PINEAPPLE PRODUCTION



NATIONAL AGRICULTURAL RESEARCH ORGANIZATION (NARO)

HORTICULTURE PROGRAMME

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Propagation

Pineapples are propagated vegetatively by planting crowns, slips , suckers or tissue cultures.. The propagules are extremely resistant to desiccation and root readily when planted in the nursery or in the field. By planting various types or propagules the period of harvest can be extended since offshoots (suckers) fruit in about 17 months, slips in 20 months and crowns in 22-24 months.

Planting takes place at the start of the rainy season or it can start any time in the irrigated areas. Scaly leaves should be removed from the lower portion of the propagule stem to expose future roots. The propagule stem should be allowed to air dry for one week prior to planting so that the callus layer is formed over the damaged tissue.

Spacing: 2 ft x 1 ft x 4 ft or 60 cm x 30 cm x 120 cm. giving a plant population of approximately 15,000 plants per acre. The propagules are planted on a level ground and later ridged. Ridge planting helps to provide a deep bed for a better root growth and also creates water between the double two spaces or draining away excess water in water logged areas.

Cultivars

Cultivars: Smonth Cayene is by far the most important and popular pineapple cultivar throughout the topics, the leaves are almost spineless except at the apices. Queen is still grown in some areas. This cultivar produces smaller but sweeter fruits than smooth cayenne, but the leaves are spiny and difficult to work with. The red Spanish is a semi spineless cultivar grown mainly in West Africa and South Africa. Its fruits are intermediate between those of smooth cayenne and queen but are of better quality than those of smooth cayenne. It has some resistance to mealybug wilt disease.

Environment and soils

Low and medium elevation in tropical areas are much more preferable. Well drained and alkaline soils are also preferred, pH, 5.0 – 6.5.

Fertilizers: Nitrogen is the nutrient most used by pineapples. It can be applied at the rate of 50 kg per hectare top dressed one month after planting. Additional 41-670 kg per hectare applied three to six months interval is recommended before maturity. An additional 200 kg per hectare of nitrogen can be applied to each ratoon crop. Where phosphorus is lacking, plants have narrow brittle leaves with a dark red color spreading the entire leaf.

Pottassium deficiency produces a poor quality fruit; few suckers and slips will be formed. The best method of application is preplant broadcast mixed with the top 15 cm of soil. Iron deficiency is identified by a general chlorosis similar to that typical of nitrogen deficiency Zinc deficiency causes a mottled yellowing of the leaves.

Pests

Weeds are the primary pests affecting pineapple production, to obtain maximum production, perennial weeds should be dug out prior to planting and all newly germinating weeds should be controlled while in seedling stage. A mulch of leaves, grass or other organic materials such as chopped debris from previous pineapple crops in beneficial in restricting weed growth, decreasing erosion adding humus to the soil and conserving moisture. Selective herbicides are available which provide effective weed control.

Nematodes, particularly the root knot nematode may become a problem and is a serious pest in many pineapple growing regions. Infestations by pineapple mealy bug result in yellow spots appearing on the leaves but, more importantly the insects spread black spot (*penicilium funiculosum and fustrium moniliforme*), and are also responsible for mealybug.

Control: Dipping pineapples before planting in a fungicide-insecticide solution can help to eliminate them.

Thrip may be important as vectors yellow spot virus which causes deformed fruits or the production of fruits with several dead fruit lets. Hosts of the virus other than pineapple are weeds such as black jack, datura stramonium, emila sonchfolia and vegetable such as pepper, tomato egg plant broadbean, spinach and peas. Yellow spot of pineapples is usually more severe when these plants are grown nearby.

Ear and root rots caused by the fungus *phytophthora cinnamon* and *p. parasitica* are sometimes serious. Pink disease, caused by a bacterium transmitted to ripe fruits by insects causes a browning of canned fruits but can be prevented by early harvesting. The disease enters fruits via wounds and causes the fruit to ferment, producing a yeasty, alcoholic smell and undesirable off-flavour.

Control: By careful handling to prevent injury and by sorting so that injured fruits are consumed or processed rapidly and only uninjured fruits are sent to the market.