

CORE PAPER- VIII

**PLANT SYSTEMATICS ECONOMIC BOTANY
AND
ETHNOBOTANY**

UNIT - V

Cereal - Paddy



Cereal- Paddy

Oryza sativa. Family - Poaceae. It is the most important cereal of tropical climate.

Morphology of useful parts

Rice is the seed of monocot plants *Oryza sativa*. This is called Cereal grain and is consumed as staple food in a large part of world's human population. The inflorescence is panicle containing a number of branches, each terminating in a single grain.

Economic importance

- Rice is the major food of half of the world's population.
- Oil is processed from the bran for both food and industrial **uses**. Broken **rice** is used in brewing, distilling, and in the manufacture of starch and **rice** flour. Hulls are used for fuel, packing material, industrial grinding, fertilizer manufacture, and in the manufacture of an industrial chemical called furfural. Parched rice (pori) is crisp to eat. It is sold either salted or unsalted.
- The flattened parboiled rice is known as flaked rice. Like corn flakes, it is a very good break fast food. Flaked rice is also used for preparing different kinds of food items.
- Sake is an important alcoholic beverage prepared by the fermentation of rice.

- Bran is an important by-product of rice milling industry. It is used as a cattle feed.
- Bran oil is extracted either by expression in a hydraulic press or extra-ction with solvents. Bran oil is used as edible oil and for preparation of vanaspathi, making soaps. It is also used in the textile industry, leather industry.
- Bran wax is a by-product in bran-oil extraction. It is used in chocolate industry and in the manufacture of lip-sticks.
- Paddy husk is used as fuel, in brick kilns. It is also used in brick making.
- Straw is used as cattle feed, in the manufacture of straw-boards and for making hats, ropes, mats, etc.

Timber - *Pterocarpus santalinus*

Pterocarpus santalinus, with the common names **red sanders**, **red saunders**, **red sandalwood**, **Rakt Chandan**, and **saunderswood**, is a species of *Pterocarpus*. It belongs to Fabaceae



Morphology of useful parts

Pterocarpus santalinus is a light-demanding small tree, growing to 8 metres (26 ft) tall with a trunk 50–150 cm diameter. It is fast-growing when young, reaching 5 metres (16 ft) tall in three years. It attains a height of 10 m and a girth of 0.9–1.5 m under favourable growing conditions. The blackish-brown bark is fissured and resembles crocodile skin.

- The inner bark, when injured or cut, oozes red coloured ‘santolin’ dye.
- The wood is extremely hard and dark red in colour.

Economic importance

Due to its slow growth and rarity, furniture made from zitan is difficult to find and can be expensive . It has been one of the most prized woods for millennia.

Red sandalwood has been used for making the bridge and also the neck of the Japanese musical instrument Shamisen. It has great demand for the heartwood

Pterocarpus santalinus is used in traditional herbal medicine as an antipyretic, anti-inflammatory, anthelmintic, tonic, hemorrhage, dysentery, aphrodisiac, anti-hyperglycaemic and diaphoretic.

Pulse - Green gram



Vigna radiatae - **green gram Family -Fabaceae**

Morphology of useful parts - The pods are long, cylindrical, hairy and pending. They contain 7 to 20 small, ellipsoid or cube-shaped seeds. The seeds are variable in colour they are usually green

Economic importance

It is an excellent source of high quality protein (25%) having high digestibility. It is consumed as whole grains as well as "Dal" in a variety of ways in our food.

Sprouted green gram is used in the preparation of curry or a savory dish (South India). It is supposed to be easily digestible and hence the patients prefer it.

It is also a good source of Riboflavin, Thiamine and Vitamin C (Ascorbic acid). When green gram is sprouted, seeds synthesized remarkable quantity of ascorbic acid (Vitamin C). Green gram is also used as green manure crop. It being a leguminous crop has capacity to fix the atmospheric nitrogen

It fits well in many intensive crop rotations. Green gram can be used as feed for cattle.

Oil yielding plant - Coconut

Coconut, fruit of the coconut palm (*Cocos nucifera*), family (Arecaceae).



Morphology of useful parts -Mature fruits, ovoid or ellipsoid in shape, 300–450 mm (12–18 inches) in length and 150–200 mm (6–8 inches) in diameter, have a thick fibrous husk surrounding the familiar single-seeded nut . A hard shell encloses the insignificant embryo with its abundant endosperm, composed of both meat and liquid.

Uses-Besides the edible kernels and the drink obtained from green nuts, the harvested coconut also yields copra, the dried extracted kernel, or meat, from which coconut oil, a major vegetable oil, is expressed. The meat may also be grated and mixed with water to make coconut milk, used in cooking and as a substitute for cow's milk. The dry husk yields coir, a fibre highly resistant to salt water and used in the manufacture of ropes, mats, baskets, brushes, and brooms.

