

Growing Bananas at Home

A Simple Guide to Get You Started

By Laura Karanja, PhD

"Banana is a major staple household and commercial crop for thousands of small scale farmers in Kenya. With more varieties being introduced in the market, production has steadily increased at an annual rate of 7.19% as of 2022."

- [Bananas production quantity](#)

Author's Note



Hi, My name is Laura. I'm a Plant Breeder and Virologist.

With over 30 years of training and assistance from farmers, I'm privileged to have gained first hand farming knowledge of the the dependable banana, one of our major staple crops.

It is my pleasure to share with you my knowledge of:

- ◉ The Best Production Regions
- ◉ Environmental Requirements for Planting
- ◉ Banana Orchard Planting, Growth and Management
- ◉ Pest and Disease control
- ◉ Post Harvesting Handling

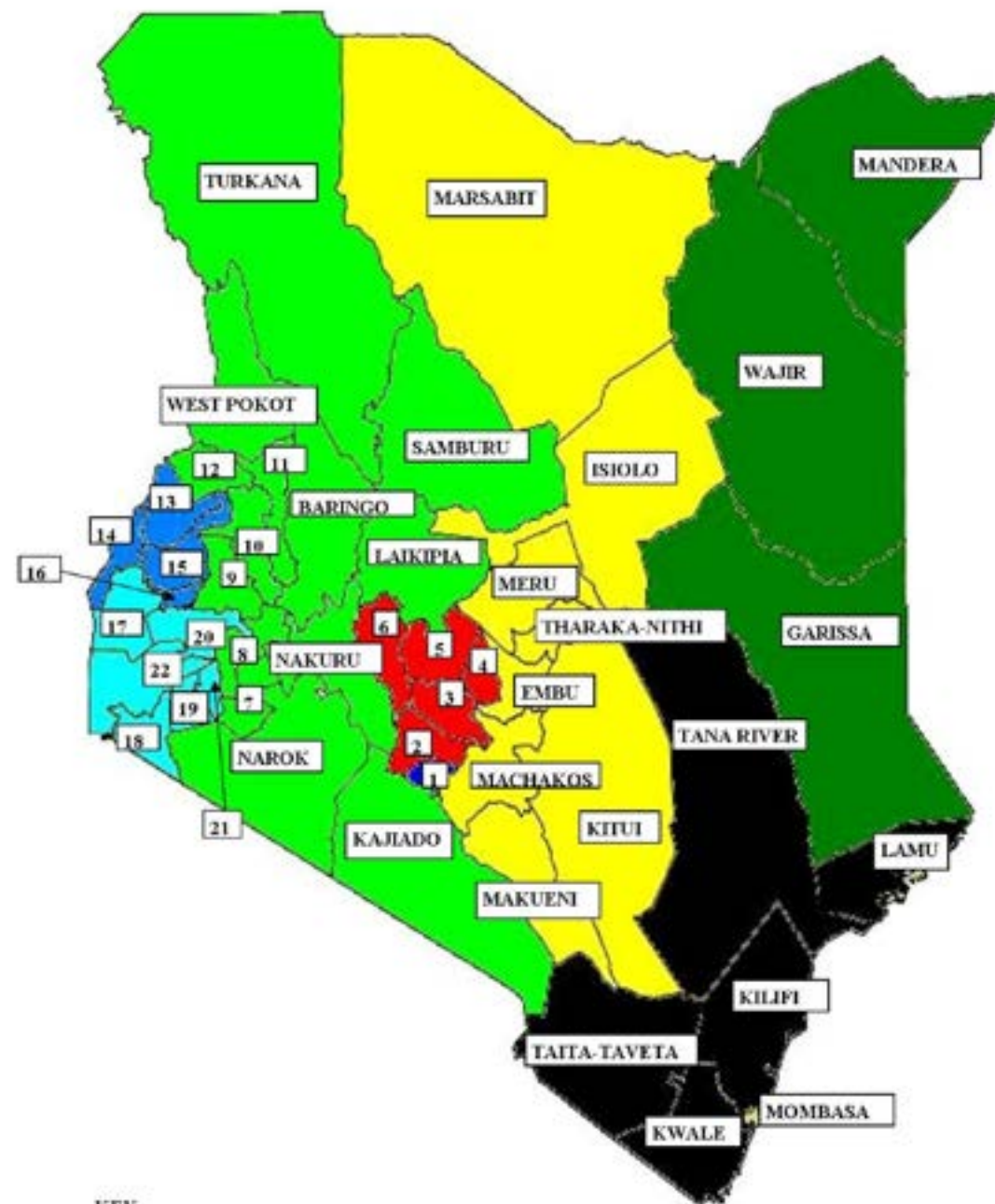
Through the farmers' collaboration, I along with my colleagues, improved the current developed banana varieties through virus disease diagnostics to become the beloved cooking and dessert varieties common in most of our households.

