

CABBAGE

(*Brassica oleracea* L. var. *capitata*)

Cabbage is a typical cool season crop grown for the thickened main bud called head. It is one of the most popular and widely grown vegetables in the region and has occupied second position in production after potato. It is a rich source of vitamin A, C and mineral including potassium, calcium, sodium and iron.



Varieties

Season	Varieties/Hybrids	Days to 50% maturity	Yield (q/ha)
Early	CH - 21 (Hybrid)	63	290
	CH - 2200 (Hybrid)	65	300
	Green Express (Hybrid)	72	320
	Pusa Ageti (OP)	68	280
Mid	Bahar(Hybrid)	85	750
	BC - 76 (Hybrid)	85	650
	Pride of India (OP)	75	308
Late	Raj - 2 (Large) (Hybrid)	98	648
	Raj - 2 (Hybrid)	88	572
	Green Challenger (Hybrid)	90	500

Soil and Climate

For early crop light soils are best whereas for late crop heavy soils are preferred. The optimum soil pH is 6.0 to 6.5.

It requires cool and moist climate. In lower hills of Meghalaya, cabbage is grown mainly in winter season (October-January), while in higher hills it is grown in both rainy and winter seasons. In mid hills, cabbage can be grown almost throughout the year.

Field preparation

Same as cauliflower

Seed Rate

Early season: 500g/ha, **Mid & late season:** 400g/ha

Time of Sowing

Early season: Mid June to July,

Mid season: Mid August to September,

Late season: October - November

Nursery Raising

Same as in cauliflower

Transplanting

5-6 week old seedlings with 4-6 leaves should be transplanted. Transplanting should be done in the evening. Immediately after transplanting, irrigation should be provided.

Spacing

Early season: 45 x 45cm, **Mid and Late season:** 60 x 45cm

Manure and fertilizers

FYM or compost @ 15 to 20 tonnes/ha is incorporated in the soil during land preparation. Besides FYM, N: P: K @ 120:60:60 kg/ha is applied. Full amount of phosphorus and potash along with half amount of nitrogen is applied at the time of transplanting. Remaining amount of nitrogen is applied in two split doses i.e. 30 and 45 days after transplanting as top dressing.

Weeding and earthing up

During the whole crop duration two to three weedings are sufficient to control the weeds followed by earthing up.

Plant protection measures

Cutworms: The caterpillars are 3 to 4 cm long, gray or brown to almost black with various markings. They hide in daytime and feed at night. They cause damage by biting the foliage and by cutting down the young seedlings just above the ground level.

Control:

1. Picking and destruction of the larvae at the early stage of the crop.
2. Growing of paired rows of mustard after every 25 rows of the crop.
3. Spraying of the heavily infested crop with Rogor or Endosulfan @ 2 -3 ml/ l of water.

Leaf Webber: The leaves are skeletonised by the larvae, which remain on the under surface of leaves in webs and feed on them. They also attack flower buds and pods. The insect commonly sucks early grown crop.

Control:

1. Picking and destruction of the larvae at the early stage of the crop.
2. The crop should be sprayed with Cyfluthrin @ 0.5ml/l of water.

Damping off: It is a serious disease in the nursery. In severe conditions, the affected seedlings droop and fall off due to infection at the collar region. Seed treatment with Thiram or Captan @ 2.5-3 g/kg of seed is recommended. The seedlings should be treated with Bavistin @ 1g/l or Dithane- M - 45 @ 2g/l of water.

Black rot: First signs of the disease often appear along the margins of leaves as chlorotic regions and the chlorosis progresses in the direction of the mid rib forming a V shaped area. Symptoms may appear from any side and centre of the leaves. The bacteria are transmitted through seeds.

Black leg: It occurs mostly in moist regions, especially in areas with high rainfall during the growth period.

Seed treatment should be done with hot water at 50°C for 30 minutes or mercuric chloride @ 1 g/l for 30 seconds.

Harvesting and yield

Harvesting is done when the heads are well developed and firm. The heads are cut with a knife, preferably attached with some wrapper leaves. A good crop may yield 250-300 q/ha.