Other useful products derived from the coconut palm include toddy, palm cabbage, and construction materials. Toddy, a beverage drunk fresh, fermented, or distilled, is produced from the sweetish sap yielded by the young flower stalks when wounded or cut; toddy is also a source of sugar and alcohol. Palm cabbage, the delicate young bud cut from the top of the tree, is, like the buds from other palms, eaten as a salad vegetable. Mature palm leaves are used in thatching and weaving baskets. The fibrous, decay-resistant tree trunk is incorporated into the construction of huts.

Spices – Cinnamon

Cinnamon, (*Cinnamomum verum*), evergreen tree of the laurel family (Lauraceae).



cinnamon quills



Morphology of useful parts

The spice derived from its bark. The spice, consisting of the dried inner bark, is brown in colour and has a delicately fragrant aroma and a warm sweet flavour

- The most useful part of the cinnamon tree is the outer bark which is generally
- used as a spice and for several natural medicinal applications. The inner bark of
- the cinnamon tree has more medicinal effects and also contains more essential oil.

Uses

Cinnamon is often used for medicinal purposes due to its unique properties. These main properties of cinnamon are astringent, warming stimulant, carminative, antiseptic, antifungal, anti-viral, blood purifier, and digestive aid . All of these properties of cinnamon make it a good medicinal plant. Cinnamon is generally used as a spice or ingredients of curry powder. It is used as a spice or condiment in curries and similar preparations. It is also used in medicine as a cordial stimulant. It is also used in bowel complaints such as dyspepsia, diarrhoea and vomiting. Powder cinnamon is a reputed remedy for diarrhoea and dysentery. The bark also yields oil which the chief constituent is Cinnamic aldehyde.

Fiber - Cotton



Fibre plant - Cotton

Gossypium barbadense and *G. hirsutum* are some examples for fibre plants. Family – Malvaceae

Morphology of useful parts

The seeds are contained in a capsule called a "boll", each seed surrounded by fibres of two types. These fibres are the more commercially interesting part of the plant and they are separated from the seed by a process called ginning. The seed coat of cotton seeds produce fibres on their external surface. So, it is called as surface fibre.

Economic importance

Almost the entire textile industry depends on this fibre. Cotton is used in stuffing the pillows and cushions. It is also used in making rubber tyres, carpets, blankets and cordages are made from cotton.

It gives three important products: fibre, food and cattle feed.

Lint fibre is for clothing which is very much useful in the textile industries.

Seed is used for extracting oil. This is also used as vanaspathi.

Cotton flour prepared from the seed is used for bread and biscuit making.

Cotton seed cake is used as a good organic manure.

Fatty acids obtained from oil is used in the preparation of insecticide, fungicides and plastics, etc.

Beverage - Coffee



Binomial name - *Coffea arabica*

Family: Rubiaceae

Morphology of useful parts

Fruits on ripening yellow in color and then become crimson and black upon drying.

- It contain drup type fruit and the shape of fruit is ellipsoidal or spheroidal.
- In each fruit 2 locules are present and it contain 1 seed in each chamber.
- Seeds are green in colour while sperating from the plant.
- The inner surface of seed is deeply grooved .
- Seed contain green corneous endosperm and small embryo.
- Seeds are 8.5-12.5 cm long.

Uses

1. It is an important non-alcoholic beverage, like tea.
2. More than 90% coffee is obtained from the berries of *Coffea arabica*.
3. Coffee beans are roasted for developing the aroma, flavour and colour and finally ground before they reach to the consumer.
4. “Beans” contain caffeine (0.75 to 1.5%), a volatile oil, glucose, dextrans, proteins and a fatty oil.
5. Caffeine provide stimulating effect while the volatile oil (caffeole) is responsible for aroma and flavour.
6. Leaves and fruits of Coffee also contain some alkaloids.
7. In India, *C. arabica* is grown in Nilgiris and Kamataka.
8. Seeds of *C. canephora* (*syn. C. robusta*), a robust evergreen shrub, are used in making “instant coffee”.

Medicinal plant - *Phyllanthus amarus*

FAMILY Euphorbiaceae



Morphology of useful parts

Phyllanthus amarus is an erect, annual plant growing from 10 - 50cm tall, but usually less than 30cm. The stem can be branched or unbranched. The aerial parts of the plant are used in a bitter infusion as a cholagogue, diuretic, febrifuge and stomachic.

Uses

The plant is commonly gathered from the wild for local medicinal use.

Phyllanthus amarus is widely used as a medicinal plant and is considered to be a good tonic, diuretic and febrifuge.

The following chemical constituents have been isolated: lignans (e.g. phyllanthin, hypophyllanthin, phyltetralin, nirtetralin, niranthin), ellagitannins (phyllanthusiin D, amariinic acid, elaeocarpusin, repandusinic acid A and geraniinic acid B), flavonoids, tannins, alkaloids of the quinolizidine type, phenolic compounds and a chroman derivative[

The leaves were found to contain the highest amounts of phyllanthin (0.7%) as compared to the whole plant: phyllanthin (0.4%), hypophyllanthin (1.2%), gallic acid (0.4%) and ellagic acid (0.2%) Phyllanthin and hypophyllanthin have protective activity against cytotoxicity. However, phyllanthin has also been reported to be toxic to the nervous system and liver[

Aqueous extracts show potent anticarcinogenic activity against development of different tumour types.

