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# **Banana Plant Cultivation**



## ➤ Introduction:



**B**anana is the oldest and commonest fruit known to the mankind. It is one of the important fruits, and constitutes second largest fruit industry in India. It is nutritious palatable and easily digestible fruit. It is available round the year because of its taste, nutritive and medicinal value. Banana is rich in carbohydrates, minerals such as calcium, potassium, Mg, Na and phosphorous. Other than fresh fruits, it can be consumed as processed in various forms like chips, powder, flakes, etc. Banana pseudostem is chopped

and used as cattle feed. Also, the leaves are used as plate. The botanical names of banana are *Musa cavendish* and *Musa paradisiaca*, which belongs to the family *Musaceae*. Banana is the second most important fruit crop of India next to mango. It is favorite fruit of all classes of people.

**Variety: G9**

## ➤ Climate:

**B**eing a tropical crop, banana requires warm, humid and rainy climate. The optimum temperature range is 10 to 40°C and the relative humidity is 90% or above. It is highly susceptible to frost and cannot tolerate arid conditions. Strong desiccating winds cause considerable reduction in the growth of the plant and yield and quality of fruits.

## ➤ Soil:

**B**anana is a heavy feeder crop/. Therefore, fertility of soil is very important. Rich, well drained, fertile, free working, soils with plenty of organic matter is best suited for cultivation. The optimum range of pH of soil should be 6 to 8.

## ➤ Propagation:

**C**ommercial edible bananas do not produce viable seeds. So, the banana is commonly propagated by suckers and sword suckers with narrow leaves. Rhizomes whole or in bits from fruited and non-fruited plants with at least one sound bud can be successfully used as propagating material.

## ➤ Planting



**P**lanting of banana is done by two methods viz. Pit method and furrow method. Planting is done from February to May whereas in North India, it is done during July-August. In South-India, it can be done any time of year except summer. Tall varieties should be planted at 3x3 m whereas dwarf ones

at 2x2 m apart.

## ➤ Manuring:

**B**anana is a heavy feeder and responds well to manuring. Banana is a quick growing and short-lived plant. Therefore, it is more beneficial, if quick growing fertilizers are applied. In Tamil Nadu, application of 100 g of N, 30 g of P<sub>2</sub>O<sub>5</sub> and 300 g of K<sub>2</sub>O per plant to be supplied in three doses during the second, third and fifth months is recommended. In Maharashtra, 100 g N, 40 g P<sub>2</sub>O<sub>5</sub> and 100 g K<sub>2</sub>O per plant is recommended. Out of these, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O is applied at the time of planting and N is given in three split doses: third, fourth and fifth month after planting.

## ➤ Care after Planting:

- **Desuckering:** - Desuckering is an important operation in banana cultivation. In this, the unwanted suckers, which develop near the base of the plant, are removed. Cutting the suckers from ground level and then pouring the kerosene (2-3 drops) to kill the growing point of pseudostem does it.
- **Propping:** - It is an essential cultural practice to give proper support to the plants with bamboos. It is done to avoid falling down of plants due to high winds.
- **Wrapping:** - to protect the fruits from sunburn, hot wind and dust the bunch is covered. Wrapping is also done to improve the colour of the fruit.

## ➤ Species:

There are many varieties of banana in India like- Poovan; it is the most important commercial variety in Tamil Nadu, Andhra Pradesh and West Bengal. It is also known as Lal velchi in Maharashtra, Dwarf Cavendish or Basarai, Robusta or Harisal, Rasthali or Mutheli, Rajeli or Nendran, Sonakela, Safed Velchi.

## ➤ Harvesting and Yield:

Harvesting of banana is done 12 to 15 months after planting in dwarf and 15 to 18 months after planting in tall varieties. Signs of maturity of banana fruits are, fruit becomes plumpy and angles are filled in completely, when tapped gives metallic sound, drying off of top leaves and change in colour of fruits from deep green to light green.



## ➤ Important disease of Banana:

**Panama wilt:** It is caused by the soil borne fungi *Fusarium oxysporum*.

Symptoms: Leaves become yellow, Pseudostem splits and breaks.

Control Measures: Eradication of the infected plants. Growing resistant varieties like Dwarf Cavendish. Soil drenching with Vapam @ 0.85% and mercuric chloride @ 3000 PPM in nursery.

**Bunchy Top:** It is caused by the virus, which is transmitted by an aphid *Pentalonia nigronerua*.

Symptoms: Infected plants have short, narrow, erect leaves with short petiole. Plants remain slanted.

Control Measures: Infected plants should be uprooted and burnt. Spraying of 2-4, D to control weeds.

**Root stock weevil:-** Damaging stage is adult and grub

Symptoms of damage:- Grub bores into stem which is affected by fungi or bacteria.

Control measures: - Use healthy suckers and rhizomes. Before planting treat the pit with 0.65 % Lindane 60-80 g/pit. Soak the sucker in 0.1% Lindane solution, spray 0.05 % endosulfan.

➤ Economic of One Acre Banana Cultivation:

Expenditure:

Distance(in acre)	Sapling (in land)	Cost (per plant)	Total	Other Expenses (As Per Requirement)	Cost of cultivation
5X5 ft	1800	60 Rs.	$1800 \times 60 = 1,08,000/-$	Fertilizers Land preparation Labor expenses etc.	1,08,000 /-
<b>Total Cost of Cultivation: 1,08,000/-</b>					

➤ Income:

Income of year	From each plant	Total Production	Company buy-back	Total	Total income
1 <sup>st</sup> Year	40 kg	$1800 \times 40 = 72000 \text{ kg}$	5 Rs. kg	$72000 \times 5 = 3,60,000 \text{ /-}$	3,60,000 /-
2 <sup>nd</sup> Year	40 kg	$1800 \times 40 = 72000 \text{ kg}$	5 Rs. kg	$72000 \times 5 = 3,60,000 \text{ /-}$	3,60,000 /-
<b>Total Income: 7,20,000/-</b>					

## ➤ Technical Support & Services:

**W**e also provide technical support for farming. Our Service Department with technically qualified staff provide after sales service and farmers advisory services to our customers to get better plant establishment and faster growth of Herbal and Horticultural plantations.

We have largest network of employees who deliver Plants to customers at their door steps. Free technical services to customers on planting method, management practices and plant protection measures. Our teams of Agricultural Experts periodically visit and supervise the plantations and suggest necessary guidelines to get better growth and higher returns. Services:

1. This includes Supervision, consultancy, guidance, Transportation cost first year.
2. First production starts after 1<sup>st</sup> year and production will remain for next 1 year.
3. Buy back agreement of Banana.
4. The income expenditure indicated by the company is an approximated figure, as it also depends on the nature and hard work of the farmer.

## ➤ Terms And Conditions:

1. For 1 Acre plantation the cost of Plants is Rs. 1,08,000/-, out of which 50% has to be paid before the cultivation and the remaining half after the planting is done.
2. The Buy Back Agreement Stamp paper of Rs.100/- has to be stamped by District Court of your area.
3. For 10 Acre or more yield the buy Back Agreement Stamp Paper will be of Rs.500/-.





***("Look deep into nature,  
and then you will understand  
everything better")***

**THANK YOU**

**For More Information Contact Us**

**“MAATITATVA AGRO INDUSTRIES PVT. LTD.”**

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