INDIAN KNOWLEDGE SYSTEM (IKS)

Common Medicinal Plants of

AYUSH Udyan &

St. Xavier's College Jaipur

STATE TREE OF RAJASTHAN

Khejri

Scientific Name: *Prosopis cineraria*
Family: Fabaceae

- ***Local Name:*** Khejri
- ***Parts Used:*** Leaf, fruit pod

Basic Information:

- State tree of Rajasthan.
- This tree is highly revered among Hindus and worshipped as part of Dusshera festival.
- Small tree.
- The leaves are bipinnate, with seven to fourteen leaflets on each of one to three pinnae.
- Thorned branches along internodes.
- Small and creamy yellow flowers.
- Seeds in pods.

Uses:

- Extract from unripe fruit pods of the plant was shown to ameliorate artificially induced damage to testes in an animal model.
- Leaf juice is used in treatment of mouth ulcers.

INTRODUCTION

For thousands of years, medicinal plants have been an essential component of human society, acting as main providers of health and healing in a wide range of cultures and civilizations. These amazing plants include a diverse range of species, each with special medicinal qualities and attributes. The importance of medicinal plants in healthcare has persisted throughout history, from traditional herbal medicines to cutting-edge pharmaceutical breakthroughs.

Tribes and traditional healers have long depended on their understanding of medicinal plants to treat a variety of illnesses and preserve health. This wealth of botanical knowledge has been passed down orally over the years, including everything from plant identification and cultivation to manufacturing of remedy and its application. Deeply ingrained in ecological knowledge and cultural legacy, ethnomedical practices emphasise the close bond that exists between people and the natural environment. Large scientific studies conducted in the present period have shed additional light on the medicinal properties of plants and resulted in the identification and isolation of bioactive substances with beneficial properties. The fact that many pharmaceutical medications already on the market have botanical roots highlights the significant influence of medicinal plants on contemporary medicine. Furthermore, people looking for all-natural substitutes or conventional therapies continue to find resonance in herbal medicine's holistic approach, which considers not just the symptoms but also the underlying causes and interconnection of health.

In this context, St. Xavier's College Jaipur has taken an initiative to plant a variety of medicinal plants in the campus. Local villagers will also be allowed to collect different plant products as per their requirements. Setting up medicinal plant garden will increase the knowledge of using traditional medicines. Apart from aforementioned facts, loss of biodiversity is presently a major concern. Increased population, loss of habitat, overexploitation, pollution are the major factors causing loss in biodiversity. Resultantly, many medicinal plants are extinct today in their wild habitats. Lack of proper identification using both morphological and molecular data (DNA barcoding) may restrict the proper sustainable use of medicinal plants. Thus, the indigenous medicinal plants (vulnerable or least concerned) can be conserved in the college premises and sharing of proper knowledge of using it with the assistance of the villagers in a sustainable manner will go a long way in preserving and promoting both indigenous knowledge and the environment.

PRINCIPAL'S MESSAGE

The Indian Knowledge System (IKS) includes all the disciplines of knowledge that have been refined to a great degree in India from ancient times, as well as all of the customs and practices that the country's many communities including tribal ones-have adhered to it.

St. Xavier's College Jaipur has taken an initiative to support IKS in various ways, among these, establishment of AYUSH Udyan and plantation of other medicinal plants in the college premises are important. Setting up of medicinal plant garden will be beneficial for local villagers. They can collect the plants or plant-based products as their requirements. So, a public private relationship will be formed. Setting up of medicinal plant garden is under the seed money project scheme of the college. AYUSH Udyan could be a place dedicated to promoting well-being through nature, meditation, or holistic practices. AYUSH stands for Ayurveda, Yoga, Unani, Siddha and Homoeopathy. The AYUSH Udyan programme seeks to raise public awareness of the AYUSH systems' holistic therapeutic modalities.

The Indian government and other organisations work to combine traditional medicine with contemporary healthcare systems through AYUSH Udyan, encouraging general well-being and providing alternative treatments for a range of medical conditions. India's dedication to conserving and reviving its rich legacy of natural healing techniques while modifying them to meet modern demands and obstacles is shown in this endeavour. In near future, many more medicinal plants will be planted in the campus and training to local people will also be conducted from college.

