

DASHAMOOLA – THE TEN ROOTS (A REVIEW ARTICLE)

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ABSTRACT

Dashamoola the roots of ten medicinal plants play a vital role in traditional medicine. Our students are not familiar with these plants even after completion of their degree programme in Botany. It is a heart breaking truth. In my two P.S.C. interviews, a question was “What are the plants included in Dashamoola?” and again, the third one for College Professors job, the interview board asked a question that “Name the plants included in Dashapushpagal”. All these questions were very simple and measure our basic knowledge in the subject. Moreover, this type questions may help to remove our tension in front of the interview board. As a graduate in Botany, all students must know at least the botanical names and families of plants growing in our surroundings and can distinguish the useful plants (food or medicinal) from non useful or poisonous plants.

INTRODUCTION

Herbal medicines are being used by nearly about 80% of the world population, primarily in developing countries for primary health care. Assessing the current status of health care system in adequacies of synthetic drugs is likely to be more glaring in the coming years. It has been reported that there has been an alarming increase in number of diseases and disorders caused by synthetic drugs prompting a switch over to traditional herbal medicine. India has over 1, 08,276 species of bacteria, fungi, animals and plants already identified and described (Pole, S. 2013).

Ayurveda is a traditional Indian Medicinal System practiced for thousands of years. Considerable research

on pharmacognosy, chemistry, pharmacology and clinical therapeutics has been carried out on ayurvedic medicinal plants. Natural products, including plants, animals and minerals have been the basis of treatment of human diseases. The current accepted modern medicine or allopathy has gradually developed over the years by scientific and observational efforts of scientists. However, the basis of its development remains rooted in traditional medicine and therapies. Selection of scientific and systematic approach for the biological evaluation of plant products based on their use in the traditional systems of medicine forms the basis for an ideal approach in the development of new drugs from plants.

The Ten Roots

Dashmool contains 10 roots of following plants in equal proportion. It is a combination of Brihat Panchamoola and Laghu Panchamoola.

Ingredient	Quantity
Brihat Panchamoola	:
Aegle Marmelos – Bilva (Indian Bael)	10%
Premna serratifolia (Premna mucronata & Premna integrifolia) – Agnimantha (Arani)	10%
Oroxylum indicum – Shyonaka	10%
Stereospermum suaveolens – Patala	10%
Gmelina arborea – Gambhari (Beech wood/Kasmari)	10%
Laghu Panchamoola	:
Solanum indicum – Brihati (Indian Nightshade)	10%
Solanum xanthocarpum – Kantakari	10%
Desmodium gangeticum – Shalaparni	10%
Uraria picta – Prishnaparni	10%
Tribulus terrestris – Gokshura	10%

Ref.www.ayurtime.com

Therapeutic Indications

Dashmool (Dashamula) is indicated for following health conditions:

Osteoarthritis, Muscle spasm, Low backache, Rheumatoid arthritis, Bursitis, Fibromyalgia, Gout, Paralysis, Facial paralysis, Hemiplegia, Sciatica, Constipation, Gas or flatulence, Bloating, Difficulty in Urination or reduced flow of urine, Cough & Bronchitis, Asthma or Breathing troubles, Atherosclerosis, General body aches and Fatigue with body aches.

Dashmool Formulations

- Dashmularishta (Dasamoolarishtam)
- Dhanwantharam Kashayam
- Dasamulakatutrayadi Kashayam
- Dasamoola Kashayam (Dashmool decoction)
- Dashmool Churna (Dashmool powder)
- Dashmool Oil
- Dashmool Rasayana, Dasamoola Rasayanam, or Dasamula Rasayana
- Dashamoola Haritaki

1. *Aegle marmelos*

Bael or *Aegle marmelos* is a spiritual, religious and medicinal plant, native of India and Bangladesh and spread throughout South East Asia. The fruit takes about 10 to 11 months to ripen. Wood Apple is a sweet, aromatic and astringent in nature. Bel has many benefits and uses such as to cure tuberculosis, hepatitis, dysentery, constipation, peptic ulcer, piles and many more, useful in worm infestation and stomach related problems. Bael or *Aegle marmelos* is also known as Bengal quince, golden apple, Japanese bitter orange, stone apple, etc. It is also known by various names such as Wood apple, Kaitha, Maredu Pandu, Vilam Palam, Belada Hannu, Koovalam, Kothu, Koth Bel, etc. It's one of the few Ayurvedic plants whose entire parts from root to leaves are used for different diseases. The fruit balances Kaph and Vata doshas, its roots improve digestion, leaves are good for pain, stem for heart and bel flower's for curing of diarrhea (Sivaraja & Balchanran 1994).

