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Crop details

Pineapple (nanasi)

Ananas comosus

Family: Bromeliaceae

Categories

Fruits & Nuts

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Quick stats

Family	Bromeliaceae
Typical harvest	58.3 t/ha
Varieties	3
Pests and diseases	6
Seasons	3

Crop profile

Growth habit	perennial
Days to harvest	540
Main uses	Sweet fresh fruit, juice, jam, dried slices and tinned pineapple. Tops and residues can feed livestock.
Pollination	insect
Origin and where it grows	Pineapple (nanasi) grows well in warm, moist lowland and mid-altitude areas of East Africa, especially coastal and high rainfall zones.

Weather, soil and spacing

Best temperature	20 - 30 °C
Rainfall	1000 - 1800 mm/yr
Altitude	0 - 1800 m
Best pH	5 - 6
Soil type	Light to medium, well-drained sandy loam or loam with good organic matter. Pineapple (nanasi) likes slightly acidic soils.
Row spacing	90 cm
Plant spacing	30 cm
Planting depth	10 cm
Seed rate	kg/ha (check local recommendation)

Simple notes for farmers

About the crop: This crop is perennial; once planted it can keep producing for many years. Harvest typically starts about 540 days after planting.

Main use: Farmers mostly grow this crop for sweet fresh fruit, juice, jam, dried slices and tinned pineapple. tops and residues can feed livestock..

Pollination: Mainly insect; healthy flowers and pollinators improve fruit set.

Where it grows: Pineapple (nanasi) grows well in warm, moist lowland and mid-altitude areas of East Africa, especially coastal and high rainfall zones.. Grouped under: Fruits & Nuts.

Best climate: 20 - 30 °C; 1000 - 1800 mm/yr; up to about 1800 m a.s.l.

Soil: Best at pH 5 - 6; light to medium, well-drained sandy loam or loam with good organic matter. pineapple (nanasi) likes slightly acidic soils..

Farmer guide (Mwongozo wa Mkulima)

Planting	Use healthy suckers, slips or crowns from clean fields. Remove excess leaves at the base, plant upright so the base is just covered and firm the soil. Mulch between rows.
Transplanting	Sort planting materials by size so the field flowers and matures more evenly. Avoid very small or weak suckers.
Irrigation	Keep soil moist but not waterlogged, especially during early growth and fruit swelling. Mulch helps save water.
Fertigation	With drip, apply small doses of nitrogen and potassium every few weeks. Reduce heavy nitrogen late in the season to avoid very soft fruits.
Pest scouting	Check Pineapple (nanasi) regularly for mealybugs, scale insects, root and heart rots and leaf spots. Look at the base of plants, under leaves and inside the heart.
Pruning and training	Remove dead leaves and poor suckers. Keep only the best ratoon suckers per plant to maintain uniform stands.
Harvest	Harvest when eyes are well filled, colour changes from green to yellow starting from the base, and fruit has a strong sweet smell. Use a sharp knife and leave a short stalk.
Postharvest	Handle fruits gently, avoid sunburn and bruising. Cool in shade, pack in clean crates and transport upright to reduce damage.

Nutrient schedule (Mbolea kwa Hatua)

#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
1	Basal before planting	0	Well-rotted manure + P fertilizer (e.g., TSP or DAP)	10 t/ha manure + 150 kg/ha P fertilizer	N: 0, P?O?: 0, K?O: 0	Incorporate manure and P into raised beds or ridges before planting Pineapple (nanasi).
2	Early growth topdress	60	NPK 17-17-17 or 15-15-15	200 kg/ha	N: 0, P?O?: 0, K?O: 0	Apply alongside rows, keep fertilizer off the plant whorl.
3	Flower induction / pre-fruit topdress	240	High-K fertilizer (e.g., 12-12-24 or MOP/SOP mix)	250 kg/ha	N: 0, P?O?: 0, K?O: 0	Supports good fruit set and development, applied as field approaches flowering.
4	Ratoon start feed	360	NPK 17-17-17 + manure	150 kg/ha + 5 t/ha manure	N: 0, P?O?: 0, K?O: 0	Applied after harvesting mother crop to feed ratoon suckers.

