



COMMON MEDICINAL PLANTS AND THEIR USE

AYUSHMAN BHARAT

AYUSH Health & Wellness Centres



MINISTRY OF AYUSH
Government of India



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Background

Growing plants around the house has multi-dimensional benefits as they have enormous potential in the prevention and treatment of various ailments. Apart from this, plants provide basic nutritional requirement in the form of food ingredients. Plants also keep the environment clean by improving the air quality. Growing plants helps in preserving indigenous knowledge, culture and if taken up on a large scale, can also empower women, take care of livestock and poultry activities.

Indiscriminate collection from natural habitat has adversely affected availability of plants. Adulteration is common in the herbal material procured from market and their identification needs expertise and scientific tools. Therefore, cultivation of some essential and easy to grow plants in the house hold is always beneficial for the conservation of plants and appropriate use.

So as to empower the community with the basic knowledge of medicinal plants, this booklet has been prepared focusing on 16 useful plants which can be easily grown in the gardens, parks or even in the pots. The booklet covers the general description of the plants, their medicinal uses and method of cultivation.

Home Remedies

Home remedy is a simple medication prepared at home by using herbs available in the region or other ingredients available in the house like spices. Use of home remedies is prevalent in every parts of the country as they are also cost effective.

General Instruction

The home remedies are generally safe but may give rise to side effects if not used properly. Therefore the following instructions should be read carefully, understood and followed by the user.

- Home remedies are meant for prevention of diseases and management of simple and minor illnesses like common cold, cough, loss of appetite, indigestion and to aid recovery from illnesses etc.
- Sometimes, the home remedies are also useful in chronic problems such as osteoarthritis.
- Home remedies cannot replace a standard treatment and can be used as add on only. The attending physician should be always informed about the home remedy used by the patient.
- Home remedies should not be used in major diseases such as cancer, serious or life threatening conditions as a main course of treatment.
- Avoid any internal medication when a person is unconscious, not even through the nose. It may enter airway and can cause sudden death.
- These home remedies should not be given to the child below 1 year of age, unless advised by a qualified AYUSH physician.
- The medicines mentioned in this booklet are generally considered safe; however, in case of any discomfort it should be stopped immediately and reported to a qualified physician.
- Use of right ingredient will give the desired result and therefore ensure proper identification of herb.
- The plants from footpath, burial grounds, dump-yards, drain-sides, industrial belt & other polluted area should be avoided.
- The plant should be properly washed and dried in shade if required.

- It should be stored in airtight container and freshness should be ensured before use.
- Utmost care should be given to old, sick persons, children, pregnant women while administrating these simple home remedies.
- Do not cause damage to the whole plant and encourage replacement while plucking it.
- Collection of plant materials should be done in proper season to ensure maturity and minimal damage to plant.
- Encourage the use of weeds (like touch me not) and plant wastes (pomegranate fruit coat, rose petals).
- The dose mentioned in the booklet is for adult, while advising for children it must be $\frac{1}{2}$ or $\frac{1}{4}$ of this adult dose.
- The dosage may be adjusted with little alterations according need.
- General Measurements

5gm = 1 Tea spoon full

5ml = 1 Tea spoon full

- General Dosage

Fresh juice- $\frac{1}{2}$ to 2 tea spoons

Decoction- $\frac{1}{2}$ to 1 cup

Hot and cold infusion- $\frac{1}{2}$ to 1 cup

Powder- 1 to 3 gm

Paste- 1-3 gm

Oils are generally recommended for external use as home remedy.

- Frequency of these simple medications is generally 2 to 3 times a day, may be more frequently in cough, vomiting, dyspnoea, diarrhea etc.
- The duration may be as required or advised by the physician or till the symptoms subside.
- In case of combined use/ add on, a minimum gap of 30 minutes should be kept to avoid drug interaction.
- The home remedies may be taken along with water, milk, butter milk, honey, ghee, rock salt as desired or as advised.
- Juice should be prepared by crushing with stones/pestle or grinding in mixture with little water if required and the juice should be strained through a clean cloth/ strainer.
- Decoction should be prepared by boiling crushed/coarsely powdered drug in water.
- Paste should be prepared by crushing/grinding the drug very finely with desired liquid if required.
- It is advisable to take only one or two home remedies mentioned in the booklet at a time.
- The person should be immediately referred to a medical facility if the condition is serious like acute pain, high fever, respiratory distress, unconscious, uncontrolled bleeding, tumors, ulcers, chronic cough, unexplained weight loss etc. and in case of suspected major ailment.

1. Amalaki (*Phyllanthus emblica* L.)

- **Local name :** Amla (Hindi)
Indian Gooseberry (English)
- **Habitat:** All over India
- **Part used:** Fruit
- **General description**

Amla is a medium sized deciduous



plant. It grows to a height of 8 -18 meters. It has a crooked trunk and spreading branches. Its flower is yellow-greenish in color. The fruit is spherical pale yellow with six vertical furrows. It has gray bark and reddish wood. Its leaves are feathery, linear-oblong in shape and have peculiar smell. Its wood is hard in texture. It wraps and splits when exposed to the sun or in excessive heat.

