

Botanic name: *Ricinus communis* L. -- Sp. Pl. 2: 1007. 1753 [1 May 1753] (IK)

Common name: Castor, Gandharva hasta (Sanskrit), Reri (Bengali),

Family: Euphorbiaceae

Habitat: Terrestrial

Distribution: Native to eastern Africa & the tropical regions of the world.

Description: A suckering shrub; leaves alternate, palmate, glossy, green to purplish or reddish-green and 30 to 75 cm across, with long petioles; monoecious flowers without petals, male flowers with creamy stamens, female flowers at the tip of the spike; capsule large, oval and greenish; fruit capsule- each capsule contains three seeds that look like fat, swollen dog ticks and are deadly poisonous

Phytochemicals: Steroids, saponins, alkaloids, flavonoids, and glycosides, alkaloids- ricinine and N-demethylricinine and flavones glycosides like kaempferol-3-O- β -D-Xylopyranoside, kaempferol-3-O- β -D-glucopyranoside, quercetin-3-O- β -D-xylopyranoside, quercetin-3-O- β -D-glucopyranoside, kaempferol-3-O- β -rutoside and quercetin-3-O- β -rutoside²⁰ (dried leaves), monoterpenoids (1, 8-cineole, camphor and α -pinene) and sesquiterpenoid (β -caryophyllene), gallic acid, quercetin, gentisic acid, rutin, epicatechin and ellagic acid are the major phenolic compounds isolated from the leaves; indole-3-acetic (roots), fixed oil consisting of glycosides of ricinoleic, isoricinoleic, stearic, dihydroxystearic acids, and also lipases and a crystalline alkaloid, ricinine (fruits, seeds), ester form of palmitic, stearic, arachidic, hexadecenoic, oleic, linoleic, linolenic, ricinoleic and dihydroxy stearic acids. The stem also contains ricinine. Seeds also possess the ergost- 5-en-3-ol, stigmasterol, Y-sitosterol, fucosterol and one probucol. Essential oil (α -thujone, 1, 8- cineole, α -pinene, camphor and camphene). Lupeol and 30-Norlupan-3 β -ol-20-one are obtained from coat of castor bean

Medicinal/Economic uses: Pharmacologically active as antiinflammatory, antifertility, antioxidant, hepatoprotective, antinociceptive, antidiabetic, CNS activity, antihistaminic, anticancer, Bone Regeneration, larvicidal, antifertility effects, antibacterial, anti-inflammatory, also protects liver from damage. Used in Indian Ayurvedic system to treat rheumatism, pain in the urinary bladder, lumbago, diseases of the abdomen and inflammations; helminthiasis, dysuria, arthritis, pain in the urinary bladder, dysuria, abscesses; constipation, rheumatism, diseases of the liver and spleen, piles, lumbago, sciatica, Induction of labour. Castor oil can also be used as paints, enamels and varnishes, oiled fabrics, linoleum, patent leather, flypaper, typewriting, printing inks, greases and special lubricants. In India, leaves have also been recommended in the form of a decoction or poultice and as an application for women to increase the secretion of milk, on sores, boils and swellings. The castor cake is used as manure in this sub-continent especially in India. Rich in nitrogen and other minerals castor cake is suitable as manure for paddy, sugarcane, tobacco, etc. The powdered leaves are used for repelling aphids, mosquitoes, white flies and rust mites. Castor oil is commonly applied over the abdomen to give relief in the flatulence in the children (Kumar 2017).

More read: Kumar (2017): International Journal of Pharmacognosy and Phytochemical Research 2017; 9(4); 466-472.