Prof. Fr. S. Xavier SJ

Principal

St. Xavier's College Jaipur

Aloe

Scientific Name: *Aloe Vera*
Family: Asphodelaceae

- ***Local Name:*** Ghritkumari
- ***Parts Used:*** Leaf gel

Basic Information:

- Herb with succulent leaves containing sharp spine.
- Leaf gel contains polysaccharide acemannan.
- Leaf margin is serrated.
- Flowers produced in spike.
- Active phytochemicals are aloin, aloesin, phytosterol.
- Having antioxidant, antimicrobial activities.

Uses:

- Wound, constipation, diabetes, skin injury, hair problems, psoriasis.

Tulsi

Scientific Name: *Ocimum sanctum*
Family: Lamiaceae

- ***Local Name:*** Tulsi
- ***Parts Used:*** Leaf

Basic Information:

- Erect, hairy stem.
- Simple, petiolate leaf with decussate phyllotaxy.
- Verticillaster inflorescence.
- Active phytochemicals are cirsilineol, circimaritin, isothymusin, apigenin, rosameric acid, appreciable quantities of eugenol.
- Having antioxidant, antimicrobial activities.

Uses:

- Fever, cold and cough, insect bite, respiratory problems.

Sadabahar

Scientific Name: *Catharanthus roseus*
Family: Apocynaceae

- ***Local Name:*** Sadabahar
- ***Parts Used:*** Leaf

Basic Information:
- Evergreen subshrub or herb.
- Oval to oblong glossy green leaves.
- Colored flowers with 5 petal like lobes.
- Small stamens.
- Active phytochemicals are vincristine, vinblastine.
- Having anticancer and antidiabetic activities.

Uses:
- Diabetes, cancer.

Sarpgandha

Scientific Name: *Rauvolfia serpentina*
Family: Apocynaceae

- ***Local Name:*** Sarpgandha
- ***Parts Used:*** Leaf, root

Basic Information:
- Perennial undershrub.
- Large leaves.
- Flowers occurring in whorls.
- Shiny, purple black ripe fruit.
- Active phytochemicals are alkaloid ajmaline, ajmalicine, serpentine, yohimbine, reserpine.
- Having antimicrobial activities.

Uses:
- High blood pressure, rheumatism, cardiovascular diseases.

Ashwagandha

Scientific Name: *Withania somnifera*
Family: Solanaceae

- ***Local Name:*** Ashwagandha
- ***Parts Used:*** Root

Basic Information:

- Short shrub.
- Elliptic leaves.
- Small, green, bell- shaped flower.
- Orange red ripe fruit.
- Active phytochemicals are withanolide, withaferin A.
- Having antimicrobial, anti-inflammatory activities.

Uses:

- Fatigue, insomnia, anxiety, stress.

Pan

Scientific Name: *Piper betle*
Family: Piperaceae

- ***Local Name:*** Pan
- ***Parts Used:*** Leaf

Basic Information:

- Evergreen, Dioecious.
- Heart shaped leaves.
- Active phytochemicals are eugenol, chavicol, hydroxychavicol, caryophyllene.
- Having antimicrobial, antiinflammatory activities.

Uses:

Cough, asthma, headache, rhinitis.

Bhoomi Amla

Scientific Name: *Phyllanthus niruri*
Family: Phyllanthaceae

- ***Local Name:*** Bhoomi amla
- ***Parts Used:*** Leaf

Basic Information:
- Plant bears ascending herbaceous branches.
- Light green and smooth bark.
- Pale green flowers.
- Fruit capsule.
- Active phytochemicals are lignans, flavonoid, glycoside, gernanin, amarin.
- Having antiviral, hepatoprotective activities.

Uses:
- Liver disorder, skin ailment.

Hadjod

Scientific Name: *Cissus quadrangularis*
Family: Vitaceae

- ***Local Name:*** Hadjod
- ***Parts Used:*** Stem

Basic Information:
- Quadrangular-sectioned branches.
- Toothed trilobe leaves.
- Evergreen climber.
- Active phytochemicals are α and β-amyrins, β-sitosterol, ketosetosterol, phenolics.
- Having antiinflammatory, analgesic activities.

Uses:
- Healing of broken bones, injured ligaments and tendons.

