

Banana

Land Preparation

Prior to planting banana, grow the green manuring crop like daincha, cowpea etc. and burry it in the soil. The land can be ploughed 2-4 times and leveled. Use of rotovator or harrow to break the clod and bring the soil to a fine tilth. During soil preparation basal dose of FYM is added and thoroughly mixed into the soil. A pit size of 45cm x 45cm x 45cm is normally required. The pits are to be refilled with topsoil mixed with 10 kg of FYM (well decomposed), 250 gm of Neem cake and 20 gm of Carbofuran. Prepared pits are left to solar radiation helps in killing the harmful insects, are effective against soil borne diseases and aids aeration. In saline alkali soil where PH is above 8 Pit mixture is to be modified to incorporate organic matter. Addition of organic matter helps in reducing salinity while addition of perlite improves, porosity and aeration. Alternative to planting in pits is planting in furrows. Depending on soil strata one can choose appropriate method as well as spacing and depth at which plant is required to be planted.

Planting Material

The banana is propagated by suckers and rhizomes. However, tissue cultured plantlets are also being used on a large scale nowadays. These tissue cultured plantlets enable early harvesting in 11-12 months after planting. Suckers can be obtained from neighboring farms.. Cares should be taken to select disease free suckers. Before planting, the suckers should be treated to prevent nematode attacked. The suckers should be soaked for 10 minutes in a solution prepared by mixing 100 liters of water with 3 liters vermiwash with *Trichoderma viride* and *Pseudomonas*. The large suckers should be placed in the windward side followed by smaller sucker. This helps to reduce wind and gives uniform yield. After one month of planting, sun hemp can be sowed. When it comes to flowering, it should be ploughed. Before harvesting 3 weeding should be done. At 1½ months apply vermicompost @ 1.5 kg per tree and on the 75th day apply 1 basket of farmyard manure for each tree. Within 95-100th day place *Azospirillum*, vermicompost and phosphobacteria @ 200 g per tree.

Planting and Infilling

The planting material is treated with a solution of 250 g of ghee, 0.500 g of honey and 15 kg of cow dung. The spacing adopted by organic banana cultivators is 1.5 m x 1.5 m and 1.5 m x 1.8 m. Traditionally banana growers plant the crop at 1.5 m x 1.5 m with high density, however plant growth and yields are poor because of competition for sunlight.

Water Management

The plants need to be irrigated immediately after planting. About 30-40 weekly irrigations are required. When summer temperature crosses 37.5^o C, irrigation on every 3rd day is essential. Inadequate irrigation to banana leads to delayed flowering, irregular bunch size, delayed maturity, reduced fingers and poor keeping quality of the fruits. The drip system of irrigation should be followed in the organic banana cultivation.

Intercultural Practices

Propping

Propping or supporting the bearing plants can be done by suitable propping material like bamboo or wooden poles.

Mulching

Mulching is desirable immediately after planting. Mulching controls weed growth, conserves moisture, hastens growth and improves yield.

De-suckering

All varieties of banana throw suckers from 2-3 months after planting. All these suckers should not be allowed to grow as they will compete with the mother plants for water and nutrients thereby reducing the yield of main crop. De-suckering with sickle at 15-20 days interval right from the beginning till flowering is essential.

Wrapping

Wrapping the bunches is essential to have blemish / bruise free fruits with uniform size and quality. For this, black colored polythene may be used for covering the fruits.

Removal of male buds (Denavelling)

Removal of male buds helps fruit development and increases bunch weight. Male buds are removed from the last 1-2 small hands with a clean cut keeping a single finger in the last hand.

Deflowering

It consists of removal of the withered style and perianth. This is generally not practiced. Therefore, they remain attached to the fruit bunch & then removed after harvesting which is damaging to the fruits. It is therefore suggested that you remove them just after flowering.

Other operations

Weeding is done 3-4 times in a year. Trashing is done by removing dried leaves. Earthing up of the soil is required to be carried out two times annually.

Harvesting

The crop gets ready for harvest after 11-12 months of planting. First Ratoon crop is ready after 8-10 months from harvesting the main crop and second Ratoon after 8 months of harvesting of the first Ratoon crop. Thus over the period of 27-30 months, it is possible to harvest three crops i.e. one main crop and two Ratoon crops.

Storage

Keep Bananas refrigerated. The ripening process can be delayed if you refrigerate it. The skin of the fruit will turn dark but the flesh remains firm. Conversely, do not store Bananas below 13°C as it will stop its ripening process (at that temperature Bananas do not emit heat or ethylene).