2. *Desmodium gangeticum*

Shalparni (***Desmodium gangeticum***) is a shrub with woody stem, 2-4 feet in height. Branches are covered with soft hairs. Leaves are unifoliate, ovate, oblong, obtuse, and pubescent beneath and up to 15cm in length. Lower surface of leaves is light green in color.

Desmodium gangeticum (Linn.) DC: An endangered ethnomedicinal plant *Desmodium gangeticum* Linn. DC known as Shalparni or Prishiparni in Hindi and Sanskrit is an endangered ethnomedicinal plant belonging to family Leguminosae sub family Fabaceae. This plant is one among the Dashamoola (ten roots) of Ayurveda and is an important ingredient of many famous Ayurvedic drugs like Dashmoolarishta, Chyavanaprasha, Dhanwantharam Kuzhambu, Rasnathi decoction, Agusthya Rasayanam, Sukumara gritham, Dasamula

Katuthiyadi kashayam, Dasamula thailam, Danvantra thailam, Mahamasah thailam, Anu thailam, Vidaryadi gritham and Brahma Rasayan. It is an erect woody under shrub in tropical region with alternate leaves and compressed fruits. About 38 different species of *Desmodium* have been reported in India of which *Desmodium gangeticum* and *Desmodium adscendens* are used ethnomedicinally all over the world. Among which *Desmodium gangeticum* is used in the Indian system of medicine; particularly in the (Green, J. 2000).

3. *Gmelina arborea*

Gmelina arborea has a wide range of local medicinal uses. The juice of young leaves has been used to treat gonorrhoea and as a cough medicine. The leaf juice has also been used externally to treat ulcers. A paste of the leaves has been applied to treat headaches associated with fever. This tropical forest species has high economic potential because of its rapid growth and wide variety of uses. Gamhar is a Southeast Asian tree that produces high-quality wood, which is used to make furniture and musical instruments, such as Indian sitars and drums. Gamhar is a tree that can grow to 30 m high, with smooth, whitish to greyish reddish-brown bark and a straight trunk. Its leaves are 8 to 20 cm long, 4.5 to 15 cm wide, and covered with star-shaped hairs. Two large glands are paired at the base of each leaf. The outer surface of the calyx (sepals) is scattered with flat, round glands. The flowers are reddish-yellow, hairy and five-lobed. The hairless fruits are 10 to 15 mm in diameter and glossy yellow when mature. They are recorded as having a bittersweet taste. *Gmelina arborea* has a wide range of local medicinal uses. The juice of young leaves has been used to treat gonorrhoea and as a cough medicine. The leaf juice has also been used externally to treat ulcers. A paste of the leaves has been applied to treat headaches associated with fever. The root has been used to treat epilepsy, fever and indigestion. The bittersweet fruit has been included in cooling decoctions given for fevers (Sivaraja & Balchanran 1994).

5. *Oroxylum indicum*

Oroxylum indicum is a species of flowering plant belonging to the monotypic genus *Oroxylum* (frequently spelled Oroxylon) and the family Bignoniaceae, commonly called midnight horror, oroxylum, or Indian trumpet flower. It is a mesocaul tree which can reach a height of 18 metres (59 ft). The large leaf stalks wither and fall off the tree and collect near the base of the trunk, appearing to look like a pile of broken limb bones. These twice pinnate leaves in life are up to 7' 10.5" (240 cm) in length and comparably wide, borne on petioles or stalks up to 6' 7" (2 meters) in length, making this the largest of all dicot tree leaves. According to Corner they are quadripinnate (leaflets display four orders of branching). The individual leaflets can be up to six inches (15 cm) long by 3.5 inches (9 cm) wide. The tree is a night-bloomer and flowers are adapted to natural pollination by bats. They form enormous seed pods up to five feet (1.5 meters) long and four inches

(10 cm) in width | that hang down from bare branches. Those long fruits curve downward and resemble the wings of a large bird or dangling sickles or swords in the night.

The seeds are round with papery wings.

