

Fertilizer:

A full grown vines should be given 750 – 800 gm N, 500-600gm P, 800-900gm K and 20kg FYM in two dressing, half to two third in January to February and remaining after fruit set in April to May.

Flowering and Pollination:

Kiwi is dioecious (male & female flower are born on different plant) thus needing plants of both sexes to produce fruit. A staminate plant is provided for the pollination of every 9 pistillate plants. Every third plant in alternate row should be pollinizer (staminate). Kiwi plants are pollinated mainly by honey bees besides hand pollination in early hours are very effective for heavy fruit setting and quality yield.

Difference of male and female flowers:

Male flowers produce pollen from numerous stamen while female flowers have well developed ovary with long sticky stigma in the center. Although female flowers have stamens, they do not produce functional pollen.

Crop and quality regulation:

Hand thinning (removal of lateral flowers or fruits) is essential to harvest quality crop of good size. Flower or fruit thinning (20%) to the extent of retaining 5-6 fruits per flowering shoot produce more fruits of A Grade (70gm and above) without any adverse effect on total yield.

Harvesting and yield:

Bearing starts at the age of 4-5 years. Yields vary from 25- 100kg fruits/ Plant. Fruits ripens from October – December depending upon variety and climate. Fruits having 6.2% TSS are ideal for harvesting.

Pests and diseases:

Apply any systemic insecticide in case of leaf roller, passion vine hopper and mite during bud burst to pea stage at 15-20 days interval.

For disease like root rot, collar rot or crown rot, soil drenching with Bordeaux mixture (1%) or Ridomil is effective.



CULTIVATION OF KIWI FRUIT



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Introduction:

Kiwi fruit or Chinese gooseberry (*Actinidia deliciosa*) is known as "China's miracle fruit" and the horticultural wonder of New Zealand. Kiwi fruit is mostly grown in the middle of Himachal Pradesh, UP, JK and Kerala. In North East, it is being cultivated in Arunachal Pradesh in some sizable area but other states like Sikkim, Meghalaya and hills of Manipur have vast potential for successful cultivation of Kiwi fruits. In Nagaland it is grown in Zunheboto and Phek district.

Economic importance:

The fruit has high nutritive and medicinal value. It is a rich source of vitamin B, C and E and low in calories. It is also rich in minerals like Phosphorus, Potassium and Calcium and has dietary fibre. The fruit contains an enzyme that tenderizes meat, thus it can be rubbed into steaks before boiling. Fruits are eaten fresh or processed into products like jam, jelly, squash, juice and wine. Seeds are used for making pastries, fragrant flower in producing perfume and roots processed into insecticides against aphid and rice borer.

Climate and Soil:

For high yield and quality fruits the plant requires 700-800 chilling hours below 7°C to break its dormancy period during winter. In summer, high temperature above 35 °C and low humidity may cause scorching of leaves. Sun scald and heat stress are the main problem in its cultivation. It can be grown at 800-1500m above MSL. A rainfall of about 150cm/year is sufficient. The plant does not withstand strong winds due to its vigorous vegetative growth, large leaves and viny habit.

A well drained sandy loam soils rich in organic matter and soil pH 5-6.5 is ideal.

Cultivars:

- (I) Female plants
 - a. Allison – early type
 - b. Bruno – early type (large fruit)
 - c. Hayward – late
 - d. Abbott - mid season
 - e. Monty – mid season
- (II) Male plants
 - a. Tomuri
 - b. Matua

Land preparation:

Steep land is contoured into terraces for planting vines. The rows are to be oriented in a north-south direction to avail maximum sunlight. Preparation of pits, mixture of farmyard manure and filling are to be completed by December.

Planting Material:

Most suitable method of multiplication is cuttings. The cuttings of 0.5 – 1cm thick with short internodes and 15-30cm long are ideal. Hard wood cuttings are prepared during the dormant season (Dec- Feb) from the previous year summer growth. It should have at least 3 healthy bold buds from middle of the shoot. Semi hard wood cutting with 3 buds and 0.5 – 1cm thick from the middle portion of the current season growth are taken in July. The base of the cuttings are wounded and treated with 4000-5000 ppm IBA for 15 – 20 seconds and to prevent rotting the top portion are waxed. The cuttings are provided 2 nodes below and 1 or 2 nodes above the media.

A rooting medium consisting of farm yard manure, sand, leaf compost, soil in the ratio 1:1:1:1 results in highest rooting

in open conditions. The cuttings should be planted 6-8cm apart in rows spaced at 12-15cm. Shade should be provided at nursery bed.

Planting time: January

Spacing:

- 1) T-bar planting system – 4m row to Row and 5-6m plant to plant
- 2) Pergola – 6m

Training:

Training of kiwi is very important requiring constant attention. The main aim is to establish and maintain a well-formed framework of main branches and fruiting arms. It can be trained with the help of supporting wires to form a roof like structure which is known as pergola to protect the fruit from sun scald and bird damage. A simple T- bar trellis with 3-5 wires can also be adopted.

Pruning:

The basal 3-5 buds of current growth are only productive. The vines grow 4-5m each year which becomes overcrowded if not pruned in summer and winter season. Therefore the pruning is done to maintain a balance between vine growth and optimum profitable fruit production. In summer, keep the vines open and avoid crowding and shading of wood. Suppress the unwanted new lateral canes and maintain control on spur growth along the permanent fruiting arms. Girdling of young Kiwi vines enhances the yield in the following year. A 3-4mm wide strip is removed around the lateral at the height of about 1-1.5m.