

# FarmLens Ltd

Website: [farmlens.africa](http://farmlens.africa) | App: [app.farmlens.africa](http://app.farmlens.africa) | Headquarters: Nairobi, Kenya



Crop details

## Castor bean

*Ricinus communis*

Family: Euphorbiaceae

Categories

Oil & Industrial

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### Quick stats

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

### Crop profile

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

### Weather, soil and spacing

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

<b><u>Planting</u></b>	Direct seed at onset of rains into a firm, well-drained seedbed. Thin to spacing. Avoid waterlogging at establishment.
<b><u>Transplanting</u></b>	Not typical; taproot sensitive to disturbance.
<b><u>Irrigation</u></b>	Generally rainfed; ensure moisture at germination, branching and flowering; avoid prolonged drought at flowering.
<b><u>Fertigation</u></b>	Under irrigation, apply small N splits through early flowering; avoid excess N late (lodging).
<b><u>Pest scouting</u></b>	Scout weekly for whiteflies, jassids (leafhoppers), aphids and capsule borers; monitor for Alternaria leaf spot and wilt.
<b><u>Pruning and training</u></b>	No pruning; rogue off-types; stake in windy areas for tall types.
<b><u>Harvest</u></b>	Harvest when capsules turn brown and begin to dry; pick in 2–3 rounds to minimize shattering; dry and thresh carefully.
<b><u>Postharvest</u></b>	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 <sub>2</sub> O <sub>5</sub> : N/A, K <sub>2</sub> O: N/A	Place 5–8 cm from seed; avoid seed burn
2	Topdress	35	Urea	60 kg/ha	N: N/A, P <sub>2</sub> O <sub>5</sub> : N/A, K <sub>2</sub> 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 <sub>2</sub> O <sub>5</sub> : N/A, K <sub>2</sub> 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 <sub>2</sub> O <sub>5</sub>	Basal	30	kg/ha
K <sub>2</sub> O	Basal	30	kg/ha
N	Topdress	30	kg/ha
K <sub>2</sub> 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>
rained 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](http://farmlens.africa) and [app.farmlens.africa](http://app.farmlens.africa). Headquarters: Nairobi, Kenya. This guide was generated from the FarmLens database.