➤ **Uses**

1. **Enhancing immunity:** The fruit is useful in the form of juice, powder, food recipe or as part of formulation in enhancing immunity against diseases.
2. **Urinary problems:** 10 to 20 ml of fresh juice of Amalaki with jaggery is beneficial in burning micturition.
3. **Reproductive problems:** Fresh juice of Amalaki or powder is useful in menorrhagia and leucorrhoea.
4. **Diabetes / Prediabetes:** Powder of Amalaki and turmeric (2-4gm each in equal quantity) with water will be an effective remedy.
5. **Anemia:** Juice of Amalaki is beneficial.
6. **Acid peptic disorder:** Amalaki powder (2gm-3gm) with warm water will help in hyperacidity.

7. **Constipations:** 5 to 10 gm of Amalaki powder taken with warm water during bedtime is useful in relieving constipation.
8. **Cosmetics:** Amla boiled with any oil is used traditionally for the treatment of dandruff and hair loss.

➤ **Food recipes**

1. **Amla murabba:** Boiled Amla pieces are soaked in sugar or jaggery syrup and flavored with cardamom. This easy recipe is suitable for everyday use to boost immunity and to manage health issues mentioned above. This preparation is not recommended for diabetics due to presence of sugar jaggery.
2. **Amla chutney:** Amla along with fennel seeds, chillies salt and other spices as per the choice are grounded in coconut.
3. **Amla pickle:** Boil the Amla with salt and water till it becomes tender, drain the water. Heat some oil and add mustard seeds, asafoetida and chilli powder. Mix well and add Amla. Stir till mixed well and excess water gets fully evaporated.

➤ **Precautions**

Intake in excessive quantity may result in loose motion.

➤ **Mode of propagation**

1. It is propagated by seeds as well as by stem cuttings.
2. When the stem divisions are used as the planting material, the selected division should have 3-4 nodes. 100% sprouting will be seen in 7-10 days. Planting may be done in the month of June.

Or

3. Collect the fresh seeds during February-March. Sow them on nursery beds or directly in the fields. 60% of germination would be obtained within 10 days.

➤ **Ayurvedic formulations**

Chyawanprash, Triphala Churna, Amalaki Churna.

2. Ashwagandha *(Withania somnifera (L.) Dunal)*

- **Local name:** Asgandh (Hindi)
Indian Ginseng, Winter Cherry
(English)
- **Habitat:** All over India
- **Part used:** Whole plant,
mainly root
- **General description**



Ashwagandha is native to drier parts of India. It is a perennial herb that is short, tender, growing 35-75 cm tall. Velvet-hairy branches extend radially from a central stem. Leaves are dull green, elliptic, usually up to 10-12 cm long. The flowers are small, green and bell-shaped. Orange fruits in persistent papery sepals follow the small greenish flowers.

➤ **Uses**

1. **Fatigue:** Ashwagandha powder (2gm-6gm) with milk or ghee is useful in general weakness.
2. **Insomnia:** Ashwagandha powder (2gm-3gm) with sugar/milk/ cow's ghee is useful in sleeplessness anxiety & depression.
3. **Neurological/ degenerative problems:** Ashwagandha powder (2gm-6gm) boiled with milk is useful in neurological problems and degenerative arthritis.

➤ **Food recipes**

Ashwagandha tea: Mix $\frac{1}{2}$ cup milk, $\frac{1}{2}$ cup water and 1 teaspoon Ashwagandha powder together and boil. Add the cardamom and honey and drink it twice in a day. Milk can be added in place of water.

➤ **Precautions**

Over dose can cause diarrhoea, stomach upset and vomiting.

➤ **Mode of propagation**

Ashwagandha is propagated by division, cuttings or seed. It prefers dry stony soil with sun to partial shade. Seed is the best way to propagate Ashwagandha. It can be grown from seeds in the early spring or from greenwood cuttings in the later spring.

➤ **Ayurvedic formulations**

Ashwagandha Powder, Ashwagandharistha.

3. Bala (*Sida cordifolia* L.)

- **Local name:** Khareeti (Hindi)
- **Habitat:** Throughout the tropical and sub-tropical plains of India
- **Part used:** Whole plant, especially root
- **General description**



Bala is an erect perennial plant that reaches 50 to 200 cm tall. The stems are yellow-green, hairy, long, and slender. The yellow-green leaves are oblong-ovate, covered with hairs, and 3.5 to 7.5 cm (1.4 to 3.0 in) long and 2.5 to 6 cm (0.98 to 2.36 in) wide. The flowers are dark yellow, sometimes with a darker orange center, with a hairy 5-lobed calyx and 5-lobed corolla.

➤ **Uses**

1. Neurological /degenerative problems: Decoction of Bala (whole plant) for internal use and oil for local application are recommended. Oil can be prepared by boiling the Bala paste in sesame oil. Use of this oil is indicated for massage, internal use and for therapeutic enema also.
2. Leucorrhea: Root powder (2gm-3gm) with milk is useful.