Lemon Grass

Scientific Name: *Cymbopogon citratus*
Family: Poaceae

- ***Local Name:*** Lemon grass
- ***Parts Used:*** Leaf

Basic Information:
- Strap, linear, entire leaf.
- Leaves have parallel venation.
- Pseudostem is formed.
- Crushed leaves have lemony scent.
- Active phytochemical is citral.
- Having antiinflammatory, analgesic activities.

Uses:
- Increase immunity, promote digestion, stabilize menstrual cycles.

Pathharchatta

Scientific Name: *Kalanchoe pinnata*
Family: Crassulaceae

- ***Local Name:*** Pathharchatta
- ***Parts Used:*** Leaf, stem

Basic Information:
- Perennial plant.
- Elliptical, fleshy leaves.
- Panicle inflorescence.
- Active phytochemicals are bufadienolide compounds, flavonoid, phenolics.
- Having antiinflammatory activity.

Uses:
- Treatment of kidney stone, hypertension, cancer.

Mandukparni

Scientific Name: *Centella asiatica*
Family: Apiaceae

- ***Local Name:*** Mandukparni
- ***Parts Used:*** Whole plant

Basic Information:
- Slender stem, creeping stolon.
- Root stalk consists of rhizome.
- White flowers borne in umbel infloresecence.
- Active phytochemicals are asiaticoside, brahmoside, asiatic acid, brahmic acid, centellose, centelloside.
- Having antiinflammatory activity.

Uses:
- Skin problems, digestive problems, blood purifier.

Neem

Scientific Name: *Azadirachta indica*
Family: Meliaceae

- ***Local Name:*** Neem
- ***Parts Used:*** Leaf, bark, fruit, seed oil

Basic Information:
- Fast growing, evergreen tree.
- Opposite pinnate leaves, short petiole.
- Flowers arranged in drooping axillary panicles.
- Fruit is glabrous drupe.
- Active phytochemicals are azadirachtin, polyphenols, triterpene.
- Having antifungal, immunomodulatory, antiinflammatory, antihyperglycemic, antimicrobial activity.

Uses:
- Skin problems, rheumatism, dental problems, upset stomach.

Ajwain

Scientific Name: *Trachyspermum ammi*
Family: Apiaceae

- ***Local Name:*** Ajwain
- ***Parts Used:*** Leaf, fruit

Basic Information:
- Annual herb.
- Schizocarpic fruit.
- Active phytochemicals are glycosides, saponin, phenolics, thymol.
- Having antiinflammatory, antioxidant activity.

Uses:
- Indigestion, arthritis, lowering inflammation.

Amla

Scientific Name: *Phyllanthus emblica*
Family: Phyllanthaceae

- ***Local Name:*** Amla
- ***Parts Used:*** Fruit

Basic Information:
- The tree is small to medium in size, reaching 1–8 m in height.
- Mottled bark.
- Pinnate leaves.
- Pale yellow spherical fruits with six vertical furrows.
- Active phytochemicals are ascorbic acid, tannin, flavonoid, emblicanin.
- Having antiinflammatory, antioxidant activity.

Uses:
- Immunity booster, digestive problems, liver problems, hair problems, skin problems.

Arjuna

Scientific Name: *Terminalia arjuna*
Family: Combretaceae

- ***Local Name:*** Arjuna
- ***Parts Used:*** Bark

Basic Information:

- Arjun grows to about 20–25 meters tall, buttressed trunk and forms a wide canopy at the crown.
- Oblong and conical leaves.
- Thick bark.
- Active phytochemicals are arjunic acid, arjunolic acid, arjungenin, arjunetin, tannins, glycosides.
- Having antiinflammatory, antioxidant activity.

Uses:

Hypertension, anginal pain, heart failure, dyslipidemia.

Chipkali Bel

Scientific Name: *Ficus Pumila*
Family: Moraceae

- ***Local Name:*** Chipkali bel
- ***Parts Used:*** Leaf

Basic Information:

- It is a woody evergreen climber.
- Oval, cordate leaves.
- Active phytochemicals are phenolics, terpenoids.
- Having antifungal, cardioprotective (some reported) activity.

Uses:

- Skin diseases, wounds, rashes, dyslipidemia.

