Peltophorum pterocarpum

(DC.) Backer ex Heyne

Fabaceae - Caesalpinioideae

braziletto wood

LOCAL NAMES
English (rain tree,golden flame,yellow poinciana,copper-pod,rusty shield bearer,sagabark peltophorum,yellow flame,yellow gold mohur,yellow flamboyant); Filipino (jamerelang laut,siar); Hindi (perungondrai,kondacinta,ivalvagai,bonmeza); Indonesian (soga jambal,soga); Malay (jemerelang laut,batai,batai laut,jemerelang soga); Sinhala (iya vakai); Spanish (flamboyán amarillo); Tamil (iyalvagi,iya vakai); Thai (krathin paa,no see,nonsi,saan ngoen); Trade name (braziletto wood); Vietnamese (trac vang,lim set)

BOTANIC DESCRIPTION
Peltophorum pterocarpum is a deciduous tree usually reaching a height of 15 (-24) m, although it may attain 50 m and a diameter of 50 (-100) cm. Bark smooth, grey; crown dense, spreading.

Leaves large, 30-60 cm long, with 8-10 pairs of pinnae each bearing 10-20 pairs of oblong leaflets 0.8-2.5 cm long with oblique bases.

Flowers orange-yellow, each about 2.5 cm in diameter, fragrant, particularly at night; inflorescence brown-tomentose, panicles terminal with rust-coloured buds.

Fruits 1-4 seeded pods, flat, thin, winged, 5-10 cm long, dark red when ripe, then turning black.

P. pterocarpum has a deep root system. The specific epithet 'pterocarpum' alludes to its winged seed.

BIOLOGY
Flowering occurs from March-May, although sporadic flowering may occur throughout the year (particularly in young trees), and a second flush of flowers may occur in September-November.

Tree: Stand of P. pterocarpum. (Rafael T. Cadiz)

Flowers and foliage (Fagg, M. ANBG Photo No.: a.4868)

Flowers and pods on the inner branches of the tree (Gassouma S.)

ECOLOGY
Under natural conditions, P. pterocarpum is a lowland species, rarely occurring above an altitude of 100 m. It frequently grows along beaches and in mangrove forests, especially the inner margins of mangroves. In Java it is also found growing wild in Imperata grassland fields and teak forests. The species prefers open or disturbed forest conditions.

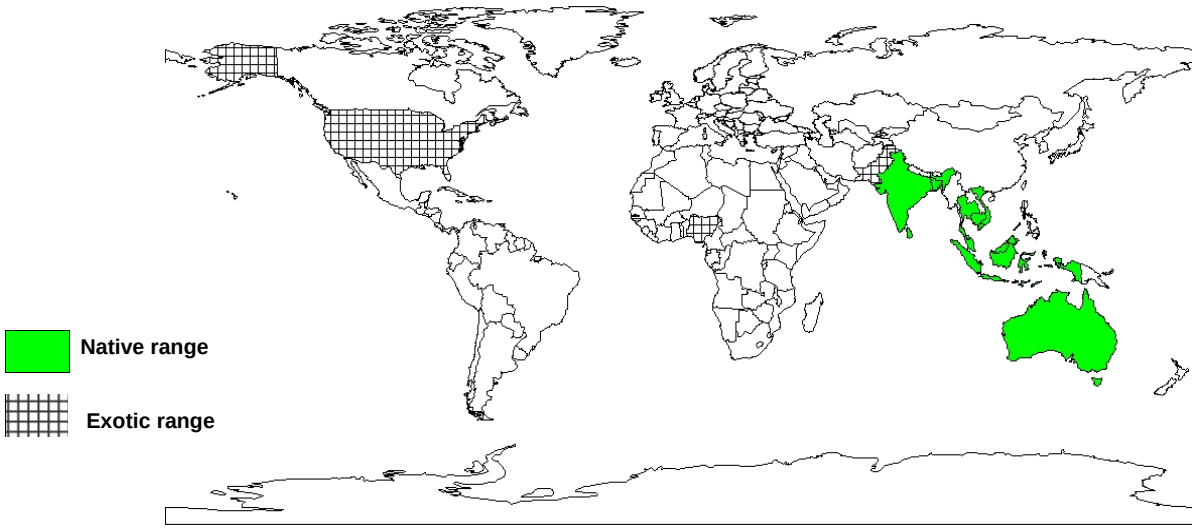
P. pterocarpum will grow in tropical climates with a dry season of 1-3 months. It thrives best under more or less seasonal conditions in coastal vegetation, rain forests and savanna woodlands.

