How to establish and graft passion fruit seedlings

After grafting

- Seedlings should be watered regularly and protected from insects.
- All shoots from the rootstocks must be removed.
- Harden-off seedlings by exposing them to the sun gradually when scion shoot is about 10cm long.
- Remove grafting tape from the union and transplant seedling in the field one month after grafting.

Cleft and splice grafting

1) Cleft/Top wedge grafting method
2) Whip/slice grafting method

Ksh. 20
Introduction

Passion fruit production is constrained by several insect pests, diseases and inadequate knowledge on the management of the crop among other factors.

A grower needs to know a few basic facts about the crop.

Passion types

The two types of commercially grown passion fruit in Kenya.

1) The purple passion (Passiflora edulis f. edulis)

This type of passion fruit is most suited to upper midland and highlands (1,100 to 2,500m above sea level). It has purple coloured superior fruits of 4-5 cm in diameter which have an aromatic flavour.

It is good for fresh market and juice extraction for local and export markets.

2) Yellow passion fruit (Passiflora edulis f. flavicarpa)

This passion fruit is most suited to the coastal lowlands. It is more vigorous and has a larger fruit of 5-7cm. It is more acidic and used for juice extraction. Yellow passionfruit is resistant to Fusarium; wilt, tolerant to Phytophthora blight, nematodes and brown spot.

It is used as rootstock to purple passion fruit.

Seed extraction, planting and grafting

Step 1: Seed extraction

Healthy mature fruits of yellow passion fruit with a history of good bearing capacity are collected from parent plant. Seeds are scooped from the fruits

- Extracted seeds are put in water for at least 3 days to ferment and ease separation of pulp and seed.

Step 2: Planting

Seeds are planted into prepared beds or into 6 cm wide by 22.5cm high polyethylene bags filled with sterilized soil to eliminate root knot nematodes, soil borne diseases and other harmful organisms.

- Sterilization may be through solarization (using sun) or by use of steam.
- Germination starts after about 17 days.

Step 3: Grafting

Seedling rootstocks of yellow passion fruit are grown until they are at least 50cm high and 3-4 mm thick.

- Healthy seedlings with dark green leaves are selected for grafting.
- Scions from healthy high yielding true-to-type vines of purple passion fruit are collected preferably when the plants have flowered.

Scion mother plants should be raised in areas protected against sucking insects, to reduce incidences of disease.

- Sterilization of grafting equipment between grafts must be practised (use jik).
- Two methods of grafting are used. These are cleft (most common) and splice.