My hope is the information in this guide will arm you with the right tools for starting your farming journey. I wish you the best and feel free to reach out if you get stuck.

Best wishes,

Laura S Karanja, Plant Breeder and Virologist (PhD)

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KEY

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|--------------|---------------------|--------------|--------------|
| 1. NAIROBI | 8. KERICHO | 15. KAKAMEGA | 22. HOMA BAY |
| 2. KIAMBU | 9. TRANS NZOIA | 16. VIHIGA | |
| 3. MURANG'A | 10. UASIN GISHU | 17. SIAYA | |
| 4. KIRINYAGA | 11. ELGEYO-MARAKWET | 18. MIGORI | |
| 5. NYERI | 12. NANDI | 19. KISII | |
| 6. NYANDARUA | 13. BUNGOMA | 20. KISUMU | |
| 7. BOMET | 14. BUSIA | 21. NYAMIRA | |

Production regions

In Kenya, bananas are grown mainly in Western, Central, some parts of Eastern, some parts of Rift Valley (Kerio valley, Kericho, Baringo) and Coastal Region

Banana Varieties

Dessert varieties	Grand Nain; Williams; Dwarf Cavendish; Chinese Cavendish; Valery, FHIA 17, Sweet banana and Lacatan among others	 A photograph showing a bowl filled with several bunches of ripe, yellow dessert bananas. The bananas are small and curved, typical of varieties like Grand Nain or Dwarf Cavendish. They are arranged in a bowl, and some are still attached to their stems.
Cooking varieties	Ng'ombe, Nusu Ng'ombe, Uganda Green and Muraru among others	 A photograph showing a large bunch of green cooking bananas hanging from a tree. The bananas are long and curved, and are still green, indicating they are not yet ripe for eating raw. They are surrounded by large, green banana leaves.

Climate and Soil Requirements



- Altitude: 0-1800 m.a.s.l (Metres Above Sea Level)
- Rainfall: 1000 mm per year
- Temperature: 27°C
- Soils: Deep, well drained loams of high fertility and high content of organic matter

Banana Orchard Establishment & Manangement

Site

- Should be sheltered against wind, free from hail storms, not prone to water logging and salinity. It should be close to a reliable water supply.

Land preparation

- Deep ploughed land

Hole preparation

- 60cm x 60cm x 60 cm square but in drier areas and;
- For tissue culture seedlings deeper holes of 90 cmx 90cm x 90cm are recommended due to their tendency to “push up”.

Spacing

- Tall varieties such as Sweet Banana Grand Nain, FHIA 17 plant at 4m x 3m,
- Medium height variety: Williams, N'gombe plant at 3m x 3m and;
- Short variety: Dwarf Cavendish, Uganda green 3m x 2m



Steps to planting

- Separate top-soil (30cm) from the sub-soil while digging the holes.
- Mix the top soil with two debes of well decomposed manure and 200 gms (a handful) of DAP and return half of the mixture into the hole.
- Carefully remove the tissue culture seedling from the bag without breaking the soil in the bag.
- Place the tissue culture seedling into the hole and put the rest of the soil mixture.
- Cover the plantlet with the soil up to the level where the soil in the bag had reached.
- Use the sub-soil to make a basin around the plant for holding water

Banana Orchard Establishment & Management

Watering

- Irrigate immediately after planting and daily for two weeks then water regularly especially during dry spell (at least 20 litres of water per hole per week).

