Uses

Cleome is predominantly used as a leafy vegetable. The tender leaves or young shoots, and often the flowers, are boiled in stew or as a side dish. The leaves are rather bitter, and for this reason are cooked with other leafy vegetables such as cowpea, amaranth and black nightshade. To reduce the bitterness, milk is added to the boiled leaves and the mixture left overnight. In other areas; leaves are boiled briefly, the water is discarded and these are then combined with other ingredients in a stew.

Acknowledgement

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References


**Scientific name:** *Cleome gynandra*

**Common names:** Cat’s whiskers, Cleome, African cabbage, Oorpeultjie, Leroto, Murudi, Rirudzu, Bangala, Ulude

**Origin and distribution**

*Cleome gynandra* is reported to have originated in tropical Africa or Southeast Asia and has spread to other tropical and subtropical countries in the Northern and Southern hemisphere. Cleome is not formally cultivated as a commercial crop but for years it has been a semidomesticated volunteer crop in home gardens or on fertile land near homesteads in many parts of sub-Saharan Africa. In South Africa, cleome is found in the Limpopo, North West, Gauteng, Mpumalanga, KwaZulu-Natal, Free State and Northern Cape provinces.

**Description**

It is an erect, annual herb which can grow up to 0.6 to 0.9 m high.

**Roots**

Long taproot which has few secondary roots with root hairs.

**Stem**

The stem is glandular and rarely hairless with longitudinal parallel lines. Pigmentation varies from green to pink or violet to purple. It has many branches, sometimes becoming woody with age.

**Leaves**

Compound and lobed leaves with 3 to 5 leaflets. Leaflets are unequal, ovate with the narrower end at the base or elliptic oblong 2.5 to 6 cm long, 1.4 to 3.2 cm wide. The surface of the leaves is covered with glandular hair.

**Flower and seeds**

The flower is showy, white or purple in long terminal flower cluster with the separate flowers attached by short, equal stalks at equal distances along a central stem, up to 30 cm. The complete flower-head, including stems, stalks and flowers is a terminal flower cluster, many-flowered, elongating in fruit; the bract is 3-folate (three leaves) to simple above resembling the leaves, but smaller and attached directly by its base without a stalk. Petals are white, sometimes fading to rose pink. The capsule is linear, sub-erect to spreading, 1 to 6 cm long and 5 to 5 mm wide; the persistent style is 2 mm long and the valve is thin-textured, glandular with hairs. The seeds are brown, circular in outline, measuring 1, 5 mm in diameter, with an obscurely netted surface.

**Climatic and soil requirements**

**Temperature**

Cleome requires temperatures of 18 to 25 °C. Because of its tropical origin, cleome is believed to be day-length insensitive, however, some cleome species are facultative long-day species (not restricted to a particular function). The plant does not grow well in shade.

**Rainfall**

Cleome can grow in areas with short periods of useful rainfall, the plants can tolerate some degree of drought, however, this may speed up maturity and senescence (growing old) of the plant. Water stress reduces leaf yield and quality. The plants cannot withstand flooding.

**Soil**

Cleome is adapted to many soil types and a pH range of 5.5 to 7.0. The soil types range from sandy loam to clay loams.

**Cultural practices**

**Propagation**

Cleome is cultivated from seed.

**Fertilisation**

Soil fertility may affect the nutritional composition of the raw leaves. Application of either farmyard manure or compost or inorganic fertilisers is necessary. Diammonium phosphate is reported to give better results (as the nitrogen gives the plant a good early start) than double or triple superphosphate.

**Irrigation**

The plant requires little attention and is therefore rarely irrigated. However, during inadequate rainfall, frequent irrigation is necessary, especially during the vegetative growth period. Frequency of irrigation can be determined by the waterholding capacity of the soil.

**Weed control**

Weeds can be hand picked or shallow cultivation can be done, however, care should be taken to avoid root damage.

**Pests and diseases**

At planting care must be taken as slugs and snails can destroy entire seedlings. Other pests that attack cleome are: pentatomids (*Acrosternum gramineum* and *Agonoselis nubilis*) and their parasitoids, locusts (*Schistocerca gregaria*), nematodes (*Meloidogyne* spp.), flea beetles (*Phyllotreta mashonana* Jacq.), green vegetable bugs (*Nezara* spp.), cabbage sawfly (*Athalia* spp.), cotton jassids (*Empoasca* spp.) and hurricane bugs (*Bagrada* spp.).

The plant is also host to mildew fungus (*Sphaerotheca fuliginea*, *Oidiopsis taurica* and *Cercospora uramensis*).