



MEDICINAL PLANTS AND THEIR USES

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Introduction

Since ancient times, medicinal plants, have been identified and employed in conventional medical procedures. For a variety of purposes, including defense and protection against various insects, fungus, illnesses, and herbivorous animals, plants synthesize hundreds of chemical compounds. Worldwide research has been done to confirm their effectiveness, and some of the results have prompted the development of plant-based medications. Medicinal plant products have an annual market value of more than \$100 billion worldwide.

History -

Around 3000 BC, clay records from ancient Sumerian list hundreds of medicinal herbs, including opium and myrrh. There are nearly 800 plant remedies listed in the ancient Egyptian Ebers Papyrus, including castor bean, garlic, aloe, and cannabis. From ancient times to the present, hundreds of plants and spices, including turmeric, which contains curcumin, have been utilized in Ayurvedic treatment, as described in the Atharva Veda, the Rig Veda, and the Sushruta Samhita.

Early Mediaeval Benedictine monks translated and reproduced ancient books, kept herb gardens, and otherwise conserved medical knowledge throughout Europe. Several classical Greek literatures, like Dioscorides, were translated into Arabic

during the Islamic Golden Age. In the Islamic world, especially in Baghdad and Al-Andalus, herbalism was very popular. Abulcasis (936–1013) of Cordoba published The Book of Simples, while Ibn al-Baitar produced several books on therapeutic plants.

The Early Modern period saw the flourishing of illustrated herbals across Europe. As a result of early modern discovery and the ensuing Columbian Exchange, which took place in the 15th and 16th centuries and involved the movement of cattle, crops, and technologies between the Old World and the Americas, many novel plant remedies made their way to Europe. Garlic, ginger, and turmeric were among the medicinal herbs that arrived in the Americas; coffee, tobacco, and coca travelled in the opposite direction. All around Europe, botanical gardens sprang up, and efforts were made to cultivate both native and foreign therapeutic plants.

In the eighteenth century, Linnaeus (1707–1788) gave a concise account and categorization of the species that had been described up to that point in his work Species Plantarum (1753). The naming system was changed to a binominal one by Linnaeus. Each species' name was composed of the species name, which began with a tiny letter, and the genus name, which began with a capital letter.

Knowledge and application of medicinal plants underwent a sea change in the early 1800s. The birth of scientific pharmacy was signalled by the identification, confirmation, and separation of alkaloids from pomegranate (1878), ipecacuanha (1817), strychnos (1817), quinine (1820), and other plants, followed by the isolation of glycosides. As the chemical procedures were improved, more active components of medicinal plants were found, including



tannins, saponosides, etheric oils, vitamins, hormones, and so on.

Distribution of medicinal plants:-

The distribution research of the therapeutic plants reveals that they are dispersed among a variety of landscape features and ecosystems. Approximately 70% of India's medicinal plant species are located in tropical forests in the Himalayas, the Aravalis, the Western and Eastern Ghats, the Chota Nagpur Plateau, and the Vindhyas. The Kashmir Himalayan region is one of the Himalayas, and it is tucked away in the Northwestern folds of the Himalayas, which were recently named a global biodiversity hotspot. *Dioscorea deltoidea*, *Rheum Emodi*, *Arnebia benthamii*, *Inula racemosa*, *Datura stramonium*, *Aconitum heterophyllum*, *Hyoscyamus niger*, *Sassurea* spp., and *Picrorhiza kurroa*, are some of the most significant medicinal plants found in the Kashmir Himalaya. These plants grow abundantly in regions such as Yusmarg, PirPanjal, Sonamarg, Gurez, Lolab valley, Gulmarg, Pahalgam, and Tilail valley.