5. *Premna mucronata*

Agnimantha or botanically *Premna Integrifolia* is an important ingredient of Dashmool Plants. Dashmool has two subcategories Brihat Panchamoola and Laghu Panchamoola. Agnimantha is included under Brihat Panchamoola. All these plants have anti-rheumatic, anti-inflammatory and analgesic properties. Agnimantha is used in the treatment of all types of Vata Disorders (diseases related to the nervous and musculoskeletal system), inflammatory disorders, neuralgia, rheumatoid arthritis, anemia, piles, constipation, common cold, and loss of appetite. It is also useful in eruptive fevers, which include infections like scarlet fever (scarlatina), measles, small pox, varioloid eruptions, and erysipelas. (Sreeman namboothiri 1990).

6. *Solanum indicum*

Description of Plant. Brihati (*Solanum indicum*) is a spiny and highly branched shrub, usually dispersing or diffused, growing up to 1-5 meters in height. Its younger branches are thickly covered with minute star-shaped hair. The spines are shining yellow, about 1-5 cm long. Traditionally Brihati, is used in treatment of respiratory ailments (asthma, catarrh, dry and spasmodic cough), dropsy, heart diseases, chronic fever, colic, scorpion stings, difficult urination, and worm infestation. Brihati is an important medicinal plant and extensively used in Ayurveda (Sivarajan & Balachandran 1994).

7. *Solanum xanthocarpum*

Geographical Source It occurs throughout India, in dry situations as a weed along the roadsides and wastelands. It is naturally propagated by seed in waste lands. It is also distributed in Ceylon, Asia, Malaya, Tropical, Auastrana and Polynesia. **Morphology** A very prickly diffuse bright green perennial herb, somewhat woody at the base; stem is somewhat zigzag; branches are numerous, the younger ones clothed with dense stellate tomentum; prickles are compressed, straight, yellow, glabrous and shining, often exceeding 1.3 cm. Leaves are usually 5-10 in numbers and 2.5-5.7 cm in length, ovate or elliptic, sinuate or sub pinnatifid, obtuse or sub acute, stellately hairy on both sides, sometimes becoming nearly glabrous in age, armed on the midrib and often on the nerves with long yellow sharp prickles, base usually rounded and unequal-sided; petiole 1.3-2.5 cm long, stellately hairy. The berries are green and white strips when young but yellow when mature. They are 1.3-2 cm in diameter, yellow, or white with green veins, surrounded by the enlarged calyx. Seeds are 2.5 mm in diameter and glabrous. Calyx is nearly 1.3 cm long, densely hairy and prickly; tube short, globules. Lobes are 11 mm long, linear-lanceolate, acute and hairy outside.

Filaments are 1.5 mm long, glabrous; anthers 8 mm long, oblong lanceolate, opening by small pores. Ovary is ovoid, glabrous; style glabrous. **Traditional uses** In ancient Ayurveda, plant is described as pungent, bitter, digestive, alternative astringent. Stems, flowers, fruits are bitter, carminative. Root decoction used as febrifuge, effective diuretic and expectorant. Charaka and Sushruta used the extract of entire plant and fruits in internal prescription for bronchial asthma, tympanitis, misperistalsis, piles and dysuria and for rejuvenation. Kantkari Ghrita of Charaka is specific for cough and asthma. Linctuses prepared from the stamens of flowers is prescribed for chronic cough in children (Bangasena). The whole plant is used traditionally for curing various ailments. Decoction of the plant is used in gonorrhoea; paste of leaves is applied to relieve pains; seeds act as expectorant in cough and asthma; roots are expectorant and diuretic, useful in the treatment of catarrhal fever, coughs, asthma and chest pain. The plant is also known to have pest repellent properties and used as a contact poison and molluscicide. Roots are one of the constituents of well known Ayurvedic preparation "Dasmul Asava" and used as an expectorant, cough, asthma, and chest pain in Ayurvedic medicine. Fruits are edible and used by the local people as folk medicines in treating throat infections and other inflammatory problems. The stem, flowers and fruits are prescribed for relief in burning sensation in the feet accompanied by vesicular eruptions. The antispasmodic, antitumor, cardiotoxic, hypotensive, antianaphylactic and cytotoxic activities are also reported. Fruit juice is useful in sore throats and rheumatism. A decoction of the fruits of the plant is used by tribal and rural people of Orissa (Green, J. 2000).

