



INFORMATION BOOKLET ON UTILITY OF AGRO FORESTRY TREE SPECIES IN TAMIL NADU



**ENVIS HUB
DEPARTMENT OF ENVIRONMENT
GOVERNMENT OF TAMIL NADU
2019**



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PREAMBLE

Cultivating trees and agricultural crops in intimate combination with one another is an ancient practice that farmers have used throughout the world. This intentional act of combining agriculture and forestry to create integrated and sustainable land-use systems is called agro forestry.

Agro forestry is a dynamic system that uses principles of agricultural science, forestry, husbandry, ecological conservation, economics, and policy to sustainably manage crops through the combination of annuals, perennials, trees, and livestock. Agro forestry provides both economic and environmental benefits simultaneously. These benefits include protection against loss of topsoil, regeneration of soil fertility, crop and livestock protection, diversification of products and protection against the risk associated with volatile commodity markets, wildlife habitat enhancement, enhanced aesthetics, water quality management, waste management, and carbon sequestration.

Agro forestry is a land management system that combines perennials (including trees, shrubs and palms) with annual agricultural crops and livestock to increase total production while providing economic, social and environmental benefits. The goal is to reduce risk and increase total productivity in agricultural system simultaneously providing regular income and increased cash flow. By integrating trees, perennials and/or. Livestock into a conventional agricultural system, agro forestry promotes the efficient use of sunlight, moisture, plant nutrients and other ecological services.

Local farmers and landowners, governments and international institutions contribute to the implementation of agro forestry techniques. Commonly practiced temperate zone agro forestry techniques include silvopasture, forest farming, windbreaks, and riparian buffers. Humid tropical zone agro forestry techniques include home gardens, living fences, silvopasture and shifting cultivation etc.,

This book "Information Book on Utility of Agro forestry species in Tamil Nadu" gives the uses of 100 Agro forestry Tree species in Tamil Nadu with description of their properties and uses. The species are listed in alphabetical order (with family) for easy reference. The book has brought out the facts and figures about the properties and uses of some of the common and also lesser-known agro forestry tree species for use of Foresters and Formers.

ACACIA AURICULIFORMIS



Scientific name

Acacia auriculiformis Benth

Family

Fabaceae

Trade Name

Black wattle

Local Name

Kathichavukku

Tree

Medium sized

Distribution

Grown in humid to sub humid low land tropics. Growing naturally in narrow strips along river, coastal dunes, saline lagoons and floodly plains. Found to grown well in all tracts of Tamil Nadu

Properties

Colour

Sapwood yellow in colour. Heart wood light brown to dark red in colour

Hardness

Hard

Weight

Heavy

Grain

Light grain, fine grained, straight grained

Working properties

Good for turning and carving. Finishes well and takes good polish. Attractively fissured grains

Natural durability & preservation

Reasonably durable

Effect of Ammonia Fumigation

Wood has strong reaction on ammonia fumigation

Uses:

- Wood is used for furniture, joinery, farm tools and construction if tresses of suitable girth are available
- Excellent wood for turnery articles, toys, carron coins, chessmen and handicrafts
- Used as an ornamental and shade tree

ACACIA CATECHU



Scientific Name	<i>Acacia catechu</i> (L.f.) Willd.
Family	Fabaceae
Trade Name	Black cutch tree
Local Name	Cenkarungali
Tree	A Deciduous, gregarious trees. Bark dark greyish brown to dark brown
Distribution	<i>A. catechu</i> occurs naturally in lower mountains and hills. It is especially common in the drier Regions on sandy soils of riverbanks and watersheds

Properties:

Colour	dark greyish brown to dark brown
Hardness	Very strong to Hard
Weight	Moderately heavy
Grain	Straight grained
Working properties	Hard to work
Natural durability & preservation	The timber needs long seasoning, and is fairly difficult to saw

Uses :

- Fresh leaves and small lower branches are eaten by cattle
- Bark is used to treat sores in the mouth, chest pain, strangulation of the intestine
- Bark is used to dysentery, diarrhoea and in healing wounds
- Heartwood is applied in a thick decoction for cancerous sores
- Seeds are used to antibacterial action

ACACIA ELATA



Scientific Name	<i>Acacia elata</i> Benth
Family	Fabaceae
Trade Name	Cedar wattle
Local Name	Seegai
Tree	Large deciduous tree
Distribution	Grown in moist deciduous forests and near water courses
Properties :	
Colour	Pale brown in colour. Sapwood yellowish and heartwood brownish pink in colour
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Good grain pattern
Working properties	Turning and carving
Natural durability and preservation	Durable
Effect of Ammonia fumigation	Wood has negligible reaction on ammonia fumigation

Uses :

- Heartwood chips are used as dyes and tannins
- Timber is used for construction purposes, furniture's making, cabinet making, carvings and plywood manufacture
- Gum is edible
- Fast growing avenue tree

ACACIA FERRUGINEA



Scientific Name	<i>Acacia ferruginea</i> DC.
Family	Fabaceae
Trade Name	Safed khair
Local Name	Parambai, Karambai
Tree	Small to medium tree. Bark dark brown and rough
Distribution	Found from North Gujarat to Eastern India and in Western Ghats Found in many regions of Tamil Nadu

Properties :

Colour	Sapwood pale yellowish white, heartwood is olive green in colour
Hardness	Hard to very hard
Weight	Heavy to very heavy
Grain	Straight to interlocked
Processing & Drying	Somewhat difficult as it is liable to develop cracks and end splits unless proper care is taken. Kiln seasoning recommended
Working properties	Sawing is satisfactory
Natural durability & preservation	Durable

Uses :

- Bark is used to cure leukoderma and ulcers
- Wood is used for building constructions, cart wheels, frame work, beams, agricultural implements, knees of boats and railway sleepers
- Tree exudates gum, which is used as an adhesive
- Gum is used for medicinal purposes
- Pods and leaves are good source of fodder for cattle

ACACIA LEUCOPHLOEA



Scientific Name

Acacia leucophloea (Roxb.) Willd

Family

Fabaceae

Trade Name

White barked acacia, Safed kikar

Local Name

Velvaylam, Vel - vaghe

Tree

Moderate-sized or large deciduous tree

Distribution

Plains of Punjab, drier parts of Siwaliks, Central, Western, Southern India. Found suitable for many regions of Tamil Nadu

Properties:

Colour - Sapwood

White Heartwood reddish brown to nearly brick-red, streaked with darker and lighter colour

Hardness

Hard, strong and tough

Weight

Moderately heavy

Grain

Irregularly interlocked grain

Processing & Drying

Seasons well

Working properties

Takes a good polish

Natural durability and preservation

Durable

Uses:

- Bark is used for bronchitis (medicinal value)
- Bark is valued for tanning and also gives a coarse fibre suitable for fishing nets, ropes etc
- Wood is used for posts and beams in house constructions, cartwheels, shafts, axles and agricultural implements
- Excellent fuel
- Young pods and seeds are good source of fodder
- Gum from tree is used as emulsifying agent

ACACIA MANGIUM



Scientific Name	<i>Acacia mangium</i> Willd
Family	Fabaceae
Trade Name	Acacia mangium
Local Name	Mangium
Tree	Evergreen tree or shrub. Bark rough hard and fissured near the base
Bark	Greyish brown to dark brown. Establishes well in areas where water is available
Distribution	<i>Acacia mangium</i> is native to Australia, Indonesia and Papua New Guinea. <i>Acacia mangium</i> is a low-elevation species associated with rain forest margins and disturbed, well - drained acid soils (PH 4.5-6.5). It can tolerate a minimum annual rainfall of 1000 mm. Tolerant to acid, low nutrient soils; ability to grow well where competition is severe. Introduced in India as an agro-forestry tree species

Properties :

Colour	Pale brownish yellow wood
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Good grain pattern
Processing & Drying	Seasons well
Working properties	Takes good polish, good turning and carving properties
Natural durability and preservation	Durable after seasoning and Treatment
Effect of Ammonia fumigation	Wood has moderate/very light reaction on ammonia fumigation.

Uses :

- Wood is used in construction works, boat building, furniture and cabinet making, plywood, excellent particle board etc
- Wood is used as firewood and charcoal

ACACIA NILOTICA



Scientific Name	<i>Acacia nilotica</i> (L.) delile
Family	Fabaceae
Trade Name	Babul
Local Name	Karuvai, Karuvelam
Tree	Small sized tree. Dark brown or black rough bark with deep narrow longitudinal fissures. Grown in tank beds of Tamil Nadu under social forestry scheme
Distribution	Grows naturally in the deciduous forests of peninsular India
Properties :	
Colour	Sapwood whitish to pale yellow, heartwood pinkish brown to reddish brown, sapwood sharply demarcated from heartwood lustrous
Hardness	Moderately hard to hard
Weight	Heavy to very heavy
Grain	Straight to interlocked
Working properties	Seasons well, takes good polish and good turning quality
Natural durability & preservation	Durabilit. Heartwood treatable but complete penetration of preservation not always obtained
Effect of Ammonia fumigation	Wood has strong reaction on ammonia fumigation

Uses:

- Bark and pods are used in tanneries
- Wood is used as construction work as posts, beams, and rafters buildings, bridges, agricultural implements, tool handles
- Wood is used in medicine
- Tree exudes gum called "babul gum or gum Arabic"

ACACIA SUMA



Scientific Name	<i>Acacia suma</i> (Syn.) or <i>Acacia polyacantha</i> Willd.
Family	Fabaceae
Trade Name	White barked Acacia
Local Name	Othalai, Mogalli, Celai
Tree	Small tree
Distribution	Found most suitable for Western and Southern agro Climatic zones West Bengal, Orissa and Peninsular India
Properties :	
Colour	Dark brown wood smooth and close grained
Hardness	Hard to very hard
Weight	Heavy to very heavy
Grain	Close grained
Working properties	Seasons well, takes good polish and finishes well. Good for turning and carvings
Natural durability and preservation	Moderately durable
Effect of Ammonia fumigation	Wood has negligible reaction on ammonia fumigation

Uses:

- Leaves are used as cattle fodder
- Bark decoction is used for dysentery (Medicinal Value)
- Wood is used mostly for poles and fence posts, building constructions, bus and lorry bodies. Tool handles, heavy packing cases, crates, chests, class I general purpose plywood, flush door, shutters, block boards core and face veneers
- Heartwood chips are used for tanning and dyeing
- Tree gives black gum which is Used in medicine and calico printing

ACROCARPUS FRAXINIFOLIUS



Scientific Name	<i>Acrocarpus fraxinifolius</i> Arn
Family	Fabaceae
Trade Name	Mundani, Shingle tree
Local Name	Malankonnai, Neirai
Tree	Grows into large to very large tree
Distribution	West coast tropical evergreen and west coast semi evergreen forests. Performs well in areas with good water availability and grows fast
Properties :	
Colour	Sapwood yellowish to greyish white, heartwood light pinkish or reddish brown
Hardness	Soft to moderately hard
Weight	Moderately heavy
Grain	Straight to slightly interlocked
Processing & Drying	Moderately refractory wood. Solar seasoning of wood necessary
Working properties	Easy to saw and work. Due to resin, teeth of saw often gets clogged, finishes well, takes good polish
Natural durability and preservation	Non-durable. Heartwood only partially treatable

Uses:

- Leaves are suitable for mulching
- Wood is suitable for boat oars and floating feeders in harbours
- Wood is used for poles and fence posts
- Class plywood used as tea chests, furniture and cabinets, block boards, tool handles, bobbins, cricket stumps, musical instruments, packing cases, boxes, pencil industry, mathematical, engineering and drawing instruments
- Wood exudes a gum like resin when the trees are felled
- *Acrocarpus fraxinifolius* has been recommended for reinforcing riverbanks and stabilizing terraces
- Ideal as a shade tree on tea and coffee plantations, very good for reforestation of open areas. Soil improver

ADINA CORDIFOLIA



Scientific Name	<i>Adina cordifolia</i> (Roxb.) Hook. f. (syn) or <i>Haldina cordifolia</i> (Roxb.) Ridsdale
Family	Rubiaceae
Trade Name	Haldu
Local Name	Manjakadambu
Tree	Medium to very large, deciduous tree. Bark grey, soft thick exfoliating in small irregular flakes
Distribution	Southern moist mixed deciduous, moist teak bearing and west coast semi evergreen forests. Usually in Assam, Andaman, Rajasthan, West Bengal and Burm
Properties :	
Colour	Sapwood yellowish white, heartwood yellow or yellowish brown
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Even grained
Processing & Drying	Seasons well
Working properties	Gives good finish and polish, good for turning
Natural durability and preservation	Non durable, wood easily treatable

Uses :

- Bark is a febrifuge
- Bark yields tannins
- Wood is used in making planking, house posts, furniture, packing cases, cigar boxes, turnery as grain measure, snuff boxes, combs, drums, canoes & etc
- Wood is used as Pulp for paper manufacture

AEGLE MARMELOS



Scientific Name	<i>Aegle marmelos</i> (L.) Correa
Family	Rutaceae
Trade Name	Bael tree, Wood apple
Local Name	Vilvam, Bilva
Tree	Small to medium tree. Bark is greyish and corky
Distribution	Southern dry mixed deciduous forest. Grows well in many tracts of Tamil Nadu

Properties :

Colour	Wood is yellowish white to yellowish brown, sapwood and heartwood not distinct
Hardness	Hard to very hard
Weight	Heavy to very heavy
Grain	Straight to interlocked
Processing & Drying	Seasons well
Working properties	Somewhat difficult to saw, takes good polish
Natural durability & Preservation	Non durable

Uses :

- Leaves yield essential oil. The leaves and seed oil have pesticidal properties
- Wood is used for temporary constructions, agricultural implements carvings, tool handles
- Various parts of the tree are used for its curative, pesticidal and nutritive properties
- Fresh half ripe Bael fruit is mildly astringent and used to cure dysentery, diarrhoea, hepatitis, tuberculosis, dyspepsia and good for heart and brain. Roots have anti-diarrhoeic, antidote to snake venom, anti-inflammatory and wound healing properties
- Fruit is one of the most nutritious fruits, rich in riboflavin and used for the preparation of a number of products like candy, squash, toffee, slab, pulp powder and nectar
- Gummy substance around seeds serves as adhesive, varnish and paints