Classification of medicinal and aromatic plants-

1- According to the usage-

- A. Medicinal Herbs-** Because of their therapeutic qualities, medicinal plants are utilised to make medicines.
- B. Culinary Herbs-** Because culinary herbs have strong tastes like mint, cinnamon, and basil, they are arguably the most commonly utilised herbs in cooking.
- C. Aromatic Herbs-** A common usage for aromatic herbs is due to their fragrant foliage or blossoms. Aromatic herb oils can be used to make toilet water, perfumes, and other fragrances. For example, clove, basil, rosemary, etc.

D. Ornamental Herbs- Because decorative herbs, such as lavender and chives, have vividly coloured flowers and foliage, they are utilised as decorations.

2. According to the active constituents-

A. Aromatic (volatile oils) - The lovely smell that many of these herbs possess is reflected in the name.

They are widely utilised in medicine as well as flavourings and fragrances. Stimulants and nerviness are the two subcategories of aromatic herbs. like garlic, ginger, and fennel.

B. Astringent Herb- Tannins found in astringent herbs have the power to precipitate proteins, which "tighten," or compresses, living tissue and aids in stopping discharges. For instance, red raspberry with peppermint.

C. Bitter Herbs- Laxative herbs, diuretic herbs, saponin-containing herbs, and alkaloid-containing herbs are the four subcategories of bitter herbs, which get their names from the presence of phenols and phenol glycosides, alkaloids, or saponins. For instance, milk thistle and chamomile.

D. Mucilaginous Herbs- The polysaccharides that mucilaginous herbs possess are responsible for their slick, mild flavour that tastes pleasant when diluted.

For instance, chia seeds, flaxseeds, aloe vera, and liquorice root.

E. Nutritive Herbs- The nutritional value that these herbs add to the diet is the source of both their name and their classification. Apples, bananas, broccoli, cabbage, carrots, onions, pineapples, and so forth.



Sl no	Common name	Scientific name	Description	Uses	
1	Tulsi	<i>Ocimum sanctum</i>	An annual delicate herb that is widely grown in the nation's tropical environment. Since it is revered in Hindu philosophy, it is also grown indoors and in kitchen gardens.	Promotes Heart Anti-aging Treats Kidney Stones Relieves Fever Healthy eyes, oral	
2	Brahmi	<i>Bacopa monnieri</i>	A creeping, glabrous annual found in moist areas of India, with many ascending branches that root at the nodes.	Known as "Medhya Rasayana" enhancing memory power Reduces anxiety level	
3	Babool	<i>Acacia arabica</i>	a medium-sized tree that grows throughout the drier regions of India, especially in the south and southwest, with a spreading crown and a short trunk. The tree's bark is used medicinally.	oral & dental hygiene burn injuries and in the management of skin diseases prevention of bleeding gums	
4	Pineapple	<i>Ananas comosus</i>	A terrestrial herb, pineapple plants range in height from 2 1/2 to 5 feet and spread out to 3 to 4 feet). They have a short, sturdy stem and a rosette of waxy, strap-like leaves that are long-pointed, ranging from 20 to 72 inches long, typically with needle tips.	Sufficient Vitamin C intake can help your body create and maintain collagen an essential protein found in hair and skin. Fights infections Fights cough and cold Improves digestion Maintains blood pressure Improves brain and heart health	
5	Coriander	<i>Coriandrum sativum</i>	An annual herb that is widely grown as a spice crop around the world. The plant's fruits and leaves are also therapeutic.	Reduces Skin Inflammation Controls Blood Pressure Rich Source of Calcium Controls Diabetes Diuretic Properties Treat Osteoporosis Reduces Cholesterol Prevents Arthritis	
6	Kalmegh	<i>Andrographis paniculata</i>		This herb grows upright every year. The stem has wings on the angles of the younger sections and longitudinal furrows on a quadrangular shape. It is significantly larger at the nodes and is dark green in colour. The leaves dark green in colour.	Promotes Digestion Protects the liver and gall bladder Kills intestinal worms & support intestine Protect skin from pimples Reduces swelling and cuts down exudation from capillaries
7	Garlic	<i>Allium sativum</i>		The lower half of the stem of this member of the liliaceae family is covered in leaves, and the stem itself is more than a metre tall. Bulbets, which are glabrous, white, or slightly reddish, take the place of flowers. Flowers appear from May through July.	Treats Dysentery Control diabetes Lower cholesterols Thrombosis Treat ache Heart health Weight Management
8	Nut Grass	<i>Cyperus rotundus</i>		A perennial herb that emerges in many parts of the world, including India, during the rainy season. It has a long, sturdy rootstock. The plant's rhizome is utilised for its therapeutic qualities.	It has long been used to treat fevers, sun dermatitis, and summertime sore throats. Experimental research has demonstrated that it has strong anti-inflammatory properties. If the fever persists for more than a week, see a physician.
9	Varuna	<i>Crataeva nurvala</i>		A medium-sized deciduous tree that grows both wild and in cultivation all over India. In Ayurveda, tree bark is employed.	The effect of Varuna has on the body's fluids and urinary system it is. Advised by Ayurveda for the treatment of kidney, ureter, and bladder stones, among other urinary tract issues. It has litholytic (stone-breaking), antibacterial, and urinary properties.
10	Cinnamon Leaf	<i>Cinnamomum tamala</i>		A tree of intermediate stature with fragrant leaves and bark that grows wild in the north eastern and tropical Himalayas.	Diabetes, Digestion, Cold
11	Lesser Cardamom	<i>Elettaria cardamomum</i>		This tall herbaceous perennial is grown in warmer parts of India, particularly in the northeastern and southern states,	Worldwide, cardamom is well-known for its culinary usage. Use as flavoring agent, treatment of disease of oral



