FarmLens Ltd
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Crop details

Clove (karafuu)

Syzygium aromaticum

Family: Myrtaceae

Categories

Fruits & Nuts | Spices & Condiments

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Quick stats

Family	Myrtaceae
Typical harvest	0.6 t/ha
Varieties	2
Pests and diseases	5
Seasons	3

Crop profile

Growth habit	tree
Days to harvest	3650
Main uses	Dried flower buds (spice), clove oil; some use for medicine and beverages.
Pollination	insect
Origin and where it grows	Best along humid tropical coasts and islands (e.g., coastal TZ/Zanzibar, northern Mozambique; pockets at Kenya coast).

Weather, soil and spacing

Best temperature	22 - 30 °C
Rainfall	1500 - 2500 mm/yr
Altitude	0 - 800 m
Best pH	5.8 - 6.8
Soil type	Deep, well-drained red/loam soils rich in organic matter; benefits from coastal volcanic/ferallitic soils.
Row spacing	700 cm
Plant spacing	700 cm
Seed rate	kg/ha (check local recommendation)
Nursery days	270

Simple notes for farmers

About the crop: This crop has a growth habit described as "tree". Harvest typically starts about 3650 days after planting.

Main use: Farmers mostly grow this crop for dried flower buds (spice), clove oil; some use for medicine and beverages..

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

Where it grows: Best along humid tropical coasts and islands (e.g., coastal TZ/Zanzibar, northern Mozambique; pockets at Kenya coast).. Grouped under: Fruits & Nuts, Spices & Condiments.

Best climate: 22 - 30 °C; 1500 - 2500 mm/yr; up to about 800 m a.s.l.

Soil: Best at pH 5.8 - 6.8; deep, well-drained red/loam soils rich in organic matter; benefits from coastal volcanic/ferallitic soils..

Farmer guide (Mwongozo wa Mkulima)

Planting	Plant healthy, well-rooted seedlings at onset of rains. Dig large holes, mix in compost and topsoil. Provide windbreaks and mulch.
Transplanting	Stake young trees; partial shade first year helps establishment.
Irrigation	Keep soil evenly moist, especially in dry spells and during flowering/bud development.
Fertigation	Split small N and K doses during rainy months; add compost/mulch annually.
Pest scouting	Check for shoot/capsule borers, scales and termites; watch for dieback and leaf spots after wet spells.
Pruning and training	Form a strong central framework; remove dead branches; maintain weed-free basins.
Harvest	Pick flower buds when full-sized and turning from green to pink. Dry in sun/solar dryers to brittle stage.
Postharvest	Dry quickly on clean racks (3–5 days). Store in airtight, dry containers away from light to preserve oil.

Nutrient schedule (Mbolea kwa Hatua)

#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
1	Basal at planting	0	Compost + NPK 15-15-15 (light)	100 kg/ha (plus 5–10 t/ha compost)	N: 15, P?O?: 15, K?O: 15	Mix thoroughly with backfill; avoid direct root contact with fertilizer.
2	Early rainy season topdress	120	CAN 26% N	80 kg/ha	N: 21, P?O?: 0, K?O: 0	Ring-apply in basin under canopy; mulch afterwards.
3	Pre-flowering K boost	240	Sulfate of potash (SOP)	100 kg/ha	N: 0, P?O?: 0, K?O: 50	Supports bud and oil quality; apply before main flowering flush.

Nutrient requirements

Nutrient	Stage	Amount	Unit
N	Establishment	20	kg/ha
P?O?	Establishment	20	kg/ha
K?O	Establishment	20	kg/ha
N	Bearing_maintenance	40	kg/ha
P?O?	Bearing_maintenance	20	kg/ha
K?O	Bearing_maintenance	40	kg/ha

Varieties

Name	Country	Maturity (days)	Traits

Zanzibar/Pemba selection	TZ	3650	Well-adapted to humid islands; good oil content.
Coastal Kenya selection	KE	3000	Adapted to coastal belts; responds to mulching.

Fertilizer recommendations

Stage	Product	Rate	Notes
Basal	NPK 15-15-15 + compost	100	With 5–10 t/ha compost at planting/early rains.
Topdress (rainy season)	CAN 26% N	80	Split in two light feeds if season is long.
Pre-flowering	SOP (K?SO?)	100	Improves bud set and spice quality.

Pests and diseases

Name	Type	Symptoms	Management
Shoot/capsule borers	pest	Bored shoots and buds; frass/webbing; bud drop.	Prune and destroy infested shoots; attract/retain natural enemies; selective controls if needed.
Scale insects & mealybugs	pest	Sticky honeydew, sooty mould; twig decline.	Encourage predators, manage ants, use horticultural oils when necessary.
Termites (young trees)	pest	Girdling at base, lodging of seedlings.	Keep basins clean, use physical barriers and spot treatments as per recommendation.
Leaf spot / anthracnose	disease	Brown/black lesions on leaves and young shoots; defoliation in wet weather.	Improve airflow, prune lightly, use protectants during prolonged wet spells if advised.
Dieback	disease	Shoots dry from tip backwards; twig/branch death.	Remove affected twigs, avoid injuries, improve tree vigor with manures and mulch.

Yields

System	Typical	Min	Max	Notes
Smallholder coastal rainfed (mature blocks)	0.4	0.2	0.7	Bearing from year 5–7; peak around year 12–20 with good care.
Managed orchards (mulch + manuring)	0.8	0.5	1.2	Regular manuring, pest control and moisture conservation.

Season calendars

Country	Region	Planting	Harvest
TZ	Zanzibar & Pemba	Onset of main rains; seedlings with good root balls.	Bud harvests in seasonal flushes (often Jun–Nov).
TZ	Tanga/coastal belt	Start of long rains; protect from dry winds.	Flush pickings during main dry season after rains.
KE	Coast (Kilifi, Kwale pockets)	At onset of reliable rains; ensure irrigation for dry gaps.	Seasonal pickings depending on rainfall pattern.

Region suitability

Country	Region	Suitability
KE	Humid pockets of the Coast	Medium
TZ	Tanga coastal humid belt	High
TZ	Zanzibar & Pemba islands	High
UG	Very warm, humid lakeshore pockets	Low