AILANTHUS EXCELSA



Scientific Name	<i>Ailanthus excelsa</i> Roxb
Family	Simaruobaceae
Trade Name	Maharukh
Local Name	Pinnari, Periamaram
Tree	Large tree. Bark-light greyish brown
Distribution	Indigenous in peninsular India and extensively cultivated. Grown throughout Madhya Pradesh, South Bombay, Bihar and Orissa. Grows well in most parts of Tamil Nadu. It is a fast growing tree

Properties :

Colour	Pale yellow
Hardness	Soft
Weight	Light weight
Grain	Straight grained
Processing & Drying	Seasons easily
Working properties	Turning and carving qualities
Natural durability and preservation	Perishable, heart wood easily treatable
Effect of Ammonia fumigation	Wood has negligible reaction on ammonia fumigation

Uses :

- Bark is febrifuge. Juice of bark is used for asthma, dysentery
- Wood is used for packing cases, match sticks, sword handles, rubber boxes, tea chests
- Tree yields resin and used incense stick
- Fruit yields fatty oil

AILANTHUS MALABARICUM



Scientific Name	<i>Ailanthus malabaricum</i> Dc. (syn) or <i>Ailanthus triphysa</i> (Dennst.) Alston
Family	Simaroubaceae
Trade Name	Maharukh
Local Name	Perumaram, Mattipal, Gugguladhup
Tree	Large deciduous tree. Bark grey, smooth in young trees and becomes rough as the tree grows old
Distribution	Sparse in west coast semi evergreen and southern moist mixed deciduous forests growing in Mangalore, in the evergreen tropical forests of western Ghats upto 1500 mts. Often cultivated in south India. Grows fast in areas where water is available

Properties :

Colour	Yellowish white, sapwood and heartwood not distinct. Lustrous
Hardness	Soft
Weight	Light
Grain	Straight
Processing & Drying	Easy to season; to avoid stains, green conservation and rapid seasoning is recommended
Working properties	Easy to saw good nailing and holding quality takes good polish
Natural durability and preservation	Perishable, Heartwood easily treatable

Uses :

- Bark is used in medicine
- Wood is used for packing cases, match splints and boxes, slate frames, toys, class III veneers, core and face veneers for block boards
- Yield aromatic resin used for making agarbathis
- Ornamental tree

ALBIZIA AMARA



Scientific Name

Albizia amara (Roxb.) B.Boivin

Family

Fabaceae

Local Name

Sikkai, Usil

Tree

Moderate sized deciduous tree. It resembles the acacias but lacks thorns. Its root system is shallow and spreading

Distribution

Dry forests of Deccan, Karnataka extending to dry places towards west coast. Found in many tracts of Tamil Nadu

Properties :

Colour

Sapwood large, white, heartwood, purplish brown

Hardness

Very hard

Grain

Close grained

Processing & Drying

Easy to season

Working properties

Not difficult to work and can be brought to fine smooth surface. Takes polish well

Natural durability and preservation

Durable

Uses :

- Leaves are used as an adulterant for tea
- Leaves make excellent fodder
- Tannins may be obtained from the bark
- Wood is darkish in colour, fine grained and hard. Therefore it can be used for furniture making, agricultural implements and construction
- Branches are suited to both firewood and charcoal
- Seeds are poisonous
- Tree yields gum used against ulcers; fruits are said to cure malaria and coughs
- Soap can be made from the roots and leaves can be used for washing hair
- Its spreading root system makes it a good soil binder, deterring soil erosion
- Albizias are popular as shade trees for tea and coffee plantations
- This is a very good species for afforestation of degraded hilly areas in dry and semi-arid tracts in mixture with other species such as *Acacia catechu*, *A. planifrons*, *Anogeissus latifolia* and *Azadirachta indica*
- Planted in urban areas as an ornamental and avenue tree

ALBIZIA FALCATORIA



Scientific Name	<i>Albizia falcatoria</i> (L.) Fosberg (syn) or <i>Falcataria moluccana</i> (Miq.) Barneby & J.W.Grimes
Family	Fabaceae
Trade Name	Batai
Local Name	Silavagai
Tree	Large to very large tree. Fast growing tree
Distribution	Sub tropical moist to wet through tropical moist to wet forest life zones. Grows well in Kanyakumari district of Tamil Nadu
Properties :	
Colour	Heartwood is light brown with slight pinkish or yellowish tinge Sapwood not clearly demarcated
Hardness	Soft wood
Weight	Light wood
Grain	Fuzzy grain
Processing & Drying	Seasons well
Working properties	Sapwood easy to treat
Natural durability and preservation	Non durable, vulnerable to termite

Uses :

- Wood is used for core veneer, packaging and crating, furniture components, pulp and paper, fibre board, particle board
- Used as catamarans / boats

ALBIZIA LEBBECK



Scientific Name

Albizia lebeck (L.) Benth

Family

Fabaceae

Trade Name

Kokko siris, East Indian Walnut

Local Name

Vagai

Tree

Medium to large, Bark grey to dark brown, rough, irregular, cracked

Distribution

Ranging from tropical thorn to tropical wet through subtropical thorn to wet forests. Grows Western Ghats and Agro climatic zones of Tamil Nadu

Properties :

Colour

Sapwood whitish or yellowish white heartwood brown or chocolate coloured with dark streaks, fairly lustrous

Hardness

Moderately hard to hard

Weight

Moderately heavy

Grain

Straight to wavy or interlocked

Working properties

Wood is easy to saw and work due to interlocked grains takes excellent polish, wood good for carving and turning. Peels satisfactorily if soaked in hot water

Natural durability and preservation

Very durable. Heartwood only partially treatable

Effect of Ammonia Fumigation

Wood has negligible reaction on ammonia fumigation

Uses :

- Leaves and seeds are used for eye problems
- Bark is used for tanning & dyes
- Wood is used for class I general purpose plywood, decorative panelling, tea chests, block boards, flush door, shutters, furniture and cabinets, construction, musical instruments, mathematical and drawing instruments, tool handles, shafts of carts, lorry bodies
- Tree yields gum

ALBIZIA ODORATISSIMA



Scientific Name	<i>Albizia odoratissima</i> (L.f.) Benth
Family	Fabaceae
Trade Name	kala siris, Black siris, Ceylon, rosewood
Local Name	Lyavagai, Silavagai
Tree	Large deciduous tree
Distribution	Southern moist mixed deciduous, southern dry mixed deciduous and west coast semi-evergreen forests

Properties :

Colour	Sapwood white or yellowish white, heartwood dark brown with dark streaks lustrous
Hardness	Moderately hard to hard
Weight	Moderately heavy to very heavy
Grain	Straight to wavy or slightly, interlocked
Processing & Drying	Seasons well
Working properties	Difficult to saw. Very good for turning and carving takes excellent polish and finish
Natural durability and preservation	Fairly durable
Effect of Ammonia fumigation	Wood has strong reaction on ammonia fumigation

Uses :

- Leaves and twigs are used as cattle fodder
- Wood is used as Commercial plywood, decorative plywood, furniture and cabinets, flush door, shutters, building and bridge constructions, tool handles, railways sleepers, mathematical and engineering instruments, carts and carriages
- Tree gives dark brown gum

ALBIZIA PROCERA



Scientific Name	<i>Albizia procera</i> (Roxb.) Benth
Family	Fabaceae
Trade Name	Safed siris, White siris
Local Name	Venvagai, konda vagai
Tree	An erect slightly pubescent and nearly glabrous large deciduous
Distribution	Southern moist mixed deciduous and moist teak bearing forests Trees cultivated for shade and timber. It is a fast growing tree
Properties:	
Colour	Sapwood pale yellowish white heartwood brown to dark brown
Hardness	Moderately hard to hard
Weight	Moderately heavy
Grain	Straight and even grained
Processing & Drying	Seasons well
Working properties	Easy to saw and work can be worked to a good surface and polishes well
Natural durability and preservation	Moderately durable. Heartwood only partially treatable

Uses:

- Wood is used as commercial plywood, flush door shutters, building constructions, tool handles, railway sleepers, musical instruments, mathematical instruments, engineering and drawing instruments
- Wood is used for making furniture's and carvings

ALBIZIA RICHARDIANA



Scientific Name	<i>Albizia richardiana</i> (Voigt) King & Prain
Family	Fabaceae
Trade Name	Richardiana
Local Name	Albizia richardiana
Tree	Large and Quick growing ornamental tree
Distribution	Native of Madagascar. Grown as an ornamental tree in cities and towns. It is a fast growing tree, found to perform well in many tracts of Tamil Nadu

Properties :

Colour	Heartwood light to dark brown, smooth
Hardness	Soft
Weight	light
Grain	Straight grain
Processing & Drying	Seasons well. Takes good polish. Not good for turning and carving
Working properties	Easy to saw and gives good polish
Natural durability and preservation	Moderately durable
Effect of Ammonia Fumigation	Wood has negligible reaction on ammonia fumigation

Uses:

- Wood is used in veneer and plywood making
- Shade giving ornamental tree

ALSTONIA SCHOLARIS



Scientific Name	<i>Alstonia scholaris</i> (L.) R. Br
Family	Apocynaceae
Trade Name	Shaitan wood or Devil tree
Local Name	Elalaipalai, palegaruda, Mukampalai
Tree	Medium to large. Evergreen tree. Bark grayish brown, rough, lenticellate
Distribution	Southern moist mixed deciduous and moist teak bearing forests. Found commonly in west coast forests of Maharashtra, but scattered in Bengal, Uttar Pradesh, Assam, Bihar, Orissa, Andhra, Madhya Pradesh. Found to perform well in some tracts of Tamil Nadu

Properties :

Colour	White to yellowish white or pale brown, often discoloured due to sap stain, sapwood and heartwood not distinct, Lustrous
Hardness	Soft
Weight	Light to very light
Grain	Even grained
Processing & Drying	Seasons well but soon gets mouldy and discoloured
Working properties	Easy to saw and work, finishes to a dull and moderately smooth surface. Good for turning and carving. Takes dull polish
Natural durability and preservation	Not durable
Effect of Ammonia Fumigation	Wood has negligible reaction on ammonia fumigation

Uses:

- Bark is used as medicine for curing skin diseases, headaches, joint pains and bitter tonic used in treatment of Malaria
- Wood is used for class III plywood and veneers, packing cases and boxes, match splints, pencil slats, wooden frames, furniture's etc

ANACARDIUM OCCIDENTALE



Scientific Name	<i>Anacardium occidentale</i> L.
Family	Anacardiaceae
Trade Name	Cashew nut, cashew apple
Local Name	Mundri, Andimangottai, Kollangottai
Tree	Medium size evergreen tree. Bark grey or greyish brown, rough, moderately thick, fibrous
Distribution	Native of South America, extensively cultivated in coastal areas of India and coastal areas of Tamil Nadu in sandy places and often gregarious

Properties :

Colour	Pale grey to brownish grey. Sapwood and heartwood not distinct
Hardness	Soft
Weight	Light
Grain	Straight to somewhat interlocked grains
Working properties	Easy to saw and work. Nail holding capacity good
Natural durability and preservation	Perishable

Uses :

- Wood is used for low quality furniture, fibre boards, block boards, packing cases, charcoal
- Nuts are edible. The pericarp of the fruit gives black coloured oil called 'cardol'
- The pericarp is used to treat warts, corns and ulcers
- Trees are planted in coastal sand dune reclamation

ANOGEISSUS LATIFOLIA



Scientific Name	<i>Anogeissus latifolia</i> (roxb.ex dc.) wall. ex guillem. & Perr
Family	Combretaceae
Trade Name	Axle wood
Local Name	Vekkali, Namai, Vellanagai
Tree	Large deciduous tree. Smooth exfoliating in irregular thin scales
Distribution	Southern moist mixed deciduous southern dry mixed deciduous and moist teak bearing forests

Properties:

Colour	Sapwood grey to pale yellowish brown, heartwood purplish brown
Hardness	Hard to very hard
Weight	Heavy to very heavy
Grain	Slightly interlocked
Processing & Drying	Difficult to season as it develops splits and cracks, green conversion in rainy season followed by stacking under cover recommended
Working properties	Difficult to saw. Finishes to a smooth surface
Natural durability and preservation	Non durable. Heartwood very refractory to treatment Splits on seasoning

Uses :

- Leaves are used for tanning
- Wood is used for tool handles, agricultural implements, railway sleepers, carts and carriages, picker arm in textile mills, cart and making boats
- Trees yield gum and used in pharmaceuticals and cloth printing
- Excellent charcoal

ANTHOCEPHALUS CADAMBA



Scientific Name	<i>Anthocephalus cadamba</i> (Roxb.) Miq (syn) or <i>Neolamarckia cadamba</i> (Roxb.) Bosser
Family	Rubiaceae
Trade Name	Kadam
Local Name	Kola aiyila, Vello cadambi
Tree	Large deciduous tree. Bark is dark grey with longitudinal fissures, peels off as scales. Very Fast growing and ornamental tree
Distribution	West coast semi-evergreen forest. Fast growing particularly in areas where water is available
Properties:	
Colour	White with yellowish tinge to creamy white yellowish grey, sapwood. Sapwood and heart wood not distinct
Hardness	Soft
Weight	Light wood
Grain	Even grained
Processing & Drying	Seasons well
Working properties	Sawing and working not difficult
Natural durability and preservation	Perishable. Heartwood easily treatable

Uses :

- Bark is used to treat urinary and uterine complaints
- Wood is used for furniture, tea chests, building construction, class III veneers for plywoods, match splints, pencil slats, turnery cheap boards, packing cases and match industry
- Fruits are used to cure leprosy and dysentery

ARTOCARPUS HIRSUTUS

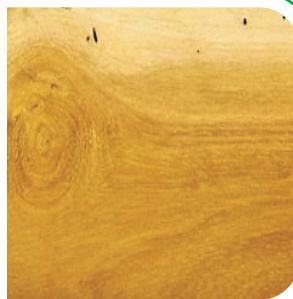


Scientific Name	<i>Artocarpus hirsutus</i> Lam.
Family	Moraceae
Trade Name	Aini
Local Name	Ainipila, Anjili
Tree	Large to very large tree
Distribution	West coast tropical evergreen, west coast, semi evergreen and southern secondary moist mixed deciduous forests
Properties:	
Colour	Sapwood greyish or yellowish white heartwood golden to yellowish brown. Lustrous
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Straight to interlocked
Processing & Drying	Seasons well
Working properties	Easy to saw and machine when green, turns well to a good shining surface, takes good polish
Natural durability and preservation	Durable