Paper and Pulp- Casuarina

Casuarina equisetifolia



Family- Casuarinaceae

Morphology of useful parts

Casuarina is an evergreen tree growing to 6–35 m (20–115 ft) tall. The foliage consists of slender, much-branched green to grey-green twigs 0.5–1 mm (0.020–0.039 in) diameter, bearing minute scale-leaves in whorls of 6–8.

Uses

Casuarina is widely used as a bonsai subject, particularly in South-east Asia and parts of the Caribbean. The wood of this tree is used for shingles, fencing, and is said to make excellent hot-burning firewood., *Casuarina* are also grown for erosion prevention, and in general as wind breaking elements.

The *Casuarina* leaves are usually used for ornamental purposes in the urban region. Other than ornamental purposes, the *Casuarina* was also explored in for its potential in remediation of textile dye wastewater. *Casuarina* leaves were found to be useful as absorbent material for the removal of textile dyes such as reactive orange 16 Rhodamine B, methylene blue, malachite green and methyl violet 2b. Similarly the *Casuarina* dried cone was also reported to be able to remove Rhodamine B, and methyl violet 2b.

The *Casuarina* bark was reported to able to remove methylene blue. Even the *Casuarina* seed was also found to be useful in dye removal of neutral red and malachite green. The carbon derived from the cones of *Casuarina* was found to be good absorbent for the landfill leachate while another laboratory also reported good absorbent for copper ions from aqueous solution.

Casuarina equisetifolia Lin. has been used traditionally for treating inflammation, cancer and other diseases, but its efficacy has not been scientifically examined in treating arthritis; the bark extract showed anti-arthritic activity.

Ethnobotany

Ethnobotany is the scientific study of the relationships that exist between people and plants. Ethnobotanists aim to document, describe and explain complex relationships between cultures and (uses of) plants: focusing, primarily, on how plants are used, managed and perceived across human societies (e.g., as foods; as medicines; in divination; in cosmetics; in dyeing; as textiles; in construction; as tools; as currency; as clothing; in literature; in rituals; and in social life)

According to Schultes (1962), ethno botany is defined as the study of the relationships between the people of a primitive society and plants.

Alcom (1984) states that ethno botany is the study of contextualized plant use.

Jain (1987) elaborated it as the total natural and traditional relationship and interaction between man and his surrounding plant wealth. Recently, Wickens (1990) defined ethno botany as the study of useful plants prior to commercial exploitation and eventful domestication. In fact, ethno botany is the first knowledge on plants which primitive and aboriginal people had acquired by sheer necessity, intuition, observation and experimentation in the forests.

In the early nineteenth century the isolation of alkaloids such as morphine, quinine etc. as effective drugs from the herbs heralded new era in the use of plant products in modern medicines. The twentieth century has witnessed the emergence of ethno botany as a distinct academic branch of natural science. There has been an increasing interest in the scientific study of ethnic plants used by various indigenous peoples commonly designated as aboriginal natives, first people, original settlers, adivasees, Vanya jaati (forest castes), Aadim Jaati (primitive castes), Jan Jaati (folk communities) and tribals.

Plants of Ethno botanical Importance

The tribals and natural populations living in different parts of India use plant species of forest floras for food, fodder, fibres house building, fuels, medicines, beverages, oils, gums, resins, dyes, basketry, timber and wood works, musical instruments, fish poisons, religious ceremonies, narcotics etc. About 5000 plant species have been recorded so far which are used by tribals and aboriginal communities in different states. Some of the plants are used for particular purposes in more than one state while the others are used only in one state.

The ethnic plant wealth may be divided into the following groups on the basis of their uses:

- (1) Wild edible plants (food plants)
- (2) Ethno medicinal plants
- (3) Fibre and floss yielding plants

- (4) Oil yielding plants
- (5) Dye yielding plants
- (6) Gum and resin yielding plants
- (7) Ethno toxic and fish poison plants
- (8) Timber and wood work
- (9) Tannin yielding plants
- (10) Plants used in basketry and brooms. Some less known ethnic plants which are used by tribals for food, ethno medicine and narcotic purposes are listed here.

Importance of Ethno botany

It provides information regarding the traditional uses of plant wealth which can be utilized in integrated tribal development.

The ethno botanical studies throw light on certain unknown useful plants and new uses of many known plants which can be exploited for developing new sources for some plant products and agro based industries such as, food processing, fibres and floss, cordage and basketry, extraction of edible and nonedible oils, gum, resins, tannin, dye extraction for the upliftment of tribal communities.

The tribals depend mostly on forest flora for meeting their day to day needs and primary health care. They collect and utilize many wild plants for food, medicines, fibres, oils, gums, tannins and dyes from the ambient vegetation of their localities.