8. *Stereospermum suaveolens*

According to Ayurveda, Patala is a powerful analgesic and anti-inflammatory herb. *Stereospermum suaveolens* flower is good cardiac tonic and used in heart diseases. Flowers also has cough expectorant properties and beneficial in cough, asthma and hiccough. Bark decoction of *Stereospermum suaveolens* used in acidity and ulceration. Patala kshar is highly helpful to cure urinary disorders and kidney stone. Flowers of it have aphrodisiac properties and used in sexual debility and general debility as well. *Stereospermum suaveolens* is good for curing digestive disorders and used in diarrhoea, anorexia and piles etc (Sreeman Namboothiri 1990).

9. *Tribulus terrestris*

Tribulus terrestris is a herb from Ayurveda that is mostly recommended for male health including virility and vitality, and specifically more catered towards cardiovascular and urogenital health. It is a common supplement for its libido enhancing properties and supposed testosterone boosting properties. On the sexual side of things, *Tribulus* does appear to be a relatively reliable and potent libido enhancer in rats and the lone human study assessing this has confirmed an increase in sexual well being and erectile function. While it is not

exactly known how *Tribulus* works, it is known to enhance androgen receptor density in the brain (muscle tissue not confirmed) which may enhance the libido enhancing properties of androgens. Limited evidence suggests that it is weak to non-effective in enhancing fertility. A specific component, tribulosin, appears to be quite potently cardioprotective and is effective in the 1-10nM range. It has not yet been tested in living creatures, but remains a very promising option. Green, J. (2000).

In animal research, the fruits of *Tribulus* appears to protect the organs (mostly liver and kidneys) from oxidative damages at reasonably low dosages and also exert anti-stress effects; confirming the status of *Tribulus terrestris* as an adaptogen. Despite the above promise as an adaptogen and a libido enhancer, studies investigating

Tribulus in sports performance have all failed to find benefits. The herb seems to be a possibly healthy herb that enhances sexuality but with limited use for power output and testosterone enhancement (which it has repeatedly failed to do). (Iyengar1981).

10. *Uraria picta*

An erect under shrub, with stems and branches with hooked hairs. Leaves, Pinnate, 3-9 foliolate, stiff, up to 30 cm long. Leaflets linear oblong, the midrib and neighboring parts white or pale yellowish on the upper side, green beneath, glabrous above, pubescent beneath. Flowers in close fascicles on the axis of terminal or axillary racemes, which are 10-40 cm long. Calyx 4-5 mm long, corolla 6-8 mm long, purple. Pods 3-6 jointed, the joints folded on one another. The fruit is.

1. *Aegle marmelos*. (Rutaceae)



2. *Desmodium gangeticum*. (Leguminosae)



3. *Gmelina arborea*. (Verbenaceae)



4. *Oroxylum indicum*. (Bignoniaceae)



5. *Premna mucronata*. (Verbenaceae)

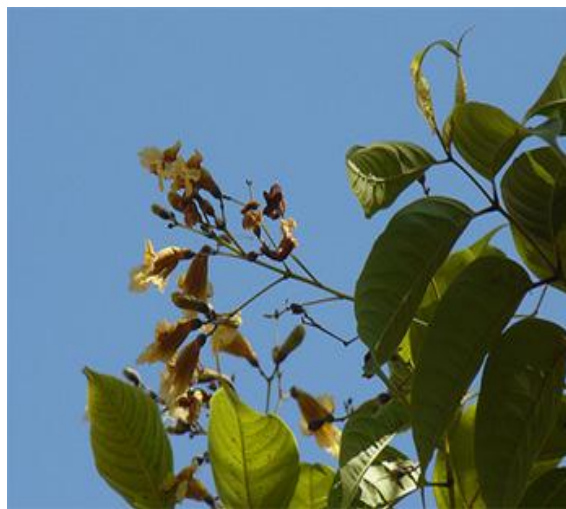


6. *Solanum indicum*. (Solanaceae)





7. *Solanum xanthocarpum*. (Solanaceae).



8. *Stereospermum suaveolens*. (Bignoniaceae).



9. *Tribulus terrestris*. (Zygophyllaceae).



10. *Uraria picta*. (Legominaceae).

Used in the treatment of sore mouths of children. The juice of the root is used as an aphrodisiac. The powdered leaves are used against gonorrhoea.

CONCLUSION

In ayurveda treatment, Dashamoola roots widely used against more than 30 diseases mentioned above and majority of the ayurvedic preparations include these ten roots as its ingredients. A person having knowledge in botany can easily grow these plants in his/her home garden, can use as home remedy medicine for common ailments. Moreover, peoples get self-employed by cultivating and marketing the roots of these plants in the raw drug market. Through this way he or she can overcome the unemployment problems facing in the society.

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