Uses :

- Wood is used for boat and ship building, vehicle bodies, beams, rafters, window, door frames and ceiling boards, furniture and cabinets, turnery, piles, flush door, shutters, class I plywood, block boards, tool handles, fence posts, textile mill accessories, mathematical, engineering and drawing instruments etc
- Wood powder is used as a natural dye (Yellow dye)

ARTOCARPUS INTEGRIFOLIA



Scientific Name	<i>Artocarpus integrifolia</i> Linn. f. or (syn) <i>Artocarpus integer</i> (Thunb.) Merr.
Family	Moraceae
Trade Name	Jack, Kathal
Local Name	Pala
Tree	A large sized evergreen tree
Distribution	West coast tropical evergreen and southern hill top tropical evergreen forests, widely cultivated
Properties:	
Colour	Sapwood greyish or pale yellow. Heartwood yellow to yellowish brown or pinkish brown, lustrous when first exposed
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Straight to interlocked
Processing & Drying	Seasons well
Working properties	Easy to saw and work. Wood can be brought to a smooth finish and takes good polish. Good for turning and carving
Natural durability and preservation	Very durable, not attacked by fungi and termites
Effect of Ammonia Fumigation	Wood has strong reaction on ammonia fumigation
Uses :	
<ul style="list-style-type: none"> • Bark yields gum • Wood yields a yellow dye • Wood is used for multipurpose constructional timber, furniture and cabinets, carving and turnery • Wood is used for class II plywood and veneers, block boards, musical, mathematical, engineering and drawing instruments, lorry and bodies • Fruits and seeds are edible 	

AZADIRACHTA INDICA



Scientific Name	<i>Azadirachta indica</i> A.Juss
Family	Meliaceae
Trade Name	Neem
Local Name	Veppam, Vembu
Tree	Medium to large sized tree. Bark greyish to dark grey in colour
Distribution	Naturally found in deciduous forests of peninsular India. Found in all the agro climatic zones of Tamil Nadu

Properties:

Colour	Sapwood yellowish grey to yellowish brown, heartwood reddish brown, lustrous
Hardness	Hard to very hard
Weight	Heavy
Grain	Interlocked grains
Processing & Drying	Green conversion followed by open stacking under cover recommended
Working properties	Sawing and machining fairly well. Wood good for turning and carving, takes good polish and finish
Natural durability and preservation	Moderately durable
Effect of Ammonia Fumigation	Wood has strong reaction on ammonia fumigation

Uses:

- Leaves are highly nutritive, used as fodder, medicinal value - antiseptic, insect repellents
- Bark yields gum
- Bark astringent, bitter tonic beneficial for malaria
- Wood is used for packing cases, wardrobes, book cases, closets, posts for construction or fencing (termite resistant) carving and toys, agricultural implements, tool handles, boards and panels, furniture
- Dry flower powder is used as tonic

BAMBUSA BAMBOO



Scientific Name

Bambusa bambos (L.) Voss

Family

Poaceae

Trade Name

Spiny bamboo

Local Name

Peruvarai

Tree

Very densely tufted bamboo with curving branches. Culms usually bright green, shining usually 15-30m high and 15-18cm diameter nodes slightly swollen and few lower nodes produce short aerial roots internodes usually 20-40cm long, thick walled; branches develop from all nodes from the base upwards, lower branches spreading and with recurved spines; spines usually in trees. Fast growing

Distribution

Moist deciduous forests upto an altitude of 1000 m, MSL with 2000-2500 mm rainfall is ideal. Adapt well along perennial rivers and valleys with rich moist soil. Found commonly in homesteads

Properties:

Colour

Culms bright green

Processing & Drying

Best dried by air seasoning. Kiln seasoning also practiced

Natural durability and preservation

Durable but durability is increased when treated

Uses :

- Leaves are used as fodder
- Wood is used for paper & pulp and pulp is used for making rayon
- Wood is used in various articles for daily use as Umbrella, baskets, caps, brushes, mats, furniture, artefacts etc
- Wood is used in house constructions, bridges, fences, match splints, agarbathies
- Seed is cooked and eaten
- It is used for afforestation in wastelands

BASSIA LATIFOLIA



Scientific Name	<i>Bassia latifolia</i> Roxb.
Family	Sapotaceae
Trade Name	Madhuca tree or Mahua butter tree
Local Name	Katillupai, Illupai
Tree	A large deciduous tree
Distribution	Native of Central India. Largely planted and self sown
Properties:	
Colour	Reddish brown
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Close grained
Processing & Drying	Take good polish
Working properties	Takes good polish
Natural durability and preservation	Very durable and lasts exceptionally well under water

Uses :

- Wood is used for house building, ships, boats, canoes, furniture, well constructions, oil mills, drums, domestic utensils yokes, cart axles, carvings
- Flowers and fleshy endocarp are edible and laxative in nature
- Oil from seeds is used to cure skin diseases
- Mahua butter is got from seeds which are used in cosmetics and toiletries
Mahua butter is edible

BOMBAX CEIBA



Scientific Name	<i>Bombax ceiba L.</i>
Family	Bombacaceae
Trade Name	Semul, Red silk cotton tree
Local Name	Elavamaram, Mullitaru, Ilavu, Malaielavam, Pula
Tree	Large to very large tree. Bark is grey covered with conical prickles when young and deeply cracked when old
Distribution	It is widely found in temperate Asia, tropical Asia, Africa and Australia. In peninsular India, the tree is very commonly seen in the dry and moist deciduous forests and also near rivers
Properties:	
Colour	Creamy white to pale yellowish brown or greyish brown, sapwood and heartwood not distinct, often lustrous
Hardness	Very soft to soft
Weight	Very light to light wood
Grain	Straight grained
Processing & Drying	Very easy to season
Working property	Easy to saw, peels and glues well. Good for turning and carving. Takes good polish and finish
Natural durability and preservation	Perishable. Heartwood easily treatable
Effect of Ammonia fumigation	Wood has moderate/very light reaction on ammonia fumigation

Uses :

- Wood is used for class II plywood and veneers, packing cases and boxes, match splints and boxes, ship building, fishing floats, toys, pencil slate, drums, toys, coffins, match industry, match splints, tea boxes etc
- Seeds yield pale yellow oil and used in soap making
- Floss is used in bedding and upholstery industry

BORASSUS FLABELLIFER



Scientific Name	<i>Borassus flabellifer</i> L.
Family	Arecaceae
Trade Name	Palmyrah palm
Local Name	Panai
Tree	A large erect palm
Distribution	Native of Africa, cultivated and run wild throughout the plains
Properties:	
Colour	Wood black outside light brown inside
Hardness	Hard outside and soft inside
Natural durability and preservation	Very durable under water

Uses :

- Leaves used as writing material in ancient times and also for plan leaf books, fans, thatching mats, hats, bags, buckets, green manure, primitive flutes
- Wood is used in hut construction for rafters, pillars, posts and for crude bridges
- Juice is a source of jaggery
- It is one of the toddy yielding plants
- Young fleshy roots are eaten
- Leafy stalk yield fibre, used for brushes and broom
- Stem fibres are plaited into fish traps

BRIDELIA RETUSA



Scientific Name	<i>Bridelia retusa</i> (L.) A. Juss
Family	Phyllanthaceae
Trade Name	Kasi
Local Name	mullu-venga
Tree	Small to medium sized tree. Bark greyish brown rough with many cracks, exfoliating in irregular flakes
Distribution	Mostly in Southern moist mixed deciduous west coast semi-evergreen and moist teak bearing forests

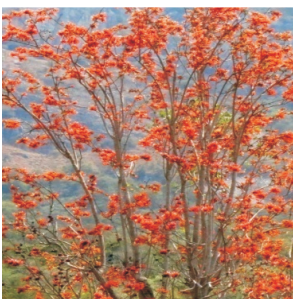
Properties:

Colour	Sapwood greyish-white to grey, heartwood olive brown
Hardness	Moderately hard
Weight	Heavy
Grain	Shallowly or deeply interlocked
Working properties	Easy to saw and machine and works to a fairly smooth surface
Natural durability and preservation	Moderately durable

Uses :

- Tree yields a gum used in medicine and caulking of boats
- Leaves have medicinal value
- Bark is used for dyeing, fish nets and medical purposes as demulcent, tonic
- Wood is used for rafters, posts and floor boards in buildings; agricultural implements, tool handles, carts and carriages

BUTEA MONOSPERMA



Scientific Name

Butea monosperma (Lam.) Taub.

Family

Fabaceae

Trade Name

Bastard teak, Dhak Tree

Local Name

Elaiporasu, palasu, porasu

Tree

Small to medium – sized deciduous tree. Tree trunk usually crooked and tortuous, with rough greyish-brown, fibrous bark showing a reddish exudates

Distribution

Southern dry mixed deciduous and thorn forests

Properties:

Colour

Creamy white to pale yellowish brown, sapwood and heartwood not distinct

Hardness

Soft to moderately hard

Weight

Light weight

Grain

Straight to somewhat interlocked

Processing & Drying

Seasons well

Working properties

Easy to saw and work but difficult to peel into veneers

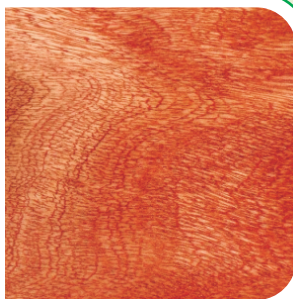
Natural durability and preservation

Perishable

Uses :

- Tree yields a gum called Gum Kino which is an astringent
- It can be used as a dye and as tannin
- Leaves are used to making platters, cups and beedi wrappers
- Flowers are useful in the treatment of liver disorders and seeds act as an anthelmintic
- Wood is used for water scoops, low quality furniture, cheap boards
- Wood pulp is suitable for newsprint manufacture. Wood makes a fuel of moderate quality. Leaves are sometimes used as a fuel
- wood is burnt for gunpowder charcoal
- Root and bark fibre used for cordage and caulking boats

CALOPHYLLUM INOPHYLLUM



Scientific Name	<i>Calophyllum inophyllum</i> L.
Family	Calophyllaceae
Trade Name	Alexandrian Laurel
Local Name	Pinnai, punnai, Undi
Tree	Medium sized tree. Bark brownish black with shallow irregular fissures
Distribution	Coastal areas and along river banks
Properties:	
Colour	Sapwood pinkish and heartwood reddish brown with dark lustrous streaks
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Interlocked, close grained
Processing & Drying	Seasons well but liable to develop short surface cracks if sufficient care is not taken in stacking
Working properties	Saws without difficulty and works to a fine finish takes good polish
Natural durability and preservation	Non durable

Uses :

- Tree yields a resin which is emetic and purgative
- Bark contains tannins
- Wood is used for building constructions, flush door, shutters, class I plywood, tea chests, furniture, panelling, ship building, caulking boats
- Seed oil is used in soap making, illuminant, medical oil for rheumatism, leprosy and skin disorders

CALAMUS ROTANG



Scientific Name	<i>Calamus rotang</i> L
Family	Arecaceae
Trade Name	Canes
Local Name	Perambu
Tree	Climbing palm exhibiting a slender stem, flexible, more or less spiny
Distribution	It is found in central and southern India, and has slender but strong stems. Performing well in Sholapuram, Kalamavur and other centers in Trichy, Tanjore areas of Tamil Nadu
Properties:	
Colour	Lustrous brown
Weight	Light
Processing & Drying	Air seasoning. Straightening of the poles is often done during drying process by placing wooden weights over the spread poles. Simple knives are used for peeling and splitting the rattan
Working properties	Elastic and flexible
Natural durability and preservation	Highly durable

Uses :

- Wood is used for making furnitures
- Wood is also used for making basket-work, mats, blinds, etc
- Roots are medicinal used in chronic fever
- Rattans can be used agro forestry
- Fruits are edible

CASSIA FISTULA



Scientific Name

Cassia fistula L.

Family

Fabaceae

Trade Name

Raj brikh, Indian Laburnum

Local Name

Konnai, Sarakonnai

Tree

Small to medium sized tree. Bark greenish grey, smooth when young and rough when old exfoliating in hard scales

Distribution

Distributed in drier parts of India. Often cultivated. Southern dry mixed deciduous, moist teak bearing and southern moist teak bearing and southern moist mixed deciduous forests

Properties:

Colour

Sapwood - greyish white to light yellowish brown, heartwood yellowish red to brick red or reddish brown

Hardness

Very hard

Weight

Heavy to very heavy

Grain

Straight to slightly interlocked

Processing & Drying

Refractory to seasoning as it develops cracks, splits and warps

Working properties

Difficult to saw, machining not satisfactory

Natural durability and preservation

Very durable

Uses :

- Leaves are used as fodder
- Bark yields tannin
- Wood is used locally for building constructions, plough handles, wheels and shafts of crafts, turnery, tool handles, charcoal, posts, bridge works, rice pounders, furniture and railway works
- Root bark, seed and leaf have medicinal uses
- Pod pulp is a purgative
- It can be planted as avenue tree

CASSIA SIAMEA



Scientific Name

Cassia siamea Lam.

Family

Fabaceae

Local Name

Ponvarai, Manjakonnai, Simaiavarai, Sinnakonnai

Tree

Medium sized tree. Bark is grey an smooth, slightly fissured

Distribution

Native of south East Asia, planted as Avenue tree. The species performed well in many agro climatic zones and has good plantations for energy plantations in Tamil Nadu

Properties:

Colour

Sapwood yellowish white to greyish brown. Heartwood dark brown to black with lighter streaks, lustrous

Hardness

Moderately hard to hard

Weight

Heavy to very heavy

Grain

Slightly interlocked grain

Processing & Drying

Seasons well

Working properties

Not difficult to work with tools, finishes to a fairly smooth surface and takes good polish

Natural durability
and preservation

Very durable

Uses :

- Wood is used for general constructions, wood inlays, furnitures, joinery, tool handles, walking sticks etc
- Flowers are used as vegetable
- It can be planted as avenue tree

CASUARINA EQUISETIFOLIA



Scientific Name

Casuarina equisetifolia L.

