

Curcuma longa L.

Trade Name: Turmeric

Sanskrit Names: Haridra, Nisa, Krmighna

Malayalam Name: Manjal

Tamil Name: Manjal

Description

Rhizomatous herbs; rhizome medium sized, 2-3 x 2-3 cm, conical, deep orange-yellow inside, strongly aromatic; sessile tubers many, cylindrical, branched; root tubers rare. Leafy shoot 80-120 cm tall, pseudo stem c. 30 cm long. Leaves 4-6, distichous; petiole 35-40 cm long; lamina 45-60 x 15-20 cm, oblong-lanceolate, tapering at both ends, margins wavy, glabrous, pubescent towards the extreme tip; ligule short, near the lamina. Inflorescence central, 25-30 cm; peduncle 15 cm, concealed within the leaf sheaths; spike 8-10 cm long with a distinct white coma. Coma bracts 8-10, 7 x 3.5 cm, spreading. Fertile bracts compactly arranged, lower half of adjacent bracts fused to form pouches, tip recurved, pale green, outer surface minutely pubescent. Lower bracts subtend cincinni of two flowers, upper bracts one flowered. Flowers 4.5-5.5 cm long, equal to the bracts; bracteoles large, outer 3 x 2 cm, ovate-oblong, inner 1.5 x 1 cm. Corolla tube 2.5 cm long, white; lobes unequal; dorsal lobe larger, 1.5 x 1.7 cm, concave, white, hooded, hood hairy, lateral lobes linear, 1.5 x 1.2 cm, white, glabrous. Labellum trilobed, middle lobe emarginate, light yellow with a broad, median dark yellow band. Lateral staminodes linear, 1.5 x 0.8 cm, tip slightly incurved. Ovary 5 mm long, tricarpeal, syncarpous; ovules many on axile placenta, pubescent towards the tip; style long, filiform; stigma bilobed.

Distribution:

Turmeric is distributed throughout tropical and subtropical regions of the world. It is widely cultivated in Asian countries, mainly in China and India.

Uses

Turmeric is fragrant and has a bitter, somewhat sharp taste. In India, where it is used as a main ingredient in curries and food coloring. The thick, cured rhizomes contain protein, vitamins, minerals, carbohydrates, and yellow-orange volatile oils called

Curcuminoids that are responsible for the biological activity of turmeric. Curcumin is the active ingredient in turmeric which has been shown to have a wide range of therapeutic effects. To heal many health disorders like liver problems, digestive disorders, treatment for skin diseases and wound healing. Turmeric has been reported to cure the Digestive disorders, Liver diseases, Skin Cancer, Antherosclerosis, Osteoarthritis, Menstrual problems of Woman, Bacterial Infection, Wounds, Eye Disorder and also it has long been used in both Ayurvedic and Chinese medicine as an anti-inflammatory. Curcumin has been known to have antioxidant, anti-inflammatory, and anticancer effects and also playing an important role in the prevention and treatment of various diseases, from cancer to autoimmune, neurological, cardiovascular diseases, and diabetes.

Cultivation:

Soil and climate

A friable well drained red loamy soil in wet or garden lands under tropical conditions is ideal. It can be grown in regions receiving an annual rainfall of 1500 m.

Season: May-June is suitable

Propagation

Mother rhizome & finger rhizomes.

Seed rate of finger rhizome – 2000 kg/ha.

Seed treatment

Rhizome treatment with *Pseudomonas fluorescens* 10 g/kg and *Tricoderma viride* as 4 g/Kg (Biocontrol).

The seed rhizomes are dipped in Carbendazim 1 g/lit and Phosalone 35 EC 2 ml/lit for controlling rhizome rot and scales.

Main Field Preparation:

Main field is ploughed and ridges and furrows are formed at spacing of 45 cm (or) raised beds of 120 cm width are formed at an interval of 30 cm and the laterals are placed at the centre of each bed.

Spacing

45 x 15 cm. 25-30 g weight rhizomes are to be dibbled at a depth of 4 cm.

Manuring

Basal: FYM - 25 t /ha, neem or groundnut cake - 200 kg/ha, 25:60:108 kg of NPK per ha;
30 kg of FeSO₄ and 15 kg of ZnSO₄.

Top dressing: 25: 108 kg of N and K/ha applied on 30, 60, 90, 120 and 150 days after planting.

Pests and Diseases

Seed treatment with *P. fluorescens* 10 g/kg and *T. viride* 4 g/ Kg and soil application of 2.5 Kg/ha each of *P. fluorescens* and *T. viride* in 50 kg of FYM as basal and top dressing on 150 Days after planting.

Spraying Carbendazim 500 g/ ha or Mancozeb 1kg/ha or Copper oxy chloride 1.25 kg/ha. Mix sticker solution @ 5ml / 10 litre of spray solution

Harvest

The plants will start lodging, yellowing and drying on crop maturity.

The rhizomes are dug with spade or digging forks.