Curry

Scientific Name: *Murraya koenigii*
Family: Rutaceae

- ***Local Name:*** Curry
- ***Parts Used:*** Leaf

Basic Information:

- It is a small tree, growing 4–6 meters (13–20 ft) tall.
- Trunk up to 40 cm in diameter.
- Pinnate leaves.
- Active phytochemicals are cinnamaldehyde, mahanimbine, girinimbine.
- Having cardioprotective, antidisease, antiinflammatory activity.

Uses:

- Hair growth, indigestion, dyslipidemia, antidisease.

Lahasun

Scientific Name: *Allium sativum*
Family: Amaryllidaceae

- ***Local Name:*** Lahasun
- ***Parts Used:*** Strongly aromatic bulb

Basic Information:

- Perennial flowering plant.
- Bulb.
- Sheathing leaf.
- Active phytochemicals are allicin, ajoene (sulfur containg).
- Having antioxidant, antiinflammatory, antimicrobial activity.

Uses:

- Pain management, dyslipidemia, other wide range of diseases.

Sehjan/ Sahijan

Scientific Name: *Moringa oleifera*
Family: Moringaceae

- ***Local Name:*** Sehjan/ Sahijan
- ***Parts Used:*** Leaf, fruit, seed

Basic Information:
- Deciduous tree.
- Hermaphrodite flower.
- Three-sided hanging fruits.
- Active phytochemicals are phenolic compounds.
- Having antioxidant, antiinflammatory, antibacterial activity.

Uses:
- Anemia, asthma, heart disease, malnutrition.

Jamun

Scientific Name: *Syzygium cumini*
Family: Myrtaceae

- ***Local Name:*** Jamun
- ***Parts Used:*** Leaf, fruit, seed

Basic Information:
- An evergreen tropical tree, tall, with oblong opposite leaves that are smooth, glossy and have a terpentine smell.
- It has fragrant white flowers in branched clusters at stem tips.
- Purplish-black oval edible berries.
- Active phytochemicals are β-sitosterol, myricitrin, quercetin, noctacosanol.
- Having antidiabetic, antiinflammatory, antibacterial activity.

Uses:
Strengthning the teeth and gums, diabetes, indigestion.

Kalmegh

Scientific Name: *Andrographis paniculata*
Family: Acanthaceae

- ***Local Name:*** Kalmegh
- ***Parts Used:*** Whole plant

Basic Information:

- An erect branched annual herb.
- Stem quadrangular, branched with longitudinal furrows.
- Leaves dark, simple, opposite, green and lanceolate.
- Flowers pale purple in axillary and terminal, panicle racemes.
- Fruits almost linear-oblong compressed capsules.
- Active phytochemicals are diterpenoid (andrographolide), flavonoid, polyphenol.
- Having antioxidant activity.

Uses:

- Common cold, diarrhoea, fever, liver.

Papeeta

Scientific Name: *Carica papaya*
Family: Caricaceae

- ***Local Name:*** Papeeta
- ***Parts Used:*** Leaf, fruit

Basic Information:

- Small, sparsely branched tree.
- A single stem growing from 5 to 10 m.
- Spirally arranged leaves.
- All plant parts contain latex in articulated laticifers.
- Active phytochemicals are carotenoids, polyphenol, lutein.
- Having antioxidant, antiinflammatory, antimicrobial activity.

Uses:

- Diabetes, dyslipidemia, neuralgia, liver problems.

Glossary of Different Terms

Analgesic: Acting to relieve pain.

Anemia: Condition when blood produces a lower than normal amount of healthy red blood cells.

Anginal: Chest pain due to reduced blood flow to heart.

Antioxidant: Substance that prevent cell damage by free radicals.

Arthritis: Joint inflammation.

Capsule: Fruit type.

Cardiovascular: Heart related.

Caries: Dental plaque produced by bacteria.

Dyslipidemia: Abnormal amount of all types of lipids in body.

Hepatoprotective: Prevention of liver damage.

Herb: Soft textured small plants with little woody tissue.

Hypertension: High blood pressure.

Inflammation: Body's response to injury or infection.

Insomnia: Sleep disorder.

Neuralgia: Nerve pain.