Family

Casuarinaceae

Trade Name

The Tinian pine and Beafwood tree

Local Name

Casuarina, Savukku

Tree

Large sized evergreen tree. Bark light greyish, brown, rough, thick, furrowed and flaking in oblong pieces

Distribution

Native of Andamans and south East Asia. Cultivated extensively in Tamil Nadu by farmers. A species preferred as plantation crop and in agro forestry in the State

Properties:

Colour

Sapwood pale brown. Heartwood dark reddish brown

Hardness

hard to very hard

Weight

Heavy to very heavy

Grain

Straight grained

Processing & Drying

Refractory to seasoning, due to severe deep splits, green conversion followed by close stacking under cover recommended

Working properties

Difficult to saw and cut but takes good polish

Natural durability

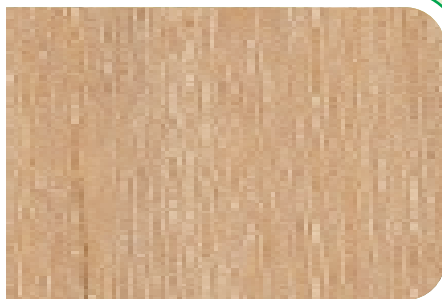
and preservation

Non-durable in exposed conditions and in contact with ground moderately durable under cover and in contact with water Heartwood is resistant to dry wood termites and partially treatable

Uses :

- Tree yields a resin
- Bark is used in dysentery. It yields a light reddish coloured dye used for toughening fishermen nets
- Bark is astringent
- Wood is used as poles and beams for temporary constructions, work and small furniture
- Wood is used as fuel wood and charcoal
- Needles used for making activated carbon

CASUARINA JUNGHUHNIANA



Scientific Name	<i>Casuarina junghuhniana</i> Miq.
Family	Casuarinaceae
Trade Name	Thailand Casuarina
Local Name	Thailand Savukku
Tree	Large sized evergreen tree. Bark light greyish, brown, rough, thick, furrowed and flaking in oblong pieces
Distribution	Very fast growing when compared to <i>Casuarina equisetifolia</i> . This species has been introduced in most of the research centres in Tamil Nadu and found to perform well

Properties:

Natural durability and preservation	Non- durable in exposed conditions and in contact with ground moderately durable under cover and in contact with water
Effect of Ammonia fumigation	Wood has moderate/very light reaction on ammonia fumigation

Uses :

- Wood is used in making small furniture, making tools and temporary constructions

CEIBA PENTANDRA



Scientific Name	<i>Ceiba pentandra</i> (L.) Gaertn.
Family	Bombacaceae
Trade Name	Kapok, White silk cotton tree
Local Name	Ulagamaram, Panjimaram
Tree	medium to large sized tree. Bark greyish brown, green when young
Distribution	Native to tropical America and Africa. Often grown in homesteads and in plantations in many parts of Tamil Nadu
Properties:	
Colour	Greyish white or greyish brown, sapwood and heartwood not distinct, somewhat lustrous
Hardness	Very light to light wood
Weight	Very light to light wood
Grain	Slightly interlocked grain
Processing & Drying	Seasons well
Working properties	Easy to work. Finishes to a fairly smooth surface and takes good polish
Natural durability and preservation	Very durable

Uses :

- Tree yields a gum used for bowel complaints
- Wood is used as catamarans, match splint boxes, general constructions, inlay of furniture, tool handles, walking sticks, light packing cases
- Yarn is used in dyeing units, the floss is used in bedding and upholstery
- Seed yields oil similar to cotton seed oil. Seeds are fed to cattle
- Roots are diuretic
- Pressed cake is used as feed for cattle

CHLOROXYLON SWIETENIA



Scientific Name	<i>Chloroxylon swietenia</i> DC.
Family	Rutaceae
Trade Name	East Indian Satin wood
Local Name	Porasu, Varimarai, Varimaram, Varimari
Tree	Medium sized tree. Bark rough, yellowish corky
Distribution	Southern dry mixed deciduous forests. Performing well in many tracts of Tamil Nadu

Properties:

Colour	Greyish yellow to golden with satin lusture, sapwood and heartwood not distinct
Hardness	Hard to very hard
Weight	Heavy to very heavy wood
Grain	Straight to interlocked
Processing & Drying	Seasons well
Working properties	Easy to work with tools, finishes to a fairly smooth surface and takes good polish
Natural durability and preservation	Very durable
Effect of Ammonia fumigation	Wood has negligible reaction on ammonia fumigation

Uses :

- Tree yield an amber or brownish red gum and a yellow dye
- Leaves are used in curing rheumatism
- Wood is used for general constructions, inlay of furniture, tool handles, walking sticks
- Wood can be used for cabinets, interior decorative work, mathematical instruments, picture frames
- Seeds yields a non drying oil and wood an essential oil

COCOS NUCIFERA



Scientific Name	<i>Cocos nucifera</i> L.
Family	Arecaceae
Trade Name	Coconut Tree
Local Name	Tennaiamaram
Tree	A large palm; stem smooth grey or greyish brown, erect or curved
Distribution	Native of tropical America. Cultivated in Seacoast region of the country and to a lesser extent in inlands
Properties:	
Colour	Red towards periphery and reddish brown towards center
Hardness	Outer portion very hard and inner soft
Weight	Very heavy
Grain	Interlocked
Working properties	Sawing difficult. Can be brought to smooth surface and takes good polish
Natural durability and preservation	Perishable can be preservative treated

Uses :

- Leaves woven into mats and baskets
- Wood used for rafters, poles, posts and beams, constructional items, tool handles, walking sticks, wooden bowls and vases, fancy work and curio items Saw dust can be used in the manufacture of cement – based building bricks can be used in decorative furniture
- Meat of seeds eaten raw or used in sweet meat in kitchen preparation, pastries and confectionary
- Coconut oil is employed in food products, soaps and cosmetics
- Coconut fibre husk used in making mats, ropes, baskets, brushes
- Coconut milk is a refreshing drink

DALBERGIA LATIFOLIA



Scientific Name

Dalbergia latifolia Roxb.

Family

Fabaceae

Trade Name

East Indian Rosewood

Local Name

Venkothairupottu, Thodgathi, Tawadi, Eravadi

Tree

A large sized deciduous tree. Bark grey with cracks peels off in their flakes

Distribution

West coast semi- evergreen Moist teak bearing and Southern secondary moist mixed deciduous forests. It is found in Malabar, on Sub-Himalyan tract, Central and South India and throughout Western Ghats. This species has been introduced in many agro climatic outside its home and found to perform moderately where water is available

Properties:

Colour

Sapwood pale yellowish white with pinkish tinge and heartwood purplish-brown with black or real streaks, colour uniform

Hardness

Hard

Weight

Heavy to very heavy

Grain

Close grained

Processing & Drying

Easy to season

Working properties

Easy to work with hand tools and machine, can be brought to good finish and polish. Good for turning and carving

Natural durability & preservation

Very durable, sapwood perishable but readily treatable with complete penetration

Uses :

- Leaves are used as fodder
- Bark contains tannin
- Wood is used for making high class furniture, construction of buildings flush door shutters, class I plywood for face veneers, tool handles, artificial limbs and rehabilitation aids, textile mill accessories, chess pieces, carom musical instruments, engineering instruments bentwood articles, handcrafts
- Rosewood oil (Oil from heartwood) is used in perfume industry
- Oil has medicinal properties, which boosts immune system, cures headache and skin diseases

DALBERGIA SISOO



Scientific Name	<i>Dalbergia sissoo</i> DC.
Family	Fabaceae
Trade Name	Sissoo, Shisham
Local Name	Sissoo
Tree	A large deciduous
Distribution	West coast semi evergreen. Moist teak bearing and southern moist mixed deciduous forests

Properties:

Colour	Sapwood small white. Heartwood brown with darken streaks
Hardness	Hard
Weight	Heavy
Grain	Straight grained
Processing & Drying	Seasons well and does not warp or split
Working properties	Offers resistance to sawing and cutting. Excellent for turnery takes a good polish and finishes to a smooth surface
Natural durability and preservation	Very durable

Uses :

- Leaves are used as fodder
- Wood is used in high quality furniture, cabinets, decorative veneer marine and aircraft grade plywood, carving, engraving, tool handles, sporting goods, house constructions, agricultural implements, carriages, carts, gun carriages, cartwheels etc
- Wood is popular for making doors and windows, suitable for firewood and used in charcoal making

DENDROCALAMUS STRICTUS



Scientific Name

Dendrocalamus strictus (Roxb.) Nees

Family

Poaceae

Trade Name

Male Bamboo

Local Name

Kalmungil

Tree

A deciduous, densely tufted bamboo, this species occupies 53 per cent of total area of bamboo in India. Culms are 8-16m tall, 2.5-8 cm in diameter, thick walled. This is the most common and useful bamboo in the India. The lower part of the culms is sometimes solid. The species prefers well- drained, poor, coarse, grained and stony soils

Distribution

Widely distributed in India in semi-dry and dry zone along plains and hilly tracts usually upto an altitude of 1000m; also commonly cultivated throughout the plains and foot hills, native to Tamil Nadu, performing very well in Tamil Nadu. The species is largely used in afforestation of wastelands

Properties:

Colour

Glaucous when young and yellowish when old

Processing & drying

Best dried by air seasoning, Kiln seasoning also practiced

Natural durability
and preservation

Very durable

Uses :

- Leaves are a good fodder. The decoction of leaves is used as medicine
- Wood is used for making furnitures, basket making, mats, handicrafts, doors & windows, agricultural implements, tool handles, constructional purposes
- The thin solid culms are used as laths (Walking sticks)
- It is used in preparation of activated carbon
- It is also used as musical instruments (Flutes, horns, clarionets, saxophones, drums etc
- Pulp is suitable for rayon industry
- Medicinal purposes like kidney ailments and gonorrhea
- Young shoots are commonly used as food
- Dry culms and rhizomes are used as fuel

DYSOXYLUM MALABARICUM



Scientific Name	<i>Dysoxylum malabaricum</i> Bedd. ex C. DC.
Family	Meliaceae
Trade Name	White cedar
Local Name	Vellagil
Tree	Very large upto 35 m in height and 60-90 cm in diameter Bark grey with white coats
Distribution	West coast tropical evergreen and southern hill top tropical evergreen forests
Properties:	
Colour	Sapwood whitish or greyish yellow, heartwood yellow to golden yellow or yellowish brown
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Straight to some what interlocked
Processing & Drying	Easy to season. Green conversion and quick stacking recommended
Working properties	Easy to saw and machine takes good polish
Natural durability and preservation	Very durable

Uses :

- Wood is used for construction works, decorative panelling, aircraft plywood, furniture cabinets, tool handles, textile mill accessories, chess pieces, Mathematical and engineering instruments

EUCALYPTUS GLOBULUS



Scientific Name

Eucalyptus globulus Labill

Family

Myrtaceae

Trade Name

Blue gum

Local Name

Karpooramaram

Tree

A lofty tree with fibrous deciduous grey outer bark

Distribution

Native of Australia. It is cultivated in Nilgiris, Annamalai, Palni hills and other places in India. It is grown as an ornamental plant

Properties:

Colour

Wood light grey or pink

Hardness

Soft to moderately hard

Weight

Light to moderately heavy

Grain

Straight to slightly interlocked grains

Processing & drying

Difficult to season

Working properties

Not good for turning and carving but takes good polish

Natural durability
and preservation

Durable

Effect of

Ammonia fumigation

It is strong reaction, turning wood nearly black on ammonia fumigation

Uses :

- Wood is used for house-beams, railway sleepers, bridge work, rough carpentry etc
- Seeds and leaves yield a kind of aromatic oil of commerce used for medicinal purposes
- Used as pulp wood for rayon and in paper industries

EUCALYPTUS GRANDIS



Scientific Name	<i>Eucalyptus grandis</i> W.Hill
Family	Myrtaceae
Trade Name	Rose gum, flooded gum
Local Name	Karpooramaram
Tree	Large sized tree. Bark whitish or ash coloured
Distribution	Native of Australia, extensively raised in plantations

Properties:

Colour	Sapwood pinkish, heartwood pinkish brown to reddish Brown
Hardness	Moderately hard
Weight	Moderately heavy to heavy
Grain	Straight to some what interlocked
Processing & drying	Seasoning difficult, liable to work and crack
Working properties	Easy to saw and work
Natural durability and preservation	Non durable
Effect of Ammonia fumigation	It is strong reaction, turning wood nearly black

Uses :

- Wood is used mainly for pulping, suitable for packing cases and boxes, crafts, beams, columns, poles and posts, sleepers, ship building and flooring

EUCALYPTUS TERETICORNIS



Scientific Name	<i>Eucalyptus tereticornis</i> Sm.
Family	Myrtaceae
Trade Name	Mysore gum
Local Name	Thailamaram
Tree	Large tree. Bark whitish or ash coloured, smooth, fast growing tree
Distribution	Native of Australia, extensively raised in plantations in many parts of Tamil Nadu. Superior clone have been identified for early harvesting

Properties:

Colour	Sapwood light or pale red, heart wood reddish brown
Hardness	Hard to very hard
Weight	Heavy to very heavy
Grain	Straight
Processing & drying	Seasoning difficult, liable to work and crack
Working properties	Easy to saw and work. Nail holding capacity good
Natural durability and preservation	Moderately durable under cover
Effect of Ammonia fumigation	It is strong reaction, turning wood nearly black

Uses :

- Wood is used mainly for pulping, suitable for packing cases & boxes, beams, columns, poles & posts, railway sleepers, ship building and flooring
- Pulp used in paper industries

FERONIA ELEPHANTUM



Scientific Name	<i>Feronia elephantum</i> Correa
Family	Rutaceae
Trade Name	The wood apple, Elephant apple
Local Name	Vellam, Vilatti, Vellanga
Tree	A middle sized glabrous deciduous tree. Bark dark grey or nearly black
Distribution	Dry open forests, often cultivated and on west coast Performs well in many parts of Tamil Nadu
Properties:	
Colour	Wood yellowish or greyish white
Hardness	Hard
Weight	Moderately heavy
Grain	Straight grained
Processing & Drying	Easy to season
Working properties	Easy to saw and work
Natural durability and preservation	Moderately durable

Uses :

- Leaves aromatic, astringent, yield an essential oil
- Leaves, bark, roots and fruit pulp are all used against snakebite
- Wood is used for house building, naves of wheels, oil crushers, pen holders, rulers, ornamental carving and agricultural implements
- The pulp of the fruit is acidic and is made into jelly
- Fruits eaten, also used for making sherbet
- Tree lopped for fodder
- Juice of young leaves is mixed with milk and given as a remedy for intestinal troubles of children