Tribal communities utilize ethno medicinal plants for the treatment of diseases and disorders like diarrhea, dysentery, fever, headache, skin diseases, boils and blisters, rheumatism and gout, piles jaundice, ophthalmic diseases, toothache, bone fracture, snake bite, helminthic or worm infection, cuts and wounds, cough, cold, asthma, leprosy etc. The ethno medicinal data will serve as a useful source of information for the chemists, pharmacologists and practitioners of herbal medicines for detection and isolation of bioactive compounds used in modern medicines.

During the last few decades, a succession of the so called Wonder drugs e.g. reserpine quinine, ephedrine, cocaine, emetine, khelline, colchicine, digitoxin, artemisin, podophyllotoxin, guguhipid, taxol etc. have been discovered from plants with rich ethno botanical lore in tribal societies. The isolation of these alkaloids from plants heralded a new era in the use of plant products in modern medicines.

The efficacies of a number of phytopharmaceuticals derived from plants such as atropine (pupil dilator), berberin (used in gastrointestinal disorders), caffeine (a stimulant), digitoxin (a cardiac tonic), emetine (antiamebic), ephedrine (anti asthmatic), morphine (analgesic), papain (protein digestant and anthelmintic), quinine (antimalarial), reserpine (tranquilizer), Vinblastine and

Vincnstme (antileukaemic), Camptothecin, (antitumour), forskoline (hypotensive and antispasmodic) with rich folk-lore have been discovered.

The recent discovery of certain bioactive compounds such as artemisin (antimalarial drug from *Artemisia annura*), taxol (anticancer drug obtained from *Taxus brevifolia*), hypericine (antiviral from *Hypericum perforatum*), Gossypol (a male contraceptive from *Gossypium spp*), yue chukene (antifertility agent from *Murraya penniculata* triggered the interest in medicinal plants all over the world. Further efforts are being made with a view to discover potent herbal medicines based on ethnotherapeutics prevalent in tribal and aboriginal societies.

The knowledge of ethno botany plays a vital role in the primary health care and economy of the tribals and aboriginal populations of our country and has potential for the discovery of new herbal drugs and new sources of nutraceuticals etc.

Medicinal Practices of Irulas

The Irulas, the largest Tamil speaking adivasi (Aboriginal) tribe in Tamil Nadu, found themselves virtually bonded labourers in 1976 when the Forest Protection Bill deprived many of their traditional lifestyle. The Irulas started moving to the neighbouring villages in hope of rebuilding their lives. The Irulas revealed a diversity of plants that have medicinal and nutritional utility in their culture and specific ethnotaxa used to treat a variety of illnesses and promote general good health in their communities. These tribal groups living in biodiversity rich areas possess a wealth of knowledge on the utilization and conservation of food and medicinal plants. This knowledge has been passed on from one generation to another without any written document, and also it has helped them to have sense of responsibility in judicious utilization of the plant resources and also to conserve. Moreover, it is an undeniable fact that the knowledge of indigenous people is invaluable in the present day context of biological diversity conservation and its sustainable utilization.

One of the ailments that may be controlled by daily consumption of a particular plant is diabetes. Irulas have an ancient diagnostic system that utilizes their natural surroundings; to determine whether someone has '*Chakari noie*' (diabetes) the person is asked to urinate on the ground to see if ants are attracted to the abnormally high sugar concentration in their urine. The Irulas treat diabetes using an ethnotaxa called '*Sirukurinjan*', which appears to be *Gymnema sylvestre* in the Asclepiadaceae or "milkweed family". Many Irulas families grow *Gymnema sylvestre* as a climbing vine near their home and it is a household custom to consume one leaf a day. They also regularly add leaves to several of the common curry dishes at least once a week even though the leaves add a bitter taste to the meal. If a young member of the household is diagnosed with '*Chakari noie*' (diabetes), they will be asked to consume 2 to 3 fresh tender leaves every morning before meals with a glass of water for about a year.

The Irulas treat 'Moottu vadham' (rheumatoid arthritis) with at least two different ethnotaxa, including 'Vagai' and 'Mudakkathan' *Cardiospermum halicacabum* L. *sensu lato* ('balloon vine') and 'Vagai' to be *Salvadora persica* L. The Malasars treat rheumatic pain using two other plants, *Diplocyclos palmatus* (L.) C. Jeffrey and *Boerhavia diffusa* L..

' Vagai ' and ancient remedy for ' Moottu vadham ' (rheumatoid arthritis).

' Mudakkathan ' ancient remedy for ' Moottu vadham ' (rheumatoid arthritis).

Some modalities are less specific and are treated with a general all purpose plant such as 'Veeraii', which means 'vigorous blood'. 'Veeraii' has reddish sap and is used to treat 'Ratha o'ttam' (blood circulation problems). We identified this ethnotaxa as *Diospyros ferrea* var. *buxifolia* (Wild.) Bahk. Previous research indicates that Malasars used 'Ratha surai' (*Begonia malabarica* Roxb.), which also has reddish sap, to treat blood disorders. We had one record of the Irulas (an isolated mountain community near the Malasars), which used *Begonia malabarica* Roxb. to treat blood cancer. *Abrus precatorius* L., *Crotalaria verrucosa* and *Selaginella rupestris*, .