➤ **Precautions**

1. Dizziness, restlessness, irritability, insomnia, headache, lack of appetite, nausea, vomiting, flushing, tingling, difficulty in urinating and pounding heartbeat may happen if taken in access quantity.
2. Use of Bala with other stimulants such as caffeine is contraindicated. This might increase the chance of having side effects.

➤ Mode of propagation

The plant is propagated through seeds and root suckers. It prefers clay damp soils under shade conditions.

- Collect the mature seeds from well-grown plants. Dry them and soak in water for 24 hours. Sow the seeds in raised beds during rainy season since water logging would be injurious to the seedling. In other seasons you could sow the seeds in sunken beds. In 6-7 days, 80-90% germination is obtained.
- For vegetative propagation, plant the root suckers in small pits, cover with loose soil and allow for sprouting. Transplant the seedlings when they have at least 4 leaves.

➤ Ayurvedic formulations

Balarishtha, Dashamularistha, Bala Taila.

4. Brahmi

(Bacopa monnieri (L.) Pennel)

- **Local name :** Brahmi (Hindi)
- **Habitat :** All over India, particularly in marshy land
- **Part used:** Whole plant
- **General description**

Brahmi is a perennial, creeping herb widely grown in wetlands and muddy shores. The leaves of this plant are succulent and relatively thick and are arranged oppositely on the stem. Small flowers are borne in leaf axils. Flowers are blue, purple, or white, 8-10 mm, obscurely 2-lipped. Seeds are yellow-brown, ellipsoid, truncate at one end, longitudinally channelled. Flowering occurs during May-October.



➤ **Uses**

1. **Memory enhancer** - 8 to 10 crushed fresh leaves or 3 gm powder of Brahmi in water taken with sugar and milk improves learning skills and memory.
2. **Mental fatigue** - Juice of Brahmi leaves 1-2 spoons with ghee and honey taken twice daily controls mental stress and anxiety.
3. **High blood pressure** - One spoon of Brahmi juice taken twice daily helps in lowering high blood pressure.
4. **Epilepsy** - 20 ml Brahmi juice with milk or boiled with cow's ghee, taken twice daily is beneficial in epilepsy (as add on to regular medication).

➤ **Food recipes**

Brahmi chutney: Heat the oil, add black gram, bengal gram, red chillies, curry leaves and asafetida. Fry them till the grams turn golden brown in color. Transfer roasted and cooled masala to a blender/mixer. Add salt, tamarind, grated coconut and Brahmi leaves, grind to a smooth consistency by adding water.

➤ **Precautions:** Consult the physician for long term use or in case of specific health problems.

➤ **Mode of propagation**

- It is propagated mainly by stem cuttings but sometimes it can also be propagated by seeds.
- For vegetative propagation, cut the whole plant into small units with 4-6 nodes each.
- Dip the cuttings in cow dung slurry to ensure better rooting.
- Plant these stem cuttings directly in the field. Use marshy open fields for the cultivation of the plant.
- It grows faster in the high temperature (33- 42 Degree Celsius) and humidity (65 -80%). It prefers wet spots. It is grown in the pots in the house garden. It requires water from time to time as its roots are shallow.

➤ **Ayurvedic formulations**

Brahmi Rasayana, Brahmyadi Ghrita.

5. Guduchi

(Tinospora cordifolia (Thunb.) Miers)

- **Local name:** Giloy (Hindi)
- **Habitat:** All over India
- **Part used:** Stem and leaves
- **General description**

It is a large, deciduous, extensively-spreading, climbing shrub with several elongated twining branches. Leaves are simple, heart shaped with long petioles. Fruits aggregate in clusters of one to three and are orange in color.



➤ **Uses**

1. **Fever** - Decoction (30ml) of Guduchi stem is useful in all types of fever including prevention and treatment of dengue, malaria, chikungunya flue like symptoms.
2. **Enhances immunity** - Decoction of stem (40ml) taken every day alongwith the standard treatment is good in immune deficiency conditions like AIDS, tuberculosis and even cancer. The decoction is used for prevention of seasonal infections.
3. **Diabetes** - The stem of *Tinospora cordifolia* is widely used in the therapy of diabetes for regulating blood glucose.
4. **Joint pain** - Single or synergistic formulations of *Tinospora cordifolia* with ginger has been used in treatment of all types of arthritis including the sequel of viral fever.

➤ **Precautions**

Over dose may cause palpitation and discomfort in the chest.

Intake should be immediately stopped and should consult a physician immediately.

➤ **Mode of propagation**

The plant is propagated either through seeds or through cuttings but the best way is through cuttings. Plant is raised through stem cuttings having nodes/seeds sown directly in ground or in a pot of adequate size. Plant requires support to grow, which can be provided by raising rope, stick etc. The Climber needs watering once in 2-3 days. Thereafter, occasional watering as per the requirement will help the plant to survive in adverse conditions.

