

MANGO

Mangifera indica Linn.

Cultivar:

Amrapali: Dwarf and regular bearing cultivar ideally suited for high density planting. It is being popularised for its high orchard efficiency. The fruit is oblong in shape, size is little smaller than Dusehari, but ripens later than Dusehari. Yellow coloured fruit has good keeping quality and fruit flavour. The TSS ranges between 18-20° Brix.

Dashehari: One of the most popular cultivars of North India, with excellent quality and size of fruit. Trees are moderately vigorous, spreading with rounded top. Fruit is oblong with a round base, beakless and shoulders are equal. Skin is medium thick, smooth, yellow and pulp is firm and fibreless with pleasant flavour. Taste is very sweet with TSS 19 – 20° Brix. Stone is medium covered with fine fibre. It is a regular bearer. Fruits ripen in mid season from June-July.

Langra: Tree is very vigorous and spreading. It is alternate bearer requires more planting distance due to its vigour. It is a heavy yielding mid season variety with TSS 19-20° Brix. Fruit size is medium, ovate, light green at maturity, very strong and pleasant flavor with medium keeping quality. Stone has fine fibre all over.

Malda: It is a very popular cultivar of Ganga-Jamuna plains. It is heavy bearer with medium-sized fruits of light green colour. Trees are medium to large, spreading and moderately vigorous. Fruits are beakless with round apex. Skin is medium thick, the flesh soft, fibreless, yellowish with TSS of 17–18° Brix. Stone is densely covered with small hairs. Fruits ripen from May–July.

Fazli: The tree is vigorous and spreading. This late season variety bears large- sized fruits with TSS 17 – 18° Brix, having little fibre on stone. The fruits remain light green even at ripening.

Kishan Bhog: Mid season heavy bearing variety producing medium-sized fruits, oval oblique in shape. Fruits are yellow colored having good keeping quality

Mallika: Tree is semi-vigorous, medium to heavy cropper and has a strong tendency to bear regularly. The fruits have an attractive appearance and the average fruit weight is 307 g with pulp percentage is 74.0. The pulp is firm, fibreless and the stone is very thin. The total soluble solid is higher (25° Brix) than that of Dashehari, has better keeping quality and also matures later than Dashehari.

Soil:

It can be grown in a wide range of soil conditions. But the crop is successfully grown in rich deep alluvial soil.

Time of Planting: During monsoon

Planting Distance: 12 m x 12 m

Propagation:

- 1) **Air layering:** For obtaining true to type plant air layering of one year old shoot of bearing plant is the best method when treated with IBA (500 ppm).
- 2) **Wedge Grafting:** Seedlings are raised from seeds of local hardy vigorous mango plants in polybags (18 cm x 20 cm). The rootstocks become ready for grafting at 9-10 months while the scions should be 4-5 month old. The rootstock is headed back 15-20 cm above the soil and given a 4.0 – 4.5 cm long downward vertical cut. The scion, 15 – 18 cm long having 3 - 4 active buds, is prepared by giving a 4.0 - 4.5 cm long wedge cut and is inserted into a split of the stock and pressed properly so that the cambium layers come in contact with each other. The union is then firmly tied with a 150 gauge polythene strip of 2 cm wide and 25–30 cm long. Immediately after grafting the graft is covered with a 2.5 cm x 18 cm long white polythene cap and tied with a rubber band at the base. The scion starts sprouting in 9 – 12 days and the cap is removed after 25 – 50 days depending upon the growth. After removal of the cap the grafted plant is shifted to the net house for hardening.

Manure and Fertilizer:

Non bearing stage (upto 3rd year) per plant/year	Bearing tree per plant/year	Old declined tree per plant/year
10–15 kg FYM	20-25 kg FYM	50-60 kg FYM
73 g N	730 g N	1 kg N
18 g P ₂ O ₅	180 g P ₂ O ₅	0.5 kg P ₂ O ₅
68 g K ₂ O	680 g K ₂ O	1 kg K ₂ O

(In case of old declined trees 3% urea as foliar spray per year after pruning).

Pruning and Training:

Pinch off sprouts below the graft union regularly and pluck off panicles up to 3 years. Practice thinning of terminal shoots every year. Prune criss-cross branches once in 5 years.

Bee Pollination:

Five *Apis cerana* colonies/ha (1 colony/bigha) for getting effective yield of mango.

Plant protection:

- 1) **Stem borer:** Plug with kerosene dipped cotton.
- 2) **Mango hopper:** Spray Thiamethoxam 25 WG@ 26 g. a.i/ha
- 3) **Red Ants:** Apply Thiamethoxam 25 WG@ 26 g. a.i/ha
- 4) **Pulp weevil:**
 - i. Spray Imidacloprid 17.8 SL @ 0.4-0.8 gai/plant or 1-2ml/plant
 - ii. Cultural practices like clean cultivation, light hoeing and smearing of lime on the base of the trunk.

iii. Combined treatment of cultural practices and spraying of Thiamethoxam 25 WG@ 26 g. a.i/ha

- 3) **Fruit Fly:** Use of methyl eugenol trap @ 20 number / ha at the time of fruiting
- 4) **Pink disease and anthracnose:** Spray copper fungicide @ 0.2%
- 5) **Mango malformation:** Deblossom affected panicles and spray 200 ppm NAA.
- 6) **Fruit drop:** Spray Bispyribac Sodium (10% SL) twice at full bloom and again after two months of 1st spray.

Harvesting: After 4 years of planting during June to August

Yield: 10 years old plant gives a yield of 200-250 fruits. Plant of 20 years and above: 400-600 fruits.

Benefit: cost ratio: 4.10 for bearing plant