

PLANT NEST KE

Fruit Farming Starter Guide

A practical 25-page handbook for Kenyan farmers — site selection, spacing, irrigation, pest control & market access.

Published by Plant Nest KE · Sagana, Kenya

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1. Why fruit farming in Kenya right now

Kenya's fruit demand is growing on three fronts — local supermarkets, the export market (Hass avocado, passion, mango) and value-added processors (juice, dried fruit). A well-managed acre of grafted seedlings can outperform maize 5–15x.

The opportunity

- Hass avocado exports from Kenya crossed KSh 19B in 2023.
- Local fruit consumption per capita is still below the WHO recommendation — domestic demand keeps growing.
- Grafted seedlings fruit in 18–30 months vs 5–7 years from seed.

Who this guide is for

First-time farmers, agripreneurs diversifying from maize/dairy, and existing fruit growers tightening their agronomy. Every recommendation is written for Kenyan conditions and Kenyan markets.

2. Choosing the right fruit for your land

Match the crop to your altitude, rainfall and market access. Below is a quick decision table.

Altitude & climate guide

Crop	Altitude (m)	Rainfall (mm/yr)	First harvest
Hass Avocado	1,500–2,100	1,000–1,600	24–30 months
Wambugu Apple	1,200–2,400	800–1,400	18–24 months
Passion Fruit (Purple)	1,100–2,000	900–2,000	8–12 months
Mango (Kent, Apple)	0–1,500	500–1,200	24–36 months
Tree Tomato	1,500–2,400	800–1,500	12–18 months
Citrus (Pixie, Eureka)	0–2,100	900–1,500	24–36 months
Pawpaw (Solo Sunrise)	0–1,600	1,000–1,800	9–12 months
Dragon Fruit	0–1,700	600–1,300	12–18 months

Not sure what fits your farm? WhatsApp our agronomist on +254 704 220 899 — share your GPS location and we'll recommend.

3. Site selection & soil preparation

Good fruit farms start with the right site. Get this wrong and no amount of fertiliser fixes it.

Choosing the site

- Gentle slope (2–8%) for drainage; avoid waterlogged flats.
- Full sun — at least 6 hours/day. Avoid heavy shade from large trees.
- Wind protection — plant a windbreak (Grevillea, Casuarina) on the exposed side.
- Access to water year-round (borehole, river, dam, or harvested rainwater).

Soil testing

Send a soil sample to KALRO or Crop Nuts before planting. A KSh 2,500 soil test can save you KSh 100,000 in wasted fertiliser. Test for pH, N, P, K, organic matter, and EC.

Land preparation

- Clear shrubs and deep-rooted weeds (couch grass).
- Plough/rip to 60 cm to break any hardpan.
- Mark planting holes at correct spacing (see chapter 4).
- Dig holes 60 × 60 × 60 cm; separate topsoil from subsoil.
- Mix each hole with 1 debe (20 L) well-rotted manure + 200 g DAP + lime if pH < 5.5.
- Refill, water heavily, and let settle for 2–4 weeks before transplanting.

4. Spacing & planting layout

Correct spacing means more sunlight per tree, easier spraying, and higher yields per acre.

Recommended spacing

Crop	Spacing (m)	Trees / acre
Hass Avocado	6 × 6	112
Wambugu Apple	3 × 3	450
Mango (grafted)	8 × 8	63
Passion Fruit	2 × 3	670
Tree Tomato	2 × 2.5	800
Citrus	5 × 5	160
Pawpaw	2 × 2.5	800
Dragon Fruit (post)	3 × 3	450

Tip: Plant on a triangular pattern instead of a square grid to fit ~15% more trees per acre with the same canopy room.

5. Watering & irrigation

Water is the #1 yield driver. The right system pays for itself in one season.

Options ranked by ROI

- Drip irrigation — best for fruit; 60% less water, drops fungal disease, easy fertigation.
- Mini-sprinklers — good for citrus and mango orchards on level ground.
- Basin/furrow — cheapest to install but wastes water and encourages weeds.

Water requirements (rule of thumb)

Young trees (year 1): 15–20 L per tree per week. Bearing trees: 60–100 L per tree per week in dry season. Drip systems should run 1–2 hours every 2–3 days, not daily floods.

Mulching

Cover the basin around each tree with 10 cm of dry grass, banana leaves or coffee husks. This cuts evaporation by ~50% and suppresses weeds.

6. Fertiliser & nutrition program

Feed the soil, not the plant. Combine organic and inorganic — neither alone delivers commercial yields.

Foundation (every year)

- 1–2 debes (20–40 L) well-composted manure per tree, applied at the onset of rains.
- Top-dress with CAN or NPK 17:17:17 in two splits — early rains and mid-season.
- Add foliar feeds (calcium, boron, zinc) at flowering and fruit set.

Sample program — Hass Avocado (bearing)

Mar: 500 g NPK 17:17:17 + 20 L manure. Jul: 300 g CAN. Oct: 500 g NPK + foliar Ca+B. Apply in a ring at the drip line, never against the trunk.

Lime & pH

If soil pH is below 5.5, apply 2–4 bags of agricultural lime per acre once every 2–3 years. Fruit trees lock out phosphorus and micronutrients in acidic soil.

7. Pruning, training & canopy management

Pruning is free yield. An unpruned tree wastes 30–40% of its sugars on shaded, unproductive branches.