➤ **Ayurvedic formulations**

Amritarista, Guduchyadi Kwatha.

6. Haridra (*Curcuma longa* L.)

- **Local name :** Haldi (Hindi), Turmeric (English)
- **Habitat:** Cultivated all over India
- **Parts used:** Rhizome (underground stem)
- **General description :** Haridra is a herb, it reaches up to 1 m tall. Highly branched, yellow to orange, cylindrical, aromatic rhizomes are found. The leaves are alternate and arranged in two rows. They are divided into leaf sheath, petiole, and leaf blade. The petiole is 50 to 115 cm long. The simple leaf blades are usually 76 to 115 cm long and rarely up to 230 cm. They have a width of 38 to 45cm and are oblong to elliptical, narrowing at the tip.



➤ **Uses**

1. **Multiple benefits:** hepato-protective, blood-purifier, antioxidant, antiallergic, and reduces high cholesterol.
2. **Diabetes/Prediabetes :** Powder of Amalaki and Haridra (2-4gm each in equal quantity) with water.
3. **Seasonal allergy / Influenza :** 2 to 3 gm of powder with warm milk twice a day .
4. **Skin diseases and wounds :** Powder mixed with water or oil for external application on affected area alongwith 2 to 3 gm of powder for internal use.

➤ **Food recipe**

1. Turmeric is used daily in cooking as a spice.

2. Pieces of fresh rhizome may be added in the vegetables and pickle.
3. Pieces of fresh rhizome ground with coconut, chillies, tamarind, salt and jaggery makes a healthy and tasty recipe. The same may be boiled alongwith water to eat with rice or millet. Jaggery and lemon may be added according to the need.

➤ **Precaution**

Turmeric is hot in nature and excessive use may be avoided during summer. If burning of feet, palm and urine is noticed, the intake should be restricted.

If taken together with other medicines in diabetes, the blood sugar may drop drastically.

➤ **Mode of propagation**

The plant is propagated through seeds and cuttings.

- Collect fresh seeds, sow them directly in raised beds, pots or polybags. May-June is the favorable season for sowing. In 7-8 days the seeds germinate. They show 70-90% germination.
- Vegetatively the plant can be propagated through cuttings. Separate the tillers arising from the base of a matured plant and plant them individually as mentioned above.

➤ **Ayurvedic formulation**

Haridra Khanda.

7. Kumari (*Aloe barbadensis* Mill.)

- **Local name :** Aloe Vera (English), Ghritkumari (Hindi)
- **Habitat:** All over India
- **Part used:** Gel inside the leaves
- **General description :** Aloe Vera is a stem less or very short-stemmed plant growing to 60–100 cm tall, spreading by offsets. The leaves are thick and fleshy, green to grey-green, with some varieties showing white flecks on their upper and lower stem surfaces. The margin of the leaf is serrated and has small white teeth. The flowers are produced in summer on a spike up to 90 cm tall, each flower being pendulous, with a yellow tubular corolla 2–3 cm long.



➤ **Uses**

- 1 **Burns and wounds:** Due to its soothing, moisturizing, and cooling properties, Aloe vera gel is used externally to treat burns. Gel, mixed with turmeric powder and coconut oil aids early healing of wounds and ulcers including anal fissure and skin problems.
- 2 **Digestive problem:** 2 to 3 spoons of Aloe gel mixed with a glass of water should be taken in all types of digestive and liver problems.
- 3 **Adjuvant therapy:** Aloe vera gel may be taken with antibiotics, NSAIDs (Non-steroidal Anti-Inflammatory Drugs) and chemotherapy to eliminate drug induced gastritis and other adverse effects.
- 4 **Multiple uses:** Useful in various diseases such as diabetes,

arthritis, eye disease, spleen and liver complaints.

➤ **Precautions**

1. Contraindicated in cases of known allergy to plant. It may cause redness, burning, stinging sensation and rarely generalized dermatitis in sensitive individuals.
2. Oral intake of Aloe vera is not be recommended during pregnancy as it may cause stimulation of uterine contractions.
3. It may sometime causes gastrointestinal distress in the infant if given to breastfeeding mothers.

➤ **Mode of propagation**

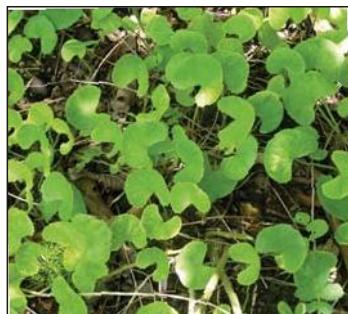
- Methods of propagation are sexual (with seeds), vegetative (by pups obtained from the plants themselves or by the micro-propagation method).
- It is grown successfully in marginal to sub marginal soils having low fertility. It is observed that its growth was faster under medium fertile heavier soil such as black cotton soils of central India.
- It is cultivated in pots out door or indoor, kept on sunny window.

➤ **Ayurvedic formulations**

Kumari Asava, Rajahaparvartani Vati, Aloe Vera Juice, Pulp, Cream.