Petiolate: Leaf with petiole.

Phyllotaxy: Arrangement of leaves.

Phytochemicals: Plant derived chemicals.

Psoriasis: Overactive immune system, skin cells multiply rapidly.

Rheumatism: Any disease identified by inflammation and pain in the joints, muscles, or fibrous tissue, especially rheumatoid arthritis.

Rhinitis: Nasal congestion.

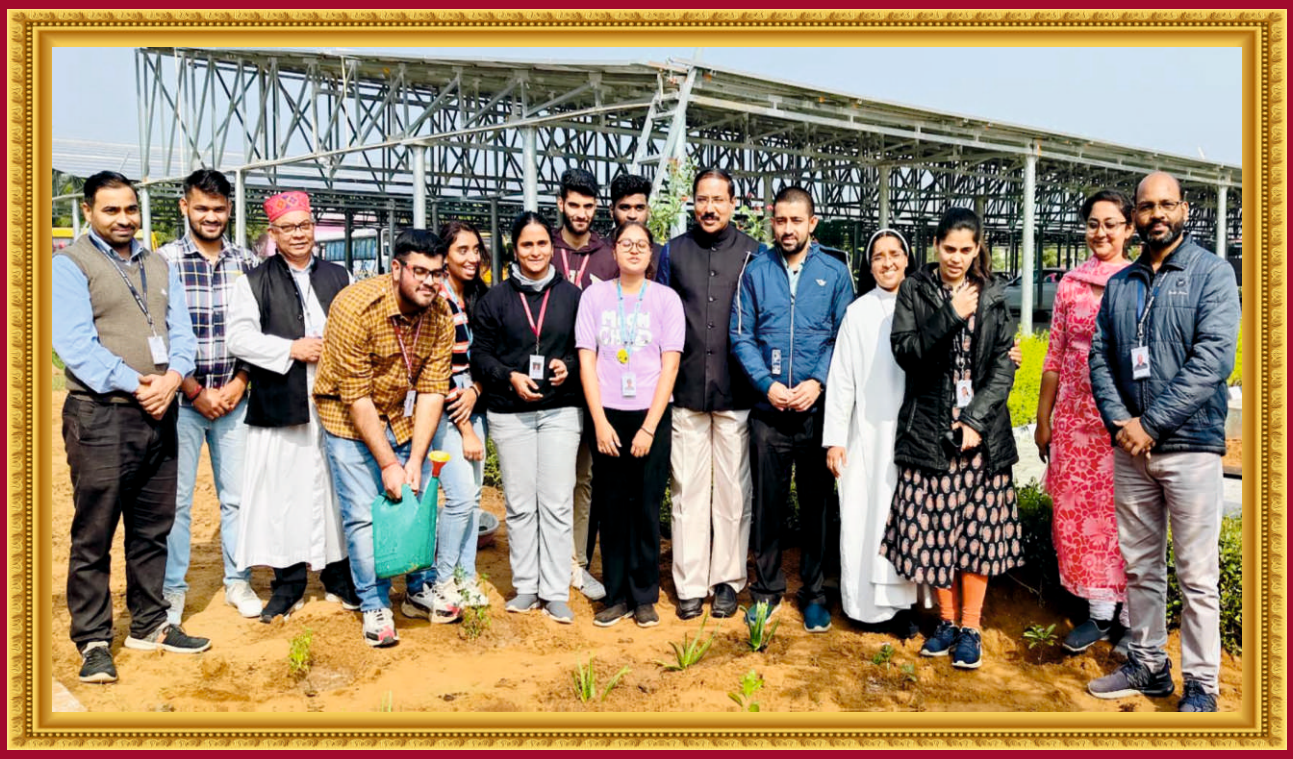
Serrate: Leaf margin is cut into the fine teeth.

Shrub: Perennial woody plant.

Spike: Type of inflorescence (arrangement of flowers on floral axis).

Verticillaster: Type of inflorescence.

The Team Behind AYUSH Udyan



St. Xavier's College Jaipur

Nevta - Mahapura Road, Near Nevta Dam, Jaipur, Rajasthan - 302029
T:+91 9828726366 / E: info@sxcjpr.edu.in,iqac@sxcjpr.edu.in
www.sxcjpr.edu.in