

Seed Production Technology of Sunnhemp

Insect- Pests

Top Shoot Borer (*Cydia tricentra* Meyr)

This is a common insect in all the sunnhemp growing areas. In the early stage of crop larvae bore into the top portion of young plants and consequently apical buds are distorted into galls and plants become stunted.

Control

1. Deep ploughing during summer for exposure of the pest to sun.
2. Soil application of Furadon 3G @ 16.5 kg/ha followed by two sprayings of 0.1% Carbaryl 50WP at an interval of 15 days immediately after the commencement of pest attack.

Hairy Caterpillar (*Utethesia pulchella* Linn.)

This is a most serious insect of seed crop. The larvae of the pest feed on the foliage and skeletonize them completely and then at later stage bore into the pods and eat away the seeds.

Control

Two to three sprayings of Monocrotophos 36% S.L. @ 1.5ml/ litre of water at 15 days interval.

Diseases

Vascular wilt

It is caused by *Fusarium udum* But. f. sp. *crotalariae* is very common disease of

sunnhemp.

Control

1. The vascular wilt can effectively be controlled by application of neem cake @ 50 q/ha before sowing.
2. Seed should be treated with Carbendazim @ 2 g/kg.

Yield

The seed crop of sunnhemp matures in about 135-145 days after sowing. After harvesting, threshing and winnowing the seed must be sun dried before storage. By adopting above mentioned technology 10-12 q/ha of seed yield can be obtained.

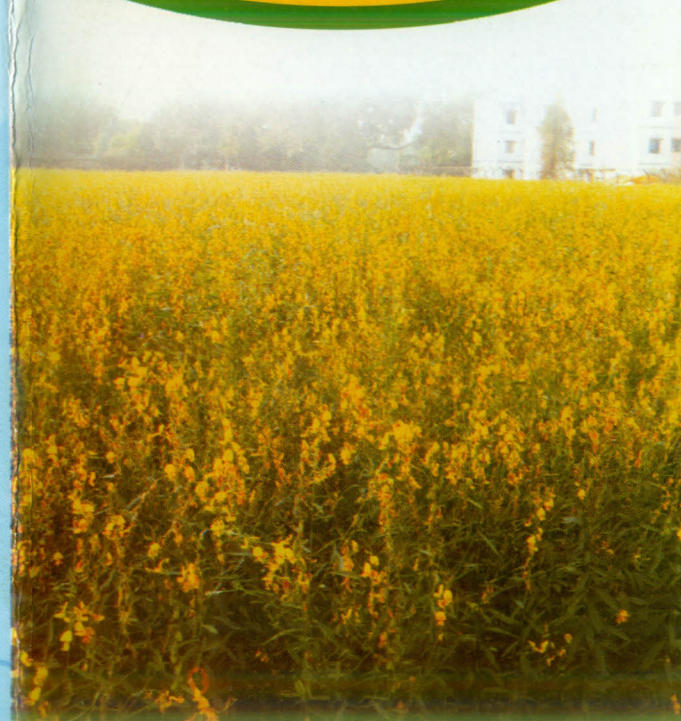


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Sunnhemp is an important multipurpose fabaceous crop of India. It is mainly grown for fibre and green manuring. The crop is also used as green fodder in some areas. The fibre has high cellulose, low lignin and negligible ash content. It has been identified as the most suitable indigenous raw material for manufacturing of high quality tissue paper, cigarette paper and paper for currency. In India, traditionally it is used for making ropes, twines, net, handmade paper, tat-patties and canvas.

Climate and Soil

The crop is well suited to tropical and subtropical climate. For seed production, initially it requires hot and humid climatic condition for vegetative growth but later on during reproductive phase decline in temperature and humidity is considered to be ideal. The crop thrives well on almost all types of soil except acidic, alkaline and water logged areas. Well drained loam or sandy loam soils are best for sunnhemp cultivation. Soils rich in phosphorus and calcium are most suitable for sunnhemp cultivation.

Land Preparation

One or two ploughing through rotavator is sufficient to obtain good tilth. Land should be properly leveled by giving a gentle

slope to ease drainage. There should be proper moisture in the soil at the time of sowing for good germination.

Sowing Time and Method

In northern India first fortnight of August is the most suitable time for sowing but the crop can be sown up to the last week of August. Delay in sowing beyond this causes significant reduction in yield. The crop should be sown in rows for higher seed yield. The distance between row to row 30cm and plant to plant 10cm is essential for better seed production. The seed should be sown at the depth of 2-3cm.

Seed and Seed Treatment

The seed should be treated with Carbendazim @ 2g/kg seed before sowing. The seed treatment protects the crop from soil and seed borne diseases. Seed rate varies with the method of sowing. A seed rate of 25 kg/ha is sufficient for line sown crop whereas it requires 35 kg of seed per hectare in broadcast method of sowing. After sowing, the soil is raked and laddered to put the seed 2-3 cm below the surface.

Improved Varieties

Use of improved variety is essential for high seed yield. The important varieties of sunnhemp are Ankur, Swastik, Shailesh, K-12 Yellow, K-12 Black, Chindwada etc.

Manures and Fertilizers

Sunnhemp being a leguminous crop fulfills its nitrogen requirement through the process of symbiotic nitrogen fixation. However, for the initial growth and development of crop 20 kg N/ha may be applied as a starter dose. Application of 40 kg P₂O₅ and 20 to 40 kg K₂O /ha depending on soil condition are required for better seed yield.

Irrigation

Generally the crop does not require any irrigation during vegetative phase due to sufficient moisture in soil because of rains. The crop may be irrigated during reproductive phase if sufficient soil moisture is not present.

Weed Control

The crop of sunnhemp grows very fast and thus smoother most of the weeds, except nut sedges. In problematic areas one weeding in early stage of crop growth is sufficient.

Topping

Apical topping after 30 days of sowing is essential for better seed yield. It induces profuse lateral branches thereby increasing the potential podding area.