Pineapple

*Scientific name: Ananas comosus*

**Introduction:** Pineapple is an important fruit crop in India. Originated in Brazil, it spread to other tropical parts of the world. The cultivation of pineapple is confined to high rainfall and humid coastal regions in the peninsular India and hilly areas of North Eastern region of the country. At present, pineapple is commercially grown in Assam, Meghalaya, Tripura, Mizoram, West Bengal, Kerala, Karnataka and Goa.

Though the domestic demand for Pineapple is quiet high, major portion of pineapple produced in India are exported. Pineapple is mostly exported to Nepal, UK, Spain and UAE. Besides fresh fruit, pineapple is mostly exported to these countries as canned pineapple and in the form of juice.

**Nutritive Value of Pineapple:** Pineapple is a good source of vitamins, mineral like calcium, magnesium, iron etc. and fibre. Pineapples are said to be beneficial for the treatment of the following:

1. Pineapples are packed full of vitamin C and fiber – important for the immune and digestive systems.
2. They contain the enzyme ‘Bromelain’ which is thought to aid digestion.
3. Besides the above mentioned benefits, pineapple is said to be help in the treatment of Dyspepsia, Bronchitis, High blood pressure and Arthristis.

**Climate and soil:** Pineapple is a humid tropical plant. It grows well, both in the plains and also at elevations of 900-1100m above sea level. It tolerates neither very high temperature nor frost. An ideal temperature for successful cultivation of pineapple is between 20°C to 36°C. Pineapple does not perform well either above or below this temperature range. Besides this, there should not be too much difference between the day and night temperature.

Pineapple grows in almost any type of soil, provided it is free-draining. Slightly acidic soil with pH range of 5.5 to 6.0 is considered optimum for pineapple cultivation. The soil should be well drained and light in texture. Heavy clay soil is not suitable. Sandy loam soils are ideal
for pineapple cultivation.

**Pineapple Variety:** There are different varieties of pineapple which are commonly grown all over the world. Most common variety grown under in India are - Kew, Giant Kew, Queen, Mauritius, jaldhup, lakhat etc. Among these variety Kew/ Gient Kew and Queen are commonly grown in the north eastern part of India and is believed to be best suited for these part of the country.

![Kew, Queen, Mauritius, Jaldhup](image)

**Propagation and Planting:** Pineapple is commonly propagated by-

a. **Crown:** Crown is commonly used for propagation in some parts of the country including Mizoram. In comparison with other propagating material like suckers and slips, crown takes longer time to come into bearing.

b. **Sucker:** Sucker is the most commonly used planting material. Plants raised through suckers have vigorous growth and bears fruit early.

c. **Slip:** Though it is not a common practise, Slip are also used as propagating materials usually when suckers are not available. It takes about two years to bear fruit.

**Planting System:** There are three system of planting commonly practised-

a. **Single row System:** In this system plants are spaced at 30cm apart and row to row spacing is kept at 60cm.

b. **Double row System:** This system of planting is the most common method of planting and is believed to be best suited for north eastern conditions. In this system of planting, plants are planted in two rows and the spacing between plants is kept at 30cm while the
row to row is spaced at 60cm. After every two rows, 90cm trenches are made between the double rows and the soil from these trenches are used for earthing up so that the rows are slightly raised above the trenches. By using this system, about 40,000 - 43,500 plants can be accommodated in one hectare area.

**Double Row System (With Black Polythene Mulch)**

c. **Triple row System**: This system of planting is almost similar with that of Double Row System except that there are three rows between the trenches instead of two rows as in double row system. Plant to plant and row to row spacing, as well as the trench spacing remains the same as that in double row system of planting.

**Important notes to be noted at the time of planting:**

1. In contrast with the traditional practise of planting along the slope, planting across the slope should be adopted.

2. As mentioned before, suckers are the best propagating material (planting material). Irrespective of the type of planting material used, Suckers, crown or slips are first cured by stripping off the lower leaves, followed by drying in the sun, or in partial shade for three to four days before planting. This helps in re-establishing the plant quicker besides avoiding chances of rotting before the plants are properly established.

