



PINEAPPLE CULTIVATION



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

DIVISION OF HORTICULTURE
ICAR RESEARCH COMPLEX
FOR NEH REGION
UMROJ ROAD, UMIAM - 793 103
MEGHALAYA



NATIONAL ACADEMY OF TROPICAL HORTICULTURE

Pineapple (*Ananas comosus*) is one of the commercially grown fruit crops of NEH region. Its pleasant flavour and exquisite taste qualifies pineapple as one of the choicest fruits throughout the NEH region. The fruits are eaten fresh as well as canned and processed in different forms.

For getting high yield of pineapple following scientific know-how has been recommended.

Soil and climate

Practically every soil is suitable for pineapple provided the soil have of good retention of moisture, drainage and aeration. Cultivation over hardpan in sub soil and water logging should be avoided. The pH should not be more than 6.0. The optimum temperature range for successful cultivation is between 15.6°C and 32.2°C.

Varieties

Kew and Queen are most suitable varieties for cultivation. The important features of the varieties include:

Kew: It is a late maturing variety grown particularly for its canning quality. The plants are vigorous and leaves are long with straight margins. Leaves often have a short sector of small spines at the tip and also at the base near its attachment to the stem; where they are irregularly arranged. Fruit weight ranged from 1.5 to 2.5 kg and is oblong in shape, slightly tapering towards the crown. Eyes are broad and shallow, making fruits more suitable for canning. The fruit is yellow, almost fibreless and very juicy with 0.6-1.2% acid, and 12-16° brix TSS.

Queen: The plants are characterized by dwarf, compact habit of growth. Foliage is bluish

green. The leaves are short, stiff, and spiny along the margins and thickly covered with a whitish bloom on both surface. Fruit weight ranges from 0.9-1.3 kg. Eyes are small, prominent, deep set. When fully mature, the fruit is golden-yellow and internal flesh is deep golden yellow. The TSS content varies from 15 to 16° brix and acidity between 0.6-0.8%. This variety is suitable for table purpose.

Manure and fertilizers

Well rotten FYM @ 500 g/pit is applied at 15-20 days before planting. Application of 12 g each of N & K₂O/plant is recommended. There is no need of phosphorus application. However, if the soils are poor in phosphorus, 4 g of P₂O₅/plant can be applied. Nitrogen and potash is applied in two equal split doses. The first dose of nitrogen is given two months after planting and the last dose 12 months after planting. Entire phosphorus and half dose of potash are given at the time of planting and the remaining potash 6 months after planting.

Planting material

Suckers and slips are usually preferred for planting since they flower comparatively earlier than crown. Slips of 45-50 cm size with weighing from 350-450 g gave an earlier uniform flowering and fruiting, followed by 55-60 cm suckers weighing 500-750 g. The fruit quality is found better by 5-10 cm long crown planting.

Planting

Pineapple is mainly planted just at the onset or at the end of monsoon. However, September is the best time for its planting in NEH region.

About 85% plants set fruits and became ready for harvesting in 18 months of planting. Planting of pineapple across the slope prove better for getting higher yield because of least soil loss. Planting is done at a spacing of 30 x 60 x 90 cm in double row method of planting, which accommodates 43,500 plants/ha i.e. suckers should be planted at a distance of 30 cm from plant to plant within the line and 60 cm in between two lines, and 90 cm between two double rows.

Flower induction

To get uniform flowering in pineapple, application of 25 ppm Ethrel (6.25 ml/100 litres of water) + 2% Urea + 0.05% NaCO_3 at 40-45 leaf stages is done. About 50 ml of the solution is poured into the heart of the plant. Efficacy of flower inducing compound is reduced during rainy season. Therefore, these chemicals are not applied during rains. Plant start flowering in 45-50 days after chemical application.

Intercropping

For suppressing the weed population and restoring soil fertility in pineapple, intercropping with leguminous crop like rice bean, cow pea and moong are most suitable in the first year of planting.

Mulching

Moisture stress and weed growth are the major problems in pineapple cultivation. Mulching of pineapple field with black polythene followed by thatch grass gives better yield and quality, and suppresses the weed growth.

Irrigation

Pineapple is grown mostly as a rainfed crop in this region. During scarcity of rainfall irrigating pineapple once in 10-15 days is advisable wherever facilities exist to ensure good crop.

Pests and diseases

Mealy bug is the most important pest of pineapple. The nymphs and adults suck juices from leaves and tender shoots. Need based application of Monocrotophos (Nuvacron) 2.5 g/litre of water at vegetative stage and Endosulfan 2.5 ml/litre of water at the fruiting stage is recommended to manage the pest.

Heart rot or stem and root rot are common disease of pineapple. The green leaves turn yellowish green and tips turn brown. The central whorl of leaves when affected will come out with a gentle pool. Basal portion of the leaves shows sign of rotting and emits foul odour. The disease is controlled by good drainage, proper selection of healthy planting material and prophylactic treatment of planting material with Dithane Z-78 (3g/litre water).

Harvesting and yield

Pineapple attains flowering at 10-12 months after planting and attains harvesting 15-18 months after planting, depending upon the variety, time of planting, type of planting material used. Yield has been recorded in the tune of 40-50 t/ha.

Compiled and edited by

D.S.Yadav, B.Dey and R.K.Patel

For Further information contact:

**The Director,
ICAR Research Complex for NEH Region,
Umroi Road, Umiam – 793 103 Meghalaya**

Published by
Director, ICAR Research Complex for NEH Region,
Umiam, Meghalaya
and
designed and printed by
print21, 3, Ambikagiripath, R.G.Baruah Road,
Guwahati 781024, Ph: 2202028