GMELINA ARBOREA



Scientific Name	<i>Gmelina arborea</i> Roxb.
Family	Verbenaceae
Trade Name	The Wood apple, Elephant apple
Local Name	Vellam, Vilatti, Vellanga
Tree	A middle sized glabrous deciduous tree. Bark dark grey or nearly black
Distribution	Dry open forests, often cultivated and on west coast. Performs well in many parts of Tamil Nadu
Properties :	
Colour	Wood yellowish or greyish white
Hardness	Hard
Weight	Moderately heavy
Grain	Straight grained
Processing & drying	Easy to season
Working properties	Easy to saw and work
Natural durability and preservation	Moderately durable

Uses :

- Leaves aromatic, carminative, astringent, yield an essential oil
- Leaves, bark, roots and fruit pulp are all used against snakebite. Juice of young leaves is mixed with milk and given as a remedy for biliousness and intestinal troubles of children
- Wood is used for house building, naves of wheels, oil crushers, penholders, rulers, ornamental carving and agricultural implements
- The pulp of the fruit is acidic and is made into jelly
- Fruits eaten, also used for making sherbet
- Tree lopped for fodder

GREVELIA ROBUSTA



Scientific Name	<i>Grevillea robusta</i> A. Cunn. ex R. Br.
Family	Proteaceae
Trade Name	Silver oak
Local Name	Nattu cavundal
Tree	It is a fast growing evergreen, medium to large sized tree. Bark fissured, sometimes postulate, dark grey to dark brown
Distribution	Native of Australia, grown in tea and coffee estates as shade trees and in home stead
Properties :	
Colour	Sapwood cream coloured to pale pink, heartwood yellowish brown or red brown
Hardness	Hard
Weight	Moderately heavy
Grain	Straight
Processing & drying	Air dries slowly, tends to warp
Working properties	Easy to work with tools, but difficult to bring a good finish. Good for turning and carving
Natural durability and preservation	Perishable and treatable with chemicals
Effect of Ammonia fumigation	Wood has moderate / very light reaction on ammonia fumigation

Uses :

- Wood is used for panelling in building constructions. Flush door shutters class III general-purpose plywood, decorative plywood, block boards, packing cases and boxes, mathematical, engineering and drawing instruments, bobbins, toys, cabinet works, boat building

GREWIA TILIAEFOLIA



Scientific Name	<i>Grewia tiliaefolia</i> Vahl.
Family	Tiliaceae
Trade Name	Dhaman
Local Name	Thadachi, Unu, Thadasu
Tree	A moderate sized tree. Bark grey to blackish brown, rough fibrous, peels off in thin flakes
Distribution	Sub Himalayan tract from Kashmir to Nepal, Central and South India. Found in moist deciduous forests of Tamil Nadu
Properties :	
Colour	sapwood light greyish brown, heartwood reddish brown in colour with dark streaks
Hardness	Moderately hard
Weight	Heavy
Grain	Fairly straight
Processing & drying	Moderately refractory, liable to surface cracking and end splitting. Conversion soon after felling and stacking under cover recommended
Working properties	Easy to saw and machine can be brought to a smooth finish and takes good polish
Natural durability and preservation	Moderately durable. Heartwood refractory to treatment

Uses :

- Bark of the branches yield a cordage fibre used for rope making and used in dysentery
- Wood is used for agricultural implements, tool handles, constructional purposes like door and window frames, furniture, poles, fence posts, Railway sleepers, tent accessories boat and ship building, badminton rackets, balancing benches, hurdles, cricket stumps and bails, brush ware, cart & carriages, bus bodies etc

GYROCARPUS JACQUINII



Scientific Name	<i>Gyrocarpus jacquinii</i> Gaertn.(syn) or <i>Gyrocarpus americanus</i> Jacq.
Family	Hernandiaceae
Local Name	Vellaithanaku
Tree	A large deciduous tree. Bark thin greyish, white with a silvery luster
Distribution	North circars, especially in Godawari and Krishna in forests of the eastern Ghats, Deccan and carnatic in deciduous forests, extending to west to east slopes of the western Ghats
Properties :	
Colour	Grey
Hardness	Light
Weight	Soft
Grain	Even grained
Processing & drying	Seasons easily
Working properties	Easy to saw and work, gives good finish and takes good polish
Natural durability and preservation	Perishable and can be chemically treated

Uses :

- Wood is used for better quality toys, catamarans, carved figures, models, combs, trays, boxes
- Wood is used mainly furniture, catamarans and paddles
- Seeds are made into rosaries and necklaces

HARDWICKIA BINATA



Scientific Name	<i>Hardwickia binata</i> Roxb.
Family	Caesalpiniaceae
Trade Name	Anjan
Local Name	kolavu
Tree	Deciduous tree, with graceful drooping branchlets
Distribution	Found in the dry Savannah forests of the Deccan peninsula, Central India and parts of Uttar Pradesh and Bihar

Properties:

Colour	The sapwood is small and white. The heart wood is dark reddish brown streaked with purple
Hardness	Wood is extremely hard
Weight	heavy
Grain	close grained
Working properties	Hard worked
Natural durability & preservation	Durable timber

Uses :

- Wood used for naves of cart wheels, oil mills, ploughs, cold crushers, posts, beams, mine props, bridges, wells, pontoons, oars and parquet floors
- It is also used for carving, turning and ornamental work
- It is suitable for bench screws, lathe chucks, tool handles, sheaves of rope blocks, railway keys, tent pegs and brake blocks
- Bark yields a red-brown fibre used for well ropes and other agricultural purposes
- Leaves are used as cattle fodder and manure

HEVEA BRAZILENSIS



Scientific Name

Hevea brasiliensis (Willd. ex A.Juss.) Müll.Arg.

Family

Euphorbiaceae

Trade Name

Rubber wood, Para rubber

Local Name

Rubber maram

Tree

Large sized tree. Bark greyish black, smooth

Distribution

Native of South America. Raised extensively in plantations in Kanyakumari district and in Kerala

Properties :

Colour

Wood is yellowish white when freshly cut, brownish or creamy on exposure, sapwood and heartwood are not distinct

Hardness

Moderately hard

Weight

Moderately heavy

Grain

Straight

Processing & drying

Seasons easily

Working properties

Easy to saw and works well with hand tools and machines

Natural durability and preservation

Perishable, sap stains common. Moderate to treatments

Uses :

- Wood is used in packing cases and boxes, fibre boards, particle boards, match splints and boxes, low quality furniture, bentwood articles, tool handles, door and frame shutters
- Seed oil can be used for soap manufacture
- Oil cake is used as manure and cattle feed
- Rubber is obtained from latex

HIBISCUS TILIACEUS



Scientific Name	<i>Hibiscus tiliaceus</i> L.
Family	Malvaceae
Trade Name	Sea hibiscus
Local Name	Nirparuthi
Tree	Large tree. Bark is grey in colour
Distribution	Seacoast forests and along tidal rivers all round India and Burma

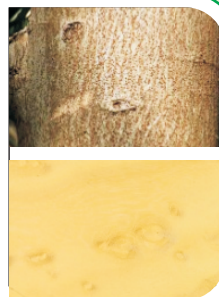
Properties :

Colour	heartwood is purplish in colour
Hardness	Moderately hard
Weight	Light
Grain	fairly straight
Processing & drying	Seasons well
Working properties	Easy to work and rather finishes well
Natural durability and preservation	Not very durable. Durability is increased when treated

Uses :

- Leaves are used for cold and cough
- Bark is used for making wrapping paper
- Bark is used soaked in water and used to treat dysentery
- Bark, branched, flower buds are laxative in nature
- Wood is used as cabinet work, furniture, inlay works, building constructions, etc
- Wood is durable in sea water, used for planking and light boats, floats of fishing nets, catamarans
- Infusion of seeds used as an emetic
- Root used in the preparation of ayurvedic medicines

HOLOPTELEA INTEGRIFOLIA



Scientific Name

Holoptelea integrifolia (Roxb.) Planch

Family

Ulmaceae

Trade Name

Indian elm, Kanju

Local Name

Ayili, Aya, Awie, Thavasi, Ani

Tree

A deciduous tree. Bark whitish grey, thin, exfoliating in irregular flakes

Distribution

West coast semi evergreen and occasionally in moist teak bearing forests. Through out India except in higher hills

Properties :

Colour

Light yellow or yellowish grey, sapwood and heartwood not distinct. Somewhat lustrous

Hardness

Moderately hard

Weight

Moderately heavy

Grain

Somewhat interlocked

Processing & drying

Seasons well

Working properties

Easy to saw and work, turns to a fine smooth surface and takes good polish

Natural durability and preservation

Non-durable. Heartwood treatable but complete penetration of chemicals in wood not always obtained

Uses :

- Leaves are fodder.
- Bark yields strong fibre used for ropes. Bark pulp made into hardboards and insulation boards
- Wood is used for brush backs and handles of dusting brooms
- Wood is also used indoor building purpose, general constructions, cheap furniture, bobbins, cotton reels in textile mills
- Wood is used for class I plywood, packing cases, match boxes & splints, block boards, tool handles, agricultural implements, toys, bentwood articles, paper & pulp
- Seeds contain fatty oil

JATROPHA CURCAS



Scientific Name	<i>Jatropha curcas</i> L.
Family	Euphorbiaceae
Trade Name	Purging Nut
Local Name	Kattamannakku
Tree	Perennial hardy shrub
Distribution	Native of south America and Africa and spread all over the world

Properties :

Hardness	Soft
Weight	Light
Working properties	Wood is very easy to saw and work with tools

Uses :

- Oil from the seeds is potentially the most valuable end products
- Oil is an environmentally safe, cost effective, renewable source of non conventional energy. It may be used as an alternative to diesel, kerosene, coal, LPG etc
- Oil is used in manufacture of soap, candle, varnish and as lubricant, hydraulic oil
- Oil cake is a manure and after detoxification can be used as cattle feed. Oil cake is superior to cow dung and can replace chemical fertilizer
- The plants can be planted as live fencing
- Seeds are used as bio fuel and in medicine
- Seeds yields Glycerol as by product during oil extraction

KHAYA SENEGALENSIS



Scientific Name	<i>Khaya senegalensis</i> (Desv.) A.Juss.
Family	Meliaceae
Trade Name	African mahagony
Local Name	Kaya
Tree	Large to very large tree
Distribution	Native of Africa, introduced in India, planted as an avenue trees. Has excellent agro forestry potential and fast growing tree

Properties :

Colour	Sapwood is pinkish in colour and heartwood is dark red brown
Hardness	Moderately hard
Grain	Good grain pattern
Processing & Drying	Dries rather slowly but fairly well with little checking or warp.
Working properties	Seasons well. Takes good polish and finish. Good in turning and carving properties
Natural durability and preservation	Moderately durable. Heartwood is resistant to termites. Softwood is resistant to preservatives
Effect of Ammonia fumigation	Wood has Moderate reaction on ammonia fumigation

Uses :

- Bark used in tanning. Bark scales are used as fish poison, used in traditional veterinary practice and used in medicine (Jaundice)
- Bark Seeds and leaves are used in fever and headache
- Wood is used for furniture and cabinetwork, joinery, boat building, decorative panelling, veneer
- Oil from seed is edible
- Roots used in treatment of mental illness

LAGERSTROEMIA LANCEOLATA



Scientific Name	<i>Lagerstroemia lanceolata</i> Wall.
Family	Lythraceae
Trade Name	Benteak
Local Name	Venthekku, Vevala, Chennanji
Tree	A large deciduous tree. Bark yellowish, grey smooth, exfoliating in large papery flakes
Distribution	Western coast of India in deciduous forests from Bombay to Travancore, ascending into the hill ranges of Mysore
Properties :	
Colour	Sapwood grey or pink, heartwood light reddish brown to walnut brown
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Straight to somewhat interlocked
Processing & Drying	Air seasoning difficult. Kiln seasoning recommended
Working properties	Sawing and machining satisfactory, finishes to a smooth surface and takes good polish
Natural durability and preservation	Durable. Heartwood very refractory to treatment

Uses :

- Leaves are used as green manure
- Leaves and fruit contain tannin
- Wood is used for door and window frames, tea chests, furniture and cabinets, tool handles, poles and posts, railway sleepers, boat and shipbuilding, textile mill accessories
- Wood is also used as cart and carriages, bent wood articles, balancing bench, javelins, hurdles and toys

LEUCAENA LEUCOCEPHALA

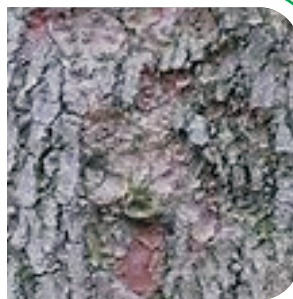


Scientific Name	<i>Leucaena leucocephala</i> (Lam.) de Wit
Family	Fabaceae
Trade Name	Subabul
Local Name	Nattu cavundal
Tree	Small to medium sized tree. Bark rough and shallow with rusty orange brown vertical fissures
Distribution	West coast tropical evergreen and west coast semi evergreen forests, cultivated extensively outside forest areas
Properties :	
Colour	Sapwood pale yellowish white, heartwood golden brown with dark streaks
Hardness	Hard
Weight	Heavy, moderately strong
Grain	Close—grained
Processing & Drying	Easy to season
Working properties	Easy to work
Natural durability and preservation	Durable on seasoning

Uses :

- Leaves are highly nutritious and used as animal feed
- Wood is used in paper, rayon and particleboard
- Timber is used as sawn timber, furniture, parquets, flooring, construction works, fence posts, tool handles and poles
- Gum yields and has commercial value
- Pods, seeds and leaf tips are used as food
- Seeds used as concentrates for dairy animals
- Dried seeds are widely used as ornamentation

MACHILUS MACRANTHA



Scientific Name	<i>Machilus macrantha</i> Nees (syn) or <i>Persea macrantha</i> (Nees) Kosterm
Family	Lauraceae
Trade Name	Ladder wood
Local Name	Kollamavu
Tree	Large deciduous tree. Bark pale brown with dark blotches, rough in old trees
Distribution	West coast tropical evergreen west coast semi- evergreen, occasionally in moist teak bearing and southern sub tropical hill forests
Properties :	
Colour	Light orange brown to light reddish brown, sapwood and heartwood not distinct
Hardness	Moderately hard
Weight	Light to moderately heavy
Grain	Straight
Processing & Drying	Green conversion followed by immersion in water and stacking recommended
Working properties	Easy to saw and work, planes to a dull smooth surface.
Natural durability and preservation	Non durable