MENISPERMACEAE

Cyclea peltata (Lam.) Hook.f.,

Local name: Sethari Kodi

Uses: Leaf juice administered orally to get relief from cough, cold and body pain.

CAPPARIDACEAE

Celome monophylla L.,

Local name: Kadugu sedi

Uses: Leaf juice added as drops into The ear to cure earache.

MALVACEAE

Malvatrum coromandelianum (L) Garke,

Local name: Kalakenikai

Uses: Roots grind with water and administered orally for stomach pain.

OXALIDACEAE

Oxalis corniculata L.,

Local name: Puliyankeerai

Uses: Leaf paste mixed with water and taken orally to cure vomiting and headache.

RUTACEAE

Glycosmis mauritiana (Lam.)Yaich.,

Local name: Panasedi

Uses: Leaves and barks were crushed and applied on forehead to cure severe headache.

Naringi crenulata (Roxb) Nicolson,

Local name: Naivalampattai

Uses: Strange belief among the tribes is if the bark is crushed with water or milk and drink it will protect them from all types of diseases.

Ruta graveolens L.,

Local name: Arubathansedi

Uses: Leaf paste applied externally in children's stomach to cure diarrhea, stomach pain and vomiting.

MELIACEAE

Cipadessa baccifera (Roth.) Miq.,

Local name: Marundha soppu Uses: Leaf paste is used as curative in chronic rheumatism

SAPINDACEAE

Dodonaea angustifolia L.f.,

Local name: Marundha soppu

Uses: Leaves were boiled with sesame oil and applied externally to get relief from rheumatic pains.

CAESALPINIACEA

Caesalpinia bonduc (L) Roxb.,

Local name: porumaielai

Uses: Root juice taken orally to get relief from gastric disorders. Seeds are grind with sesame oil and taken orally to increase body weight.

APLACEAE

Centella asiatica (L) Urban,

Local name: Kutheraikokku

Uses: Crushed leaves mixed with sugar candy and taken as a digestive agent and also regulate the blood circulation.

Buplerum wightii P.K. Mukherjee,

Local name: Malai seragam

Uses: Root and leaf juice administered Orally for timely and easy delivery.

Heracleum ceylanicum Gardner ex C.B. Clarke,

Local name: Ponaikal sedi

Uses: leaves and young stems crushed with sesame oil and used against insect allergy.

RUBIACEAE

Rubia cordifolia L.,

Local name: Periya nangai.

Uses: Leaf juice administered orally to cure cough, cold and nervous disorders.

ASTERACEAE

Adenostemma lavenia (L.) Kuntze,

Local name: Kasirukai

Uses: Fresh leaves boiled with water and the paste is applied externally on the body to cure skin diseases.

***Artemisia parviflora* Buch – ham. Ex Roxb.,**

Local name: Railpundu

Uses: Leaf past applied on forehead to get relief from headache.

PLUMBAGINACEAE

Plumbago zeylanica L.,

Local name: Cithiramalliver.

Uses: Roots ground with water and applied over the body against insect bite.

LAMIACEAE

***Plectranthus malabaricus* (Benth.) R.H. Willemse,**

Local name: Ellamabai

Uses: Leaf juice administered orally for smooth functioning of heart. It will also prevent heart attack.

ARISTOLOCHIACEAE

Aristolochia tagala Cham.,

Local name: Modhalaikodi.

Uses: Leaves and tender stem were ground and administered orally to cure diarrhea and vomiting.

SANTALACEAE

Thesium wightianum Wall. ex Wight,

Local name: Anaikchi

Uses: Whole plant was kept in a cloth and tied on the cheek to prevent bulging.

HYPOXIDACEAE

***Curculigo orchioides* Gaertn.,**

Local name: Nelapanai

Uses: Juice of rhizome used as an antidote for snake bite.

COLCHICACEAE

Gloriosa superba L.,

Local name: Kodanki kizhangu.

Uses: Tubers ground and made into pills and used as sleeping tablet but heavy dose will cause death.

