

Botanic name: *Leucaena leucocephala* (Lam.) de Wit -- Taxon x. 54 (1961). (IK)

[syn: *L. glauca*]

Common name: Wild Tamarind, White Lead tree

Family: Fabaceae (Leguminosae- Mimosoideae)

Habitat: Terrestrial

Distribution: Naïve to Mexico, Belize, Guatemala; introduced in India as a dangerously aggressive alien invasive species. It has been nominated as among 100 of the "World's Worst" invaders by the IUCN Invasive Species Specialist Group (Lowe 2000) and listed as a noxious weed in Western Cape South Africa and a Category 2 invader (invaders with certain qualities, e.g. commercial use or for woodlots, animal fodder, soil stabilisation, etc.). In India, the invasive nature of this plant is destructing forest ecology, mixed crop pattern, and inhibiting crop growth through its allelopathic effects on native species, attributed to its high rate of seed germinability, stress tolerance and capability to grow in almost every agro-climatic condition. A prolific bearer of seeds (up-to 1700 pods per tree with each pod containing 20 seeds with 2-3 cycles per year); seeds are dispersed by rodents, birds and naturally, the plant can form dense monotypic stands in disturbed areas that it invades preventing the establishment of native plant species. It also excludes plant growth in its vicinity by an allelopathic effect caused by an allelochemical-mimosine. Young leaves and mature seeds have a high mimosine content.

More read: <http://www.iucngisd.org/gisd/species.php?sc=23>

www.issg.org/pdf/inv_of_week/leuleu.pdf

Description: An evergreen small scrubby tree with loosely arranged branching; leaves bipinnately compound with 3-10 pairs of leaflets, linear-lanceolate, alternate; flowers white, borne in dense globular clusters (12-30 mm across), looking like a 'pompom' in full bloom, borne in the leaf forks on peduncle which is 2-6 cm long, with one to three clusters present in each leaf axil; sepals five, tiny; corolla white; stamens 10, pale-yellow or whitish; fruits pods, elongated, linear, flattened with pointed beak/apex

Phytochemicals: Secondary metabolites as phylobatanins, alkaloid, cardiac glycosides, tannins, flavonoids, saponins and Glycosides. Squalene (41.02%), ficaprenol-11 (polyprenol), lupeol, sitostenone, trans-coumaric acid, cis-coumaric acid, pheophytin-a, pheophorbide a methyl ester, methyl-132-hydroxy-(132-S)-pheophorbide-b and aristophyll-C, Phytol (33.80%), 3,7,11,15-Tetramethyl-2-hexadecen-1-ol, and 3,7,11-Tridecatrienitrile, 4,8,12-trimethyl (leaves) and mimosine-an allelochemical

Medicinal/ Economic uses: Leaf paste applied to poisonous stings and bites in Myanmar. Seeds used to treat diabetes and expel intestinal worms and prevents metastasis of human oral cancer. Roasted seeds used as emollient and to increase menstrual flow. Decoction of bark and roots are used as contraceptive or for inducing abortion in Latin America. used to control stomach ache, like contraception and abortifacient. Bioactivity studies on this plant revealed its anthelmintic, antibacterial, anti-proliferative and antidiabetic activities. Edible uses-Young leaves and seedpods high in protein and Vitamin A, eaten as vegetable. Seeds used as bean substitute in tempeh (traditional bean cake), reported to be delicious. Seeds also used as coffee bean substitute. Ripe seeds sometimes eaten parched like popcorn. However, plant contains mimosine, a dilapitory amino acid that is toxic to non-ruminant vetebrates when consumed in excess -- known to cause hair loss from manes and tails of horses. Heating leaves or adding iron sulphate salts reportedly degrades the mimosine or reduces its toxicity. Wood used as firewood and charcoal. Also used to make small objects like fish-traps. Bark yields a brown dye. Exuded gum used in Asia as replacement for gum arabic. Seeds used as beads on bags or strung into necklaces in tourist trade in West Indies. Used as a cover crop in tea and coffee plantation. Often used for forage (leaves and shoots), firewood, poles, medicine (roots), shade, soil conservation and improvement, tannin, dye. It is also planted as a windbreak, a garden ornamental and as an urban shade tree.