Cabbage loopers and worms can be controlled by spraying *Bacillus* thuringensis @100ml/litre of water. Spray 2 times in 15 days. Add stickers/spreader to spray solution or Anucron 2ml/lt water.

- Spray Neem oil @2.5-5 lt/ha or neem cake @ 1kg/20 lt of water to control Aphids, Mustard saw fly or flea beetle.
- * Boil 1kg tobacco leaf powder in 5 lt water till deep black colour develops, then cool it overnight. Mix 100 ml of this solution in 2 lt water; this is enough for 50sqm area. This preparation is effective against all sucking type of insects.



Severe damage caused by cabbage butterfly larvae

Disease Management

Cultivation of resistant varieties, foliar spray of 0.5% suspension of *Pseudomonas flourosence* or Bavistin 2gm/lt water to control damping off, leaf spot whenever

necessary. Bordeaux mixture (1%) can be used to control fungal and bacterial diseases.

Harvesting

Cabbage should be harvested when the head attains full size and are compact. It is generally harvested from October to December in plains and throughout the year in hills. Yield varies from 30-40t/ha depending upon the variety and agroclimatic condition.



Cabbage butterfly larvae feeding on cabbage leaf

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Package of Practices for Cabbage Cultivation





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Introduction

Cabbage is one of the most common vegetable crops available during winter in most parts of Nagaland. It is cultivated throughout the year in pfutsero sub division. It is a rich source of vitamin A, B group and C. The tender leaves are primarily used as boiled vegetables, more in a raw than in processed forms.

Varieties

Pusa Drum Head, Pride of India, Golden Acre, Satton Eclipse, Rare Ball, Bahar etc.

Climate and Soil

Cabbage can be grown on all types of soil, ranging from light to heavy soil. In clay loam or silt soils higher yield may be obtained. Cabbage is a cool season crop which thrives best in moist climate. It can withstand extreme cold and frost relatively better than cauliflower. It grows well between 5.5 to 6.5 pH.

Package and practices for cabbage

Sowing: It is a winter season crop in plains, but in temperate regions it can be grown throughout the year.

Seed Rate: The seeds are sown @400-500gm/ha.

Nursery Management

- Make the soil fine, add 5-10 kg of compost or well rotten cowdung/sqm Prepare raised seed beds of 1m width, 15cm high and of convinient length. Cover the bed with thin transparent polythene sheet for 2-3 days for solarization.
- * Treat seeds with *Trichoderma viridi* @ 4g/kg of seed or 1g of *Pseudomonas fluorescence* culture per kg of seed to protect from root rot/damping off.
- Sow the seeds thinly in rows 10cm apart and 0.5 cm deep and watering should be done immediately.
- Mulch with dry straw or grass when necessary. Seeds will germinate within 5-7 days.
- Spray neem oil @2-5ml/lt of water to prevent from insects and pests.
- Seedlings are hardened before uprooting by withholding water for few days. When the seedlings attains 3-4 true leaves i.e. 30-45 days after sowing it is ready for transplanting

Field Preparation and Mannuring

- * Prepare the field by ploughing and hoeing and make the soil fine.
- * Add well rotten cowdung manure or vermi-compost @ 25-30t/ha
- Neem cake @3-4 q/ha can also be added, for better growth apply 20kg of Azotobacter and phosphotika (Biofertilizer).

Transplanting

★ Seedlings are transplanted at 4-6 weeks after sowing. Maintain spacing of 45 x 45-60 cm

Interculture operation

- Weeding should be done at regular interval.
- Earthing up should be done whenever necessary.
- Irrigation should be given at regular intervals.

Crop protection

- * There are various insects viz.Cabbage butterly, semilooper, head borer, cabbage web worm, diamond back moth, applies etc.
- * To avoide infestation of root grub, use well rotten FYM in the main field.