

BANANA

(*Musa paradisiacal* L.)

Banana belongs to family Musaceae is one of the important fruit crops of the region. It is quite popular in the entire Northeast states like Assam, Mizoram, Meghalaya, Nagaland, Manipur and Tripura. Banana fruits are mostly used for table purpose as well as for cooking vegetables, while in some area of the region; mature green fruits are also used for making banana chips.



Cultivars

ChiniChampa (Ney Poovan), Champa(Poovan), Jahaji (Dwarf Cavendish), Bor Jahaji and Grande Naine (Giant Cavendish), Morthomon(Sabri) are the some important cultivars grown in the region.

Soil and Climate

Clay soil with proper drainage as well as drained loamy soil is quite suitable for its cultivation. Banana grows well in tropical to sub-tropical climate. The mean temperature of 20°-30°C is optimum for its growth. Banana plant is susceptible to frost.

Propagation

Sword sucker is the most commercial planting material of banana, but nowadays tissue cultured bananas are gaining more popularity among the growers due to its early bearing, disease free and uniform flowering. About 4 months old sucker of 1-2 kg weight and 80-120 cm heights having a piece of underground stem with a few roots attached to it is suitable for planting.

Planting

The best planting season of banana is during rainy season. They are planted in small pits of 30x30x30 cm size just enough to accommodate the base of a sucker. The planting distance varies from 2x 2m in case of dwarf varieties to 3x3 m in case of tall varieties.

Manure and Fertilizer

Manure and fertilizer requirement of banana is high due to its shallow root system. An application of 8-10 kg FYM/plant is given at planting time. Fertilizer mixture comprising 180 g N + 100 g P₂ O₅ + 250 g K₂O per plant/year is ideal. The full dose of phosphorus and half dose of potassium is applied at the time of planting while nitrogen is given in 3 split doses at 2, 4 and 6 months after planting.

After care

The removal of suckers, dry leaves and pseudostems, from which the fruits have been harvested, constitute the main after-care. Daughter-suckers should be removed promptly until the mother-plant flowers. However, one daughter-sucker is allowed when the mother plant flowers. Desuckering can be achieved by pouring the kerosene oil. The removal of dry leaves and useless pseudostems should be done in time. After all the fruits are formed, the pendant portion of the remaining inflorescence along with the heart should also be removed. The propping of plants with bamboo poles after flowering is also necessary wherever damage by wind is apprehended.

Irrigation

The banana plants require very heavy irrigation. Irrigation is given in most places once in seven to ten days. Stagnation of water in the soils is not very congenial to the proper growth of banana and hence, the drainage of soil is also essential.

Insect/Pests

Pseudostem weevil: Grubs initially feed on leaf sheath and then bore into pseudostem, which get riddled, weakened and rotted. Infested plants die when central portion of stem is damaged.

Uproot and burn the infested plant. At initial stage of infestation apply Carbofuran @ 3g/plant in the soil.

Rhizome weevil: The grubs feed in the rhizome, therefore infested rhizome get riddled with holes and becomes weak. Secondary infection of pathogens causes rotting. Due to severe attack central shoot is killed.

Use of healthy sucker for planting is strongly recommended and dipping of the suckers in 0.1 % Quinalphosemulsion reduces infestation.

Banana beetles: The beetles feed on tender unfold leaves and fruits. The beetles scratch epicarp of the tender fruits, blemish them and render unmarketable.

Spray Endosulphan(2 ml/litre) or Carbaryl(2.5 g/litre) during April-September coinciding with emergence of new growth. Repeat spray at fortnightly interval if required and stop spraying about 15 days before bunch harvesting.

Banana aphid: This insect acts as a vector of bunchy top virus. Leaves of infested plant become small and fruit bunch growth is affected.

Spray Dimethoate (1.5 ml/litre) or Phosphamidon(0.05%) to kill the aphids.

Diseases

Panama wilt: Yellowing of leaves of top sides and later on hanging of leaves around pseudostem are the symptoms of Panama wilt.

Dipping of planting materials in Carbendazim(1g/litre) before planting followed by drenching at bimonthly intervals from 5 months after planting is useful.

Anthracnose: Regular to irregular spots on leaves with dark margins and grayish center. On fruits typical dark brown depressed lesion appears.

Spraying of Carbendazim (1 g/litre), Calixin(2 g/litre) in humid weather is found useful.

Sigatoka leaf spot: Fungus infects the younger leaves through stomata. Faint yellow spots gradually turn to streaks making the central portion necrotic.

Application of Bordeaux mixture (4:4:50), Dithane M-45 (2.5 g/L) is found useful.

Bunchy top virus: This disease is transmitted through aphid. Marked stunting and bunching of leaves characterize the affected plants. The crown leaves are undersized.

The infected plant should be removed and burned. Spraying of Dimethoate(1.5 ml/litre) at fortnightly interval reduces the aphid significantly.

Harvesting and yield

Dwarf varieties commence flowering in about nine months after planting and the fruits take about three months more to mature whereas, tall varieties take about 12 months for flowering after planting. The bunch is harvested just before it attains the ripening stage. When the fruits have reached the full size, ridges of the fruit become round from angular with a distinct change in colour from dark green to light green. The bunch is cut, retaining about 15 cm of the peduncle above the first hand. The yield varies considerably from 10-30 kg bunch/plant depending upon the cultivars and management.