MULTIPURPOSE INDIGENOUS SPECIES FOR MEDICINAL USE

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The knowledge of materia medica preserved in different types of indigenous medical systems is very large. Ethno pharmacology is the subject which go deep into the science of materia medica of different ethnic groups. Ayurveda, the ancient science of healing speaks a great deal about the use of different species of plants with varied uses. Enormous literature is found in the ancient texts about the habitat, methods of cultivation, manuring and other uses such as food, medicine or ornamental.

There is a big threat to these plants as the public is unaware of their medicinal values or otherwise. It is our duty to educate them show how money could be earned by growing medicinal plants, besides other uses such as timber, fodder, manure, ornamental, effects on environment etc. This will enable them to protect them from extinction.

The following indigenous species are extensively used in Ayurvedic medicine but due to their inadequate supply some are yet imported from India incurring much valued foreign exchange. Growing of these species will provide self employment opportunities, while the drug manufacturers could get quality raw materials, with many other accrued benefits of the people. The important multipurpose species are: *Santalum album, Terminalia arjuna, Madhuca longifolia, Woodforlia fruticosa, Acorus calamus, Abrus precatorius, Solanum xanthacarpum, Nelumbo nurifera, Plumbago zeylanica, Tinospera cardifolia, Azadiracta indica, Aloe vera, Adhatoda vasica, Hibiscus abelmoschus, Saraca indica.*

***Santalum album* L.**

Family	:	Santalacea
Sanskrit Name	:	Chandana
Sinhala Name	:	Sudu Handun

Small evergreen tree grows wild or are cultivated in Mysore, State and Coorg, Coimbatore in South India and in Haputale and Welimada area in Sri Lanka. Parts used in medicine are wood, volatile oil and leaves.



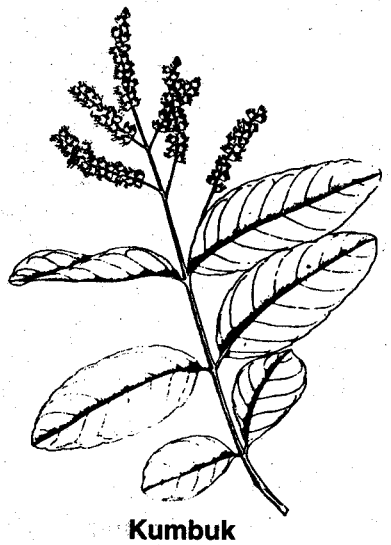
Sudu Handun

Wood is bitter, cooling, sedative and astringent. Oil is astringent and disinfectious to the mucous membranes of the genitourinary and bronchial tracts, also diuretic, expectorant and stimulant. Medicinally Sandal Wood is useful in biliousness, fever and thirst, applied externally in the form of a paste with water or rose water to scorpion stings, inflamed swelling, to prickly heat and skin eruptions, to the temples in headaches, fevers and hemicrania and to skin diseases to allay itching, inflammation, heat and pruritis. It is used to check gastric irritability, dysentery and relieves excessive thirst and heat of the body. Sandal Wood oil is a popular remedy in gonorrhoea, chronic cystitis, bronchitis, gleet and urethral haemorrhage. Leaves are used as a vegetable. It could be a shade tree in the tea plantation. Birds like the fruits. They will prey on other insects too. Oil is extracted from the hard wood and root. It is extensively used in medicine and perfumes. Large scale growing can be done in the Uva province.

***Terminalial Arjuna* Wight & Arn**

Family : Combretaceae
Sanskrit Name : Arjuna
Sinhala Name : Kumbuk

A large tree grows near water ways. The bark and leaves are used as medicine. A herbal wine 'Arjuna Arishta' is made from the bark. The bark is astringent, cardiac stimulant, tonic, lithotropic. The decoction is used in diarrhoea, haemorrhage and used as an antidote to poison. It is used in endocarditis, pericarditis, angina and in ulcers. Bark contains tannin, a colouring matter, a glucosidal and ash, containing sodium, pure calcium carbonates and traces of alkaline chlorides. Could be grown on the sides of rivers and water ways to check erosion. It is believed that Arjuna root purifies the water. It is grown near the wells by the villagers. It is a hard tree which could withstand serve droughts, floods and winds. In India it is grown as a road side tree. Wood is used as a quality timber.