and has a cavity, treatment of subterranean nausea, vomiting, branching dry cough and rootstock. Fruit has many therapeutic uses in addition to being used as a condiment.

12 Neem *Azadirachta indica* Huge evergreen tree with many branches that grows on fallow land. In practically every part of the nation, it is also grown as a roadside tree and avenue. The mythology of India holds great reverence for the tree.

Treats Acne

Nourishes Skin

Treats Fungal Infections

Increases Immunity

Insect and Mosquito Repellent

Treats Wounds

Reduces Dandruff

13 Bael *Aegle marmelos* A trifoliolate-leaved, spiny, deciduous, aromatic tree with greenish-white blooms. It is typically found in the country's arid, hilly regions. Additionally, trees are planted in gardens and next to temples as avenue trees. Both the tree's fruit and bark are used

Preparation of summer drinks, which helps overcome sunstrokes.

Fruit pulp absorbs the toxins produced by bacteria and other pathogens.

Extract oil is used to cure respiratory problems.

Anti-inflammatory.

Used to treat tuberculosis.

14 Ghee Kunwar *Aloe vera* Perennial undergrowth reaching a height of two to four feet, featuring luscious, meaty leaves with bristly prickles around the edges. It is widespread across the nation and can be found in a lot of other places worldwide.

Skin conditioner

Treatment of non-healing ulcers, burn injuries and in treating the liver diseases like jaundice.

15 Ashoka *Saraca indica* Native to India, Burma, and Malaya. It is upright and has smooth, grey-brown bark. The crown is shaped and compact. While the tree normally has flowers all year round, its stunning beauty is enhanced in January and February by the abundance of orange and scarlet

Uterine tonic and has been indicated in menstrual irregularities

Stimulant and increases uterine contractions

Stimulates the ovarian tissue.

clusters.

16 Guggulu *Commiphora mukul* A tiny tree or shrub found in rocky, dry areas in some regions of north- and south-western India, having alternating serrated leaves. Ayurvedic remedies are made using the gum resin that is extracted from the stem.

Treatment of joint disorders and heart diseases

Rheumatoid arthritis

17 Cutch Tree *Acacia catechu* A medium-sized tree that is often seen growing throughout the country's northeastern regions and the Sub-Himalayan area. It has a dark yellow inflorescence. The wood and bark of the tree are used in Ayurvedic medicines.

