

Ayurvedic medicative plant: Shorea robusta

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Abstract

Ayurveda which has historical roots in Indian ancient time as alternative medicine system. Ayurvedic medicine system beneficial to health. Ayurvedic plant can used to treat disease from ancient time in India. Raal is one of old ayurvedic plant in India. Shorea Robusta is favorite plant of Lord Maha Vishnu in ancient time and commonly called as “Indian dammer”. Not only in ayurveda but also in Unani system. Sal has many mediactive properties but role in burning is most effective. Every part of plants have medicinal properties. Fruit, flowers, bark, leaf, resin have different chemical constituent showing different pharmacological properties. They play role in skin infections, burn, jaundice, anti-bacterial, anti-diabetic, ulcers properties. This review focused on plant pharmacognosy, physiochemical, Pharmacological activity. Ayurvedic plant have minimum adverse effect or without any side effects. Some adverse effects are occurred due to adulteration. Resin obtained from shorea robusta have role in burnt. Raal (resin) which is highly viscous polymer or solid white yellowish in colour. Information gathered by reference of various research paper, article, and google.

Keywords: shorea robusta, resin, ayurveda, raal

Introduction

India is known for its traditional medicinal system-AYUSH (ayurveda, Unani, siddha, Homeopathy). Ayurvedic medicine used by 60% of world population. India is larger producer of ayurvedic plants. Ayurvedic drug research and standardization should be based upon ayurvedic principles. Shorea robusta commonly known as “Sal tree” or sarai tree, which grow in India, Nepal. Sal tree is one of Important medicine plant used in Indian systemic medicine. Sal having Kashaya Rasa, Ruksh guana, Ushna veerya, Katu vipaka properties. India wide distribution in Himalayas, Assam, Bengal, Jharkhand west to shivalik hill in Haryana. Tree is widely distributed in tropical region and 13.3% area of country it can covered. Sal is slow growing, evergreen, with 30&35 m long, 2-2.5m in diameter. Tree are grown in 100-1500m altitude, temperature range 34-47°C, annual rainfall 1000-3000mm, evergreen in between February to April, and leafing out in April to May. Sal belongs to *Diptetocarpaceae* family. In moist sandy loam soil give better result.

Table 1: Vernacular name in different languages.

| Indian languages | Common name |
|------------------|---------------|
| Hindi | Sal, salwa |
| Marathi | Sal, Ral |
| Telugu | Guggilamu |
| Tamil | Venkungiliyam |
| Malayalam | malamaram |
| Kannada | ashvakarna |
| Bengali | Sal |
| Oriya | Sala |
| Urdu | Ral |
| Sanskrit | ashvakarna |



Fig 1

Morphology

Shorea robusta is large with height 18-40m. Younger tree has elongated crown as tree became older it became more rounded.

1. leaves

Oval broad, long, simple with apex tapered to long point, 10-25cm long.

2. Flowers

Yellowish white in colour, small in size acquired at the large number in end of branches.

3. Fruits

1.3-1.5cm long, ripen generally in May. Oval, yellowish or green in colour.

4. Seed

Seed kernel with has 5 segment covering with embryo. Rich source of carbohydrates, protein, fiber, oil, ash.

5. Barks

Barks are dark brown, thick, pole in middle became shallow in mature tree. Bark having astringent activity used in wound, diarrhoea

Scientific classification

Kingdom:-Plantae Unranked:-angiosperms Order:-malvales
Family:-Dipterocarpaceae Genus:-shorea
Species:-shorea robusta

Cultivation

Best growth of shorea robusta in areas where temperature are within ranges 28- 34 °c. Young tree grow quickly attain 6m height up to 6 years. Fruits and seed bearing at 15 age of plant. Then tree bears fruit every 2 years. For coppicing tree are well responded. Coppice regeneration is practiced 30-40 years.

And 80-160 year used for forest regeneration.

Harvesting

Shorea robusta mainly harvested for seed during in summer, generally second or three weeks of May. After harvesting cleaning and grading are is done to remove the foreign, contaminated or insect attacked seed

Chemical constituents

Sal resin contains essential oil, dipterocarpol, dammarenolic acid, Asiatic acid, A-amyrin. Bark contain oleanolic acid, tannins. Friedelin, dihydroxyisoflavone, β sitosterol present in leaves. Ursolic acid and β amyrin present in whole plants.

Phytochemical study

Table 2

| Foreign matter | Not more than 2% |
|----------------------------|--------------------|
| Total ash | Not more than 2% |
| Acid insoluble ash | Not more than 0.7% |
| Alcohol soluble extractive | Not less than 6% |
| Water soluble extractive | Not less than 1.7% |

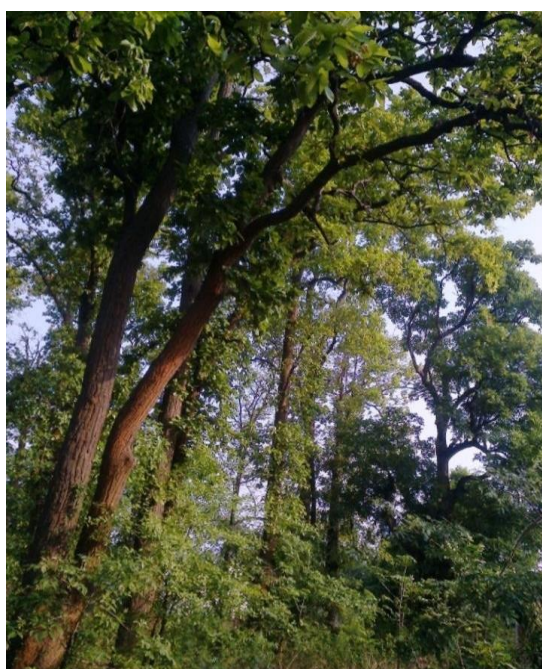


Fig 2

Medicinal Uses

Shorea robusta is a medicinal tree, used from thousand years ago to treat various diseases. Sesame oil with resin of shorea robusta ointment used in burn injury. Gum extracted from sal tree is ral resin used in diarrhoea, dysentery, skin diseases, burn wounds, fractures. Shorea robusta show antibacterial, anti- dysenteric, anti-diarrhoeal, anti-microbial, analgesic, anti-inflammatory activity, Immunomodulatory, anti-diabetic, wound healing activity.

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Conclusion

Shorea robusta is ayurvedic medicinal plants used to treat various diseases without any adverse effects. This review is focused on all pharmacognosy of shorea robusta with morphology, cultivation and harvesting, chemical constituents, medicinal uses.

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