Uses :

- Leaves are applied to ulcers
- Bark is used in asthma, constipation and rheumatism
- Wood is used for house building as planks, rafters and scantlings, class I plywood for general purposes, packing cases and boxes, match splints, flooring and ceiling boards
- Wood is suitable for commercial and tea chest plywood, cabinet panels, slate frames, boats etc
- Wood used for railway sleepers after treatment

MANGIFERA INDICA



Scientific Name	<i>Mangifera indica</i> L.
Family	Anacardiaceae
Trade Name	Mango
Local Name	Mamaram
Tree	Medium to large evergreen tree. Bark brown or dark grey, rough
Distribution	West coast tropical evergreen and west coast semi evergreen forests, cultivated extensively in farmers field
Properties :	
Colour	Yellowish white to greyish brown, sapwood and heartwood not distinct or sometimes heartwood distinct and dark brown, somewhat lustrous
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Straight to somewhat interlocked
Processing & Drying	Seasons well
Working properties	Easy to saw. Machining satisfactory takes good polish. Nail and screw holding capacity excellent peels well
Natural durability and preservation	Fairly durable, easily treatable

Uses :

- Bark is used for Ayurvedic medicine
- Wood is used for inferior furniture, flooring & ceiling boards, window frames, general purpose class I plywood, packing boxes, boat and ship building, bentwood articles, match splints, brush backs and agricultural implements
- It is suitable for planking and cheap constructional wood
- Seeds are used in curing asthma

MELIA AZEDARACH



Scientific Name	<i>Melia azedarach L.</i>
Family	Meliaceae
Trade Name	Persian lilac
Local Name	Malaivembu
Tree	A small to medium sized deciduous tree. Bark greyish brown to dark grey with long shallow vertical fissures
Distribution	Native of West Asia, grown as avenue trees
Properties :	
Colour	Sapwood is yellowish white, heartwood is reddish brown in colour
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Straight
Processing & Drying	Wood seasons well without developing any defects
Working properties	Easy to saw. Machining satisfactory takes good polish
Natural durability and preservation	Non durable

Uses :

- Leaves are used in anthelmintic and is diuretic
- Bark is bitter and is used as an anthelmintic
- Wood is used for sports goods like tennis & badminton rackets, toys, turnery, light furniture, ornamental plywood, agricultural implements, musical instruments, toys, cigar and ammunition boxes, and other packing and museum cases
- Seed oil is used as medicinal oil (Rheumatism) and suitable for soap making and hair oils
- Fruit gives oil, and the nuts are strung as beads

MELIA DUBIA



Scientific Name

Melia dubia Cav.

Family

Meliaceae

Trade Name

Malabar Neem wood

Local Name

Malai vembu, Kattu vembu

Tree

A large deciduous tree. Bark dark brown or blackish, peels off in rectangular strips. A very fast growing tree. A tree that has been promoted under agroforestry

Distribution

Southern moist mixed deciduous and moist teak bearing forests

Properties :

Colour

Sapwood grey, heartwood reddish-white

Hardness

Moderately hard

Weight

Light

Grain

Straight

Processing & Drying

Open stacking under cover recommended. Solar seasoned

Working properties

Easy to saw, machining is satisfactory and can be brought to a smooth surface

Natural durability and preservation

Moderately durable

Uses :

- Wood is used for plywood, ceiling planks, light packing cases, cigar boxes, match splints, agricultural implements, Pencils, musical instruments, tea chests, ply boards and catamarans
- Leaf is used as skin disorders and fruit is anthelmintic

MILLINGTONIA HORTENSIS



Scientific Name	<i>Millingtonia hortensis</i> L.f.
Family	Bignoniaceae
Trade Name	Indian cork tree
Local Name	Maramalli
Tree	A large tree with fragrant white flowers
Distribution	Indeigenous in Burma and Malaya. Cultivated in avenues and gardens in most parts of India
Properties :	
Colour	Wood yellowish white when fresh. Yellow to yellowish-brown on ageing with darker streaks
Hardness	Soft
Weight	Moderately heavy
Grain	Even grained
Processing & Drying	Seasons well. Good for turning and carving.
Working properties	Easy to saw and work
Natural durability and preservation	Very durable

Uses :

- Bark yields an inferior type of cork
- Wood is suitable for light furniture, ornamental work, tea boxes, brush backs, drawing boards and plane tables
- Tannin is used as an antipyretic

MICHELIA CHAMPACA



Scientific Name	<i>Michelia champaca</i> L.
Family	Magnoliaceae
Trade Name	Champak
Local Name	Shanbagam, Champakam
Tree	A tall evergreen tree. Bark grey, smooth
Distribution	Nepal, eastern Himalayas, Western ghats. Cultivated throughout India

Properties :

Colour	Sapwood pale grey or white, heartwood light brown, lustrous
Hardness	Soft to moderately hard
Weight	Light to moderately heavy
Grain	Straight
Processing & Drying	Seasons well
Working properties	Easy to saw, works to a smooth finish and takes good polish
Natural durability and preservation	Perishable to non-durable

Uses :

- Flowers and seeds are used in medicine
- Flowers are used in religious ceremonies
- Bark is used as a febrifuge
- Wood is used for building construction, class I general purposes plywood, decorative plywood, furniture and cabinets, textile mill accessories, badminton racquets, mathematical, engineering and drawing instruments, battery separators etc
- Wood is made into beads, and necklace of the beads are sold to pilgrims at Haridwar

MIMUSOPS ELENGI



Scientific Name	<i>Mimusops elengi</i> L.
Family	Sapotaceae
Trade Name	Bullet wood
Local Name	Magadam, Magil, Mahila
Tree	A large evergreen tree. Bark is dark grey, rough with vertical fissures
Distribution	West coast tropical evergreen forests. Raised as border trees in tea plantations and estate boundaries
Properties :	
Colour	Sapwood pale reddish brown, heartwood dark reddish brown
Hardness	Very hard
Weight	Very heavy
Grain	Fairly straight, to irregular or shallowly interlocked.
Processing & Drying	Seasons well
Working properties	Easy to saw, works to a smooth finish and takes good polish
Natural durability and preservation	Very durable

Uses :

- Bark and fruits used in diarrhoea and dysentery
- Wood is used for building and bridge constructions, boat building, furniture and cabinets, agricultural implements, musical instruments, picture frames, tool handles, rice pounders, turnery and carvings
- It is an excellent fuel
- Fruit is edible, and the seeds give an oil which is used as cooking, and in machine
- Dried flowers used as snuff and pounded seed used in suppositories for constipation

MORINDA TINCTORIA



Scientific Name

Morinda tinctoria Roxb

Family

Rubiaceae

Trade Name

Morinda citrifolia

Local Name

Nona, Manjanathi

Tree

A moderate sized deciduous tree. Bark dark brown or grey, corky, deeply cracked

Distribution

Southern dry mixed deciduous forests

Properties :

Colour

Wood has yellowish brown sapwood heartwood is not distinct

Hardness

Moderately hard

Weight

Light

Grain

Even grained

Processing & Drying

Green conversion and stacking under cover with ends protected, recommended

Working properties

Sawing not difficult, turns well to a fairly good finish with hand tools and machine

Natural durability and preservation

Reported to be moderately durable

Uses :

- Bark of the root is largely used for dyeing red and yellow and the dye is used for red thread for carpets, turbans etc
- Wood is used for turnery and carvings, pen holders, furniture, toys, cotton reels, slate frames, plates and dishes

MORUS ALBA



Scientific Name	<i>Morus alba</i> L.
Family	Moraceae
Trade Name	White mulberry
Local Name	Musukette, Kabbli ched
Tree	Small to medium sized deciduous tree. Bark brown rather rough
Distribution	Indigenous to Northern and Western asia, Cultivated in India
Properties :	
Colour	Sapwood yellowish white, narrow heartwood dark orange red with darken streaks when freshly cut turning deep red to purplish black on exposure
Hardness	Very hard
Weight	Heavy to very heavy
Grain	Straight grained
Processing & Drying	Seasons well
Working properties	Easy to saw and work
Natural durability and preservation	Durable

Uses :

- Leaves are mainly used for rearing silkworm
- Bark is used for papermaking and is a purgative and febrifuge
- Wood is used for agricultural implements, furniture, spokes, carts & carriages
- Wood is chiefly used for sports good like hockey sticks, rackets, cricket bats, stumps
- Fruits are eaten and have medicinal properties

MADHUCA LONGIFOLIA



Scientific Name

Madhuca longifolia (Koenig) J.F. Macbride

Family

Sapotaceae

Trade Name

Butter nut tree

Local Name

Irulmaram

Tree

Mahua is a large deciduous tree growing widely under dry tropical and subtropical climatic conditions

Distribution

Mahua trees occurring near the village in private, revenue and forestlands

Properties :

Colour

The heartwood is reddish brown, strong, hard and durable; very heavy

Hardness

Hard to very hard

Weight

Heavy to very heavy

Grain

Straight to interlocked

Processing & Drying

Easy to season

Working properties

Easy to saw and work

Natural durability
and Preservation

Very durable

Uses :

- Fodder: Leaves, flowers and fruits are lopped for goats and sheep. Seed cake is also fed to cattle
- Timber: It is used for house construction, naves and felloes of cartwheels, door and window frames
- Erosion control: Mahua has a large spreading superficial root system that holds soil together
- Shade or shelter: The wide spreading crown provides shade for animals. Reclamation: Mahua is planted on wasteland with hard lateritic soils in India
- Nitrogen fixing: Vesicular-arbuscular mycorrhizal associations and root colonization have been observed in mahua
- Soil improver: The seed cake has been used as fertilizer
- Ornamental: Mahua is occasionally planted as an avenue tree
- Boundary or barrier or support: It is planted along the boundaries of fields

ODINA WODIER



Scientific Name	<i>Odina wodier</i> Roxb.
Family	Anacardiaceae
Trade Name	Jhingan, Wodier
Local Name	Udiyamaram
Tree	Medium to large. Bark greyish black, rough exfoliating in small, thin, irregular flakes
Distribution	Moist teak bearing and southern secondary moist deciduous forests, occasionally in laterite thorn forests
Properties :	
Colour	Sapwood pale yellowish grey, heartwood reddish-brown rather lustrous
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Straight to interlocked
Processing & Drying	Difficult to season
Working properties	Sawing satisfactory can be finished to a smooth surface and takes good polish
Natural durability and preservation	Perishable, moderately durable under cover. Sapwood treatable

Uses :

- Bark is used for dyeing textile printing
- Bark yields gum and strong fibre
- Wood is used for house building, packing cases, furniture, wheel spokes, ploughs and spear shafts, combs, brush backs, wooden jars, mine-props, cutting blocks, boot lasts, troughs, well constructions, dugouts and boats
- Wood is also used for carving and turnery, tea chests and plywood bobbins, rollers in jute mills, inferior quality pencils, second quality slate frames, paper & pulp

PHYLLANTHUS EMBLICA



Scientific Name	<i>Phyllanthus emblica</i> L.
Family	Phyllanthaceae
Trade Name	Emblic myrobalan, Indian gooseberry
Local Name	Nelli
Tree	Medium sized deciduous tree. Bark light grey exfoliating in small irregular patches
Distribution	Grown almost through out India, chiefly in deciduous dry forests
Properties :	
Colour	Reddish, often with a purplish tinge, sapwood and heartwood not distinct
Hardness	Hard
Weight	Heavy
Grain	Irregularly interlocked
Processing & Drying	Somewhat difficult to season
Working properties	Easy to saw and planes a fairly smooth surface
Natural durability and preservation	Moderately durable. Very durable under water

Uses :

- Wood is used for agricultural implements, poles and inferior quality furniture
- Fruits are sour and astringent, cooling, diuretic, laxative, eaten raw, cooked and also pickled
- Fruits used in hair dyes. Fruits, barks and leaves have tannin
- Seeds yield fixed oil
- Yields excellent charcoal and firewood

PINUS PATULA



Scientific Name	<i>Pinus patula</i> Schiede ex Schltdl. & Cham.
Family	Pinaceae
Trade Name	Mexican Weeping pine, Patula pine
Local Name	Pine
Tree	Large sized evergreen tree. Bark white
Distribution	Restricted to Eastern Mexico. Planted as well in New Zealand, Australia, India, Brazil and Argentina
Properties :	
Colour	Sapwood and heartwood is reddish brown
Hardness	Soft
Weight	Light
Grain	Even grained
Processing & Drying	Dries rapidly, without severe degrade
Working properties	Saws easily, does not turn easily. Nail holding capacity good for turning and carving. Takes excellent finish and polish
Natural durability and preservation	Durable on treatment
Effect of Ammonia fumigation	Wood has Negligible reaction on ammonia fumigation

Uses :

- Wood is used as temporary constructions, making tools, packing cases, particle boards, pulp and paper, food containers, panelling, etc

PONGAMIA PINNATA



Scientific Name	<i>Pongamia pinnata</i> (L.) Pierre
Family	Fabaceae
Trade Name	Indian beech
Local Name	Pungam
Tree	Medium sized tree. Bark greyish brown, smooth or faint vertically fissured
Distribution	Tidal and beach forests and along tidal river banks all round India, also along streams and rivers in the forests of south and Central India extending northwards to the Himalayas

Properties :

Colour	Yellowish grey. Sapwood and heartwood not distinct
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Interlocked
Processing & Drying	Somewhat difficult to season, liable to develop warps and splits
Working properties	Easy to saw and work
Natural durability and preservation	Perishable

Uses :

- Leaves are used as a green manure
- Wood is used for temporary constructions, tool handles, cart and carriages, tea boxes, furniture, railway sleepers, joints, rafters, agricultural implements, boats etc
- Seeds are consumed boiled or roasted
- Oil used in making bio diesel

POPULUS DELTOIDES



Scientific Name	<i>Populus deltoides</i> Marshall
Family	Salicaceae
Trade Name	Caroline poplar, Eastern cotton wood
Tree	A large deciduous tree. Fast growing tree
Distribution	Native to us and SE Canada only <i>populus ciliata</i> is native to India. Other <i>populus</i> species like <i>populus deltoides</i> are introduced in India especially in North India. Now cultivated in various places in India