Formative pruning (years 1–2)

- Remove the central leader at 80–100 cm to encourage 3–4 scaffold branches.
- Stake young trees to keep the graft union upright.
- Remove any shoots growing below the graft union — these are not the variety you bought.

Maintenance pruning (every year after harvest)

- Cut out the 3 Ds: Dead, Diseased, Damaged wood.
- Open the centre so sunlight reaches every branch ("open vase" shape).
- Sterilise pruning shears between trees with Jik 1:10 to stop disease spread.

8. Pest & disease control — Integrated Pest Management

Use IPM: scout, identify, then act with the lightest tool that works. Spraying blindly creates resistance and kills pollinators.

Weekly scouting checklist

- Look under leaves for thrips, mites, mealybugs.
- Check fruits for fruit-fly stings (small puncture marks).
- Inspect trunks for borers and gummosis.
- Note any wilting, leaf-yellowing or unusual leaf drop.

Fruit fly — top mango / guava / citrus pest

Hang methyl-eugenol traps (1 per 10 trees), collect and bury fallen fruit, and spray protein bait (GF-120) along orchard borders. Avoid blanket cover sprays.

Powdery mildew & anthracnose

Spray copper-based fungicide (e.g. Cuprocaffaro) preventively at flowering. Rotate with sulphur to avoid resistance.

Biocontrol allies

- Plant marigold and basil between trees to repel nematodes and aphids.
- Encourage ladybirds and lacewings — they eat aphids and mealybugs.
- Use Trichoderma at planting to suppress soil-borne fungi.

9. Harvesting & post-harvest handling

Most farmers lose 20–30% of income at this stage. Handle fruit like eggs.

Harvesting

- Pick at the correct maturity — dry matter test for Hass ($\geq 23.5\%$ for export).
- Harvest in the cool of morning. Use clippers, not bare hands, to keep the stalk attached.
- Place fruit gently in padded crates, never in sacks.

Grading & packaging

Sort by size and remove blemished fruit. Use ventilated plastic crates for transport — avoid sisal bags for premium markets.

Cold chain

Even a basic shade + evaporative cooler doubles shelf life. For export, fruit goes to a packhouse at 5–7°C within 24 hours of picking.

10. Market access & pricing in Kenya

Plan your market before you plant. Yield without buyers is firewood.

Channel options (lowest to highest margin)

- Farm-gate brokers — easiest, lowest price.
- Wholesale markets (Wakulima, Marikiti, Kongowea) — better price, you handle logistics.
- Supermarkets (Naivas, Carrefour, Quickmart) — premium price, strict quality + invoicing.
- Processors (juice, dried fruit) — stable contracts, lower per-kg price.
- Export aggregators — best margins, strict standards (GlobalG.A.P, KEPHIS).

Pricing snapshot (2025 Kenyan averages — verify locally)

- Hass avocado export-grade: KSh 25–50 / fruit at farm gate.
- Passion fruit (purple): KSh 80–180 / kg.
- Tree tomato: KSh 60–120 / kg.
- Wambugu apple: KSh 30–80 / fruit.

Build a buyer list before harvest

Six months before first harvest, visit 5–10 buyers, agree on sample quantities and standards. Save their contacts and harvest dates in your phone.

11. Budget & expected returns per acre — Hass Avocado example

Indicative only — always do your own numbers with current Kenyan prices.

Year 1 setup

Item	Qty	Unit (KSh)	Total (KSh)
Grafted Hass seedlings	112	350	39,200
Land prep, holes, manure	1 acre	25,000	25,000
Drip irrigation kit	1	85,000	85,000
Fertiliser & lime (Y1)	—	—	18,000
Labour (Y1)	—	—	30,000
Pest & disease (Y1)	—	—	8,000
TOTAL Year-1 investment			205,200
Year 3 expected yield	30 fruit/tree	30	100,800
Year 5 expected yield	200 fruit/tree	30	672,000
Year 7+ mature yield	500 fruit/tree	30	1,680,000

12. 12-month farm calendar (long rains start)

Mar–May (long rains)

Transplant new seedlings. Apply manure + base fertiliser. Mulch heavily.

Jun–Aug (cool/dry)

Formative pruning. Build trellises for passion fruit. Soil-test for next cycle.

Sep–Nov (short rains)

Top-dress with CAN. Foliar Ca + B at flowering. Scout for fruit fly.

Dec–Feb (hot/dry)

Irrigate religiously. Sanitation prune. Plan markets for the coming harvest.

13. Common mistakes to avoid

- Buying ungrafted or uncertified seedlings to save 50 bob — costs you 3 lost years.
- Planting too deep — the graft union must stay above the soil.
- Skipping the soil test, then overspending on the wrong fertiliser.
- Watering daily in small amounts — encourages shallow roots.
- Ignoring the windbreak and losing flowers to dry wind.
- No farm records — you can't improve what you don't measure.
- Selling everything to one broker — always keep 2–3 buyer options.

14. Plant Nest KE — how we help

We're a Sagana-based nursery that has supplied 5,000+ farmers across Kenya. Every seedling is grafted in-house, hardened off, and inspected before it leaves the nursery.

What you get when you order

- Certified, vigorous grafted seedlings — 98% survival rate.
- Free agronomy support by WhatsApp for the life of your orchard.
- Nationwide delivery via courier or SGR parcel.
- Honest pricing, no hidden fees, no middlemen.

Ready to start?

WhatsApp us on **+254 704 220 899** or visit **plant-nest-kenya.lovable.app/shop** to browse our full catalogue.

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