Kumbuk

***Madhuca longifolia* (L) J.F. Macbr**

Family : Sapotaceae
Sanskrit Name : Maduka
Sinhala Name : Mee

A large beautiful evergreen tree grows in dry zone and wet zone. The bark, leaves, flowers, seeds and seed oil are used in Ayurvedic medicine. Oil is edible. Still many people, in the North Western and North Central provinces use Mee oil for their day to day cooking. The oil cake is also used in medicine. The tender leaves, bark and oil is used extensively in the treatment of fractures and dislocations. The flower buds and flowers contain a high percentage of honey. Bee colonies can be kept if this tree is present in abundance. The flowers are used in herbal wines. It is a beautiful tree with hard wood and can be used as an ornamental plant in large gardens. Good as a roadside tree. It attracts bees during flowering seasons. Birds and bats love the ripe fruit. This is the only mode of propagation. "Maduka Pana" fruit juicementioned in Buddhist literature is nothing but the juice of ripe fruit. It tastes as Avacado cream. More consideration should be given to grow this tree in reforestation and as a road side tree.

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***Weedfordia fruticosa* (L) Kurz**

Family : Lythraceae
Sanskrit Name : Dhataki
Sinhala Name : Malitha Mal

A large shrub which grows on the bill slopes of Haputale and Uva province. The bright red flowers are used in medicine. The flowers are mulant, astringent and tonic. Infusion of flowers and leaves is used as tea. Flowers are added to prepare Arishta and Asava (Herbal wines) of alcoholic fermentation. These flowers check the fermentation after producing alcohol between 6% to 8% in the herbal wine. The flowers are used in dysentery, diarrhoea and other chronic bowel complaints. The decoction of flowers is used in chronic ulcers. This shrub could be grown on tea estates to check erosion in the slopes. It is a hard plant which will withstand severe drought. The nectar of the flowers is much loved by many birds especially the Gira Mallitha, a vanishing species. At present the entire requirement is imported from India. In 1990 Sri Lanka has spent Rs. 510404/= to import 28250 kg of Malitha flowers.

***Acorus Calamus* Linn**

Family : Araceae
Sanskrit Name : Vacha
Sinhala Name : Vada Kaha
Tamil Name : Vasambu

A sent aquatic perennial. Part used is the dried rhizome. A volatile oil could be extracted which contains achorion another principle acoretion, calamine, mucilage and a little tannin. The root and rhizome are stimulants, emetic, stomachic, expectorant, carminative, antispasmodic and nervine sedative. In large doses (30 to 40 grams) it produces a violent and persistent emesis. It is extensively used in mental diseases. It is used in dyspepsia, flatulence, loss of appetite and in neuralgia. It can be grown in paddy fields in crop rotation. It needs very little water. It grows well in the Uva, North Central and North Western provinces. Almost all the requirements for the manufacture of Ayurvedic drugs are still imported from India. In 1989 Sri Lanka has spent Rs. 543575.08 to import 16000 kg of dried Wada Kaha rhizomes.

***Abrus Precatorius* L.**

Family : Leguminosae
Sanskrit Name : Gunja
Sinhala Name : Madatiya

A large ever green grown in Wet Zone and Dry Zone. Bark, seeds and leaves are used in medicine and the seed contains poisonous proteins and an albuminous substance called Abrin. Seeds are purgative emetic, tonic, antiphlogistic and aphrodisiac. Abrin is a very powerful irritant, produces oedema and skin irritation. Still the seed is used as a unit of measurement. Root and bark is used in medicine for cough, fractures and dislocations. The tree bears green leaves during the most dry seasons of the year. The leaves can be use as animal fodder. The leaves are used as manure. This tree can be grown as a road side tree. Leaves are used in hair oils such as Neelyadiya and Sarva Wishadiya.

***Solanum virginianum* L.**

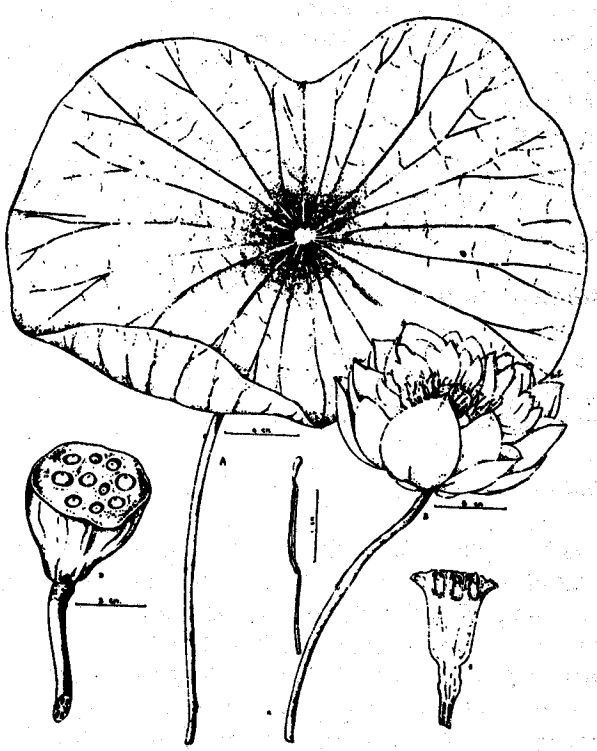
Family : Solanaceae
Sanskrit Name : Kantakari
Sinhala Name : Katuwelbatu