8. Mandukparni (*Centella asiatica* (L.) Urb.)

- **Local name :** Mandukaparni, Brahmi, Manduki
- **Habitat :** Native to India, found in tropical America, Africa, West Pakistan, China, Japan and the Pacific
- **Part used:** Whole plant



- **General description :** Perennial herb, with long slender horizontal stolons, characterised by long internodes. Leaves are green, fan-shaped or round-reniform, 1–4 cm by 1–7 cm with a crenate or dentate margin. Flowers are umbels with white or light purple-to-pink petals and bear small oval fruit.

➤ **Uses**

- 1 Mandukaparni is considered as brain tonic used for improving memory and overcoming mental stress, fatigue. 5 to 10 ml fresh juice or powder is given with milk in sleeplessness, anxiety, cognitive problems, headache or neurological problems.
- 2 It is useful in neurological problems such as convulsions along with standard therapy.

➤ **Food recipes**

- 1 Mandukaparni chutney when ground with coconut, green chilly, tamarind and coconut.
- 2 Juice of leaves or whole plant can be used in lemon sharbat, herbal tea.

➤ **Precautions**

Excessive use every day may lead to giddiness or headache.

➤ **Mode of propagation**

Stolon cuttings with minimum of one node are planted horizontally at a distance of 30 cm × 30 cm. Watering should be done just after transplantation and subsequently at an interval of 2 to 3 days. To begin with weeding is done at an interval of 15-20 days thereafter, it is done as and when required. Similarly it can be grown in the pots.

➤ **Ayurvedic formulations**

Saraswataristha, Brahma Rasayana.

9. Nimba (*Azadirachta indica* A. Juss.)

- **Local name:** Neem (Hindi)
- **Habitat :** Nimba is found in abundance in tropical and semitropical regions like India, Bangladesh, Pakistan and Nepal
- **Part used:** Leaf, fruit, bark, seed oil
- **General description:**



Neem is an attractive broad-leaved, evergreen tree which can grow up to 30m tall and 2.5m in girth. Its trunk is usually straight and 30-80 cm in diameter. Its spreading branches form a rounded crown of deep-green leaves and honey-scented flowers as much as 20m across.

- **Uses:**

1. **Dental plaque/ gingivitis:** Gargling with warm decoction of Neem leaves twice daily and brushing with twigs of Neem.
2. **Skin diseases:** Intake of powder of Neem leaves and application of Neem oil.
3. **Upset stomach:** Decoction of Neem leaves helps in abdominal pain and worm infestation.
4. **Insect repellent:** Applying Neem oil to the skin to protect against mosquitoes.
5. **Other important uses:** Used as antifungal agent, anti-parasitic, anti-oxidant, anti-inflammatory, neuro-protective, and liver protective, used in jaundice.

- **Food recipe**

Neem flower chutney along with raw mango and green chilly

or

tender leaves fried in oil alongwith red chilly, asafoetida and ajwain seeds and ground with tamarind, salt and jaggery makes very healthy and savoury chutney.

➤ **Precautions**

1. It can cause nausea, vomiting in some persons due to its bitter taste.
2. Some studies also indicated adverse effects of excess doses on sperm count, so may not be used in males planning for family.
3. Should not be used in access during pregnancy and lactation and in children.

➤ **Mode of propagation**

Neem is frequently self-sown in gardens and the areas under mature trees which are quickly colonized by a carpet of seedlings. It has the ability to establish itself under the protection of thorny bushes and to survive in dry poor soils, provided it is not subjected to frost. Although the main reproduction is by seed, root suckering does occur, for example when the roots are damaged.

The simplest way to propagate Neem trees is by seed, but root shoot and root cuttings may also be used.

➤ **Ayurvedic formulations**

Mahanarayan Oil, Nimba Churna, Neem Oil, Tiktaka Ghrita.

10. Nirgundi (*Vitex negundo L.*)

- **Local name:** Samhalu (Hindi)
- **Habitat:** All over India
- **Part used:** Leaves, bark
- **General description**

It is a shrub up to 5 meters tall or sometimes a small, slender tree with thin, gray bark. The bark is reddish brown and has compound leaves in the form of a spread hand with five leaflets, or sometimes three. Flowers are bluish-purple, small and are in bunches In central India, flowering occurs between June and December and fruiting from September to February. The fruit is a succulent drupe, black when ripe, 5–6 mm in diameter. Seeds are 5–6 mm in diameter.



➤ **Uses**

1. **Backache :** 20 to 30 ml of decoction of Nirgundi leaves twice a day is beneficial for lower back ache. 5 to 10 ml of Erandtaila (castor oil) may be added to decoction, especially when there is constipation and bloating of abdomen. The oil made up of Nirgundi leaves should be applied externally.
2. **Joint pain:** 20 to 30 ml decoction of Nirgundi roots (3 to 5 gm) or Nirgundi leaf powder in a dose of one 3-5 gm twice a day are beneficial in osteoarthritis. Oil prepared from leaves is applied or heated leaves are pressed and tied for joint pains and sprains.
3. **Headache:** Grind Nirgundi leaves with water and apply warm paste on the forehead.
4. **Wound:** Washing with decoction or juice of leaves and application of oil made from Nirgundi leaves aids healing of

wounds and chronic ulcers.