Nutrient requirements

Nutrient	Stage	Amount	Unit

N	Planting	40	kg/ha
P?O?	Planting	60	kg/ha
K?O	Planting	80	kg/ha
N	Early_growth	60	kg/ha
P?O?	Early_growth	20	kg/ha
K?O	Early_growth	80	kg/ha
N	Fruiting	40	kg/ha
P?O?	Fruiting	0	kg/ha
K?O	Fruiting	100	kg/ha
N	Ratoon_maintenance	60	kg/ha
P?O?	Ratoon_maintenance	20	kg/ha
K?O	Ratoon_maintenance	80	kg/ha

Varieties

Name	Country	Maturity (days)	Traits
Smooth Cayenne	KE	540	Large, cylindrical fruits, juicy and good for fresh market and processing.
MD2-type	TZ	500	Sweet, golden flesh with good shelf life; suited to export and local fresh markets.
Queen / local nanasi	UG	520	Smaller fruit, strong aroma and sweetness; popular in local markets.

Fertilizer recommendations

Stage	Product	Rate	Notes
Basal	Well-rotted farmyard manure	10000	Spread along rows and incorporated into beds before planting.
Vegetative growth	NPK 17-17-17 or 15-15-15	300	Split into 2–3 applications during the first 6–8 months.
Fruit development	High-K fertilizer (e.g., 12-12-24 or MOP/SOP blend)	250	Given before and during fruit swelling to improve fruit quality.

Pests and diseases

Name	Type	Symptoms	Management
Mealybugs and associated ants	pest	White cottony insects at leaf bases and roots, sticky honeydew, sooty mould and stunted plants.	Use clean planting material, control ants, remove heavily infested plants and use recommended insecticides or soaps where needed.

Name	Type	Symptoms	Management
Scale insects	pest	Small hard scales on leaves and fruits, yellowing and reduced vigour.	Field sanitation, natural enemies and targeted sprays if populations are high.
Nematodes (root pests)	pest	Poor root growth, stunting and uneven fields.	Rotate with non-host crops, use nematode-free planting material and plenty of organic matter.
Heart rot / base rots (Phytophthora and others)	disease	Soft, rotting heart leaves, foul smell and plant collapse, especially in wet spots.	Improve drainage, avoid waterlogging, use raised beds and healthy suckers.
Leaf spots and blights	disease	Spots and blighted areas on leaves reducing photosynthesis.	Use clean planting materials, avoid overcrowding and apply fungicides/biopesticides when necessary.
Fruit rots	disease	Soft, water-soaked areas on fruit, often starting at cracks or injury points.	Harvest carefully, avoid wounds and keep fruits clean and cool.

Yields

System	Typical	Min	Max	Notes
Smallholder Pineapple (nanasi), rainfed	25	15	35	Mother crop with some fertilizer and mulching, limited pest control.
Well-managed smallholder or estate (mother crop)	60	40	80	Good planting material, fertilization and weed control.
Mother + ratoon crops combined	90	60	120	Two or more harvests from the same stand under good management.

Season calendars

Country	Region	Planting	Harvest
KE	Coastal and lowland Pineapple (nanasi) zones	Best at the onset of rains; can be staggered for continuous supply.	About 15–20 months after planting for mother crop, then
KE	High rainfall mid-altitude Pineapple areas	Early rainy season on well-drained soils.	Dry periods following main rains, depending on planting
TZ	Coastal belt and high rainfall areas	Onset of main rains where drainage is good.	Follows 15–20 months later with peaks in drier months.

Region suitability

Country	Region	Suitability
KE	Coastal Pineapple (nanasi) belt	High
KE	High rainfall mid-altitude zones with good drainage	High
TZ	Coastal and southern high rainfall regions	High
UG	Warm, moist lowland and mid-altitude Pineapple zones	High