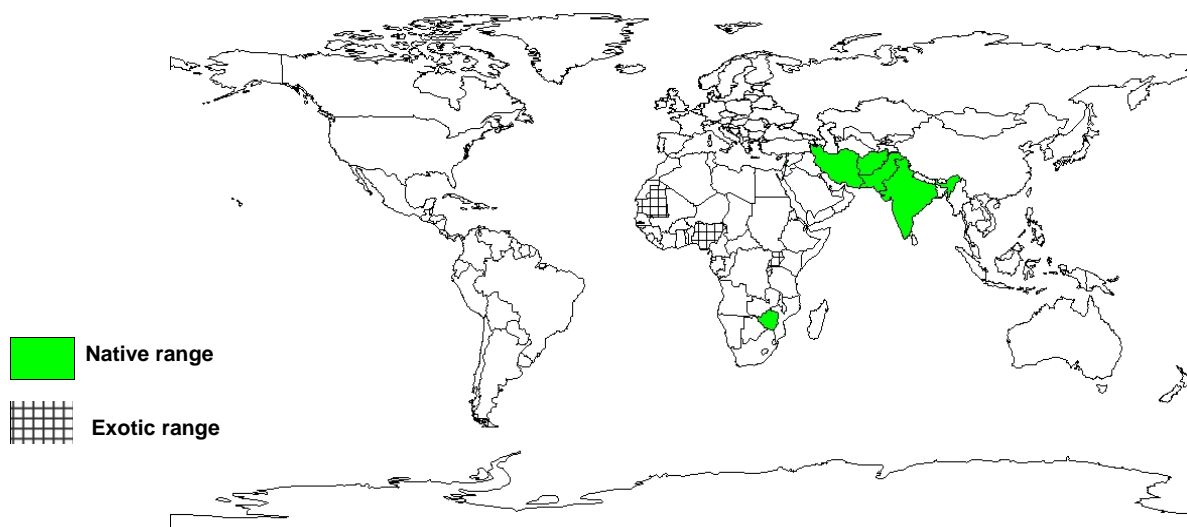
Temperature range: 15-35oC

Soil type: It grows on very shallow and skeletal soils, gravely plains, sand dunes, alluvium and rocky areas.

DOCUMENTED SPECIES DISTRIBUTION

Native: Afghanistan, India, Iran, Lebanon, Pakistan, Zimbabwe

Exotic: Mauritania, Nigeria, Uganda



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS

Food: The sweet and acidulous fruit is either eaten fresh, pickled, dried or made into confectionery. The juice can be made into a refreshing drink. In India, the fruit, when fully ripe and less than one centimeter in diameter, are gathered in the beginning of the winter months, dried, ground, and sieved. The powder formed is eaten either alone, mixed with Gur (a sugar condiment) or Bajra (millet) flour.

Fodder: The leaves of *Z. nummularia* provide excellent fodder for livestock. In India, the average total yield of forage was about 1000 kg ha⁻¹. The leaves are collected dried and stored.

Fuel: It is a source of high calorific value (4400 kcal/kg) fuel and charcoal

Timber: The heartwood is yellow to dark brown, hard, 738 kg/m³ and it is used in farm implements and for house construction.

Medicine: Dried fruit used medicinally as astringent in bilious affliction in India. The leaves are used to treat scabies and other skin diseases.

Poison: The fruits are greedily eaten by gerbils and rats and are used as baits for poisoning these rodents.

SERVICES

Intercropping: *Z. nummularia* shrubs are often intercropped with millet, legumes and oil seeds

Erosion control: The shrubs have been shown to effectively check wind erosion, help in deposition of soil, and bring about a change in the microhabitat, causing favourable conditions for the appearance of successional species such as perennial grasses

Shade: It provides shade.

Boundary or barrier or support: In India, it is commonly erected as 'brush-wood barriers' (micro-windbreaks) together with *Crotalaria burhia*.

Reclamation: It has proved successful in sand dune stabilization in India.

TREE MANAGEMENT

It produces copious coppice shoots and roots suckers forming dense thorny thickets often collecting moulds of leaves and dust.

GERMPLASM MANAGEMENT

Seed storage behaviour is orthodox. There are 1800-2000 seeds/Kg

PESTS AND DISEASES

This species is a host of larvae of butterfly *Tarucus balkanica* Freyer in Africa, Balkans, Iran, Asia Minor, Lebanon and Mauritania.

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SUGGESTED CITATION

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