PETIOLE CURL

Symptoms: A viral disease that causes extreme curling and twisting of the particles.

Control: Soil analysis is necessary. Picking out curled leaves and burning these will prevent the disease from spreading. Registered pesticides can be applied or are recommended.

“BOHON”

Symptoms: It is caused by root nematodes which cause stunting of growth and yellow foliage and even die off. Nodular galls also appear at the roots.

Control: For control the area should be flooded. Application of registered pesticides is recommended.

Harvesting methods

Kenaf is harvested at the beginning of flowering, either by hand or mechanically. Standard cutting, chopping and baling equipment can be used for harvesting kenaf as a forage and fibre crop. It is an economic advantage to use presently available commercial harvesting equipment. Kenaf is harvested by cutting the stem near the plant’s base with any cutting tool. The best time to harvest kenaf for fibre is during the plant’s flowering stage, months after planting when fiber quality and quantity are highest. Harvesting kenaf for seeds is done 4 to 5.5 months after planting when 80% of the plants have 5 to 6 dried capsules.

Uses

Kenaf fibres can be used for making many agricultural and industrial applications like paper pulp, thermoplastics, composites, geotextiles, potting mixes, agricultural mulches and films, fabrics and industrial absorbents. Kenaf fibre from the stem is used for fishing nets, ropes and doormats while fabric can be woven into carpets, cloth and clothes lining. The most important use of kenaf is producing sacks. Fibres from the stem can be used as animal litter. The leaves may be edible to both animals and humans and can be used as a herb in some dishes. Oil produced by the plants is used for first-class cooking oil and margarine production. Kenaf seeds can be used in salads, for cooking (flour) and lubrication, as well as for the manufacturing of soap, linoleum, paints and varnishes. Kenaf contains many potentially useful compounds for medicines to ease problems such as bruising, cuts and aches.

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References


Background

Kenaf is a warm season, short-day, annual herbaceous bast fibre plant which originated from West Africa. Kenaf belongs to the family called Malvaceae (Mallow) for both its economic and horticultural importance. Under good conditions kenaf will grow to a height of 5 to 6 m in 6 to 8 months. It is mostly unbranched and rapidly reaches maturity, in only 4 to 5 months the plants can grow to 2 to 5 m tall with a diameter of 12 mm. In South Africa kenaf is found in KwaZulu-Natal Midlands.

Climatic and soil requirements

Kenaf is best suited to a tropic or subtropic climate where the mean daily temperature during the growing season is more than 20 °C. Optimum temperatures for growth are 15 to 27 °C, although mean daily temperatures above 20 °C are favourable throughout the growing season. It is quite sensitive to cool temperatures and does not tolerate frost. It is also sensitive to sunlight. Kenaf grows well in a variety of soil types but it does best in deep, rich loam that is neither acidic nor alkaline. To ensure a good crop, soil must have sufficient quantity of organic matter. The crop prefers well-drained soil of medium texture.

Cultural practices

Soil preparation

The land should be ploughed at least 20 cm deep once or twice, depending on the soil type when planting kenaf. The furrows must be 30 to 48 and 60 to 96 cm apart for fibre and seed production, respectively.

Planting

For fiber production, kenaf should be planted during the months of April to October to expose the plant to long daylight. It requires 12½ to 12¾ hours or longer for producing long stems. To produce seeds, kenaf should be planted from November to December when daylength is short. Planting depth is about 0,5 to 3,2 cm. Seed is broadcasted or drilled to a row spacing of 20 to 30 cm with 5 to 10 cm between rows. Often two seeds are drilled and one seeding removed if germination has been good to ensure an even stand for the production of uniform stalks.

Propagation

Propagation is done by seed.

Fertilisation

During fertilisation 200 to 250 kg of ammonium sulphate with 21 % nitrogen give better yields and should be applied on the furrows and covered with soil of 2 to 3 cm thick before sowing. Fertiliser should be applied again 18 to 25 days after sowing when the seeds have sprouted and again when the plants are 60 to 70 days old around the area 4 cm from the plant’s base, then covered with the soil. For high yields adequate nitrogen fertilisation of 60 to 100 kg N/ha is recommended.

Irrigation

In low-rainfall regions, irrigation should be applied with about 240 to 490 mm and evenly distributed over the 4 to 5 month growing cycle.

Weed control

Weeding is done 3 to 4 weeks after planting. Once the plants are established and have outgrown the weeds, weeding is no longer needed.

Pest control

Kenaf plants are prone to small blackfly beetle and tussock moth.

Symptoms: Fly beetles attack the plant’s leaves and stems at its latter stage of growth. Tussock moths tunnels into the stem.

Control: The control of these pests can be done by harvesting early infested areas or by spraying with contact insecticides.

Kenaf is host to other several insect pests, including pink bollworm, spiny bollworm and cotton aphid. These pests do not cause severe damage and yield loss. Pest tolerant varieties and crop rotation are the most economic and effective methods of controlling such pests at present.

Disease control

Kenaf is affected by common diseases such as Botrytis cinerea, Sclerotinia rolfsii, anthracnose, leaf mosaic, petiole curl and root nematode (Meloidogyne spp.).

ANTHRACNOSE (COLLETOTRICHUM HIBISCI)

Symptoms: This fungal disease infests young leaves, stipules and meristems or growing tips which turn brown, wither and die off.

Control: This can be controlled by spraying copper oxychloride onto the leaves every other week. Before planting on previously affected areas, treat these with 50 kg potassium per hectare.

LEAF MOSAIC

Symptoms: It causes a chlorotic mottling of leaf lamina,resulting in low yield.

Control: A soil analysis should be done and balanced nutrients applied before planting.