

Pongamia/ Karanj

Botanical Name: *Millettia pinnata*

Family: Leguminosae

Common Name: Indian Beech Tree

Hindi Name: करंज

Part Used: Leaves, bark, seeds, oil

Pongamia pinnata is a legume tree that grows to about 15–25 m (50–80 ft) in height with a large canopy which spreads equally wide and creates dense shade. It may be deciduous for short periods. It has a straight or crooked trunk, 50–80 cm (20–30 in) in diameter, with grey-brown bark, which is smooth or vertically fissured. Its wood is white colored. Branches are glabrous with pale stipulate scars. The imparipinnate leaves of the tree alternate and are short-stalked, rounded, or cuneate at the base; ovate or oblong along the length; obtuse-acuminate at the apex; and not toothed on the edges. They are a soft, shiny burgundy when young and mature to a glossy, deep green as the season progresses, with prominent veins underneath. Flowering generally starts after 3–4 years with small clusters of white, purple, and pink flowers blossoming throughout the year. Karanja is increasingly used for oil production due to its use in biodiesel. The oil was formerly used for lighting, as a raw material for soaps, varnishes and paints, to repel insects in storage instalments, and as a mosquito repellent. Karanja wood can be used for fuel, and the resulting ashes as a dyeing agent. Roots yield pinnatin, a dyeing pigment. The bark is fibrous and can be turned into rope. The leaves are potential sources of fodder. The fragrant flowers are a source of pollen and nectar from which bees produce dark honey. The karanja tree hosts lac insects and is valued as an ornamental plant. Many parts of the tree are used in ethnomedicine. The karanja tree is an important species for afforestation. Leaf shedding produces large amounts of organic litter. Oil extraction yields a press cake that can be used as a fertilizer or as animal feed for ruminants and poultry. However, its feeding value is disputed because of its bitterness and antinutritional factors (see Potential constraints on the "Nutritional aspects" tab). Three main types of karanja oil cakes are available, namely rotary pressed, expeller pressed and solvent-extracted, the composition of which depending on the degree of decortication and the method of oil extraction.