

Planting material production in pineapple:

an income generating activity for farm-women

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With feminization of agriculture, there is enhanced participation of rural women in farm activities. Sustainable livelihood is a pre-requisite for every rural household, therefore simple and assured farming for farm-women is required to be identified as a source of stable income generating strategy. Quality planting material is a pre-requisite for all agri-horti-based enterprise. Horticultural crops are more remunerative than field crops and planting material production in pineapple is easy, quick and a profitable enterprise.

Key words: Farm-women, Income, Pineapple, Planting, Poduction

PINEAPPLE is one of the most profitable and remunerative fruit crop, owing to its fruit quality, short duration, easy management and good returns. Farm-women play a significant role in fruit production. They are actively involved in production and post-production activities of fruit crops. Among these activities, nursery raising is a profitable enterprise, which ensures less investment, easy management and quick returns. Therefore, planting material production of pineapple can be a easy, profitable and successful enterprise for farm-women, which can ensure livelihood enhancement and economic stability to farm families.

Pineapple is propagated vegetatively by means of sucker, slip and crown. The choice of planting material has an important bearing flowering. There are several commercial varieties of pineapple out of which, Queen, Kew and Mauritius are mostly preferred in India. Queen is the outstanding table variety used mostly for preparing juice, concentrates, squash and pulp. The Kew variety belonging to the Cayenne group is the leading commercial variety and is suitable for canning purposes.



Planting material: Slips



Planting material: Suckers

Planting material production in pineapple:

Pineapple is propagated vegetatively by means of sucker, slip and crown.

Ratoon sucker is shoot produced from ground level and produce fruit in 12 to 14 months after planting.

Side shoot or sucker is shoot produced above ground level and bear fruits within 18 to 20 months after planting.

Basal sucker known as 'slips' is located at the base of the fruit. It produce fruits within 14 to 16 months after planting. Slip is the most preferred type of planting material followed by sucker. Slip and sucker weighing around 350 g and 450 g respectively were found to be best planting material for Kew pineapple.

Crown is situated at the apex of

the fruit. This type of planting material is not commonly used by farmers, and even when used, it take as long as 20 to 24 months after planting to produce fruit. The use of crown should be avoided as it delays fruiting.

Standard guidelines: These include application and amplification of general clone certification standards. The general clone certification standards are basic, and together with the following specific standards constitute the standards for certification of pineapple clones.

The general standards are amplified as follows to apply specifically to pineapple.

- (i) **Certified clones:** There shall be produced by asexual methods like sucker or slip.
- (ii) **Land requirements:** Land use for

Package of practices in pineapple.

Practices	Recommendations
Land preparation and planting	- Land should be thoroughly ploughed and properly levelled to avoid water stagnation Adequate drainage channels should also be provided. - Planting of slips or suckers should be done in early rain or in early winter with irrigation. - Before planting, suckers or slips should be sun-cured and basal end should be dipped in fungicide like 0.4% difolatan and 0.05% methyl parathion to avoid fungal infection and mealy bugs respectively. The heart of the sucker must not be buried while planting.
Planting system and high density planting	- Planting density of 63,400 plants/ha (22.5 x 60 x 75 cm³) is ideal for sub-tropical and mild humid conditions - Hot and humid conditions a plant density of 53,300 plants/ha, spaced at (25 x 60 x 90 cm³) provides high yield.
Irrigation	- Irrigation is needed during summer at an interval of 15 days. - Drip irrigation can be used where the water supply is restricted, the cost of labour is high and cultivation techniques are advanced. Micro-jets and overhead sprinkler systems can also be used, provided wind distortion is not a problem.
Manuring and fertilization	- A dose of 12-16 g N, 2-4 g P and 10-12 g K/plant/year is optimum for pineapple. - Ammonium sulphate and calcium ammonium nitrate should be used instead of urea as they are more effective in increasing the yield and size of fruit.
Weed control	Weed is a serious problem especially during rainy season and manual weeding accounts to 40% of the total production cost. Therefore mulching is the best option to manage weeds. Dry leaves or straw is used as a mulching material. Mulching with black polythene was found to be effective.
Induction of flowering	Application of NAA @ 10-20 ppm after 8-10 months of planting or application of ethrel at a concentration of 25 ppm in combination with urea (2%) and CaCO₃ (0.04%) induces flowering after 50 days of application.
Pest and disease management	- To reduce the infestation of Mealy bug, planting material should be collected from unaffected plantations and should be treated with 0.1% dichlorovos. - Incidence of diseases can be minimized with good drainage facilities and by dipping the suckers in 0.3 per cent Blitox before planting.



Planting material production in pineapple



Specific requirement

- Clones being a group of common ancestry shall be genetically pure in absolute terms. Off-type should be discarded.
- The plants should be free from mealy bug.

Clone specification: These are as follows:

- The weight of sucker should be 400-500 g and slip 350-450 g.
- In the clone lot, clones not conforming to specified size shall not exceed 5.0% (by number).

clonal propagation of pineapple shall be freed from volunteer plants.

- (iii) *Field inspection of mother plant:* Mother plant should be healthy, true to type and free from diseases and pests. A minimum of one inspection shall be made at the fruit maturity for health and fruit quality of the mother plants. A minimum of one inspection shall be made before the sale of the clones (sucker/slip) after attaining the specified size to verify relevant factors.

Field standards

General requirements

- Isolation:* The clone propagation plots of pineapple shall be isolated from fields of the same variety not conforming to varietal purity and field of other varieties by 3-m (minimum).
- Spacing:* The spacing between plants in clone propagation plots should be 30 cm and between rows 60 cm.
- Rotation:* Nursery should rotate to other plots after raising pineapple three times in the same plot.

SUMMARY

Pineapple is one of the most important commercial and nutritious fruit crop, which also possesses several post-harvest and processing prospects. Hence, planting material production in pineapple has tremendous scope and can be a profitable enterprise for farm-women.

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