



ICAR Research Complex for NEH Region, Umiam-793 103, Meghalaya.

GUAVA



Package of practices
Division of Horticulture

ICAR RESEARCH COMPLEX FOR NEH REGION, UMIAM-793 103 (MEGHALAYA)

Guava (*Psidium guajava*) is an important fruit crop of NE states which is popularly called “poor man’s apple. It has various uses as fresh fruit as well as processed product due to its high content of vitamin ‘C’, pectin, iron, calcium and other minerals. Therefore, it is an ideal fruit for the nutritional security.

Soil and climate

It is cultivated on varied type of soils, heavy clay to very light sandy soils but sandy loam soil with an optimum pH range of 5 to 7 is ideal for guava cultivation. It can be fitted in any type of farming system and can thrive well in high hills, foothills as well as mid-hills situations.

Varieties

Allahabad Safeda and Lucknow-49 are adoptable varieties for NEH region, However, ICAR (RC) for NEH Region has also developed guava varieties viz., RCG-11, RCGH-1, RCGH-4 and RCGH-7 suitable for cultivation in region.

Propagation

Guava is propagated both by seeds and vegetative methods. But vegetative propagation is commercially practised.

Raising of rootstock: For raising rootstock, fresh seeds are extracted from ripened guava fruits and washed with water. The germination and vigour of the seedling can be improved by soaking the seeds in GA₃ (3 g/L of water) for 12 hours or in water for 24 hours. Seeds are sown in nursery bed during February and beds are mulched with dry grass followed by light irrigation. When the seedling attains the height of 8 to 10 cm then they are transplanted in 6x8” polythene bags. These seedlings ready in 8 to 12 and 12 to 18 months for grafting and budding, respectively.

Grafting: Wedge grafting during February to March is commercial method of multiplication. Rootstock is headed back about 15 cm above the ground level and beheaded rootstock is split to about 3.5 to 4.0 cm deep through the centre of stem with grafting knife.



A wedge shaped cut, slanting from both the sides (3.0-4.0 cm long) is made on the lower side of the scion shoot. The scion stick is then inserted into the split of the stock and pressed properly. The union is then tied with 150 gauge polythene strip. Immediately after grafting, the graft is covered with 2.5 x 18.0 cm long white polythene cap that is



Fig. 1. Wedge shape cut on rootstock, 2. Slant cut on lower side of scion 3. Fixing of scion in to rootstock & tying with polythene strip

4. Graft cover with poly cap 5. Graft start spouts 6. Grafted plant ready for planting

tied with rubber band at the lower end. The scion starts sprouting after 12 to 15 days, which is visible from outside. The cap is removed after 25-30 days after grafting in the afternoon.

Patch budding: A rectangular patch of a bark is removed completely from the stock and replaced with a patch of bark of the same size containing a bud is called as patch budding. It is the easiest and most successful method of guava propagation. One and half to two years old rootstock are preferred for budding. The best time for budding is during February-March.

Preparation of land and pits

Contour lines are marked and half moon terraces (1 m. dia.) are prepared. Pits (size 0.75 x 0.75 x 0.75 m) are dug at 5x 5 m apart on half moon terraces and refilled about 15 cm above the ground level with upper 30 cm soil along with 25 to 30 kg FYM, 100g Urea, 150g MOP, 350g SSP and 50g Chlorpyrifos.

Planting

The best time for guava planting is June to August. If there is no rain after transplanting then light irrigation is given.

Training and pruning

In the initial stages, trees are allowed to grow as a single upright stem up to a height of 70 to 80 cm and then topped to allow new growth below the cut end. Three to four equally spaced shoots emerged below the cut end are retained around the stem to form the main scaffold limbs of the tree and allow them to grow up to 40 to 50 cm. Further these shoots are pruned up to 50% of their total length to encourage multiple shoots formation. Again after, 3 to 4 months these shoots are pruned to their 50% length to facilitate the fruiting bud. The shoots emerging from ground level or below the graft/bud union and dried twigs should be removed periodically.

Intercropping

Additional income can be obtained by growing intercrops such as ginger, turmeric, chilli, french bean, rice bean and other vegetable crops in guava orchard during pre-bearing stage.

Manure and fertilizer schedule

The FYM is applied during February to March. Half of the fertilizer is given in April and remaining half in September. The fertilizers are applied in to ring at 20 to 25 cm width and 10-15cm depth around the basin under the canopy of the tree keeping 15 to 20 cm distance from the main stem.

Tree age (Year)	Quantity/plant			
	FYM (kg)	Urea (g)	SSP (g)	MOP (g)
1	5	285	250	185
2	10	400	500	370
3	15	860	750	300
4	20	1140	1000	400
5 and above	25	1430	1250	500

Diseases and Pests

Guava wilt: It is a serious problem observed in bearing stage. In the early stage of wilting, Thiram (3g/L) or Bavistin (1g/L) is applied in the soil or apply Bavistin at 15g in the basin of each plant. Spray 0.2% Zinc sulphate during March and September. Apply *Trichoderma* @ 15-20g with FYM in the basin of each tree. The infected plants should not be introduced in new areas.

Anthracnose and Scab: During rainy season these diseases are common. Spraying of Bordeaux mixture (4:4:50) or Copper Oxychloride @ 0.3 % at 7 to 10 days interval during June-July is useful to check the disease.

Stem borer: The insect causes severe damage to shoots and stem by making the hole during Dec-Jan. Dichlorvos (Nuvan) or Monocrotophos (Nuvacron) solution (2.5ml/litre) or Kerosene at the rate of 5 ml per hole should be injected and close the holes with clay mud thoroughly.

Fruit fly: Fruit fly is one of the most serious problem during rainy season. Spraying of protein Hydrolysate and Malathion (0.1-0.25% + 0.05%) on host trees for killing of adult flies. Hanging of wooden block traps soaked in Ethanol, Methyl eugenol and Malathion (6:4:1) on trees @ 10 traps ha⁻¹ during fruiting period.

Harvesting and yield

The fruits are ready for harvest after 110 to 120 days at fruit set i.e. during the month of October to November. The guava fruit along with stalk and one or two leaves should be handpicked. For distant market, fruits are harvested at light yellow colour stage and for processing purpose at ripen stage.

On an average 40 to 45 kg fruits can be harvested from 6 years old plants.

Compiled and Edited by
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