A periminal at one time it grew as a weed but now millions worth of Solanum virginianum is imported from India. It can be grown easily in the Dry Zone. The whole plant is used in medicine. The drying technique is still not known to the local people. The plant is used as an effective diuretic, expectorant and febrifuge and in fever, cough asthma and other lung disorders. In 1990 Sri Lanka has spent Rs. 2472044.59 to import 208650 kg of Katuwalbatu.

***Nelumbo nucifera* Gaertn**

Family : Nymphacaceae
Sanskrit Name : Kamala
Sinhala Name : Nelum

This large aquatic herb is generally grown in all parts of Sri Lanka in tanks and ponds. The entire plant is used in medicine. Rhizome and the seeds are edible. The rhizome and seeds contain resins, glucose, metarbin, tannin, fat and an alkaloid Nelumbine. The seeds are demulcent and nutritive; stamens and flowers are cooling, sedative, astringent, cholagogue, diuretic, bitter, refringent and expectorant. Seeds are edible. They are used in diarrhoea, liver diseases, fevers and as a cardiac tonic. Honey formed in the flowers is called Padama Madhu or Makaranda. This is used in eye diseases. Syrup of flowers is used in cough, to check haemorrhage from bleeding piles and in haemorrhage. Rhizome contains a large proportion of fibres and therefore it is good in piles, constipation, chronic diarrhoea and malabsorption syndrome. It maintains bowel hygiene. Seeds are used as an application in skin diseases. India, Thailand, China, Korea, Japan and many far Eastern Countries grow lotus extensively in low lying areas for food and medicinal purposes. Some of these countries cultivate lotus in rice fields in rotation with rice. Lotus can be grown with little water. The lotus is a sacred flower to the people of Egypt, India, China and Sri Lanka. It is also the national flower of India.



Nelum

***Plumbago zeylanica* Linn**

Family	:	Plumbaginaceae
Sanskrit Name	:	Chitraka
Sinhala Name	:	Ratnitul
Tamil Name	:	Chittira

A garden plant which bears beautiful red flowers. The outer covering of the root is used as medicine. The root is poisonous. It has to be treated before using. The root has a beneficial effect on piles. It is used for dyspepsia, anorexia, rheumatism, epilepsy and otehr mental disorders. It is used in many herbal wines. Root and bark is used in an external application in Leucoderma. It causes irritation of the skin. This too is imported from India. It could be easily propagated with stem cuttings and bears a good yield.

Tinosper cardifolia

Family	:	Menispermaceae
Sanskrit Name	:	Guduchi
Sinhala Name	:	Rasa Kinda
Tamil Name	:	Shindil Kodi

A large creeper. The stem and the leaves are used in medicine. Berberine is extracted from the stem. This creeper is also used in large quantities in Ayurvedic medicine. There is a scarcity because it is used so abundantly. It is used in fevers, biliary conditions, jaundice, urinary infections, skin diseases, urticaria and inflammations. It is used as a home remedy. Decoction of Tinospera and Phyllanthus emblica (Nelli) is a very common drink to cool the body. It brings down hypertension, excessive sweating and rheumatic pains. Rasa Kinda the flour of is also used in medicine. It is a very common medicine in Ayurveda. The leaves are used as a mallum and the juice of the leaves is used in Kola Kenda (Herbal porridge). This could be cultivated in every garden.

