



PACKAGE OF PRACTICES

Chayote

Botanical Name : Sechium edule

Family : Cucurbitaceae

Common names: English- Chayote

Khasi- Biskot

Garo- Sikot

Other Names- Chow Chow, Cho Cho

Chow Chow or Piskot is a native of Central America got its name Chayote from Mexico and Chow Chow from Latin America. It is a very popular vegetable in Meghalaya and was introduced in our state at the turn of the last century by General Scott who was a commanding officer in the region.

It is commonly called Squash and it is a climbing creeper, which is widely distributed in Meghalaya and other North-

Eastern States. Chow Chow fruit is roughly pear-shaped, with coarse wrinkles and it can range from 10 to 15 cm in length. In addition to the fruit, the stem, tender leaves and tuberous roots are also eaten. The plant can be grown in the backyard, greenhouses/polyhouses/shade nets. The plant of Chow Chow is a hairy climber, making a growth of about 15-20m in one season from May to December on rich well drained soils in moist conditions.

Composition and Uses : In 100 gram, the fruits of Chow Chow contain about 94.24g Water, 1.660g Sugars, 19,000kcal energy, 4.51g of Carbohydrates, 0.82g proteins. It also contains fats, minerals and vitamins, particularly Vitamin A and vitamin C. It is the cheapest vegetable in the North Eastern region. The fruit has a delicate squash like flavour when cooked and is considered an important item of daily diet among the people of hilly areas. Sometimes this vegetable is used as a substitute of potato and is cooked in many ways. Because of their flexibility and strength, the stems have been used in the manufacture of baskets and hats. Fruits, vines and tubers are also excellent fodder for livestock.

Cultivated types:

White types – Round White, Long White

Green types – Pointed Green, Broad Green, and Oval Green

However, there is no specific improved or commercial variety released in India. There are two varieties (cultivars) released outside India – Florida Green and Monticello White.

Climate and Soil requirement : These vegetables can be grown upto 1500m (msl-mean sea level) altitudes. It is a warm season crop grown in both tropical and sub-tropical regions. The ideal temperature for best fruit growth is 30oC. The chow chow vine can grow under full sun to mild shaded conditions. Generally, fruits exposed to sunlight are yellowish in colour and vines grown under shade produce dark green fruits (vegetables).

This crop requires well drained and loose fertile soil for high yields. Soils that are rich in organic matter should be selected for commercial chow chow farming. Chow chow is slightly tolerant to acidic soils (below pH 5.5). So the ideal pH should be 5.5 to 6.5.

Field preparation and Planting: Chayote is grown in the traditional way in backyards and kitchen gardens. The whole fruit is planted as a seed. Each fruit has a single large seed that sprouts as soon as the fruit reaches maturity unless placed in cool storage. Fruits stored below 8oC remain in good condition for planting for as much as 6-8 weeks, although shrivelling and decay are common. In areas of traditional production, the sowing plot is prepared before hand by making a hollow in the soil that is big enough to allow the roots to attain maximum

development. Next to the sowing plots, a frame of trellis with bamboo or other materials is commonly erected so that the plant can grow on it quickly.

During the initial stage of growth, the amount of care given is relatively high in terms of irrigation and fertilization with animal or chicken manure. Planting on a mound is followed as a useful technique to ensure adequate drainage. Both male and female flowers occur on the same vine. These flowers are visited by insects, both wasps and bees, which facilitate pollination.

Improved Cultivation Practices :

Propagation :

- The most common and efficient way of propagating chayote is to use the seeds/fruits
- The seed is removed from the fruit and placed in a flower pot or some other place where the young plants can be carefully tended before being transplanted to where they will grow.

Planting :

- Plant the matured fruit. This is allowed to germinate, first in a nursery. Upon reaching about 30cm it can now be transferred to the field
- Make holes about 30cm wide and 3-5 metres apart from

one another. Mix soil with compost and put it back into the hole

- Plant a sprouted fruit with the spouted end at the bottom of a slanting hole that is the same depth as the fruit or, one to three seedlings can be planted in each hole. Cover with soil
- On commercial plantations, sowing is carried out using rooted cuttings or selected seed
- Always clear the surrounding of weeds until about 2 metres away from the plants
- When the plants fill the trellises, the growth of weeds will be controlled

Planting time : September – November (for irrigated crop)

January – February (for rain fed crop)

Manure and fertilizer : Organic fertilizers are good for the crop. Basal application of FYM or compost is recommended. Side-dressing of FYM or compost @2-4 kg per plant should be done 7 to 8 weeks after planting and repeated every three months. Additional requirement should be met through green manure, vermin waste, bio dynamic liquid manure, etc.

Bower/Pergola: Some type of support for the climbing vines is required. Most pergolas in North East India are constructed by bamboo, about head height to facilitate walking underneath

the vines for harvesting and other operations. Pandal, Bower or Pergola can be prepared at a height of 5 feet placing bamboo poles followed by criss cross wire netting.

Weed management : Chayote does not suffer a lot from weed as it covers the soil surface; hence it checks the weed growth. But at initial stages, one or two manual weeding should be done with the help of khurpi.

Harvesting : Usually the marketable size of fruits is obtained in about 30 days from flowering. A well grown plant of about one year yields 200-300 fruits. The fruit weight is 200-450 gm. In North-East India fruits are slightly bigger. The yield of 80-100 quintals per acre has been recorded in Meghalaya. The crop is semi-perennial lasting 2-3 years.

Post harvest Handling : Fruits must be harvested and handled carefully to prevent cuts, bruises and spread of diseases. It is normally pre-cooled in cold rooms or through forced air. In the market, it is packaged in fibre board boxes with dividers. At home, place them in paper bag inside the vegetable compartment of the refrigerator set with adequate moisture. They can be stored up to 2-3 weeks at 7°C and 85-90% humidity.

Disease :

Powdery Mildew - Powdery mildew is a fungal disease that causes white or grey leaf spots covered with a kind of dust. Affected leaves are twisted, yellow and fall. It can also affect the buds that do not open. This type of infection benefits from a warm and dry weather, but with high humidity the dispersal of spores is higher. The treatment is based primarily on prevention. It is recommended to:

- Remove diseased foliage from the plant and clean up fallen debris on the ground
- Use varieties resistant to this infection
- Do not plant specimens too tight to encourage airflow
- Use a thick layer of mulch or organic compost to cover the soil after you have raked or cleaned it well. Mulch will prevent the disease spores from splashing back up onto the leaves
- Wash foliage occasionally to disrupt the daily spore-releasing cycle.
- There are experimental treatments without toxicity using baking soda mixed with vegetable oil that can be sprayed on the plant. Neem oil can also be used to prevent fungal attack
- Dispose all infected material to prevent the fungus
- Do not increase the humidity to prevent the spread the

spread of spores

- Apply Sulphur or Copper-based organic fungicides to prevent infection of susceptible plants. For best results, apply early or at the first sign of disease. Spray all plant parts thoroughly and repeat at 7-10 days intervals up to the day of harvest.