S. No	Botanical name	Family	Local Name	Habit	Parts used	Method of preparation and mode of usage	Ailments treated
01.	<i>Adina cordifolia</i> Hk. f.	Rubiaceae	Manjal Kadambai	Tree	Bark	Fresh bark is ground with brown sugar and cumin. The paste of this mixture is taken internally to treat female asthenia.	Body Weakness and Uterus related problems
02.	<i>Toddalia asiatica</i> Lamk.	Rutaceae	Masiha chedi	Herb	Bark	Paste is prepared from fresh stem bark and it is taken internally as well as topically to cure paralyzes	Paralyzes
03.	<i>Strebulus Asper</i> Lour	Moraceae	Kembara	Shrub	Leaf	Leaf paste is applied topically to treat measles like swellings on the skin	Skin diseases
04.	<i>Asparagus racemosus</i> Willd.	Liliaceae	Neermuthi	Shrub	Leaf and Root	Leaf and root powder is mixed with breast milk. The paste is taken internally to improve immunity of children	Weakened immunity
05.	<i>Cardiospermum helicacabum</i> Linn.	Sapindaceae	Thatu putu	Climber	Leaf	Paste of leaves with onion and coconut oil is taken orally for joint pain	Arthritis
06.	<i>Randia dumetorum</i> Lamk.	Rubiaceae	Kaarai kai chedi	Shrub	Seed and Fruit	Fruits are rubbed on hard substances and paste is applied topically to cure skin diseases	Dermatitis
07.	<i>Andrographis paniculata</i> Nees.	Acanthaceae	Periaa nangai	Shrub	Leaf	Leaf paste is taken orally for snake bite and to reduce pain	Snake bite, Chikun kunai

08.	<i>Ziziphus oenoplia</i> Mill.	Rhamnaceae	Churipala chedi	Shrub	Fruit and Bark	Bark and Fruit paste along with cumin is taken internally to treat diarrhea	Diarrhoea
09.	<i>Caesalpinia sepiaria</i> Roxb.	Caesalpiniaceae	Intha chedi	Shrub	Leaf	Leaves are cooked and taken orally with food for digestion problems	Stomach disorder
10.	<i>Amaranthus spinosus</i> Linn.	Amaranthaceae	Mullu Keerai	Herb	Leaf and Root	Leaf paste along with lemon juice is taken with food to cure stomach ulcer	Stomach ulcer
11.	<i>Acacia torta</i> Craib.	Mimosaceae	Seeva keerai	Climber	Leaf and Young twig	Leaf is cooked with onion and taken with food. It facilitates the expulsion of gas.	Stomach disorder
12.	<i>Zizyphus mauritiana</i> Linn.	Rhamnaceae	Kodithotti maram	Tree	Leaf	Paste of leaf along with the leaves of <i>Ailanthes excelsa</i> Roxb. is taken internally as well as topically to treat paralyze	Paralyze
13.	<i>Sida acuta</i> Burm.	Malvaceae	Kala karandai	Herb	Leaf	Crush the fresh leaves and the juice is applied topically to treat boils	Boils
14.	<i>Spilanthes acmella</i> Murr.	Asteraceae	Manjal Poo chedi	Herb	Flower	Flowers are crushed and applied on the site of toothache	Toothache
15.	<i>Ailanthes excelsa</i> Roxb.	Simarubaceae	Peevari maram	Tree	Leaf	Decoction is prepared from leaves and taken internally to treat paralyze	Paralyze
16.	<i>Hemidesmus indicus</i> R. Br.	Asclepiadaceae	Nannari	Climber	Leaf	Root and Leaf decoction is taken orally to regulate digestion	Stomach disorder

17.	<i>Argemone mexicana</i> Linn.	Papaveraceae	Manjal Paal chedi	Herb	Latex	Latex of the plant is applied topically on the site of boils	Boils
18.	<i>Mimosa pudica</i> Linn.	Mimosaceae	Thotta sinungi	Herb	Leaf	Root and Leaf infusion is applied on the wounds	Wound healing
19.	<i>Leucas aspera</i> Spreng.	Lamiaceae	Kennathumbai	Herb	Leaf	Leaf paste or crushed leaf is taken both externally & internally to treat snake bite, It is also applied topically on the forehead to cure one side headache	Snake bite, One side headache
20.	<i>Ruellia patula</i> Jacq.	Acanthaceae	Puni chedi	Herb	Leaf	Leaf paste is applied topically all over the body to treat children fever	Children fever
21.	<i>Cissus quadrangularis</i> Linn.	Vitaceae	Perandai	Lianas	Stem and leaf	Paste of stem and leaf is taken orally with food for easy digestion and to increase appetite	Stomach disorder
22.	<i>Achyranthes aspera</i> Linn.	Amaranthaceae	Nauruvi	Herb	Leaf	Paste of leaf with onion is applied externally on the bitten site of dog and to cure skin diseases	Rabies, Skin diseases
23.	<i>Syzygium cumini</i> Linn.	Myrtaceae	Naval palam	Tree	Seed	Seed powder mixed with either hot water or cow's milk are taken orally in empty stomach to treat diabetes	Diabetes
24.	<i>Abrus precatorius</i> Linn.	Fabaceae	Vellai kundu mani	Climbing shrub	Seed	Decoction of seed is taken orally to increase sperm count and to treat stomach pain	Stomach problems and sexual disorder