Fertilizer and Manuring

- Apply 200g of Calcium Ammonium Nitrate (CAN) and 2 debes of manure every year. Application is done twice in a year during the rainy seasons (April, May and September, October).



Banana Orchard Establishment & Management

De-suckering, mulching and leaf removal

- In the first 5-6 months remove all the suckers from the mother plant. Destroy the middle of the suckers to prevent re-sprouting.
- After 5-6 months select follower suckers to ensure the banana has 3 plants as follows: one bearing or nearly bearing; one large daughter; and one small granddaughter sucker.
- Remove dry leaves hanging down the plant and any leaves rubbing against the banana fingers to avoid bruising and to improve the fruit quality.
- Use the leaves as mulch for moisture conservation; weed control and soil nutrient improvement.
- Spread the mulching material at least six inches from the stem



Banana Orchard Establishment & Management

Bunch Trimming

- Break off the male flower bud once the bunch is fully emerged to avoid sheltering banana pests like banana weevils, white flies, and mites.

Yield

- Annual yield depends on climatic condition; management and variety
- Average yield is between 35 - 45 tons/ha per year.



Common Diseases and Pests

Type	Description	Control	
Sigatoka leaf spots	- It is wide spread and causes up to 50% yield loss. - Symptoms include dark brown streaks on lower leaf surface that enlarge to necrotic lesions with yellow halos and grey centres.	Chemical control: Alternate application of systemic and broad spectrum fungicide Cultural practice: Remove all infected leaves and destroy - Use resistant varieties e.g FHIA varieties (FHIA 17 FHIA 18 and FHIA 23)	
Cigar-end Rot	Symptoms show a dry rot with an ashy appearance of the fruit tips and the pulp becomes fibrous.	- Remove all dry floral parts from fruit tips - Remove flower parts 8-11 days after fruit bunch emergence, the male flower parts at the tip of the bunch. - Space as recommended (Spacing depending on the varieties), and prune out excess suckers	

Type	Description	Control	
Panama disease (Fusarium Wilt)	Soil-borne disease and infects the plant through roots, corm and wounds. Infected plants show yellowing of leaves starting from the old leaves.	Use resistant plants. Like most Cavendish are fairly resistant but Kampala is susceptible	
Nematodes	- Root knot nematodes and burrowing nematodes are spread through infested planting material. - Infected plants show yellowing of leaves, retarded growth and toppling of mature plants. Roots show brown lesions.	- Use nematicides such as Nemathorin EC 150, Azadiractin (Achook), Ethoprophos, (MOCAP GR 10) - Remove diseased tissues and expose them to sun. - Use hot water treatment by immersing suckers in hot water (50 - 55°C) for 20 minutes or dip sucker into hot water for 30 seconds	
Banana Weevil	Is commonly found in all banana growing areas. Infested plants show irregular tunnels on the pseudo-stem and rhizome which result into blackened mass of rotten tissue. Leaves turn yellow	- Dip suckers in 20% neem seed solution before planting. - Establish new orchards in uninfected fields using tissue culture seedlings. - Crop sanitation e.g destruction of residues	

Post Harvest Handling

Harvesting

Harvest when the banana fingers are three quarters round, appear light green and shiny. Support with a pole while slowly lowering the bunch to the ground to avoid injuries.

Storage

When bananas are harvested before they are taken to the market they should be stored in a cold room if possible at 13 degrees centigrade until they are taken to the market or naturally under a cool safe shade. The other preferred method is to dry them . solar energy can be used to enhance the natural process of cooling or drying.

They can also be processed into products such as flour, juices, chips / crisps, jams / jelly, sweets and wine to add value and keep longer.



We sell banana seedlings!

If you are interested in buying please get in touch through any of our contacts below.

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