3. Before planting, the planting material should be treated by dipping in Monochrotophos (0.15%) and Carbendazim (0.1%). This helps prevent infestation of Mealy Bug and rotting through fungal infection.

4. Planting can be done two times in a year, either during June-July or October-November.
**Manuring and Fertilizer Requirement:** Pineapple is a shallow feeder with high nitrogen and potassium requirement. Since these nutrients are prone to heavy losses in the soil, practices relating to time of application and the form of fertilizer determine their efficient usage. Unlike other fruit crops requirement of Phosphorus (P) is comparatively low in case of Pineapple. Though fertilizer requirement depends on the nutrient status of the soil, Urea 26gm, SSP 25gm and MOP 20 gm per plant per year is usually recommended. Urea should be applied in six split doses, the first split dose should be applied two months after planting and the rest of the split doses should be applied at two months interval. The required amount of MOP should be applied in two split doses. The first split should be applied along with the total amount of SSP at the time of planting while the second split should be applied six months after planting.

**Weeding:** Since pineapple is a shallow feeder, completion for nutrients by weeds is comparatively high. Therefore, manual weeding should be done at least three times in a year. If manual weeding is not an option, weedicide such as Diuron @ 3kg/ Ha. should be applied as pre-emergence weedicides. After five months of the first application, spraying of Diuron @ 1.5kg/Ha. should be done. Diuron 3kg should be dissolved in 1000ltrs. of water and similarly 1.5 kg of Diuron should be diluted in 500ltrs. of water, respectively.

**Harvesting:** Pineapple usually comes to flowering after 10-12 months of planting and after flowering it takes another 3-6 months for the fruits to become ready for harvesting. Harvesting depends on the requirement and for what purpose it is going to be used. For table purpose, the fruits are usually harvested at full ripe stage, while for canning purpose, fruit should be harvested when the bottom half of the fruits turns yellow. If the harvested fruits is to be stored for sometimes, the crown should not be removed immediately as keeping the fruits along with the crown helps in storing the fruits for about 10-15days without deterioration in the quality of the fruits.

**Plant Protection Measures:** No serious pest or disease of pineapple is prevalent in India, however, Mealy bug and Heart rot are important pest and disease respectively.

- **Mealy Bug:** This pest sucks the sap from the leaves and the leaves eventually dries up. For its control measures spraying of Nuvan @ 2ml per litre of water should be done.
Mealy Bug

b. Leaf/foot rot: This disease is caused by Ceratostomella paradoxa, and is very common under moist and damp condition. For its control measures, spraying of Dithane Z-78 (0.5%) should be done.

c. Leaf spot: This disease is more severe in young plants, and can be controlled by Dithane M-45 @ 2-3gm per litre of water.

Homescare Preservation:
1. Pineapple Squash

Ingredient:-
1. Pineapple Juice - 1litre.
2. Sugar - 1.5 Kgs.
3. Citric Acid - 1tblsp.
4. KMS/Sodium Benzoate - 3gms.
5. Pineapple essence & Pineapple Colour.

A Siam Dan:-
1. Dissolve the sugar in 1litrs. of water by boiling it.
2. After it has completely dissolve, allow it to cool for sometime.
3. Then add the filtered pineapple juice alongwith citric acid, Pineapple Essence and Colour and mixed it well.
4. Then add sodium benzoate/KMS which was previously dissolved in a small amount of warm water.

2. Pineapple Jam

Telh turte:-
1. Pineapple - 1Kg.
2. Citric acid - 1 teaspoon
3. Chini - 1Kg.

A Siam Dan:-
1. If possible, freshly harvested and ripe fruits should be selected.
2. Boil the pulp in a small amount of water and when its cooked, smash/crush it properly to get a good paste.

3. Boil the paste again along with the required amount of sugar and continue boiling to get a uniform paste.

4. Add Citric Acid and mixed it well by stirring thoroughly.

5. Continue boiling till all the added water evaporates and stop cooking after a thick paste is obtained.

6. Store it in a previously sterilized bottle and keep it in a cool dry place.