Properties:

Colour	Sapwood white to creamy white, heartwood light red when first exposed turning light reddish brown with age
Hardness	Wood is soft and perishable
Weight	Moderately heavy
Grain	Straight grained, but often spiralled
Processing & Drying	Seasons well
Working properties	Easy to saw and work
Natural durability and preservation	Durable

Uses :

- Wood is used for veneer, plywood boxes, pulpwood, furniture, artificial limbs, matches, General constructions and packing cases
- It is also used for sports good like badminton, tennis, racket frames

PTEROCARPUS MARSUPIUM



Scientific Name	<i>Pterocarpus marsupium</i> Roxb.
Family	Fabaceae
Trade Name	Bijasal, Kino tree
Local Name	Vengai
Tree	A large deciduous tree. Bark dark brown or grey, on injury exudes or red gummy substance
Distribution	Central and Southern India, chiefly in deciduous forests and extending North upto Kumaon
Properties:	
Colour	Sapwood pale yellowish white, heartwood golden brown on exposure. Aqueous extract of wood is characteristic yellowish blue and fluorescent
Hardness	Moderately hard to hard
Weight	Moderately heavy to heavy
Grain	Interlocked
Processing & Drying	Non-refractory; green conversion and open stacking under cover recommended
Working properties	Good for turning and carving finishes well and takes good polish. Attractively figured. Excellent nail and screw holding capacity
Natural durability and preservation	Reasonably durable

Uses :

- Wood is used as constructional purposes like beams, pillars, door and window frames, boat building, bridge constructions, excellent wood for turnery articles, toys, carom coins, chessmen and handicrafts
- Wood is also used for furniture, joinery, tool handles, poles and posts, railway sleepers, lorry bodies, spokes of cart wheels

PTEROCARPUS SANTALINUS



Scientific Name	<i>Pterocarpus santalinus</i> L.f.
Family	Fabaceae
Trade Name	Red sanders
Local Name	Senchanthanam, Chemmaram
Tree	A small to medium sized tree. Bark dark brown, rough with deep vertical and horizontal cracks
Distribution	Occurs gregariously on the dry hill slopes of eastern ghats and has a very restricted distribution in Tamil Nadu and Andhra Pradesh
Properties:	
Colour	Sapwood yellowish white, heartwood dark orange red with darken streaks when freshly cut turning deep red to purplish black on exposure
Hardness	Very hard
Weight	Heavy to very heavy
Grain	Interlocked to wavy grain
Processing & Drying	Seasons well
Working properties	Difficult to saw requires considerable care to bring to a fine finish. It can be carved and turned exceptionally well
Natural durability and preservation	Very durable
Effect of Ammonia fumigation	Wood has Negligible reaction on ammonia fumigation

Uses :

- Wood is used for making valuable carving, musical instruments, agricultural implements, tool handles
- Heartwood power is used in Ayurvedic medicine
- Heartwood powder is used as natural dye
- Alcoholic extract from heartwood has tranquilizing effects



Scientific Name	<i>Radermachera xylocarpa</i> (Roxb.) Roxb. ex K.Schum.
Family	Bignonaceae
Local Name	Onthi kalpadiri
Tree	Medium sized tree. Bark light grey, rough
Distribution	West coast semi evergreen. Moist teak bearing and southern moist mixed deciduous forests
Properties:	
Colour	HW colour darker than SW colour. HW basically brown or shades of brown
Hardness	Moderately hard
Weight	Moderately heavy to heavy
Grain	Straight to irregularly interlocked
Processing & Drying	Easy to season
Working properties	Easy to saw and machine, works to a fine finish, takes good polish
Natural durability and preservation	Durable

Uses :

- Wood is used for building construction, furniture, panelling, carts and carriages, agricultural implements, panelling, packing cases
- Tender fruits are eaten as vegetables
- Resin extracted from wood is used for skin problems

SANTALUM ALBUM



Scientific Name	<i>Santalum album</i> L.
Family	Santalaceae
Trade Name	Sandal
Local Name	Chandhanam, Sandhanam
Tree	Small, evergreen tree. Bark dark grey or brownish black, rough with short vertical cracks
Distribution	In southern dry mixed deciduous forests, found to occur in Western and Eastern ghats of Tamil Nadu
Properties:	
Colour	Sapwood whitish or pale brown heartwood light yellowish brown to dark brown, lustrous
Hardness	Hard
Weight	Heavy
Grain	Straight to slightly wavy, close grained
Processing & Drying	Seasons well
Working properties	Easy to saw, turns well to a fine smooth surface and takes good polish. Easy to carve
Natural durability and preservation	Very durable

Uses :

- Wood is used for turnery and carvings, chess pieces, decorative panelling, fancy works, incense sticks
- Sandalwood oil (from heartwood) used in perfume industry and has medicinal value
- Wood and oil are diuretic, diaphoretic, refrigerant and expectorant

SAPINDUS EMARGINATUS



Scientific Name	<i>Sapindus emarginatus</i> Vahl
Family	Sapindaceae
Trade Name	Soap nut tree
Local Name	Naikottai, Puvamkottai, Bunthikottai
Tree	A large tree. Bark is shiny grey with rough deciduous scales
Distribution	West coast semi-evergreen, moist teak bearing and southern moist mixed deciduous forests

Properties:

Colour	Yellowish white to brown
Hardness	Hard
Weight	Heavy to very heavy
Grain	Straight to wavy
Processing & Drying	Difficult to season, liable to surface cracks and end splits
Natural durability and preservation	Non durable

Uses :

- Bark is medicinal and used for asthma, epilepsy
- Wood is used for carts & carriages, locally for house constructions, agricultural implements, cabinet working and turnery
- Fruits decoctions are used in tonic, astringent and anthelmintic
- Fruits are used as a substitute for soap
- Fruit yields soapnut, which has antiparastic and detergent effects

SARACA INDICA



Scientific Name

Saraca indica L.

Family

Fabaceae

Trade Name

Asok

Local Name

Asokam

Tree

A small evergreen tree. Bark dark brownish black, smooth

Distribution

Sporadic in West coast tropical evergreen forests. It occurs wild in the Khasi Hills of Assam in Andhra Pradesh and in the evergreen forests of the Western ghats in Maharashtra and Mysore

Properties:

Colour

Wood pale yellowish-brown, sapwood and heartwood not distinct

Hardness

Moderately hard

Weight

Moderately heavy

Grain

Straight grained

Processing & Drying

Very refractory to seasoning

Working properties

Easy to saw and work

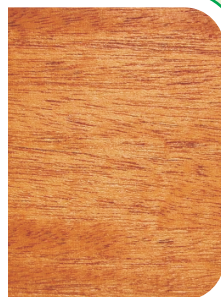
Natural durability and preservation

Moderately durable

Uses :

- Bark is used to treat ulcers, blood disorders, menorrhagia, astringent and demulcent
- Wood is used for making agricultural implements
- Flowers are used as a uterine tonic
- Fruits are chewed as a substitute for arec nuts
- Pods made a good forage

SWIETENIA MAHOGANI



Scientific Name

Swietenia mahogani L.

Family

Meliaceae

Trade Name

West Indies Mahagony

Local Name

Kattamannakku

Tree

A large evergreen and semi evergreen tree

Distribution

Origin of Central America grown in wet and dry tropical forests, wet sub tropical forests. It is distributed to 800 meter above sea level

Properties:

Colour

Reddish yellow in colour

Hardness

Hard

Weight

Heavy

Grain

Straight to interlocked (open grained)

Processing & Drying

Seasons and works well

Working properties

Wood is very to easy to saw and work with handwork tools, with a good to excellent behaviour to planning, excellent for boring, mortising, turning and moulding, good for sanding and very easy to nailing. Gives a very good finish

Natural durability and preservation

Very durable. Very resistant to fungal attack and moderately resistant to termite attack

Uses :

- Bark is used for dyeing and tanning leather
- Wood used for making small boats, fine furnitures of high quality and plywood
- Wood is used for doors, window frames, decorative veneers, turned articles, jewel box, musical instruments, scientific instruments
- The crushed fruit shells have been used as a potting medium

SIMAROUNBA GLAUCA



Scientific Name

Simarouba glauca DC.

Family

Simaroubaceae

Trade Name

Paradise tree

Local Name

Sorga maram

Distribution

This species is adaptable to all the plains of Wood Tamil Nadu and suitable for all types of soil except coastal sandy oil

Properties:

Colour

Pale yellow wood

Hardness

Moderately hard

Weight

Moderately heavy

Grain

Straight to slightly interlocked grains

Processing & Drying

Seasons and works well

Working properties

Easy to saw and work with hand tools. Excellent for boring, turning, mortising and sanding. Good nail holding capacity

Natural durability and preservation

Low durability

Uses :

- Wood is used for light furniture like desks, book shelves, bed backs, interior doors, window, frames, toys, veneers, paper & pulp etc
- Wood is good for match stick and boxes and pencil industry
- It is a good for match stick and boxes and pencil industry
- It is a good fuel and leaf litter is a good feed for earthworms
- Oil from seed is edible, used in manufacture of soaps, lubricants, paints, cosmetics, pharmaceuticals etc
- Oilcake is valuable organic manure
- Shells (endocarp) can be used in cardboard industry or pulverized and added to enrich compost

STERCULIA URENS



Scientific Name	<i>Sterculia urens</i> Roxb. (syn) or <i>Firmiana simplex</i> (L.) W.Wight
Family	Sterculiaceae
Trade Name	Senthanuuku, Kavalam
Local Name	Karan tree. Bark greenish grey smooth, exfoliating in large, thin flakes
Distribution	Dry forests of North India extends west to Ganges, throughout India and Deccan, chiefly on dry rocky hills
Properties:	
Colour	Sapwood greyish white to pale pinkish heartwood reddish brown
Hardness	Soft to moderately hard
Weight	Light to moderately heavy
Grain	Straight
Processing & Drying	Seasons well
Working properties	Easy to saw & work, finishes well and takes good polish.
Natural durability and preservation	Fairly durable

Uses :

- Bark yield a fibre for cordage
- Wood is used for inferior packing cases and boxes, picture frames, slate frames, low quality pencil slats, match splints & boxes, toys, guitars
- Heartwood may be used for small panels and inlay work in better class furniture
- Yields gum called katlia used in pharmaceuticals
- Pulverized bark given to women to facilitate delivery
- Seed is used as an adhesive in plywood manufacture

STERCULIA VILLOSA



Scientific Name	<i>Sterculia villosa</i> Roxb.
Family	Sterculiaceae
Trade Name	Pali
Local Name	Palvadinjan, Katillupei
Tree	Moderate sized deciduous tree. Bark dark brown, mottled with white
Distribution	West coast tropical evergreen and southern hilltop tropical evergreen forests
Properties:	
Colour	Sapwood pale red, heartwood light red dish brown
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Even and straight grained
Processing & Drying	Seasons well
Working properties	Not difficult to saw. Works to a fine surface. Can be easily peeled
Natural durability and preservation	Durable

Uses :

- Leaves are used as fodder
- Bark yields fibre, which is coarse but strong and used in rope making.
- Bark yields a gum used in veterinary medicine
- Wood is used as class II general purpose plywood, light packing cases, boxes, inferior match splints

SYZYGIUM CUMINI



Scientific Name	<i>Syzygium cumini</i> (L.) Skeels
Family	Myrtaceae
Trade Name	Jamun, Indian cherry
Local Name	Naga, Nava, Nagai, Naval
Tree	Medium to very large evergreen tree. Bark light grey with dark patches
Distribution	West coast tropical evergreen and west coast semi evergreen forests. Often planted as shade trees
Properties:	
Colour	Pale reddish grey to brownish grey. Sapwood and heartwood not distinct, lustrous
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Interlocked
Processing & Drying	Does not season well. Work with hand tools & machining, can be brought to a smooth surface. Good for turning and carving
Natural durability and preservation	Durable
Effect of Ammonia fumigation	Wood has Moderate reaction on ammonia fumigation

Uses :

- Bark used in dyeing and tanning and also used in gargles and mouth washes
- Wood is used for beams, rafters, posts, door and window frames in building construction, class I general purpose plywood, block boards, furniture, cart wheels, pole and fence posts, agricultural implements, boat building, tea chests
- Seeds used as feed for livestock
- Powdered seeds are used in diabetes

TERMINALIA ARJUNA



Scientific Name	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.
Family	Combretaceae
Trade Name	Arjuna
Local Name	Marudha maram
Tree	A very large deciduous tree and evergreen tree
Distribution	It occurs naturally along banks of streams and rivers and seasonally dry water courses at low elevations

Properties:

Colour	The sapwood is pinkish-white and the heartwood is brown to dark-brown,
Hardness	Hard to very hard
Hardness	Hard to very hard
Weight	Heavy to very heavy
Grain	Straight to slightly interlocked
Processing & Drying	Green conversion followed by stacking under cover recommended. Kiln seasoning offers no difficulty
Working properties	Not difficult to saw. Works to a fine surface. Can be easily peeled
Natural durability and preservation	Durable. Heartwood refractory to treatment

Uses :

- Wood is used for construction work, general purposes class I plywood, tea chests, air craft plywood, marine plywood, furniture, block boards, tool handles, railway sleepers, bobbins

TAMARINDUS INDICA



Scientific Name

Family

Trade Name

Local Name

Tree

Tamarindus indica L.

