

## Mango Farming

Mango is a good fruit tree with high demanding the market. It is majorly grown for both local and export market. The tree takes 4-6 years after planting to fruit with the introduction of grafted varieties.



### Ecological requirements

- Deep, fertile well drained, sandy loam to red clay soils with slightly acidic to neutral pH of 5.5-7.5
- Altitude of about 1200M - 1800M above the sea level
- Well distributed rainfall range of 500-1000mm per annum. Irrigate if in dry areas/dry seasons
- Temperature range of 24-28 degrees celsius

### Propagation

Buy grafted mango seedlings. They mature early, are disease free and give higher yields. Visit KALRO station near you or call iShamba on 0711082606 to be directed on a mango nursery in your area.

Normally, mangoes are grafted by joining a root stock (lower part) and a scion (upper part). To graft:

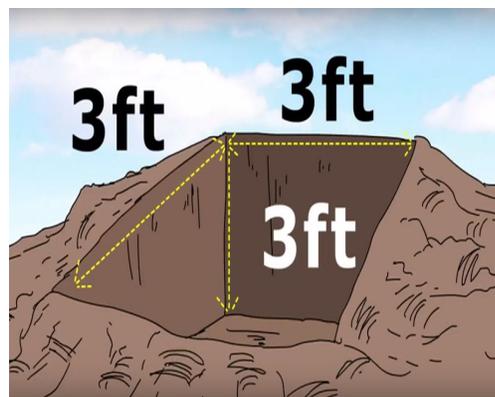
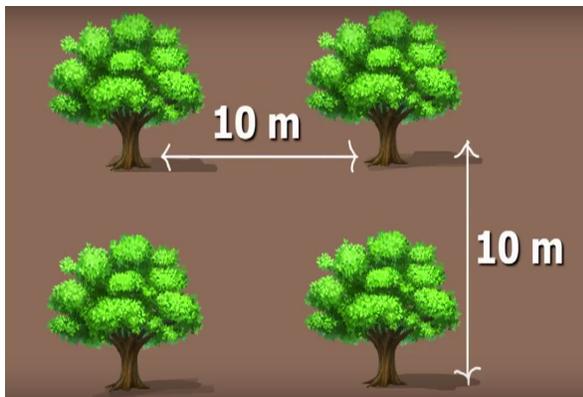
- Get a scion from a healthy cultivar and a good root stock variety
- Sharpen the edge of the scion to look like a wedge
- Make a V-shaped cut on the root stock

- Insert the scion into the deep cut made on the root stock then tie with a translucent polythene to unite them together
- Label the name of the cultivar and date of grafting

Grafting shortens the maturity period to 3-4 years.

### Establishing a mango orchard

1. Remove any root stumps in the field
2. Dig planting holes varies with variety & conditions i.e 90 x 90 x 60cm under dry conditions or 60 x 60 x 60 cm on wet areas. In an orchard, dig holes spaced 10M by 10M and 12M by 12M for the bushy varieties.



3. Separate topsoil & subsoil.
4. Mix topsoil with 1 wheelbarrow/ 20kgs of well rotten manure & 125g of TSP/DAP fertiliser
5. Fill back  $\frac{2}{3}$  of the hole with the mixture
6. Plant a seedling in the centre of the hole
7. Mulch with grass and water 2-3 times a week.

### Varieties

Mango cultivars differs in shape, size appearance and internal features.

They include Haden, Kent, Apple, Van Dyke, Kengiston, Boribo, Dodo, Apple, Tommy Atkins, Ngowe & Batawi.

The common early maturing varieties are Tommy Atkins and Ngowe:



Deep purple, sweet & moderate fibre in colour



Early maturing, large, long and deep yellow

### **Routine Management Practices (RMP)**

These are field operations you should observe while the crop is establishing in the field:

1. Pruning: Cut & remove dead or old branches. Do this in the morning, after fruiting & before flush. This will help to maintain the tree height.
2. Weed to reduce competition
3. Fertiliser application. Once the trees are established (about 3 – 6 months after Planting), start applying nitrogenous fertilizers in splits per tree e.g. CAN as follows:

- 1st year- 50g                      - 2nd year - 100g
- 3rd year - 150g                    - 4th year - 150g. Thereafter apply 200g of CAN per tree

annually.

4. Flowers induction: Smudging & EASYGRO fruit & flower sprays

### **Common Mango Pests and Diseases**

#### **Pests**

##### **Fruit flies**

Fruit flies lay eggs on mango fruits. This cause black spots which make the fruits rot.

##### **Use either of the following ways to control:**

- Hang baits on trees to attract fruit flies. REAL IPM & ICIPE have a fruit flies set up kit to kill fruit flies and the eggs
- Spray 1 metre square of the mango canopy with a mix of protein bait and a killing agent

- Keep natural enemies of fruit flies e.g Lady birds to help kill eggs on the mango fruits
- Have a tent like structure known as Augmentorium to dispose off fallen fruit & stems



*Hang baits on trees to kill eggs and fruit flies. Have an Augmentorium to dispose off fallen fruits*

**Mango seed weevil** - They feed on the leaves, tender shoots, flower buds or make holes in the fruits. Control using insecticides like ATOM



*Fruit damaged by Mango seed weevil. They make holes on fruits causing the to rot*

Mealybugs- Small white insects which suck sap from leaves or stems. Spray with insecticides to control.



*When you see white, rice-like insects on leaves/stem, it could be mealybugs*

Gall midge - It is common during the flush stage when new soft, tender and fresh leaves are formed.

The insects lay eggs on the mango leaves, when they turn to larva, they feed on leaves making holes and eventually lead to heavy leaf fall. Control with insecticides.



*Gall midge lay eggs, feed on leaves making holes and leaves eventually fall off*

### **Diseases**

**Powdery mildew** - It is a fungus which results in heavy loss of leaves and even the entire crop. You will see white patches on leaves, flowers and young buds. Use resistant varieties like Tommy Atkins to avoid. Control with an effective fungicide e.g MASTER 72WP



*Powdery mildew forms while mouldy cover on leaves, flowers, fruit and even the stems*

**Anthracnose** - It is also a fungal disease which causes black spots on leaves and a severe flower fall and abortion. This reduces yields. Spray with fungicides before they flower to control e.g SULCOP, Mancozeb, CONTROL DF, PEARL, THIOVIT JET or WET SULF.



*Severe flower abortion, black spots on fruit and leaves is a sign of Anthracnose*

## **Harvesting**

Grafted mango varieties normally fruits 3-4 years after transplanting.

Harvest with a tarpaulin or net when trees are tall to avoid damage.  
On average, the yield is between 1,000 to 1,200 fruits per tree.



*For tall trees, use a tarpaulin fixed on a stick when harvesting to avoid damage*



