

## INTERCULTURAL OPERATIONS

Inter-cultural operations are carried out on regular basis to remove the weeds. Irrigation is provided during dry periods.

## PLANT PROTECTION MEASURES

### Pests:

**Leaf roller:** Application of Rogor @ 1ml/lit of water

**Root knot nematodes:** Application of Furadon 10gm/pit during planting.

### Diseases:

**Root /Colar/Crown rot:** Spraying of Bordeaux mixture(1%). Ridomil@ 1ml/lit of water.

**Leaf spot:** Spraying of Bordeaux mixture(1%), Ridomil@ 1ml/lit of water.

## HARVESTING AND YIELD

Kiwi vine starts bearing at the age of 4-5 years while the commercial production starts at the age of 7-8 years. The fruits mature earlier at lower altitude and later at high altitudes because of variation in temperature. Harvesting time is October to December. On an average, the fruit yield varies from 50-100 kg./vine. Vines on trellis produce about 25 tonnes/ha. after 7 years.

## POST HARVEST MANAGEMENT

### GRADING

Fruits are graded on the basis of their weight. Fruits weighing 70 g. and above - 'A'-grade fruits  
40-70 g. - 'B' grade fruits, 72g minimum for export.

### STORAGE

Kiwi fruits have an excellent keeping quality. The fruits can be kept in good condition in a cool place without refrigeration upto 8 weeks. It can be kept for 4-6 months in a cold storage at -0.6° to 0° C.

## PACKING

There is no standard package for kiwi fruits. Polythene liners in storage cases are very effective in maintaining high humidity and can be used to maintain fruits in good condition for a longer period.



Male



Female



### Compiled and Edited by

Rinku Bhargali

SMS (Horticulture)

KVK-Phek, Porba, Pütsero, Phek

### Published by:

Director, NRC on Mithun (ICAR)

Jharnapani, Medziphema-797 106, Nagaland

Ph: 03862-247327

### For Details Contact

Programme Co-ordinator

KVK-Phek, NRC on Mithun,

Porba, Pütsero, Phek - 797107

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## KIWI: A POTENTIAL FRUIT FOR NORTHEAST



## कृषि विज्ञान केन्द्र-फेक

राष्ट्रीय मिथुन अनुसन्धान केन्द्र

(भारतीय कृषि अनुसन्धान परिषद)

पोरबा, फुटजीरो, फेक, नागालैण्ड - ७९७१०७

## KRISHI VIGYAN KENDRA-PHEK

National Research Centre on Mithun

(Indian Council of Agricultural Research)

Porba, Pütsero, Phek, Nagaland-797107

www.kvkphkek.nic.in/www.nrcmithun.res.in



## INTRODUCTION

Kiwi or Chinese gooseberry (*Actinidia deliciosa*) is grown widely in New Zealand, China, Japan, Australia, Chile and Spain. In India it is mostly grown in the mid hills of Himachal Pradesh, J & K, Sikkim, Meghalaya, Arunachal Pradesh and Nagaland. It is a large, woody, deciduous vine native to China. There are about 50 sp. of *Kiwi*.

## ECONOMIC IMPORTANCE

The fruit has high nutritive and medicinal value. It is a rich source of vitamin B & C and minerals like phosphorus, potassium & calcium and fetches high market price.

## SOIL AND CLIMATE

Kiwi can be grown in areas experiencing 700-800 chilling hours (no. of hours during which temperature remains at or below 7°C during the winter season).

- The plant can be grown at 800-2500 m. above M.S.L. Rainfall of about 150 cm./year is sufficient for proper growth and development.
- In summer, high temperature (> 35°C) and low humidity may cause scorching of leaves.
- Deep, rich, well-drained sandy loam soils are ideal for cultivation of kiwi.

## PLANT CHARACTER

Since kiwifruit is a dioecious plant (produces male and female flowers on separate vines), a male and a female vine are required for fruit production.

- Plants (varieties) of both sexes are essential for fruit production, and they must flower at the same time to ensure pollination.
- Male vines are usually spaced throughout the vineyard in a number of designs in which the male-female ratio varies from 1:6 to 1:9.

- Kiwifruit are wind- and insect-pollinated.

- Commercial kiwifruit growers place three to five beehives per acre to ensure good fruit set.

## VARIETIES CULTIVATED

Important kiwi varieties cultivated in India are Abbott, Allison, Bruno, Hayward, Monty and Tomuri.

**Hayward:** Most popular cultivar of the world. Biennial bearing habit and high sugar content.

**Abbott:** Early flowering and maturing variety. Fruits covered with dense hair and very sweet in taste.

**Monty:** Heavy bearer. Similar to abbot and Allison.

**Tomuri:** Good pollinizer of Hayward and Monty.

**Allison:** It is also used for pollinizer of all varieties.

**Bruno:** Requires less chilling period. Fruits tapering towards stem end and longest than all varieties. Dense hair on the fruits.

## PLANT PROPAGATION

Cutting is the most rapid and suitable method of propagation. The cuttings of 0.5-1.0m thick with relatively short internodes and 15-30 cm long from previous years growth are ideal which should be treated with IBA(500ppm) for 10 seconds and set in deep moist rooting medium. Cuttings should be taken during January-February. Tip portion should be avoided as it gives a very low rate of rooting. Soft woodcutting root easier and quicker. The media should be prepared from FYM, leaf compost, soil, sand at 1:1:1:1 proportion. Other methods like grafting, budding are also successful.

## LAND PREPARATION

Steep land is contoured into terraces for planting vines. A thorough preparation of soil is essential for the successful establishment of its vineyard.

Preparation of pits (30x30x30 ft), mixture of farmyard manure 20kg and filling of pits are to be completed by December.

## PLANTING SEASON

Planting is usually done in the month of Feb-March. The soil should be firmly placed around the roots. Square or hexagonal system of planting is followed.

## SPACING

Usually, T-bar and pergola system are adopted for planting. In T-bar, a spacing of 4 m. from row to row and 5 m from plant to plant.

## NUTRITION

A fertilizer dose of 20 kg. farmyard manure (basal dose) every year should be applied.



T-Bar

Pergola

## TRAINING AND PRUNING

Training is required to establish and maintain a well-formed framework of main branches and fruiting arms. Training system followed are T-bar or telephone system, Kniffin system and Pergola.

Fruits develops from basal 3-4 buds of current season growth only. Pruning of the plants should be done to avoid overcrowded ness and to carry out intercultural operations properly.