➤ **Precautions**

Internal use may be best avoided in pregnant women and alongwith hormonal pills. Nirgundi should be taken under medical supervision in case of heart problems.

➤ **Mode of propagation**

The mature seeds sown in nursery beds normally germinate within 2–3 weeks. Four- to six-month-old seedlings are used for transplanting in the field. It can be reproduced readily from shoot cuttings. Nirgundi roots are strong, deep and produce root suckers which can also be utilized as planting material.

➤ **Ayurvedic formulations**

Dashamularishta, Sarasvatarishta, Mahayogaraja Guggulu, Anu Taila.

11. Punarnava (*Boerhavia diffusa* L.)

- **Local name:** Gadarpunna (Hindi)
- **Habitat:** All over India
- **Part used:** Whole plant, roots
- **General description :** It is a herb grown as weed in waste lands throughout the year but dries during the summer. Leaves are small with whitish colour on the lower surface and green on upper surface. Stems are purplish or pale green depending on the variety. It bears small reddish pink flowers and fruits in winter.



➤ **Uses**

This plant is useful in all types of swellings, urinary problems, anemia, liver disorders, heart diseases and piles. It can be used in the form of fresh juice, decoction, powder or added in the food preparations.

1. **Dysuria:** 50 to 100 ml of decoction made from 5 to 10 gm of aerial portion of the plant administered twice daily is useful in urinary tract infection and burning or discomfort during urination. Intake of plenty of fluids also advisable in this case.
2. **Anaemia:** 50 to 100 ml decoction of whole plant is given thrice daily in anaemia.
3. **Jaundice:** 50 to 100 ml decoction of whole plant is given thrice daily in liver problems.
4. **Swelling:** The warm paste of punarnava plant mixed with oil applied externally twice daily on affected areas will be useful in reducing swellings. Intake of the decoction of whole plant (50 to 100 ml) is also useful.

5. **Joint pain:** Intake of 2 to 5 gm of dry ginger with 50 to 100 ml decoction of Punarnava reduces swelling and pain in the joints.

➤ **Food recipes**

1. Sauté the tender leaves in little quantity of oil or ghee or butter along with green chilies and grind with coconut to make chatni. Cumin seeds, ginger, onion, garlic or asafetida can be used as per the taste of the individual. Lemon juice, tamarind or curd may be added.
2. Leaves can be used as a vegetable in *dal or sambar*.
3. It can be used in *paratha* as any other leafy vegetable.
4. Chopped leaves can be added in the dosa along with tomato and onion.
5. Leaves and stem may be sautéed and seasoned with chopped onion, garlic, chilli and salt as a food item. It can also be mixed with sprouts.

➤ **Precautions**

Intake in excessive quantity may have mild purgative effect.

➤ **Mode of propagation**

It grows widely in waste lands and does not require any special care. The plant is propagated through seeds and cuttings.

- Collect fresh seeds, sow them directly in raised beds, pots or polybags. May-June is the favorable season for sowing. In 7-8 days the seeds germinate. They show 70-90% germination.
- Vegetatively the plant can be propagated through cuttings. Separate the tillers arising from the base of a matured plant and plant them individually as mentioned above.

➤ **Ayurvedic formulations**

Punarnavadi Mandura, Punarnavasava, Punarnavasthaka Kwatha.

12. Shatavari (*Asparagus racemosus* Willd.)

- **Local name:** Shatavar (Hindi)
- **Habitat:** All over India
- **Part used:** Tuberous root
- **General description**

The plant is a perennial, prickly climber of 1–2 meters, found wildly throughout India and also cultivated for medicinal & ornamental purpose. Shatavari has shiny green leaves like pine needles, branches that are thorny and pale. In July, it produces minute, white flowers on short, spiky stems, and in September it fruits, producing blackish-purple, globular berries. It has multiple tuberous roots that measure up to one metre in length, tapering at both ends.



- **Uses**

Shatavari is a good immunity booster. It is used to promote fertility and have a range of health benefits, particularly for the female reproductive system.

1. **To increase breast milk:** 3-5 gm of root powder or 2 spoons of Shatavari root juice taken with 1 glass of milk twice daily enhances milk in lactating mothers.
2. **As a tonic:** Shatavari root powder 1 to 3 gm is taken with milk twice daily to overcome fatigue. It is useful in age related problems such as bone and neuro degeneration.
3. **Hyper acidity and peptic ulcer:** Intake of 2-4 spoon of juice of Shatavari root or 1 to 3 gm of powder daily will be helpful to reduce hyperacidity and peptic ulcers.

- 4. Reproductive health:** 1 to 3 gm of Shatavari powder one to two times a day is useful to prevent menopausal symptoms and osteoporosis. The powder is recommended in non-specific infertility.

