Cauliflower: *Brassica oleracea var. botrytis; Brassicaceae*

Varieties

Hills: Ooty 1, Pusa Dapoli.

Plains: Early Synthetic and Tropi cross.

Soil: It requires cool moist climate. The early varieties may tolerate higher temperature and long days. This can be grown in plains during September to February. Deep loamy soils are good with higher organic matter and good drainage. It can be grown in a pH range of 5.5 to 6.6.

Season and sowing

Nursery: 100 sq.m nursery area/ha. Apply FYM at 300 kg and 10 kg of No.5 mixture (9:9:9) along with 50 g of Sodium molybdate and 100 g of Borax. Sow the seeds at 10 cm between rows in raised seed beds after drenching it with Copper oxychloride (2.5 g/lit). Transplant 30 to 40 days old seedlings at a spacing of 45 cm. Avoid land infected with 'club root disease'.

Seed rate: 375 g/ha.

Sow the seeds in raised beds and transplant 25 days (early varieties), 45 days old seedlings (late varieties) at 45 cm apart.

Preparation of field: Bring the soil to fine tilth. Pits should be taken at a spacing of 45 cm either way in hills. Form ridges and furrows at 60 cm in plains.

Irrigation

Hills: Once in a week during January and February.

Plains: Once in a week.

Application of fertilizers

Hills: Apply 30 t/ha of FYM and 90 kg N, 90 kg P and 90 kg K as basal dose and 45:45:45 kg NPK/ha after 45 days.

Plains: Apply 15 t of FYM/ha and 50 kg N, 100 kg P and 50 kg K as basal and 50 kg N after 45 days. Apply 2 kg of Departmental Vegetable micronutrient mixture without mixing with the chemical fertilizers.

After cultivation: Gap filling after 20 days of planting to maintain the population and uniform growth. Hoeing and weeding on 30th and 45th day. Avoid deep intercultivation as it is a shallow rooted crop.

Plant protection - Pests

Cut Worms: Set up light trap in summer months. Spray chlorpyriphos 2 ml/lit in the collar region during evening hours.

Aphids: The incidence is severe during autumn season. Install yellow sticky trap at 12 no/ha to monitor Macropterous adults (winged adult).

Spray neem oil 3 % or dimethoate 2 ml/lit with 0.5 ml Teepol/lit.

Diamond backmoth

1. Grow mustard as intercrop at 20:1 ratio.
2. Install pheromone traps at 12 No/ha.
3. Spray cartap hydrochloride 1 g/lit or *Bacillus thuringiensis* 1g/lit at primordial stage (ETL 2 larvae/plant)
4. Spray NSKE 5 % after primordial stage.
5. Release larval parasite *Diadegma semiclausum* (Ichneumonidae: Hymenoptera) at 50,000/ ha, 60 days after planting.

Diseases

Club root: Seed treatment at 10 g/ kg of seeds or soil application @ 2.5 kg/ha or seedling dip in solution of 5g/ litre with *Pseudomonas fluorescens*. Dip the seedlings in Carbendazim solution (1 – 2 g/lit) for two minutes. Drench the soil around the seedlings in the main field with Carbendazim @ 1 g/lit. Follow crop rotation. Crucifers should be avoided for three years.

Leaf Spot: Spray Mancozeb at 2 g/lit or Carbendazim 1 g/lit.

Leaf Blight: Spray Mancozeb @ 2.5 g/ litre.

Blanching: Blanching refers to covering of curds. A perfect curd of flower is pure white. It is necessary to exclude sunlight to obtain this. The common practice is to bring the outer leaves up over the curd and tie them with a twine or rubber band. By using a different coloured twine each day. It is easy at the time of harvest to select those tied earlier.

Physiological disorders

Browning or brown rot: This is caused by Boron deficiency. It appears as water soaked areas and later changes into rusty brown. Spray one kg of Borax in 500 lit of water 30 days after planting.

Whip tail: This results from the deficiency of Molybdenum. It is more pronounced in acidic soil. The leaf blades do not develop properly. In severe cases only the midrib develops and it can be corrected by spraying 100 g of Sodium molybdate in 500 lit of water 30 days after planting.

Buttoning: The term buttoning is applied to the development of small curds or buttons. The plants do not develop normally and leaves remain small and do not cover the developing curds. Deficiency of Nitrogen and planting the early varieties late may cause these symptoms. Avoid transplanting aged seedlings.

Blindness: Blind-cauliflower plants are those without terminal buds. The leaves are large, thick, leathery and dark green. It is due to the prevalence of low temperature when the plants are young or due to damage to the terminal bud during handling the plants or due to injury by pests.

Yield

Hills : 20 – 30 t/ha

Plains : 15 – 20 t/ha