

FarmLens Ltd

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Crop details

Lemon

Citrus limon

Family: Rutaceae

Categories

Fruits & Nuts

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Quick stats

Family	Rutaceae
Typical harvest	17.3 t/ha
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Crop profile

Growth habit	tree
Days to harvest	Perennial (bearing from year 3–4)
Main uses	Fresh fruit; juice; zest; essential oil
Pollination	insect
Origin and where it grows	Subtropics/tropics; widely grown in East Africa

Weather, soil and spacing

Best temperature	20 - 30 °C
Rainfall	800 - 1200 mm/yr
Altitude	0 - 1800 m
Best pH	6 - 7
Soil type	Well-drained loam/sandy loam; high organic matter
Row spacing	600 cm
Plant spacing	600 cm
Planting depth	5 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 Perennial (bearing from year 3–4) days after planting.

Main use: Farmers mostly grow this crop for fresh fruit; juice; zest; essential oil.

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

Where it grows: Subtropics/tropics; widely grown in East Africa. Grouped under: Fruits & Nuts.

Best climate: 20 - 30 °C; 800 - 1200 mm/yr; up to about 1800 m a.s.l.

Soil: Best at pH 6 - 7; well-drained loam/sandy loam; high organic matter.

Farmer guide (Mwongozo wa Mkulima)

<u>Planting</u>	Plant grafted, disease-free seedlings at onset of rains in 60×60×60 cm pits mixed with compost. Keep graft union 15–20 cm above soil. Mulch basins.
<u>Transplanting</u>	Do not disturb root ball; stake young trees; paint trunks to prevent sunburn.
<u>Irrigation</u>	Regular moisture critical at flowering and fruit set; irrigate deeply and infrequently; maintain mulch.
<u>Fertigation</u>	Split N and K into small, frequent doses during active growth; include Ca/Mg where needed.
<u>Pest scouting</u>	Scout for citrus leaf miner, aphids/psyllids, scales, mites, and fruit flies; monitor for HLB symptoms.
<u>Pruning and training</u>	Form 3–4 scaffold branches; remove suckers below graft; light annual thinning.
<u>Harvest</u>	Harvest when fruit is fully sized and color breaks; pick with clip to avoid tearing rinds.
<u>Postharvest</u>	Handle gently; wash/sanitize; dry and store cool with airflow; avoid ethylene exposure.

Nutrient schedule (Mbolea kwa Hatua)

#	<u>Stage</u>	<u>DAP</u>	<u>Product</u>	<u>Rate</u>	<u>Targets (kg/ha)</u>	<u>Notes</u>
1	Basal (at planting)	0	Compost + NPK 17-17-17	10 kg/tree + 150 kg/ha	N: 20, P?O?: 20, K?O: 20	Mix compost in pit; keep fertilizer away from trunk
2	Vegetative split 1	60	CAN 26% N	60 kg/ha	N: 16, P?O?: N/A, K?O: N/A	Ring apply on moist soil; mulch afterwards
3	Flowering / set	180	MOP (KCl) + MAP (12-61-0)	60 kg/ha (K) + 25 kg/ha (P)	N: N/A, P?O?: 15, K?O: 40	Avoid heavy N near bloom
4	Fruit fill (fertigation opt.)	240	KNO? / CaNO? (weekly small doses)	8 kg/ha/week	N: N/A, P?O?: N/A, K?O: 40	4–6 weeks micro-doses improve size/peel

Nutrient requirements

<u>Nutrient</u>	<u>Stage</u>	<u>Amount</u>	<u>Unit</u>
N	Basal	30	kg/ha
P?O?	Basal	20	kg/ha
K?O	Basal	30	kg/ha
N	Topdress	60	kg/ha
K?O	Topdress	60	kg/ha
N	Vegetative	40	kg/ha
K?O	Vegetative	40	kg/ha
N	Flower_set	20	kg/ha
K?O	Flower_set	30	kg/ha

<u>Nutrient</u>	<u>Stage</u>	<u>Amount</u>	<u>Unit</u>
K ₂ O	Fruit_fill	40	kg/ha
N	Maintenance	30	kg/ha
P ₂ O ₅	Maintenance	10	kg/ha
K ₂ O	Maintenance	30	kg/ha

Field images



Varieties

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
Eureka	KE		High-quality fruit; common fresh market
Lisbon	KE		Vigorous; productive under warm conditions
Ponderosa (home garden)	UG		Large fruits; coarse peel

Fertilizer recommendations

<u>Stage</u>	<u>Product</u>	<u>Rate</u>	<u>Notes</u>
Basal	Compost/manure (well-decomposed)	5000	Band in basin; keep 20–30 cm off trunk
Vegetative	CAN 26% N	60	Split into 2–3 small doses
Flower/Set	MOP (KCl)	60	Boost K before/after bloom
Fruit fill	Calcium nitrate (optional)	40	Improve peel/firmness

Pests and diseases

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Citrus canker	disease	Leaf/fruit lesions	Sanitation; copper sprays
Citrus leaf miner	pest	Leaf mines; distorted flush	Avoid excessive N; prune infested flush; selective insecticides if severe
Aphids & psyllids	pest	Curling leaves; honeydew/sooty mold; HLB risk	Control ants; use oils/soaps/selective actives; remove symptomatic shoots
Scales & mealybugs	pest	Sooty mold; twig decline	Horticultural oils; prune hot spots; biological control

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Citrus mites	pest	Bronzing; russeted rind	Maintain tree vigor; targeted acaricides if needed
Fruit flies	pest	Stings; larval damage	Protein baiting, field sanitation, traps
Citrus canker / greasy spot	disease	Lesions/leaf spots & defoliation	Sanitation; copper/protectants; airflow
Phytophthora gummosis	disease	Gum exudation; bark rot at collar	Mound soil; improve drainage; trunk paints; resistant rootstocks
Citrus tristeza (CTV)	disease	Decline on susceptible rootstocks	Use tolerant rootstocks; rogue infected trees

Yields

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
orchard	15	8	25	
rainfed smallholder	12	8	18	Bearing improves after year 4–5
irrigated/managed orchard	25	15	35	Good cultivar, nutrition & pest control

Season calendars

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Warm mid-altitudes (long rains planting)	Mar–Apr	Multiple flushes year-round
KE	Warm mid-altitudes (short rains planting)	Oct–Nov	Multiple flushes year-round
UG	Central/Eastern (humid)	Mar–Apr	Staggered harvests
TZ	Coastal & northern (unimodal)	Nov–Dec	Staggered harvests

Region suitability

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
KE	Coastal; lower & mid-altitudes with irrigation	High
KE	Cool highlands >1900 m (frost risk)	Low
KE	Low to mid-altitudes	High
KE	Poorly drained clays; waterlogged sites	Low
TZ	Coastal; Morogoro; northern valleys	High
UG	Central/Eastern sub-humid	High

Source: **FarmLens Ltd** - farmlens.africa and app.farmlens.africa. Headquarters: Nairobi, Kenya. This guide was generated from the FarmLens database.