

Pawpaw production Manual

Varieties in Kenya

The following are the common pawpaw varieties grown in Kenya;

1. Solo– produces small round sweet fruits with uniform sizes and shape. It's hermaphroditic and popular for both local and export markets.
2. Vega F1– produces medium sized fruits with an attractive red flesh. Fruits are firm and sweet, weighing 1-1.2kg.
3. Sunrise– produces smooth pear shaped fruits of high quality, weighing about 400-650g. Flesh of fruits is reddish orange and the variety is high yielding.
4. Mountain– produces small fruits only suitable for preserves and jam.
5. Red royale F1– this is an improved breed that gives good quality fruits weighing 1.7-2.3kgs which have red attractive colour and are very sweet.
6. Sinta F1– female fruits are round while hermaphrodite fruits are oblong with an average weight of 2kg. Flesh is deep yellow, firm and sweet.

Types of Papaya Plants

The types are based on the flowers arranged and can only be differentiated after the plants have flowered.

- ☐ The male (staminate) – this has male parts and doesn't produce fruits. Flowers are produced in large numbers in long drooping branches.
- ☐ The female (pistillate) – has female parts only. Flowers are large, situated singly or in clusters near the tree trunk and close to the base of leaf stalk. It is pollinated through cross pollination and produces fruits that are sweetest in all the varieties.
- ☐ The hermaphrodite- contains both male and female parts on the same plant thus capable of self-pollination.

Pollination is a key component in pawpaw production because it determines fruit set and quality.

Ecological Requirements

- ☐ Rainfall– papaya cannot withstand prolonged drought. An even distributed annual rainfall of above 1000mm is suitable. Irrigation should be done in low rainfall regions.
 - ☐ Soils– the crop does well in light, well drained soils with PH 6-6.5 and rich in nutrients. Roots are very sensitive to waterlogging.
 - ☐ Temperature– papaya thrives in warm to hot regions of temperature range of 20-35 degrees centigrade. Fruit is sweeter when grown during warm sunny season.
- In good climatic conditions, fruits grow all year round.

Propagation

This is done majorly through two ways;

- ☐ By seeds
- ☐ Vegetative i.e. by tissue culture

Growing papaya from seeds is the easiest, cheap and most successful method. Plants raised from seeds produce fruits of varied shapes, sizes, taste, colour, etc.

Vegetative propagation of pawpaw using tissue culture can result into superior plants with certain traits, e.g., resistant to pathogen attack, production of high yields etc. However, this method is rarely used because it is expensive.

Raising Seedlings

Seeds can be sown directly in the field or first raised in nursery beds, in polythene bags, containers etc.

- ☐ Prepare a seedbed to a fine tilth.
 - ☐ Drench soil with a mixture of PYRAMID 700WP 100g + LOYALTY 700WDG 10g + OPTIMIZER 20ml in 20litres of water. This eradicates soil diseases and pests, breaks seed dormancy, encourages uniform germination and supplies nutrients to the young plants.
 - ☐ Select seeds from a controlled pollination and dry them. The outer layer of the seed coat can be removed.
 - ☐ Soak seeds in OPTIMIZER 20ml/l for 30-60minutes to break seed dormancy.
 - ☐ Place 4-5 seeds in holes, 1cm deep and 15cm apart and cover with a slight layer of soil.
- Seeds germinate after 2-3weeks.

Transplanting

Seedlings are transplanted 4-5 weeks after sowing when they have attained 3-4 leaves or 15-20cm height. While transplanting, careful handling is important in order to avoid disturbing the roots.

Plants grown in a seed bed should first be hardened off.

In order to prevent transplanting shock, seedlings should be sprayed with OPTIMIZER 10ml/20l.

- ☐ Prepare planting holes 60cm*60cm, 3 meters apart.
 - ☐ Mix top soil with manure and DAP and fill the holes with the mixture. To improve on nutrient uptake, root development, stimulate plant growth among other benefits, mix manure (1 ton) or fertilizer (50kg) with HUMIPower 1kg.
 - ☐ Plant 3-4 seedlings per hole for varieties with male and female flowers on different plants. Seedlings should be placed at the same depth as they were growing previously.
- Newly transplanted seedlings should be watered regularly until they are established.

Weeding

Weeds are plants growing in undesired places. They compete with the target crop for growth factors like nutrients, sunlight, space and water, as well as harboring pathogens which directly affects performance of the crop.

Spray CLAMPDOWN 480SL 150-300/20l, which is a non-selective herbicide used to control both broadleaved and grass weeds keeping the garden weed-free.

Irrigation

This should be done especially if rainfall is inadequate in order to ensure a steady supply of moisture and especially during flowering and fruiting stages.

Mulching

This helps in suppression of weeds and moisture conservation. Decomposed mulch materials release nutrients into the soil which are absorbed by the plants.