25.	<i>Lantana camera</i> Linn.	Verbanaceae	Unichedi	Shrub	Leaf	Leaf paste is applied topically to treat wounds	Wound healing
26.	<i>Solanum nigrum</i> Linn.	Solanaceae	Chukuti chedi	Herb	Leaf and Fruit	Leaves and fruits are chewed and swallowed to cure mouth ulcer	Mouth ulcer
27.	<i>Sesbania. aegyptiaca</i> Pers.	Fabaceae	Sitha hathi	Shrub	Tender twig and seed	Tender twig and seeds are infused with coconut oil and applied topically on the hair regularly for healthy and black hair	Problems in hair growth and body heat
28.	<i>Tridax procumbens</i> Linn.	Asteraceae	Mookuthi chedi	Herb	Leaf	Leaf juice is applied topically on wounds	Wound healings
29.	<i>Phyllanthus amarus</i> Linn.	Euphorbiaceae	Keela nelli	Herb	Root and fruit	Roots and fruits are crushed and mixed with goat's milk. The mixture is taken orally to cure jaundice and liver problems	Liver problems
30.	<i>Euphorbia Hirta</i> Linn.	Euphorbiaceae	Ammaan pachcharsi	Herb	Leaf and fruit	Leaf and fruit powder is mixed with cow's milk and taken orally to treat Leucorrhoea and to keep the body cool	Leucorrhoea
31.	<i>Jatropha curcas</i> Linn.	Euphorbiaceae	Katta amankku	Shrub	Bark and latex	Decoction prepared from bark and mixed with water. The water is used to take bath for the treatment of stomach problems during pregnancy. Latex is taken orally for same purpose	Stomach related problems during pregnancy

32.	<i>Bauhinia retusa</i> Ham.	Fabaceae	Aathi	Shrub	Leaves and fibres	Leaves are fumigated and s inhaled to get relief from fever. The stem fibres are used in coir production.	Fever
33.	<i>Azima tetragantha</i> Lamk.	Salvadoraceae	Mullu kuthi chedi	Herb	Leaf	Decoction prepared from leaves and is taken orally to treat cold and cough	Cold and cough
34.	<i>Flacourtia ramontchi</i> 'L'Herit.	Bixaceae	Kejalika chedi	Herb	Fruit	Ripened fruits are taken orally to keep the body cool	Body heat
35.	<i>Cassia tora</i> Linn.	Fabaceae	Thahara chedi	Herb	Shoot tip	Tender twigs are cooked with onion and taken with food	Used as a vegetable
36.	<i>Solanum xanthocarpum</i> Schrad	Solanaceae	Kandan kattiri	Herb	Fruit	Unripe fruits are cooked and taken with food	Used as a vegetable
37.	<i>Solanum indicum</i> Linn.	Solanaceae	Mullu chundal	Herb	Fruit	Unripe fruits are cooked and taken with food to expel tapeworms. These fruits are used to preparing pickles	Expelling worms
38.	<i>Ficus retusa</i> Linn.	Moraceae	Athi maram	Tree	Leaf and fruit	Paste of Leaf along with their fruit combined with cumin is taken orally to cure swellings, Lung blockage. It is best for treat diabetes and applied topically over the fractured bones.	Diabetes, bone fracture , cold, swellings
39.	<i>Spilanthes</i>	Asteraceae	Vettu marunthu	Herb	Leaf	Leaf paste is applied	Wound

	<i>calva</i> Wt.		Chedi			directly on wounds	healings
40.	<i>Capparis sepiaria</i> Linn.	Violaceae	Thotti chedi	Herb	Fruit and Root	Leaves are pasted with lemon juice and are applied topically to treat swellings. The fruits are edible.	Swellings
41.	<i>Launaea pinnatifida</i> cass.	Goodeniaceae	Kaatu thumbi	Herb	Leaf	Leaf decoction is taken internally to get relief from fever	Fever
42.	<i>Oxalis Corniculata</i> Linn.	Oxalidaceae	Puliyarai	Small herb	Root	Paste of Root is taken orally to treat common fever	Fever
43.	<i>Euphorbia heterophylla</i> Linn.	Euphorbiaceae	Paal Poodu	Herb	Leaf	Leaf is cooked with coconut oil and onion. It is taken with food for stomach problems and to treat dysentery	Stomach problems and dysentery
44.	<i>Ocimum basilicum</i> Linn.	Lamiaceae	Thiruneetru pachai	Herb	Leaf	Dried leaves are kept in fire and the smoke is inhaled to cure Asthma	Asthma and other breathing problems
45.	<i>Croton sparsiflorus</i> Morang.	Euphorbiaceae	Sinathamani chedi	Herb	Latex	Plant latex is applied externally on the site of wasp sting	Wasp sting
46.	<i>Cocculus hirsutus</i> Diels.	Menispermaceae	Vella katha kodi	Climber	Leaf	Paste is prepared from leaves and it is administered orally to treat Leucorrhoea	Leucorrhoea
47.	<i>Abutilon indicum</i> G. Don.	Malvaceae	Thuthi	Herb	Leaf	Leaf is cooked with onion and taken orally to treat piles	Piles