➤ **Precautions**

- Shatavari is safe to be used within recommended quantity in a normal person.
- Sensitivity may cause allergic reactions in some people such as skin rashes or breathing difficulty on intake of large dose. In case of any medical problem or other medications, please follow the advice of a qualified doctor.

➤ **Mode of propagation:**

- The seeds are used for propagation in the nurseries however vegetative method is more suitable to grow in house hold. The vegetative propagation is by division of rhizomatous disc present at the base of the aerial stem. The rhizomatous disc develops several vegetative buds around the aerial shoots. The disc is divided in such a way that each piece possess at least two buds along with 2-3 tuberous roots. These pieces are planted covering the buds with 1 cm of soil followed by watering. The sprouting commences in 8-10 days after plantation.

➤ **Ayurvedic formulations**

Shatavari Ghrita, Shatavari Kalpa, Shatavari Churna.

13. Shigru (*Moringa oleifera* Lam.)

- **Local name:** Sahijan (Hindi)
- **Habitat:** All over India
- **Part used :** Leaves, bark, fruit, flower, seed
- **General description :** Shigru, also known as moringa, drumstick tree, grows to a height between 20-40 feet. Its stem is brittle having fragile branches of whitish-grey bark. It has solitary compound leaf with a row of leaflets arranged along each side of a common rachis. Leaflets are egg shaped with the broader end at the base (ovate). Flowers are yellowish-white in color and have a fragrant odour. The fruits are long and size can vary between 8-18 inches. They bear dark brown or white globular seeds. The seeds have three whitish papery wings.



➤ **Uses**

1. **Anemia:** 10 to 20 ml juice or use of leaves or pods Moringa in the form of vegetable.
2. **Asthma:** Consumption of about 100 ml of decoction of a fistful of drum stick leaves is beneficial in bronchitis and asthma.
3. **Swellings & wound:** application of warm paste made up of bark and leaves of moringa is useful in relieving pain and swelling in joints and abscesses. Its paste is also helpful in wound healing.
4. **Heart disease:** This has cholesterol lowering action and stabilizes blood pressure. Therefore, use of leaves, flowers and pods in any form is good for heart.

5. **Other uses:** Moringa is helpful in various eye problems and improving vision. It is used in amenorrhea and dysmenorrhea and as a tonic to improve the immunity against diseases.

➤ **Food recipes**

1. Drum sticks pods & leaves are popularly added in *sambhar*, *daal* and *vegetables*.
2. It can be used in *paratha* as any other leafy vegetable. Chopped leaves can be added in the *dosa* along with tomato and onion.
3. Tender drum stick pods or leaves may be sauted and seasoned with chopped onion, garlic, chilli and salt.
4. The leaves can be used in *zunka*, a recipe popular in Maharashtra and it's neighbouring parts of Karnataka. Heat oil/ ghee in a utensil and add mustard seeds, asafetida, onions, curry leaves, drum stick leaves and other spices of your choice. Add gram flour, salt, turmeric powder and red chilli powder and mix well. Add water, little by little as per desired consistency and mix well. Cook on medium heat for four to five minutes while continuously stirring. This can be used with *rice*, *roti*, *dosa* etc.

➤ **Precautions**

There are no contra- indications for the use of any part of moringa, however excessive intake may lead to increase in body heat and *Pitta* in some people. Intake may be avoided during heavy menstrual bleeding.

➤ **Mode of propagation**

- It grows best in direct sunlight. Moringa can be propagated from seed or cuttings. Direct seeding is possible because the germination rate is high. Soak the seeds in water overnight and crack the shells before planting. Remove shells and plant kernels only. Moringa seeds can be germinated year-round in well-draining soil.

- For vegetative propagation, use hard wood and not green wood. Cuttings should be 45cm to 1.5m long and 10cm thick. Cuttings can be planted directly or in sacks. Plant one-third of the length in the ground and do not over water if the soil is too heavy or wet, the roots may rot.

➤ **Ayurvedic formulations**

Shigru Guggulu.

14. Shunthi (*Zinziber officinale* Roscoe.)

- **Local name :** Adrak (fresh ginger) sonth (dry ginger) - Hindi
- **Habitat:** All over India
- **Part used:** Root
- **General description**

Ginger is a flowering plant whose rhizome is widely used as a spice and a folk medicine. It is a herbaceous perennial plant which grows pseudo stems (false stems made of the rolled bases of leaves) about one meter tall bearing narrow leaf blades. The inflorescences bear pale yellow with purple flowers and arise directly from the rhizome on separate shoots.



➤ **Uses**

1. **Rheumatoid arthritis:** Decoction of Shunthi is useful in rheumatoid arthritis when taken alongwith 10 to 20 ml of castor oil.
2. **Indigestion:** Paste of Adarak with jaggery in equal quantity helps in indigestion in warm water.
3. **Cough:** Shunthi (dry ginger) powder with honey is beneficial in cough.
4. **Joint pain:** Shunthi churna 2 gm with ghee two times in a day.