Azadirachta Indica

Family	:	Meliaceae
Sanskrit Name	:	Nimba, Ravipriya
Sinhala Name	:	Kohomba

Habitat

Grows throughout Sri Lanka but grows wild in the Dry Zone. A large ever green tree. Every part, is the bark, root bark wood, seed oil, fruits, flowers, leaves and gum is used as medicine. The bark exudes a bright amber coloured gum. Seeds contain about 10-31% of yellow bitter fixed oil. Bark, root and seeds are astringent, tonic and antiperiodic and vermifuge. The fruit is purgative, emollient and anthelmintic, used in skin diseases. Margosa is used by almost all the systems of medicine. It is used in fever, general debility, convalescence after fevers and loss of appetite. Oil is used in urticaria, eczema, crysipiles, skin diseases like ring worm, scabies, pemphigus etc. The oil is used by local veterinary physicians for ulcers and many diseases of cattle and goats. The oil is used in the toilet soap industry. Hindus consider the tree as sacred and when planted is advantageous to health as a prophylactic against many diseases. Dried leaves are used as a herbal tea with a pinch of bitter taste for diabetic patients. The bed made out of the wood of Margosa is considered to be good to sleep on for people who suffer from chronic obstinate skin diseases. Chinese and Indians believe that the Margosa tree words off evil spirits and cleans the environment. It is a good species as a road side shade tree. It needs very little water and can withstand the heat and the disturbances on the highways. Parrots and other birds like the ripe fruit. Many birds make nests in the hollows of the trunks of large Margosa trees.

***Aloe vera* Linn**

Family	:	Liliaceae
Sanskrit Name	:	Gritha Kumari
Sinhala Name	:	Komarika

There are many varieties. Some grow wild. It grows well in hot dry climates in sandy soil. The jelly like substance inside the leaves is used as medicine. The dehydrated jelly is called Titta Abin. It is also used in medicine. The juice is cooling and cathatic; used in burns, ulcers and in liver and spleen diseases.

It is stomachic in small doses and in large doses purgative. It acts as an emmenagogue and anthelmintic. It is used in various eye disorders and cough. A herbal wine known as Kumari Asavaya is made from the juice. It is used as a cosmetic and nowadays it is used extensively in shampoos and facial creams. Juice is used in making natural beverages. It is sold in cans in Japan and Taiwan as a natural beverage. This beverage is recommended to chronic alcoholics. This has a regenerative effect on the liver. Therefore it is used in jaundice.

***Adhatoda vasica* L**

Family	:	Acanthaceae
Sanskrit Name	:	Vasaka
Sinhala Name	:	Pavatta

The plant (bush) grows in all parts of Sri Lanka. It could be easily grown and withstands hard climatic conditions. The entire plant is used in medicine. The roots, leaves and flowers are extensively used in many preparations. They are used as expectorant, diuretic, antispasmodic and alterative. In chronic bronchitis, cough is relieved and the sputum is loosened so that it is brought up more easily. Decoction of the whole plant is used in fever, coryza, cough and other lung disorders. This

plant is made use of in different ways in many home remedies. Can be grown on hedge and as a fence. It is a plant that should be always kept in a home garden. There is a great demand in the local drug market.

***Abelmoschus moschatus* Medic**

Family : Malvaceae
Sanskrit name : Latha Kasturi
Sinhala Name : Kapukinissa
Tamil Name : Vathilai kasturi

A common plant through out India. Grows well in Sri Lanka. Parts used are seeds, root and leaves. The seeds are used as medicine. It is used as a substitute for musk. The seeds are known in European trade as grains of ambrette. In medicine they are useful in nervous debility, dyspepsia and lung disorders. They are also used in perfuming medicinal oils. A strong useful fibre is made from the stem of the plant. Though it could be grown in Sri Lanka still a large quantity is imported from India. Seeds are used in the preparation of tincture musk. Essential oil from the seeds is used in the perfume industry. In 1990 Sri Lanka has spent Rs. 79706 worth foreign exchange to import 1576 kg of Kapukinissa seeds.

***Saraca indica* Linn**

Family : Leguminosae
Sanskrit Name : Asoka
Sinhala Name : Asoka

A tree 6.9 m high. Distributed India, Sri Lanka and Malaya. The bark is used as medicine. Many substitutes and adulterants are used as there is a great scarcity. Up to now it is not grown as a commercial product. It is used in Ayurveda in a variety of disease conditions such as fatigue, tumour, enlargement of the abdomen, colic, haemorrhoids, ulcers, discharge from the uterus. The bark is used in uterine fibroids, bleeding, haemorrhage and dysentery. It bears beautiful flowers and is used as an ornamental tree. Hindus believe it as a sacred and auspicious tree to be kept in the garden. This tree can be grown on a large scale as a commercial product. There is a great demand for the bark.

In 1990, Sri Lanka had spent to import

*** Rs. 5,10404.00**	**-**	**28,250 Kg of Malitha flowers.**
*** Rs. 5,43,575.08**	**-**	**16,000 Kg of dried Wada Kaha rhizomes**
*** Rs. 24,72,044.59**	**-**	**2,08,650 Kg of Katuwalbatu**
***Rs. 79,706.00**	**-**	**1576 Kg of Kapukinissa seeds**