

FarmLens Ltd

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Crop details

Jatropha

Jatropha curcas

Family: Euphorbiaceae

Categories

Oil & Industrial

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Quick stats

Family	Euphorbiaceae
Typical harvest	1.7 t/ha
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Crop profile

Growth habit	perennial
Days to harvest	365+
Main uses	Biofuel seed; hedgerow
Pollination	insect
Origin and where it grows	Tropical America; Africa/Asia

Weather, soil and spacing

Best temperature	22 - 32 °C
Rainfall	600 - 900 mm/yr
Altitude	0 - 1600 m
Best pH	6 - 7.5
Soil type	Light to medium soils; drought tolerant
Row spacing	300 cm
Plant spacing	300 cm
Planting depth	30 cm
Seed rate	kg/ha (check local recommendation)
Nursery days	60

Simple notes for farmers

About the crop: This crop is perennial; once planted it can keep producing for many years. Harvest typically starts about 365+ days after planting.

Main use: Farmers mostly grow this crop for biofuel seed; hedgerow.

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

Where it grows: Tropical America; Africa/Asia. Grouped under: Oil & Industrial.

Best climate: 22 - 32 °C; 600 - 900 mm/yr; up to about 1600 m a.s.l.

Soil: Best at pH 6 - 7.5; light to medium soils; drought tolerant.

Farmer guide (Mwongozo wa Mkulima)

<u>Planting</u>	Use healthy seedlings or cuttings. Plant at onset of rains in pits (e.g., 45×45×45 cm) mixed with compost. Mulch and weed circles.
<u>Transplanting</u>	Do not damage taproot; set at collar height; firm soil.
<u>Irrigation</u>	Irrigate for establishment; thereafter minimal; water during extended droughts improves yield.
<u>Fertigation</u>	Low to moderate nutrient demand; split N in small doses early growth.
<u>Pest scouting</u>	Scout for leaf miners, mites, mealybugs/scale (sooty mold), and stem borers.
<u>Pruning and training</u>	Top plants at 45–60 cm to encourage branching; maintain 3–4 primary branches.
<u>Harvest</u>	Harvest when fruits yellow-brown; multiple pickings per season as racemes mature.
<u>Postharvest</u>	Dry seeds to ~7% moisture before storage/pressing; avoid contamination.

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	0	NPK 15-15-15	60 kg/ha	N: N/A, P?O?: N/A, K?O: N/A	Mix in pit; avoid root burn
2	Topdress (establishment)	90	CAN 26% N	40 kg/ha	N: N/A, P?O?: N/A, K?O: N/A	Light ring application; water in
3	Maintenance (pre-rains)	365	NPK 15-9-20 (or urea+MOP)	80 kg/ha	N: N/A, P?O?: N/A, K?O: N/A	Annual, adjust to yield

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	Early_growth	20	kg/ha
K?O	Early_growth	10	kg/ha
N	Maintenance	20	kg/ha
K?O	Maintenance	20	kg/ha

Field images



Varieties

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
Local Jatropha	KE	450	Drought hardy
Local landrace (seeded)	KE	720	Hardy; variable yield
Selected line (cuttings)	TZ	540	Earlier bearing; uniform canopy

Fertilizer recommendations

<u>Stage</u>	<u>Product</u>	<u>Rate</u>	<u>Notes</u>
Basal	Compost/manure (well-decomposed)	2000	Mix in planting pits
Basal	NPK 17-17-17	80	Light dose at planting
Topdress	CAN 26% N	40	~3 months after planting
Maintenance	NPK high-K (e.g., 15-9-20) or Urea+MOP	80	Annual before rains

Pests and diseases

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Leaf miner	pest	Mines in leaves	Sanitation; prune
Mites (Tetranychus spp.)	pest	Stippling; webbing in dry spells	Maintain plant vigor; selective acaricides if needed
Mealybugs/Scale (sooty mold)	pest	Honeydew; black mold on leaves/twigs	Control ants; prune; horticultural oils/soaps
Stem borers	pest	Boreholes; branch dieback	Prune and destroy infested shoots; wound protection
Powdery mildew	disease	White powder on leaves; defoliation	Improve airflow; sulfur or suitable fungicides
Mosaic/viral diseases	disease	Mottling; leaf distortion	Rogue infected plants; vector control; clean material

Yields

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
rainfed hedge	1	0.5	2	Seed yield

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
rainfed low-input	1	0.5	2	Seed yield; increases after year 3
managed orchard	3	2	5	Good selections, pruning & fertilization

Season calendars

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Semi-arid	Mar–Apr / Oct–Nov	Jun–Jan (staggered)
KE	ASAL & sub-humid (long rains)	Mar–Apr	Multiple pickings after year 2–3
KE	ASAL & sub-humid (short rains)	Oct–Nov	Multiple pickings after year 2–3
UG	Northern & eastern dry zones	Mar–Apr	Staggered once mature
TZ	Central & northern semi-arid	Nov–Dec	Staggered once mature

Region suitability

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
KE	ASAL counties; lower mid-altitudes	High
KE	Cool highlands >1800 m (frost risk)	Low
KE	Poorly drained wetlands	Low
KE	Semi-arid	Medium
TZ	Central plateau; northern semi-arid	High
UG	Northern & eastern semi-arid	High

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