

ORGANIC PINEAPPLE PRODUCTION



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Organic production of pineapple

Pineapple is a crop of the humid and sub-humid tropics. Originated in Paraguay (Brazil) and introduced in India in 1548. It is a monocotyledonous fruit exhibiting vegetative parthenocarpy and self incompatibility.

Pineapple propagation- the commonly propagating materials used are:

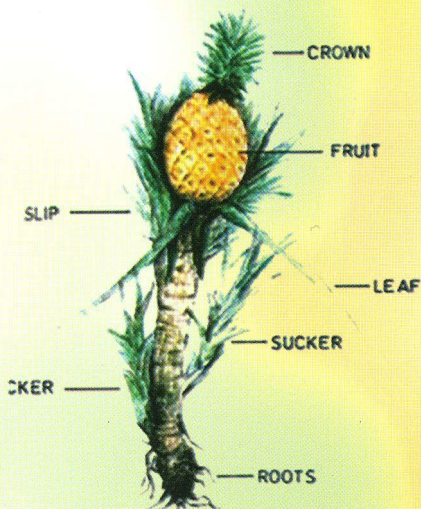
1. **Suckers** - the weight of Suckers should be 500-750g
2. **Slips** - the weight of Slips should be 300-400g the plants obtained from slips produce uniform fruit and yield
3. **Crown** - Flowering in 478-492 days after planting.

Curing of planting materials

The planting material are to be stored under shade for period of 14 days for curing and scaly leaves are removed from about 2-5 cm of the stem base to expose root initials and trim lower end of the stem leaving it exposed for 4-5 days before planting. Planting can be done after treatment to reduce mortality in field (Neem oil 5 ml/litre) solution to protect against Mealy-bugs and *Tricodrema harzanium* (0.1%) for Heartrot.

The bud/heart of fruit should not be covered with soil.

Before planting suckers/ slips should be sorted out into larger, medium and small to avoid competition between plants of different sizes. Uniformity of



planting material is necessary for carrying out cultural operation easily at a time

Planting density

In North east double row spacing of 30 cm x 60cm x 90cm with plant population of 44,500 plants are recommended across the slopes. In high density plantations 60,000 suckers with spacing of 30cmx60cmx75cm is possible

Planting time

Planting time - 12-15 months before peak flowering (Dec-March) season under natural conditions. Under Nagaland conditions pineapple is planted during May to July.

System followed -

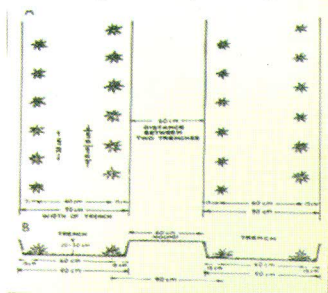
Triangular system with double row spacing

Pit size - 2 ft. x 2 ft. x 2 ft.

Pit digging- March & exposed to sun

Pit filling- 15 kg FYM+ 150gm lime+ 25 gm neem cake with top soil in April.

Planting in July -Aug



Organic manures to be applied

Compost (FYM) - 50-60 tones/ha

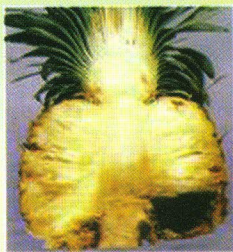
Vermicompost – 5 tones/ha

Neem Cake - 75-80 tones/ha to control soil born insects

Plant protection in pineapple

Black-rot or Soft-rot

(*Phytophthora cinnamoni*)



Symptoms: Small, circular, water-soaked spots at the stalk-end of the fruit. Fruit rots and emits foul smell. Delay between harvest and utilization of the ripe fruits leads to development of disease. The fungus makes its entry through wounds caused during picking and packing.

Management: Avoiding injury to the fruit during harvest and transit. *Trichoderma* has potential for biological management.

Heart-rot (*Phytophthora parasitica*)

The disease causes complete rotting of the central portion of the stem.

The top leaves turn brown and basal portion of leaves rots with foul odour.

Management:

Good soil drainage. Use of healthy planting material. *Trichoderma* have potential for biocontrol

Leaf and Fruit-rot: Caused by *Cyrtospora paradoxa*, The disease of planting material occurs when they are not dried and packed with little aeration. Fungus also destroys older plants by entering through wounds caused in the collar region



Leaf and Fruit-rot



Pink disease of Pink disease symptoms on pineapple fruit slices originating from a canned product

Management:

The diseased plants must be destroyed. Suckers for propagation should never be collected from the infested area. *Trichoderma* has potential for biocontrol.

Leaf Spot (*Phytophthora* sp.)

Initial symptoms are water soaked lesions on the leaves. The spots later enlarge in size and gradually dry up.

Management:

Good soil drainage and use of healthy planting material. Trichoderma have potential for biocontrol

Pineapple wilt

It is a serious disease of pineapple. Disease occurs only in association with a mealy bug and a closterovirus (PMWaV).

Mealy bugs can transmit the virus.

Management:

Controlling the mealy bugs.

Pink Disease (*Pantoea citrea*) Pink disease symptoms are difficult to observe in the field as Infections of the foliage are not usually found. When infected fruit preparations are heated during canning process, red to rusty brown coloration occurs.

Management:

Application of insecticides reduces the disease. *Bacillus gordonae* reduce disease incidence in combination with insecticides.

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Published under Biotechnology led Organic Farming in North East Hill Region, sponsored by DBT, New Delhi,