

FarmLens Ltd

Website: farmlens.africa | App: app.farmlens.africa | Headquarters: Nairobi, Kenya



Crop details

Castor bean

Ricinus communis

Family: Euphorbiaceae

Categories

Oil & Industrial

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Quick stats

Family	Euphorbiaceae
Typical harvest	1.8 t/ha
Varieties	2
Pests and diseases	7
Seasons	3

Crop profile

Growth habit	annual
Days to harvest	140-200
Main uses	Oilseed
Pollination	wind
Origin and where it grows	Africa/Asia tropics

Weather, soil and spacing

Best temperature	22 - 30 °C
Rainfall	500 - 800 mm/yr
Altitude	0 - 1800 m
Best pH	6 - 7
Soil type	Well-drained loam to clay loam
Row spacing	120 cm
Plant spacing	60 cm
Planting depth	3 cm
Seed rate	10 kg/ha

Simple notes for farmers

About the crop: This crop is annual; it grows and is harvested in one season. Harvest typically starts about 140-200 days after planting.

Main use: Farmers mostly grow this crop for oilseed.

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

Where it grows: Africa/Asia tropics. Grouped under: Oil & Industrial.

Best climate: 22 - 30 °C; 500 - 800 mm/yr; up to about 1800 m a.s.l.

Soil: Best at pH 6 - 7; well-drained loam to clay loam.

Farmer guide (Mwongozo wa Mkulima)

<u>Planting</u>	Direct seed at onset of rains into a firm, well-drained seedbed. Thin to spacing. Avoid waterlogging at establishment.
<u>Transplanting</u>	Not typical; taproot sensitive to disturbance.
<u>Irrigation</u>	Generally rainfed; ensure moisture at germination, branching and flowering; avoid prolonged drought at flowering.
<u>Fertigation</u>	Under irrigation, apply small N splits through early flowering; avoid excess N late (lodging).
<u>Pest scouting</u>	Scout weekly for whiteflies, jassids (leafhoppers), aphids and capsule borers; monitor for Alternaria leaf spot and wilt.
<u>Pruning and training</u>	No pruning; rogue off-types; stake in windy areas for tall types.
<u>Harvest</u>	Harvest when capsules turn brown and begin to dry; pick in 2–3 rounds to minimize shattering; dry and thresh carefully.
<u>Postharvest</u>	Dry to safe moisture before storage; castor seed and cake are toxic—handle with PPE; avoid feed use unless detoxified.

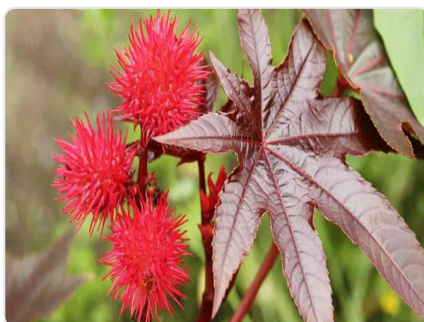
Nutrient schedule (Mbolea kwa Hatua)

#	<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	80 kg/ha	N: N/A, P ₂ O ₅ : N/A, K ₂ O: N/A	Place 5–8 cm from seed; avoid seed burn
2	Topdress	35	Urea	60 kg/ha	N: N/A, P ₂ O ₅ : N/A, K ₂ O: N/A	Apply on moist soil or before rain/irrigation
3	Topdress 2 (optional)	55	Urea 46% N	40 kg/ha	N: N/A, P ₂ O ₅ : N/A, K ₂ O: N/A	Only if crop is pale/light soils; avoid excess late N

Nutrient requirements

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

Field images



Varieties

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
Local Castor	KE	160	Oilseed type
High-oil hybrid (generic)	TZ	140	Improved oil content; uniform capsules

Fertilizer recommendations

<u>Stage</u>	<u>Product</u>	<u>Rate</u>	<u>Notes</u>
Basal	NPK 15-15-15	80	
Basal	DAP 18-46-0	80	
Topdress	CAN 26% N	100	At branching (30–40 DAP)
Optional	Urea 46% N	40	Light top-up at early flowering if needed

Pests and diseases

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Capsules borer	pest	Bored capsules	Monitoring; IPM
Whitefly	pest	Sooty mold from honeydew; virus risk	Yellow sticky traps; conserve natural enemies; selective sprays if needed
Jassids (leafhoppers)	pest	Leaf curling, yellowing	Early sowing; tolerant varieties; targeted control if thresholds exceeded
Aphids	pest	Clusters on shoots; stunting	Natural enemies; oils/soaps or selective insecticides
Capsule/Spotted pod borer	pest	Bored capsules, seed loss	Sanitation; timely picking; rotate actives if spraying
Alternaria leaf spot	disease	Concentric leaf spots, defoliation	Wider spacing; avoid overhead irrigation; protectants if severe
Fusarium wilt / root rot	disease	Wilting, vascular browning	Rotation 3–4 yrs; well-drained soils; healthy seed

Yields

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
rainfed	1.2	0.5	2	

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
rainfed smallholder	1.5	0.8	2.5	Clean seed
irrigated / improved	2.8	1.8	3.5	Good fertility + pest control

Season calendars

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Semi-arid	Mar–Apr	Aug–Nov
KE	Semi-arid & mid-altitudes (long rains)	Mar–Apr	Jul–Sep
KE	Semi-arid & mid-altitudes (short rains)	Oct–Nov	Feb–Apr

Region suitability

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
ET	Low to mid-altitude drylands	High
KE	Eastern & Rift Valley semi-arid	High
KE	Semi-arid	High
KE	Waterlogged/coastal swamp	Low
TZ	Central & Northern zones	High
UG	Dry savanna	Medium

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