Cassia grandis

L.f.

Fabaceae - Caesalpinioideae

pink shower, carao

LOCAL NAMES
English (coral shower,apple blossom cassia,pink shower,liquorice tree,horse cassia); French (bâton casse,casse du Brésil); Lao (Sino-Tibetan) (may khoum); Malay (kotek mamak); Spanish (sandal,carao,carámano,cañafistula,cañadonga); Thai (kanpaphruek (Bangkok)); Trade name (pink shower,carao); Vietnamese ([oo] m[oo]l)

BOTANIC DESCRIPTION
Cassia grandis is a medium-sized tree, up to 20(-30) m tall, semi-deciduous, young branches and inflorescence covered with rusty lanate indumentum.

Leaves with 10-20 pairs of leaflets, petiole 2-3 cm long, lanate, leaflets subsessile, elliptical-oblong, 3-5 cm x 1-2 cm, subcoriaceous, rounded at both ends.

Inflorescence a lateral raceme, 10-20 cm long, 20-40-flowered; flowers with sepals 5-8 mm long, petals initially red, fading to pink and later orange, the median one red with a yellow patch, stamens 10 with hirsute anthers, 3 long ones with filaments up to 30 mm and anthers 2-3 mm long, 5 short ones with filaments 7-9 mm and anthers 1-1.5 mm long, 2 reduced ones with filaments about 2 mm long.

Fruit pendent, compressed, 20-40(-60) cm long, 3-5 cm in diameter, blackish, glabrous, woody, rugose; seeds 20-40 per pod, surrounded by sweetish pulp.

The roots of C. fistula and C. javanica lack nodulating ability, but for C. grandis this is not clear.

BIOLOGY
It is reported evergreen in Java and deciduous in northern Malaysia and Indo-China, where the leaves fall at the beginning of the dry season. The tree flowers before new leaves appear. In Costa Rica, fruit takes 10-12 months to mature.

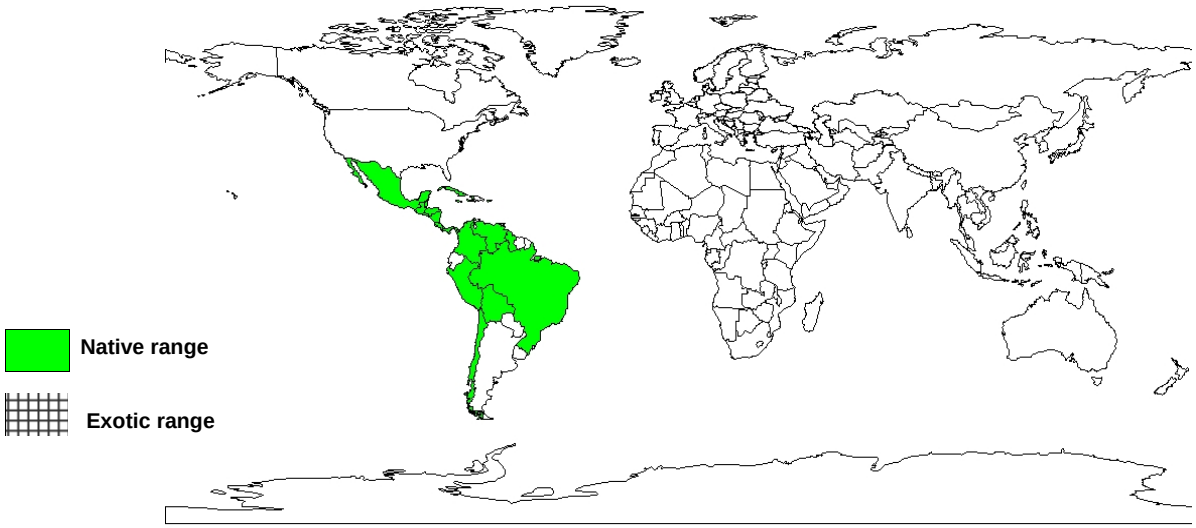
ECOLOGY
C. grandis is a common element of lowland and riparian, semi-deciduous forests.

BIOPHYSICAL LIMITS
Altitude: 0- 600 m
Mean annual rainfall: 1000-2800 mm
Mean annual temperature: 21-26 deg C
Soil type: C. grandis tolerates seasonally waterlogged soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Peru, Puerto Rico, Surinam, Venezuela

Exotic: Cambodia, Cote d'Ivoire, Democratic Republic of Congo, Fiji, India, Indonesia, Laos, Malaysia, Papua New Guinea, Seychelles, Sierra Leone, Sri Lanka, Tanzania, Uganda, Vietnam



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
Food: The membrane surrounding seeds is used as a chocolate substitute in Central America.

Fodder: Cattle relish the fruit pods of the tree.

Fuel: The tree is considered good for charcoal and fuelwood.

Timber: C. grandis is reported to give strong multipurpose wood, used in joinery, carpentry, beams among others.

Gum or resin: The seeds of C. grandis are a potential commercial source of gums. Seed gum is a potential binder for the pharmaceutical industry.

Medicine: The fruit pulp is used as a laxative similar to C. fistula and reported to be more powerful. The ripe pods and seeds of C. grandis are also used as a laxative. A decoction of the leaves is used as a laxative and in the treatment of lumbago. Fresh juice of the leaves of C. grandis is used externally in the treatment of ringworm.

Anthraquinones are found in C. grandis (aloe-emodin). Compounds isolated from C. grandis include centaureidine, catechin, myristicin, 2,4-dihydroxybenzaldehyde, 3,4,5-trimethoxybenzaldehyde, 2,4,6-trimethoxybenzaldehyde, beta-sitosterol, kokusaginine (6,7-dimethoxyfuroquinoline) and fabioline (1,1'-bipiperidine). The ethanol extract of the leaves and bark of C. grandis showed in vitro antifungal activity against Epidermophyton floccosum, Microsporum gypseum and Trichophyton rubrum in pure culture at a minimal inhibitory concentration of 50 microgram/ml.

SERVICES
Reclamation: The tree is recommended for revegetation in especially periodically flooded areas.

Ornamental: C. grandis has been widely introduced for ornamental purposes.

Boundery or barrier or support: C. grandis can be planted as a live fence.

Intercropping: C. grandis is recommended for dry zone intercropping with perennial crops and in pastures.

TREE MANAGEMENT
C. grandis requires regular pruning. It has the ability to sucker.

GERMPLASM MANAGEMENT
Seed can be stored for prolonged periods without loss of viability.

PESTS AND DISEASES

FURTHER READNG

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SUGGESTED CITATION

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