48.	<i>Eclipta prostrate</i> Linn.	Asteraceae	karisalanganni	Herb	Whole plant	The powder of <i>Eclipta prostrata</i> , <i>Leucas aspera</i> and <i>Phyllanthus niruri</i> are mixed with butter milk and taken orally to cure jaundice	Jaundice
49.	<i>Lawsonia inermis</i> Linn.	Lythraceae	Maruthondri	Shrub	Leaf	The fresh leaves are ground and gargled to treat mouth ulcer.	Mouth ulcer
50.	<i>Datura metel</i> Linn.	Solanaceae	Karu oomathai	Leaf	Herb	The fresh leaves are boiled with gingelly oil and applied topically on joints to cure swellings	Swelling in joints
51.	<i>Mukia maderaspatans</i> Linn.	Cucurbitaceae	Musu musukai	Leaf	Climber	Boil the leaf juice with gingelly oil and applied topically on the head before taking bath to cure Asthma	Asthma
52.	<i>Trianthema decandra</i> Linn.	Aizoaceae	Sathi charanai	Root	Herb	The root of this plant is taken internally to treat Elephant dialysis	Elephantiasis
53.	<i>Santalum album</i> Linn.	Santalaceae	Santhana maram	Tender twig	Tree	The paste of tender twig mixed with the juice of <i>Phyllanthus emblica</i> are taken orally to treat urinary tract infection and it is best for diabetes	Urinary tract infection and diabetes
54.	<i>Indigofera aspalathoides</i> Vahl.	Fabaceae	Sivanar vembu	Whole plant	Herb	The ash of the whole plant is added with coconut oil and applied topically to treat psoriasis	Skin diseases
55.	<i>Plumbago</i>	Plumbaginaceae	Kodiveli	Root	Herb	Root is pasted with	Piles

	<i>zeylanica</i> Linn.					gingelly oil and applied topically to cure piles	
56.	<i>Bauhinia tomentosa</i> Linn.	Caesalpiaceae	Mantharai	Leaf	Shrub	The leaf powder is mixed with honey are taken internally to treat digestive problems and vomiting	Digestive disorders
57.	<i>Rubus ellipticus</i> Sm.	Rosaceae	Vella mulli	Root	Climber	The root paste is taken internally to treat paralyzes	Paralyze
58.	<i>Cipadessa baccifera</i> Miq.	Meliaceae	Seeruholi maram	Root, leaf and bark	Tree	The paste of root, leaf and bark is applied topically to cure psoriasis	Skin diseases
59.	<i>Cassia hirsuta</i> Linn.	Caesalpiaceae	Paaparettai	Root	Shrub	The root is pasted with cumin and taken internally to treat stomach burning after a meal.	Digestive disorders
60.	<i>Glycosmis pentaphylla</i> correa.	Rutaceae	Molehulukki	Root	Shrub	The root is pasted with cumin and taken internally to treat Asthma.	Asthma
61.	<i>Alangium salvifolium</i> Wang.	Alangiaceae	Marada kodi	Whole plant	Climber	The fresh plants are fried and taken internally to treat chest burning	Burning sensation
62.	<i>Grewia tiliaefolia</i> Vahl.	Tiliaceae	Thadasu maram	Bark	Tree	The decoction of bark is apply all over the head before taking bath to treat mental illness	Mental illness.

63.	<i>Terminalia bellarica</i> Roxb.	Combretaceae	Thaanthi maram	Bark and root	Tree	The bark and root are grind & took extract, which is applied topically to treat unnecessary peelings on the skin.	Skin diseases
64.	<i>Curculigo orchioides</i> Gaetrn.	Hypoxidaceae	Nilappanai	Whole plant	Tree	The leaf paste taken internally to increase sperm count.	Genital disorder
65.	<i>Rubia cordifolia</i> Linn	Rubiaceae	Chevvali kodi	Leaf	Climber	The leaf paste is applied topically to scorpion sting and dizziness	Scorpion sting
66.	<i>Boerhaavia diffusa</i> Linn	Nyctaginaceae	Saranda kodi	Whole plant	Herb	The plant is pasted with cumin and taken internally to cure digestive problems	Digestive disorder
67.	<i>Lantana whitiana</i> Wall.	Verbanaceae	Vella uni chedi	Leaf	Shrub	The leaf is ground with <i>Cipadessa baccifera</i> root, leaf and bark & applied topically to treat Psoriasis	Skin disease
68.	<i>Adhatoda vasica</i> Nees.	Acanthaceae	Adathodai	Leaf	Shrub	The leaf decoction is taken internally to cure cold and cough.	Cold and cough
69.	<i>Jasminum angustifolium</i> Vahl.	Oleaceae	Kattu mallige	Leaf	Shrub	The leaf is boiled in water and taken with food to cure diahhroea	Diahhroea
70.	<i>Murraya paniculata</i> (L) Jack.	Rutaceae	Sedisil maram	Leaf	Shrub	The leaf paste is applied over the wounds to heal	Wounds

