

## Mahua the Golden Green of Jharkhand

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### Introduction

Mahua is one of the important trees of Central India including Jharkhand. Jharkhand has got appreciable population of Mahua trees and it plays an important role in the socioeconomy of this state. Mahua tree is a fast growing tree that grows upto approximately 20 meters in height, possesses evergreen or semi evergreen foliage with wider and round canopy. It is cultivated for its oleaginous seeds. Its oil is used for the care of the skin, used for manufacture of soaps, detergents and as a vegetable butter. It can also be used as fuel oil. The seed cakes obtained after extraction of oil is used as very good fertilizers. The flowers are used to produce an alcoholic drink, but the flowers can be used to prepare various recipes and is also used by the tribal and non tribal population. Many parts of mahua are also used for its medicinal properties. It is considered as a holy tree by the tribal population. It is also found in some other states also where it is known by different names in Andhra Pradesh it is known as Ippe or Yappa, in Gujrat as Mahuda, in Karnataka it is given the name Hippe, in Kerala called as Ponam Iiupa, in Maharastra it is called Mahwa, Mohwra in Orissa it is called Mahula, Moha ,Madgi; in Tamilnadu it is called Illupei and Elupa; In West Bengal it is called Mahwa, Maul, Mahula ; In English it is called Butter Tree; In Sanskrit it is called Madhuka and in Hindi it is called Mahua, Mohwa and Mauwa.

### Origin and Distribution

Mahua is deciduous tree of dry region and native of India. The the tree produces edible flowers and fruits during March to May. Collection of Mahua flowers and fruits is one of the most important source of employment for the poorest of the poor.

### Botanical Description

Mahua tree belongs to the family sapotaceae. The two major species of genus Madhuca found ae *Madhuca indica* and *Madhuca longifolia*.

### Scientific Classification

KINGDOM- *Plantae*

DIVISON- *Magnoliaphyta*

CLASS –*Magnoliopsida*

ORDER- *Ericolos*

FAMILY-*Sapotaceae*

GENUS- *Madhuca*

SPECIES- *indica/longifolia*

### **Botanical Features**

The Mahua tree has a large spreading root system, though many of them are superficial. Wood is hard to very hard with large sapwood. Hardwood is radish brown in colour. It is a large and deciduous tree with a short bole and rounded crown. Its bark appears to be thick grey to black with vertical cracks wrinkled. Leaves are oblong-shaped, rigid, clustered at the end of branches 6 to 9 centimetres broad and 13 to 23 centimeters long, thick and firm exuding a milky sap when broken. Young leaves are pinkish and woolly underneath. Flowers are cream coloured, corollas fleshy juicy, clustered at the end of branches. Fruits ovoid, fleshy, greenish, 3-5 cm long containing, 1 to 4 shiny brown seeds, seed is large 3-4 cm long, elliptical, flattened on one side.

### **Mahua as Traditional Medicine**

1. The flowers are used as tonic, analgesic and diuretic, traditionally used as cooling agent, aphrodisiac, astringent, demulcent and for the treatment of helminthes, acute and chronic tonsillitis, pharyngitis as well as bronchitis.
2. The bark is used for rheumatism, chronic bronchitis, diabetes mellitus, bleeding and spongy gums. It is a good remedy for itch welling, fractures and snake bite poisoning. Fruits are astringent and largely employed as a lotion and largely employed as a lotion in chronic ulcer, in acute and chronic tonsillitis and pharyngitis.
3. *Madhuca longifolia* leaves are expectorant and also used for chronic bronchitis, cushing's disease, verminosis, gastropathy, dipsia, dermatopathy, rheumatism, cephalgia and hemorrhoids.
4. The seeds fat has emuluscent property, used in skin disease, rheumatism, headach as laxatives, piles and sometimes as galactogogue.

### **How Mahua is used in various Diseases**

1. **Bronchitis** - Flowers of Mahua are used to treat chronic bronchitis proplem. Flowers are also used in treatment of cough. (Mahua boiled in milk or fried in ghee).
2. **Orchitis** - Leaves of Mahua are boiled and padded onto the testes for relief from orchitis.
3. **Rheumatism** -A decoction is prepared by boiling the bark of the Mahua tree in water. This is consumed to get relief from rheumatism. Oil obtained from seeds can also be applied on the affected areas.

4. **Diabetes** - Bark decoction is proven to be effective for cure of diabetes.
5. **Piles** - Oil extracted from seeds have laxative properties. which helps cure chronic constipation and piles.
6. **Eczema** - Madhuca leaves are effective in treatment of eczema. The leaves coated with sesame oil is heated over fire and applied on the affected area to relief from eczema.
7. **Bleeding Gums** - 4 ml of the liquid extract obtained from bark is mixed with 300 ml of water used as a gargle to get relief from spongy and bleeding gums.
8. **Tonsilits** - The above preparation is also used for chronic and acute tonsillitis and pharyngitis.
9. **Burns** - Leaves ash is mixed with ghee and is used for cure of scalds and burns. To get relief from itching ,bark paste is applied locally.
10. **During Lactation** - A handful of Mahua flowers is boiled in a glass of water till a decoction is obtained. It is filtered and given to lactating mother once before bedtime.

#### **Nutritive Value of Mahua Flower**

Moisture-19.8%,Protein-6.3%,Fat- 0.5%,Reducing sugar- 50.62%,Total inverts-54.06%,Ash-4.36%,Ccalcium-8%,phosphorus 2%.(source-Kureel R.S et.al,2009)

#### **Uses of Mahua**

**Mahua seed oil**- Mahua seed contain about 40% pale yellow semi solid fat. The oil content of the seed varied from 33 to 43%weight of kernel. Mahua oil does not have unpleasant taste. The oil is also rich in PUFA.

**Fodder**-Leaves, flowers, and fruits are used to feed goats and sheeps, seed cake is also fed to cattle

**Timber**-It provides strong and quality wood for furnitures.

**Erosion control**-Its superficial root system prevents erosion.

The plants provide shade and occasionally it is planted as an avenue tree.

### Value added Products of Mahua Flowers



- 1) Mahua flower is boiled in water with equal amount of Bengal gram. The Bengal gram becomes sweet in taste.
- 2) To make pua Mahua flowers is soaked in equal amount of water and after 2 to 3 hours crushed well, then equal amount of wheat flour is added into it and made into tight dough. Small balls are made and flattened then fried in oil.

3) To prepare Gulgule soaked and crushed Mahua flowers are mixed with wheat flour in a quantity less than half so as to prepare a loose consistency batter and with the help of spoon small size balls are dropped in oil and fried.

4) About 50 grams of Mahua flower is boiled in 250 ml of milk till the flowers are well cooked. It can be served as a sweet dish.

**Note :- Before preparing any cuisine or dish each and every mahua flower has to be cleaned to remove the pollen grains and other dust particles and washed well. Other products are of no use.**

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