



Ethanobotanical Plants and their Uses

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Tulsi is a medicinal and holy plant native to the Indian subcontinent. It is also referred to as Manjari or Krishna tulsi in Sanskrit. In the Hindu religious tradition, tulsi has symbolic significance and it is adored by a large number of Hindus in the morning and evening. It is an aromatic sub-shrub and also a cornerstone of Ayurveda, the traditional Indian herbal medicine. Each part of the Tulsi plant possesses medicinal properties and so every part of the Tulsi plant can be used in herbal remedies to treat a variety of conditions.



Fig 2: Ocimum sanctum

Ethnobotanical uses in India:

Different parts of this plant are used locally for medicinal purposes in almost all parts of India. Important ethnobotanical uses are:

1. The plant is considered very sacred and is worshipped. In Hindu mythology it is considered to be abode of God and is believed to keep evil spirits away.
2. Leaves are used to treat bronchitis, cough, cold, fever, liver disorders, headache, ear disorders, gastric disorders, leprosy and ringworm.
3. Seeds are used as laxative.
4. Whole plant is used to prepare medicines for oedema, cholera, chicken-pox, diarrhoea, dropsy and vomiting. Also used as insect repellent.

c) *Vitex negundo*

Family: Verbenaceae

Common name: Five leaved chaste tree (English), Nirgundi (Hindi)

Significance of Plants in Ethnobotanical Practices

a) *Azadirachta indica*.

Family: Meliaceae

Common name: Margosa (English), Neem (Hindi)



Fig 1 :Azadirachta indica

Description:

Neem is a member of the Mahogany family or Meliaceae. It is a fast growing evergreen tree that can grow up to 15 meters in height. It has long branches that form a broad crown. The bark is gray and rough and the leaves are pinnate, up to 30 cm long with 8-19 leaflets with saw-toothed edges. The flowers are small, yellowish-white and fragrant and form in clusters. The fruit is round, hard and yellow and contains one single seed.

Ethnobotanical uses in India:

1. Twigs are used for cleaning teeth.
2. Bark is used to prepare medicine for male infertility and against liver complaints.
3. Leaves are used as antipyretic, blood purifiers and for treating snake-bites.
4. Leaves are used against skin disorders, diabetes, cold, diarrhea, dysentery, malaria, piles, dyspepsia, gout and heart complaints.
5. Seed oil is used for skin disorders, piles, ulcers, as antiseptic, for cooking in some regions and for destroying lice.

b) *Ocimum sanctum*

Family: Lamiaceae/ Labiateae

Common name: Holy basil (English), Tulsi (Hindi).



Fig 3: Vitex negundo

Morphology

Plants of *Vitex negundo* are aromatic, large shrubs or small trees, with greyish bark; branches quadrangular, densely tomentose; leaves palmately compound, 3 to 5 foliolate; leaflets lanceolate, margin entire or crenate, glabrous above, white tomentose beneath, terminal leaflets 5-10 cm long and 1-3 cm wide, lateral leaflets smaller; flowers small, bluish-purple, in terminal, paniculate cymes; drupes globose, black after ripening. Commonly planted in the gardens, along roads and as hedge plant, also found abundantly along rivers and open wastelands in the greater part of India.

Ethnobotanical uses in India:

Vitex negundo is considered to be a sacred plant in India and is used for other purposes as well in different regions such as J&K, H.P., U.P, Sikkim, Kerala, Karnataka, Tamil Nadu, Goa, Punjab, Haryana, Rajasthan and Gujarat. Important indigenous uses of this plant are:

1. Whole plant is believed to keep the evil away.
2. Twigs are used in basketry due to their flexible nature.
3. Stem is used for fire-wood and building purposes by the tribals.
4. Leaves are used to cure boils, blisters, bodyache, piles, cough, ulcers, testes disorders, toothache and rheumatism.

d) *Gloriosa superba*

Family: Liliaceae

Common name: Glory Lily, Tiger claw(English), Kalihari, Kathari(Hindi)



Fig 4:Gloriosa superba

Morphology:

Perennial, scandent or climbing herbs with fleshy rhizome; leaves sessile, ovate lanceolate, leaf tip modified in a tendril; flowers axillary, solitary, showy with wavy margins, yellow in lower half, red in upper half, six tepals generally upto 5-7.5 cm long, six stamens each upto 4 cm long with a large anther at tip, style more than 6 cm long; capsules septicidal, with many sub-globose seeds.

Ethnobotanical uses in India:

1. Tribals of Sikkim believe that if stem is tied on arm of woman in labour , it facilitates child birth.
2. Root is used as antihelminthic.
3. Leaf is used to treat asthma and insect bites.
4. Rhizome is also used for skin infections of domestic animals.

e) Pongamia

pinnata



Fig 5:Pongamia pinnata

Morphology and Distribution:

Medium-sized , glabrous trees, with greyish bark; leaves imparipinnate; leaflets elliptic or ovate-oblong; flowers in axillary racemes, pinkish white; pods compressed, woody, indehiscent, glabrous; seeds reniform, dirty white with brownish streaks. Planted as avenue tree along roadsides, in the forests and near habitations.

Ethnobotanical uses in India:

1. Seed oil is used against widely in Maharashtra, Madhya Pradesh, Andhra Pradesh, Punjab, Haryana, Gujarat, Rajasthan, UP and Sikkim, for treating cold , ear complaints, fever, itching, eczema and rheumatism
2. Stem is used to prepare medicine for bronchitis and burns and chest pain.
3. Fruit is used to treat cough in South-India.
4. Seed oil is used as fish poison.
5. Stem is used for toothache.

f) *Terminalia bellerica*

Family: Combretaceae

Morphology

Large, deciduous tree, 12-50 m tall with dark grey fissured bark. Leaves alternately arranged or fascicled at the end of branches , elliptic or obovate, leathery, entire, 8-20 cm long and 7.5-15 cm wide. Flowers greenish yellow, small about 5-6 mm across, in long axillary and terminal spikes about 5-15 cm long, upper flowers of the spike male, lower ones bisexual; fruits obovoid, 1.5-2.5 cm in diameter, 5 -ridged, grey-velvety; seeds indistinctly five angled.



Fig 6: Terminalia bellerica

Ethnobotanical uses in India:

Terminalia is widely used by the tribals for formulation of various medicines and for edible purposes. Main uses of this plant are:

1. Fruit is used as medicine for cholera, constipation, piles, diarrhoea, drops cough, asthma and bronchitis by Central Indian tribes.
2. Bark is used for treatment of dysuria, leprosy, fever, cramps and muscle pain in Sikkim. Also the tribals of Sikkim use fruit to treat stomachache and kernel for smoking as hallucin.
3. The fruits considered to have cooling properties are edible, used as vegetable and are used as source of tannins also.
4. The exudate of stem is used by South –Indian tribals against itching caused by ticks.