Mucuna pruriens (L.) DC.

Synonym: *M. axillaris* Baker; *M. bernieriana* Baill.; *M. cochinchinese* (Lour.) A. Chev.; *M. prurita* Wight;

Family: Leguminosae

Ayurvedic Name: Kauncha

Hindi Name: Kaunch

Trade Name: Kouncha, Kaunch beej

Habit: Creeping herb

Part Used: Seeds

Active Ingredient: L Dopa, Mucunadine

Biological activity: Aphrodisiac, Antineuralgic, Analgesic, Antidiabetic, Antilithic, Antiparasitic, Antitussive, Antiarthritic, Antihypertensive, Antioxidant, Antispasmodic

Traditional and Therapeutic use: *Mucuna* seeds are used as memory enhancer, tonic and in the treatment of tuberculosis, ring worm, sores, syphilis, menstrual disorder, constipation, edeam, fever etc.

Morphological and floral characteristics: Annual, climbing shrub with long vines that can reach over 15 meters in length. When the plant is young, it is almost completely covered with fuzzy hairs, shed with age. The leaves are tri-pinnate, ovate, or rhomboid shaped. In young plants, both sides of the leaves are hairy.

Distribution: This species is widely distributed in the sub-tropical to tropical regions of Asia and Pan Tropics. It is found in most part of India, upto 1000 meter elevation includes Andaman and Nicobar Islands. In Gujarat, it is common in Saurastra region.

Varieties: At present, no certified varieties are available. However, ZFHC has developed a high yielding cultivar called Zandu Kaunch with bold and white seeds, non-itching trichomes and high L-Dopa content.

Climate and Soil: The crop grows in all types of soils, but sandy loam soil with good drainage and pH of 5.50 to 7.50 is preferred. It thrives in sub-tropical to tropical climate with a minimum temperature of 15°C in winter and maximum of 38°C in summer months. The crop is seen growing in varied climate such as coastal humid climate to dry arid climate.

Main field plantation

Land preparation: The field should be ploughed 2-3 times followed by harrowing and planking to make the soil porous and to facilitate germination and sprouting of seeds.

Transplanting and optimum spacing: The crop is raised by direct sowing of seeds in the field. The seed is treated with fungicide before sowing to protect them against soil borne diseases. Seed sowing done in June. The germination takes 8 to 10 days and the field is stocked with young growing vines in 9 months period. These vines need support of bamboo sticks for better growth and higher seed production. An optimum spacing of 1 m × 1.5 m is recommended for a crop stand of about 6700 plants per hectare.

Fertilizers: Farm yard manure at the rate of 10 to 20 MT/ha at the time of land preparation is applied to the field.

Weed control: As and when required (Mostly 1-2 weeding/ month)

Irrigation: It is given fortnightly irrigation during dry season and one irrigation per month is required in winter during pod picking.

Diseases and pest control: Sometimes, collar rot during initial stages of seedling growth has been found which can be managed by applications of 2 kg Trichorich (a formulation of trichoderma in neem cake) and 2 kg Pseudomonas fluorescens mixed with 500 kg FYM and applied to the root region. The leaf eating hairy caterpillar is found to damage the crop during pre-flowering stage. To control the pest, Neem soap is recommended to be sprayed at the rate of 5 gm/lit.

Crop maturity and harvesting: The crop matures in about 180-200 days after sowing. Mature pods are harvested to collect seeds from the pods. At the time of harvesting the pods turn to greyish-brown in colour indicating maturity for picking. Normally 3-7 seeds are found in a pod and 5-6 pods per inflorescence are generally available. Thus, about 25-30 bunches can be harvested per plant.

Post-harvest management: The pods thus harvested from the field are dried in the sunlight for 4-7 days; the seeds are further dried in shade to reach approximately 7-8% moisture in the seeds. The seeds are normally stored in gunny bags made of jute and then covered with polythene to protect from absorption of atmospheric moisture.

Yield: Seed yield is 8 -10 quintal per hectare.