Treatment of skin and respiratory problems

Oral hygiene

Local treatment for bleeding injuries as styptic agent by virtue of its astringent properties.

18 Dalchini *Cinnamomum zeylanicum* A tiny, evergreen tree with fragrant bark that grows naturally in southern India's coastal regions, reaching a height of 6 to 8 metres. The bark is utilised in both medications and food preparation.

Spice mixtures used in India.

Increase salivation and to improve digestive functions

Acts as a local antiseptic by virtue of its antibacterial action.

19 Shatavari *Asparagus racemosus* A spiky pseudotrater underbrush that grows both wild and in cultivation in the country's warmer climates. Traditional medicinal remedies are prepared using the plant's fleshy, tuberous roots.

Reduce cholesterol

Diuretic

Treat diarrhoea

Aids detestation

Treats kidney stones

Boosts immunity

20 Palasha *Butea monosperma* A medium-sized deciduous tree that is widespread throughout the nation and has magnificent orange-red blossoms. Ayurvedic medicines employ seeds in a variety of ways.

Seeds for treatment of worm infestations.

Beauty care and to maintain complexion and suppleness of skin.

Roundworm infestations

21 Amaltas *Cassia fistula* A medium-sized tree that grows in gardens and by the side of the road with vivid yellow blossoms. The tree's long, cylindrical pods

Treatment of inflammatory swellings and as a cleaning agent for ulcers and wounds.

Fruits are also used



			are utilised in Ayurvedic medicine.	as a laxative. Decrease purulent discharge and act as a local antiseptic
22	Bharangi	<i>Clerodendron serratum</i>	A slightly woody shrub that grows in forests throughout India up to a height of 1500 metres is characterised by bluntly quadrangular stems and branches. Leaves, stem, and roots are all utilised medicinally.	Treatment of common cold, chronic sinusitis, allergic rhinitis, cough and other chronic respiratory problems. Excellent dry cough home remedy. Relief from fever and hyper-pyrexia. Antipyretic and antihistamine activities.
23	Pippali	<i>Piper longum</i>	A thin, fragrant vine with blooms in lone spikes that form tiny, red berries buried in a firm, meaty spike. In Ayurveda, the spike is highly utilised in the creation of numerous medicines.	Treatment of respiratory disorders. Important constituent in digestive formulations. Used in correcting digestive disturbances and minor respiratory ailments.
24	Indian Olibanum	<i>Boswellia serrata</i>	A medium sized tree with sessile, alternating, deciduous leaves. It can be found in the central and western forests of India. The stem's gum resin has therapeutic uses.	Treatment of painful joint diseases and other inflammatory conditions. Ensure free mobility of joints.
25	Ashgandh	<i>Withania somnifera</i>	Found in warmer parts of India, this little perennial shrub with orange-berried and white blooms. The herb is now widely grown in central and western India, where it has been fully domesticated. The roots are utilised to make a variety of formulas.	Fight depression. Treats erectile dysfunction. Increase fertility in men. Control diabetics. Enhance memory. Reduce stress and anxiety. Boosts immunity. Increase muscle mass. Boosts Thyroid Function.
26	Vridhadaru	<i>Argyrea speciosa</i>	A broad climbing plant with huge, ovate-cordate leaves that grows wild in south India and the north eastern Himalaya.	Roots of Elephant Creeper have been extensively used to control inflammation of varied nature in

27	Shirish	<i>Albizia lebbek</i>	A widespread roadside tree in India, deciduous and spreading, that can reach heights of up to 900 metres in the Himalayas. Ayurveda uses the bark of the tree to treat a variety of illnesses.	Neutralize toxins in the body. Treatment of respiratory affections like bronchial asthma. Herbal tea for asthmatic persons. Control the frequency and intensity of the asthmatic attacks.
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