Fabaceae

Tamarind

Puli, Puliamaram

A large evergreen tree. Bark dark grey with longitudinal fissures and deep cracks

Native of Africa. Cultivated throughout India

Distribution

Properties:

Colour

Sapwood yellowish white to greyish brown heartwood dark purplish brown

Hardness

Hard to very hard

Weight

Heavy to very heavy

Grain

Straight to interlocked and wavy

Processing & Drying

Moderately refractory to air seasoning

Working properties

Very difficult to work

Natural durability

and preservation

Non durable in exposed conditions

Uses :

- Leaves eaten by goats and cattle; may also be tried as green manure
- Leaves and flowers used in dyeing; bark contains tannin
- Leaf is edible and has medicinal properties to prevent throat infections, intestinal
- Wood is used for internal fitting in buildings, oil and sugar mill accessories, agricultural implements, tool handles, rice pounders, panelling and furniture, turnery and carvings, toys, chopping blocks, tent accessories, wooden mallets, naves of cart wheels
- Wood has high calorific value and used for brick making and charcoal making.
- Fruits are used to prepare juices, jams, jellies etc
- Fruit pulp improves appetite and is laxative
- Tamarind kernel powder is an adhesive in textile paper sizing, food and plywood industry
- Flower and mature pods are used to cure jaundice and skin ulcers
- Seed powder used to produce strong wood cements
- Seeds are edible when boiled as roasted and good substitute for fruit protein.
- Twigs and barks are used in dyeing and tanning industry and is an astringent
- Root is used in herbal medicine to cure leprosy and dysentery

TECOMELLA UNDULATA



Scientific Name	<i>Tecomella undulata</i> (Sm.) Seem
Family	Bignonaceae
Trade Name	Rajasthan teak
Local Name	Rohida tree
Tree	An evergreen shrub or small tree. Bark, corky, reddish brown
Distribution	Desert region, often planted as an ornamental tree
Properties:	
Colour	Wood greyish or yellowish brown
Hardness	Hard
Weight	Moderately heavy
Grain	Close grained and rather fine textured
Processing & Drying	Seasons well
Working properties	Easy to work and takes good polish
Natural durability & preservation	Durable

Uses :

- Leaves readily eaten by cattle
- Bark is used in medicinal purpose as an anti-inflammatory agent, astringent
- Bark is used to treat liver and abdominal complaints
- Wood is used in making furniture, packing cases, crates, carving works and agricultural implements

TECTONA GRANDIS



Scientific Name	<i>Tectona grandis</i> L.f.
Family	Verbanaceae
Trade Name	Teak
Local Name	Thekkumaram
Tree	A large deciduous tree. Bark light brown or grey
Distribution	Mostly in the moist teak bearing forests. Raised extensively in plantations
Properties:	
Colour	Sapwood pale yellowish or greyish heartwood golden brown, occasionally with dark streaks
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Straight
Processing & Drying	Seasons very well, the best model wood for air seasoning
Working properties	Somewhat brittle, works well with hand tools and machines Gives good finish and polish
Natural durability and preservation	Very durable

Uses :

- Bark is used as astringent
- Wood is used for building constructions, class I general purpose plywood, decorative plywood, musical instruments, mathematical, engineering and drawing instruments, bus bodies, boat and ship building, poles, beams, trusses, columns, roofs, doors, window frames, flooring, planking, panelling and staircases and other constructional work
- Wood is used for furniture and cabinet making, wagons and railway carriages
Oil from seed is used for soap making and medical purposes
- Flowers are used in medicine (bronchitis and urinary discharges)

TERMINALIA BELLERICA

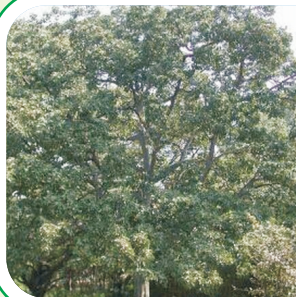


Scientific Name	<i>Terminalia bellerica</i> (Gaertn.) Roxb.
Family	Combretaceae
Trade Name	Buhera, Belleric myrobalan
Local Name	Thani, Thandri, Thandi
Tree	A large deciduous tree. Bark brownish grey with shallow longitudinal fissures
Distribution	Through the forests of India below 300ft but not in dry and arid regions of India
Properties:	
Colour	Creamy yellow or yellowish brown, sapwood and heartwood not durable
Hardness	Moderately hard to hard
Weight	Moderately heavy
Grain	Straight
Processing & Drying	Moderately refractory to seasoning
Working properties	Non durable
Natural durability and preservation	Fairly durable under water

Uses :

- Bark is diuretic and gum is demulcent and purgative
- Wood is used for temporary constructions work, general purpose class II plywood, block boards, heavy packing cases and boxes, rough shafts, dug outs, catamarans, agricultural implements, second quality slate frames
- Fruits are used for tanning
- Seed oil is good hair oil
- Seed oil is non edible and is used in manufacture of soaps

TERMINALIA CHEBULA



Scientific Name

Terminalia chebula Retz.

Family

Combretaceae

Trade Name

Gall nut

Local Name

Kadukkai

Tree

A large or small deciduous tree. Bark dark brown often with shallow vertical fissures

Distribution

Occurs throughout India in mixed deciduous forests extending to forest of comparatively dry types

Properties:

Colour

Sapwood grey or yellowish grey, often with greenish tinge, heartwood dark brown to reddish brown

Hardness

Very hard

Weight

Heavy to very heavy

Grain

Interlocked

Processing & Drying

Refractory to seasoning

Working properties

Difficult to saw and work but planes to a smooth surface and takes polish well

Natural durability and preservation

Perishable, moderately durable under cover. Heartwood only partially treatable

Uses :

- Wood is used for construction purposes as beams, scantlings, and planks, axles, shafts, yokes and tool handles
- Handles of heavy duty striking tools, railway sleepers, mathematical, engineering and drawing instruments
- Fruits are laxative, stomachic tonic and rich in tanni
- Roots, bark are used as tannin
- Trees yields a gum
- Powdered fruit is used in curing asthma
- Wood is used for seed oil is of medicinal value

TERMINALIA PANICULATA



Scientific Name

Terminalia paniculata Roth

Family

Combretaceae

Trade Name

Kindal

Local Name

Pillaimarudhu, Pulavai, Pekarakal, Adamarudhu.

Tree

A very large deciduous tree. Bark brown to dark brown, moderately rough, peels off in thin flakes

Distribution

West coast semi-evergreen, moist teak bearing southern moist mixed deciduous and southern dry mixed deciduous forests

Properties:

Colour

Sapwood greyish white, oftentimes blotched with yellow, heartwood greyish brown, rather lustrous

Hardness

Hard to very hard

Weight

Moderately heavy to heavy

Grain

Straight to wavy

Processing & Drying

Very refractory to seasoning

Working properties

Easy to saw when green, fairly easy to plane, can be brought to a smooth surface and takes good polish. Peels well

Natural durability and preservation

Moderately durable. Heartwood partially treatable

Uses :

- Bark and fruits are used in tanning and dyeing
- Bark is used for medicinal purposes like cardio tonic and diuretic
- Wood is used for construction purposes as beams, posts, rafters and planks
- Wood is commercial grade plywood and excellent general utility timber
- Wood is used for making furniture, railway sleepers, making boats, tea chests, block boards, agricultural implements, lorry bodies carts, etc
- Timber shows natural resistance to fire and may be used in buildings to be fire-proofed

TERMINALIA TOMENTOSA



Scientific Name

Terminalia tomentosa Wight & Arn

Family

Combretaceae

Trade Name

Kindal

Local Name

Karimaruthu

Tree

A large deciduous tree. Bark grey to black with deep longitudinal cracks, exfoliating in thick irregular flakes

Distribution

Occurs in sub Himalayan regions from Punjab, Assam and throughout the greater part of the peninsula

Properties:

Colour

Sapwood pinkish white to pinkish grey. Heartwood walnut brown to deep brown, sometimes with dark streaks

Hardness

Hard to very hard

Weight

Heavy to very heavy

Grain

Straight to somewhat interlocked grain

Processing & Drying

Very refractory to seasoning

Working properties

Difficult to saw and work. Good for turning. Takes lasting polish and can be brought to a fine finish with a little care

Natural durability and preservation

Moderately durable. Complete penetration of preservatives not obtained

Uses :

- Wood is a class I general purposes and decorative plywood
- Wood is used for making furnitures, tool handles, rafters, railway sleepers, sports good etc
- Oil is extracted from seed kernel
- Tree yields a gum, used as an adhesive and a purgative
- Timber is also suitable for use as telegraph and electric poles and yields pulp for manufacture of printing and wrapping paper

THESPESIA POPULNEA



Scientific Name	<i>Thespesia populnea</i> (L.) Sol. ex Corrêa
Family	Malvaceae
Trade Name	Portia tree, Indian tulp, Bhendi
Local Name	Puvarasu, Puvarasam
Tree	A medium sized evergreen tree. Bark grey or greyish brown, smooth or shallowly fissured
Distribution	In coastal areas and sometimes grown in villages
Properties:	
Colour	Sapwood white with a pale yellowish or pinkish tinge, heartwood reddish brown to chocolate brown or purplish brown with dark streaks
Hardness	Moderately hard to hard
Weight	Moderately heavy to heavy
Grain	Straight to somewhat interlocked
Processing & Drying	Seasons well
Working properties	Sawing satisfactory, works well with hand tools and machine, gives a smooth finish and takes good polish
Natural durability and preservation	Fairly durable. Heartwood refractory to treatment

Uses :

- Leaves are used as fodder
- Bark, fruits, and roots are used as astringent, dysentery and hemorrhoids
- Wood is used for making furnitures, agricultural implements, gun stocks, musical instruments, boat building, rafters, shuttles, tool handles, engineering, drawing instruments, carts and carriages
- Wood yield strong white fibre used for fishing links, caulking boats
- Seeds yield fatty oil used in skin problems

TOONA CILIATA



Scientific Name

Toona ciliata M.Roem.

Family

Meliaceae

Trade Name

Toon

Local Name

Malaivembu, Santhanavembu, Kavanauli

Tree

A large evergreen tree. Bark greyish brown thick, rough exfoliating in irregular woody scales in old trees

Distribution

West coast tropical evergreen, southern hill top tropical evergreen, west coast semi evergreen and occasionally in moist teak bearing forests

Properties:

Colour

Sapwood pinkish brown, heartwood reddish brown, rather lustrous

Hardness

Soft to moderately hard

Weight

Light to moderately heavy

Grain

Straight

Processing & Drying

Refractory to seasoning, liable to warp, green conversion and careful stacking under cover recommended

Working properties

Easy to saw, machines fairly well, gives a smooth surface and takes good polish

Natural durability and preservation

Non durable. Heartwood only partially treatable

Uses :

- Bark is used in chronic dysentery of infants and used in external application for ulcers
- Wood is used for furniture and cabinets, general purposes class I plywood, block boards, cigar boxes, packing cases, textile mill accessories, pencil slats, tennis, badminton and squash rackets, frames, musical instruments etc
- Wood yields essential oils
- Flowers yield red coloured dye

VATERIA INDICA



Scientific Name

Vateria indica L.

Family

Dipterocarpaceae

Trade Name

Vellapiney, Indian copal, Pinney varnish

Local Name

Vellakundrikam

Tree

A large evergreen tree. Bark grey often blotched with green and white thick

Distribution

West coast tropical evergreen, west coast semi evergreen and west coast secondary evergreen, Dipterocarp forests

Properties:

Colour

Sapwood creamy, white to greyish white, heartwood grey to light yellowish or pinkish, turns brown on exposure.

Hardness

Moderately hard

Weight

Moderately heavy

Grain

Fairly to narrowly interlocked

Processing & Drying

Easy to season

Working properties

Difficult to saw. Finishes to a smooth surface. Peels well

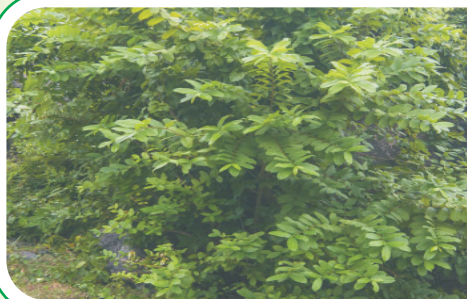
Natural durability and preservation

Non durable. Heartwood very refractory to treatment

Uses :

- Wood is used for temporary constructions, general purposes class I plywood, marine plywood, tea chests, block boards, packing and boxes, railway sleepers, cheap scaffolding, oars, masts etc
- Resin is used in varnishes and also contains an essential oil with marked antibacterial activity and considered as a tonic and expectorant
- Resin is used for incenses, caulking boats and preparing bases for setting gold ornaments
- Seeds yield an edible fat used in confectioner, soaps and candles
- Seed cake is used as manure
- Fruit shell contains tannin

WRIGHTIA TINCTORIA



Scientific Name	<i>Wrightia tinctoria</i> R.Br.
Family	Apocynaceae
Trade Name	Ivory wood, Dudhi
Local Name	Veppalai, Nilapalai, Palaimaram
Tree	A small deciduous tree. Bark grey, corky, exuding yellowish white latex when cut
Distribution	Moist teak bearing, southern moist mixed deciduous and southern dry mixed deciduous forests
Properties:	
Colour	White to light lemon yellow, sapwood and heartwood not distinct
Hardness	Moderately hard
Weight	Moderately heavy
Grain	Even grained
Processing & Drying	Wood is easy to season
Working properties	Easy to saw and work by hand or machine turns beautifully and finishes to a surface which requires little sanding
Natural durability and preservation	Not very durable

Uses :

- Leaves used as green manure
- Leaves are used as natural dye
- Leaves yield a blue indigo dye called Mysore Pala Indigo. They are also used as wrappers for Bidis
- Wood is used for carving, making toys, cheap grade pencils, match boxes, splints, mathematical instruments, pen holders, small boxes
- Stem and root barks are used for treatment of dysentery, flatulence and bilious troubles

XYLIA XYLOCARPA



Scientific Name

Xylocarpus xylocarpus (Roxb.) Taub.

Family

Fabaceae

Trade Name

Ironwood

Local Name

Irulmaram

Tree

A very large deciduous tree. Bark reddish grey, exfoliating in thick irregular flakes

Distribution

Moist teak bearing, southern moist mixed deciduous and west coast semi-evergreen forests. Occasional in west coast secondary evergreen Dipterocarp forest. Requires water, has shown good performance in State Forestry Research Institute in 2 years under 1 cum 3 pits

Properties:

Colour

Sapwood pale brownish or pinkish white, heartwood light to dark reddish-brown, often with dark streaks

Hardness

Hard to very hard

Weight

Heavy to very heavy

Grain

Straight to interlocked

Processing & Drying

Stacking under cover recommended

Working properties

Difficult to saw. Can be brought to a smooth surface and takes good polish

Natural durability and preservation

Very durable. Very refractory to treatment

Uses :

- Leaves are used as fodder
- Wood is fibrous and provides raw material for the production of paper pulp suitable for making wrapping paper
- Wood is used for sleepers, boats, canoes, ship building, bridges and building constructions, agricultural implements, textile mill accessories, pit props in coal mines
- Wood is a very good fuel
- Decoction of bark is given in diseases like gonorrhea and diarrhea and used as febrifuge
- Fruits yield a fatty oil. Fruits and seeds are edible