➤ **Food recipes**

1. **Fresh turmeric-ginger pickle:** Combine sliced ginger and turmeric $\frac{1}{4}$ cup each, 2 tsp lemon juice, chilli powder and 1 tsp salt in in a deep bowl. Mix well and serve immediately or store refrigerated for 1 week.

2. **Ginger tea:** Boil the water along with grated ginger. Add tea leaves and sugar to the boiling water and then let the tea leaves steep in the water for about 3-5 minutes. Add hot milk, mix well, strain and serve immediately.
3. **Ginger and lemon drink:** Add 2 tsp ginger juice, 1 tsp lemon juice and $\frac{3}{4}$ tsp sugar syrup to a glass of water, stir and serve immediately.
4. **Ginger chutney:** Fresh ginger ground with coconut, chillies and tamarind make a healthy and tasty recipe.

➤ **Precautions**

Intake in excessive quantity may result in heartburn and stomach upset.

➤ **Mode of propagation**

- Ginger is always propagated by portions of the rhizomes, known as seed rhizomes. Carefully preserved seed rhizomes are cut into small pieces of 2.5 – 5 cm length weighing 20-25 gm, each having one or two good buds.
- The seed rhizomes are treated planted at a spacing of 20-25 cm along the rows and 20-25 cm between the rows.

➤ **Ayurvedic formulations**

Ardrak Paka, Nagaradi Kwatha, Trikatu Churna.

15. Tulasi (*Ocimum tenuiflorum* L.)

- **Local Name :** Holy basil (English),
Tulsi (Hindi)
- **Habitat:** All over India
- **Part used:** Leaves
- **General description**

Tulasi is a heavy branched sub-shrub having hair all over the parts.



It attains the height of about 75 – 90 cm. It has round oval shaped leaves which are up to 5 cm long. The leaves are 2- 4 cm in length. Its flowers are purple – creamish in colour. Tulasi with the green leaves is called the Shri Tulasi and one with the reddish leaves is called the Krishna Tulasi. Seeds are yellow to reddish in colour. Leaves of Tulasi contains essential oils and therefore have peculiar fragrance.

➤ **Uses**

1. **Worms:** Juice of Tulasi leaves (10-20ml) is beneficial for deworming.
2. **Wound or any skin disease:** Local application of juice or paste of Tulasi leaves is good.

Cough: Juice of Tulasi leaves (5-10ml) mixed with honey is good for cough.

3. **Urticaria:** Intake and local application of Tulasi juice is useful in urticaria.

➤ **Food recipes**

1. **Tulasi tea:** Boil Tulasi leaves in water, strain, add lemon juice and Tulasi tea is ready to sip.

2. **Tulasi juice:** The fresh leaves of Tulasi can be consumed as a juice. This tasty and refreshing method of using Tulasi is profoundly rejuvenating for the immune system. Traditionally, the juice is mixed with honey to resolve cold, fever, and respiratory issues.

➤ **Precautions**

Eating fresh leaves is not advisable as it causes damage to tooth enamel. Excessive intake of Tulsi might cause nausea, heartburn and diarrhoea.

➤ **Mode of propagation**

- This is propagated through seeds. For propagating through seeds, they are to be sown in the nursery beds. The nursery should be located preferably in partial shade with adequate irrigation facilities.
- As the seeds are minute, the required quantity of seeds are mixed with sand in the ratio of 1:4 and sown in nursery bed, 2 months in advance of the onset of monsoon. They germinate in 8-12 days and seedlings are ready for transplanting in about 6 weeks' time at 4-5 leaf stage.

➤ **Ayurvedic formulations**

Tulsi Arka.

16. Vasa (*Justicia adhatoda* L.)

- **Local name:** Adusa (Hindi)
- **Habitat:** All over India
- **Part used:** Leaves
- **General description**

Vasa is a shrub with lance-shaped leaves 10 to 15 centimeters in length. They are oppositely arranged, smooth-edged, and borne on short petioles. The trunk has many long opposite ascending branches, where the bark is yellowish in color. Flowers are usually white and the inflorescence shows large, dense, axillary spikes. Fruits are pubescent, and are with club-shaped capsules.



- **Uses**
 1. **Cough:** Decoction of 5-10 Vasa leaves is beneficial in cough.
 2. **Hemorrhagic disorders:** Juice of Vasa leaves (5-15 ml) with honey is useful in hemorrhagic epistaxis and hemoptysis.
 3. **Scanty menstruation:** Decoction or juice of Vasa leaves is beneficial.
- **Precautions:** Intake in excessive quantity may result in diarrhoea, vomiting and excessive menstrual bleeding.
- **Mode of propagation**
 - Stem cuttings of 15-20 cm long with 3-4 nodes are ideal for planting done in March-April.

- Tender stem cuttings are planted in poly bags /pots filled with farm yard manure, top soil and sand in the ratio 1:1:1.
- Cuttings will root readily and will be ready to transplant to main field after two months.

➤ **Ayurvedic formulations**

Vasavleha, Vasarishta.

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