

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

Common name : Castor bean, Eranda

Family : Euphorbiaceae

Habitat : Terrestrial

Distribution : Probably a native to North-Eastern Africa (i.e., Ethiopia and Somalia) but naturalized across the African continent, from the Atlantic coast to the Red Sea, from Tunisia to South Africa and on islands in the Indian Ocean. Highly prolific and precocious producer of toxic seeds, very adaptable to different environments and has been widely distributed by man. It is reported invasive or weedy in many countries particularly in the tropics and since dense thickets shade out native flora it is able to have negative impacts on biodiversity. Weed risk assessments in the USA and Caribbean have rejected its use as a bioenergy crop due to its high invasive potential' <https://www.cabi.org/isc/datasheet/47618>

Description : A fast-growing shrub or small tree; shoots usually glaucous, variously green or red; stem and branches with conspicuous nodes and ringlike scars of the bracts; leaves spirally arranged, dark green when old; stipules united to a sheathing bud, deciduous; petiole round; blade peltate, membranous, palmate with 5-11 acuminate, serrate lobes; Flowers shortly pedicelled in lateral cymes; panicles erect, terminal, later somewhat lateral by overtopping, up to 40 cm long, usually glaucous, with unisexual flowers, male flowers towards the base, female ones towards the top. 3-5 acute calyx lobes; corolla absent; male flowers with many stamens in branched bundles; female flowers with early caducous sepals; ovary superior with three 1-ovuled cells, usually soft spiny; styles 3, red or green, 2-cleft; fruits ellipsoid to subglobose, 15-25 mm long, brown, spiny or smooth; seeds ellipsoid, compressed, with a brittle, mottled, shining seedcoat and with a caruncle at the base; endosperm copious, white; cotyledons thin.

Phytochemicals: steroids, saponins, alkaloids, flavonoids, and glycosides. dried leaves contain two alkaloids, ricinine (0.55%) and N-demethylricinine (0.016%) and six flavones: glycosides 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 -rutinoside and quercetin-3-O- β -rutinoside²⁰. The 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. Fixed oil (fruits and seeds). The stem also contains ricinine. The ergost- 5-en-3-ol, stigmasterol, γ -sitosterol, fucosterol; and one probucol isolated from the ether extract of seeds

Medicinal/Economic uses : Emetic, purgative, diuretic, immunomodulatory, antidiabetic, antimicrobial, insecticidal, larvicidal, bone-regenerating, analgesic, lipolytic, wound healing, Seeds and seed oil is used since time immemorial to treat rheumatism, worm infestation, severe constipation, abdominal disorder, boils, skin related disorders,

arthritis, facial disorder, urinary tract infection, dandruff, lumbago, and sciatica. Beneficial for lactating breast after proper massage. Economic-Oil-yielding plant but abandoned due to its invasive potential. The treated oil can also be used as paints, enamels and varnishes, oiled fabrics, linoleum, patent leather, flypaper, typewriting, printing inks, greases and special lubricants. powdered leaves are used for repelling aphids, mosquitoes, white flies and rust mites.