BIOPHYSICAL LIMITS
Altitude: 0-1600 m
Mean annual temperature: 22-32 deg C
Mean annual rainfall: 1 500-4 500 mm
Soil type: The tree prefers light to medium free draining alkaline soils although it also tolerates clay soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Australia, Bangladesh, Cambodia, India, Indonesia, Malaysia, Myanmar, Papua New Guinea, Singapore, Sri Lanka, Thailand, Vietnam

Exotic: Nigeria, Pakistan, Philippines, US



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS
Fodder: It is suitable for use as a fodder.

Apiculture: In India, it is a source of pollen for the dammer bee (Trigona iridipennis).

Fuel: The tree is used as fuelwood.

Timber: The sapwood is greyish-white, turning grey-brown on aging. The heartwood is light reddish-brown or black, moderately hard, moderately heavy, and somewhat lustrous, with a straight to interlocking grain. The wood is used locally for light construction purposes, cabinet making, sawn or hewn building timbers, woodware, woodcarving and marquetry.

Tannin or dyestuff: The bark of P. pterocarpum has been an important component of the dark or black 'soga' dye in Java, used for batik work. It is also used for tanning leather, and preserving and dyeing fishing nets. In Indonesia, the bark is used for fermenting palm wine.

Medicine: In traditional medicine it is used as an astringent to cure or relieve intestinal disorders after pain at childbirth, sprains, bruises and swelling or as a lotion for eye troubles, muscular pains and sores. It is also used for gargles and tooth powders.

SERVICES
Shade or shelter: P. pterocarpum is a widely-appreciated shade tree, due to its dense spreading crown. It is used in shelterbelts because it is wind firm.

Reclamation: P. pterocarpum is a fast-growing tree with potential use for reforestation

Nitrogen fixing: It has the ability to fix nitrogen.

Soil improver: Copper-pod is a source of green manure.

Ornamental: Yellow flame is a very beautiful and elegant ornamental tree. The beautiful golden-yellow flowers may be used as cut flowers.

Boundary or barrier or support: The tree can be used as a hedge.

Intercropping: It has been tested in rotational alley-cropping/fallow systems in Sumatra, where it shows promise (Van Noordwijk et al., 1992). It has a deep root system. Young trees are often planted in an intercropping system with mahogany or Tectona grandis.

TREE MANAGEMENT
P. pterocarpum is fast-growing, attaining a height of 9 m in 3 years and flowering when around 4 years. Agroforestry trials in south Sumatra with hedgerows spaced at 4 m intervals and cut 2-4 times a year indicated that, over a 3-year period, an average pruning yield of 8 tons/ha was possible; the umbrella-shaped crowns which developed following cutting allowed little light to reach the ground. After the first year of establishment, little effort is needed to maintain plantations. Stands will usually survive, even with thick ground cover, such as Imperata or other tall grasses.

GERMPLASM MANAGEMENT
Seed storage behaviour is orthodox. Germination is hastened by scarifying one end of the hard seed coat, softening the seed coat in dilute acid, or immersing the seed in boiling water for 2 minutes followed by soaking it in cold water for one night. Germination has been recorded at 78%.

PESTS AND DISEASES
P. pterocarpum does not suffer much from pests or diseases. In Singapore, foliage can be severely damaged by the night-flying beetle (Autoseria rufocuprea). It is a host for the bagworm moth, Pteroma plagiophleps, in Bangladesh. The larvae of Hyposidra talaca are defoliators. Powdery mildew caused by Oidium sp. is reported from India.

FURTHER READNG

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SUGGESTED CITATION

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