

Pongamia pinnata (L.) Pierre

Systematic Position

Kingdom: Plantae

Phylum: Tracheophyta

Class: Magnoliopsida

Order: Fabales

Family: Fabaceae

Genus: *Pongamia*

Species: *Pongamia pinnata* (L.) Pierre



Popular names: Indian Beech, Pongam oil Tree, Karanj, Indian Beech, Sukhchein, Karanja, Pungu, Thinwin, Karum tree, Papdi, Kanji, Ponga.

Nature: Tree

Flowering time: March to May

Fruiting time: April to June

Plant distribution: It is native of Western Ghats. It is found growing from the Seychelles to India, the Pacific Islands and in Australia. It grows all over India and is planted for its beauty by the sides of roads and in gardens.

Gardening notes:

- 1. Light:** It is well suited to intense heat and sunlight.
- 2. Water:** It is a drought resistant plant.
- 3. Propagation:** By seeds.

Economic importance:

1. Seeds yield a fatty oil, used in tanning industry for the preparation of washing soaps and candles and as a lubricant for heavy lathes, chains, enclosed gears and heavy engines and bearings of small gas engines.
2. Seeds are also used for the treatment of scabies, herpes, leucoderma and other cutaneous diseases; internally it is used in dyspepsia with sluggish liver.
3. Seed cakes are used as manure.
4. Wood used for yokes of bullock carts, ploughs, cart-wheels, rafters, thatched cottages, oil mills, furniture and small turnery articles.
5. It is used for the treatment of Malaria and worm infestation.
6. Mainly the tree is used as a shade tree in avenues in Northern India.
7. When cut, the branches are fed to cattle or ploughed into the land to enrich the soil.
8. The juice of the roots has antiseptic properties and is used to clean teeth, strengthening gums, gonorrhoea and cleaning foul ulcers.
8. Flowers were prescribed in glycosuria and other urinary disorders.
9. A decoction of dried flowers is given in diabetes.

Plant description: An evergreen fast growing medium sized tree that grows to about 25–30 feet with umbrella-shaped crown;

Root- Tap root, branched; **Stem-** Aerial, erect, branched, cylindrical, solid, woody, glabrous, **bark-** dark grey-brown, smooth.

Leaf- Compound, unipinnate, imparipinnate, opposite, green, 15-20 cm long, 10-12 cm wide, stipulate, stipules- green, curved, caducous, petiolate, petiole- 6-7 cm long, green, pulvinus at base, leaflets- 7-9, oval to oblong, abruptly pointed, acuminate apex, rounded base, entire and wavy margins, blade 6-9 cm long, 5-7 cm wide, petiolulate,

petiolule- 1 cm long, green, unicostate reticulate venation, prominent midrib and veins, commonly seen brown patches caused by caterpillars on the leaves.

Inflorescence- Racemose.

Flower- Small, hermaphrodite, papilionaceous, white or pinkish white, hypogynous, complete, zygomorphic, pedicellate, pedicel- green, 1-2 cm long, ebracteate,; Sepals – 5, gamosepalous, bell shaped, small, cup shaped, campanulate calyx tube, brown, united, inferior, valvate aestivation; Petals- 5, creamish pink, showy, 1 standard, 2 wings, 2 keels united, keels shorter than wings and enclose the pistil and stamens; the five petals are reminiscent of the pea-flower, with the large 'standard' petal hooded like a bonnet over the other four which are folded together, papilionaceous, inferior, tubular, vexillary aestivation; Stamens- 10, in two bundles, nine united at the base and form a tube around ovary, monadelphous, one free, anthers- bi-lobed, basifixed, introrse, yellow, longitudinal dehiscence; Carpel – 1, ovary- superior, sub-sessile, hairy, blackish hairs, unilocular, two ovules, rarely three, marginal placentation, style- long, curved, filiform, upper half incurved, glabrous, hairy base, greenish, stigma- terminal, small.

Fruit- A legume, or pod, woody, pointed at the apex, flattened, green when immature and dull-yellow or dark brown when ripe, 1-2 seeds, non-dehiscent, red colored seed present sometimes.

Seed- Green, rounded, thick, reniform.

Some close-up pictures of plant parts

