

# FarmLens Ltd

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

Crop details

## Cowpea (kunde)

*Vigna unguiculata*

Family: Fabaceae

Categories

Legumes & Pulses

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### Quick stats

Family	Fabaceae
Typical harvest	1.3 t/ha
Varieties	3
Pests and diseases	6
Seasons	3

### Crop profile

Growth habit	annual
Days to harvest	75
Main uses	Green leaves, fresh pods, dry grain for food, and haulms for animal feed.
Pollination	self
Origin and where it grows	Cowpea (kunde) is grown in many warm and dry parts of East Africa, often together with maize or sorghum.

### Weather, soil and spacing

Best temperature	22 - 32 °C
Rainfall	400 - 700 mm/yr
Altitude	0 - 1800 m
Best pH	5.5 - 7
Soil type	Light to medium textured, well-drained soils. Cowpea (kunde) tolerates poorer soils better than many other crops.
Row spacing	45 cm
Plant spacing	20 cm
Planting depth	3 cm
Seed rate	20 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 75 days after planting.

**Main use:** Farmers mostly grow this crop for green leaves, fresh pods, dry grain for food, and haulms for animal feed..

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

**Where it grows:** Cowpea (kunde) is grown in many warm and dry parts of East Africa, often together with maize or sorghum..  
Grouped under: Legumes & Pulses.

**Best climate:** 22 - 32 °C; 400 - 700 mm/yr; up to about 1800 m a.s.l.

**Soil:** Best at pH 5.5 - 7; light to medium textured, well-drained soils. cowpea (kunde) tolerates poorer soils better than many other crops..

## Farmer guide (Mwongozo wa Mkulima)

<b><u>Planting</u></b>	Plant Cowpea (kunde) at the start of the rains. Place 2–3 seeds per hole, cover lightly and thin to 1–2 strong plants per station.
<b><u>Transplanting</u></b>	Cowpea (kunde) is usually direct seeded, not transplanted.
<b><u>Irrigation</u></b>	Kunde is drought tolerant, but germination, flowering and pod filling need some soil moisture. Avoid long dry spells at flowering.
<b><u>Fertigation</u></b>	Being a legume, Cowpea (kunde) fixes its own nitrogen. Focus on small amounts of starter phosphorus and good inoculation where available.
<b><u>Pest scouting</u></b>	Scout weekly for aphids, flower thrips and pod borers. Also watch for leaf spots and root rots in poorly drained spots.
<b><u>Pruning and training</u></b>	No pruning needed. Keep weeds low, especially during the first 4–5 weeks after emergence.
<b><u>Harvest</u></b>	For green pods, harvest when pods are well-filled but still soft. For dry grain, harvest when most pods of Cowpea (kunde) turn brown and rattle when shaken.
<b><u>Postharvest</u></b>	Dry pods or threshed grain on clean mats or tarpaulins. Dry until seeds are hard, then store in dry, airtight containers or bags to avoid weevils.

## Nutrient schedule (Mbolea kwa Hatua)

#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
1	Basal at planting	0	NPK 10-26-10 or similar starter	40 kg/ha	N: 4, P <sub>2</sub> O <sub>5</sub> : 10, K <sub>2</sub> O: 4	Band or spot-apply fertilizer a little away from Cowpea (kunde) seed.
2	Optional K topdress (early flowering)	35	Muriate of potash (MOP) or NPK with K	20 kg/ha	N: 0, P <sub>2</sub> O <sub>5</sub> : 0, K <sub>2</sub> O: 12	Use in fields with history of low K or where haulms of Cowpea (kunde) are frequently removed.

## Nutrient requirements

Nutrient	Stage	Amount	Unit
N	Basal	10	kg/ha
P <sub>2</sub> O <sub>5</sub>	Basal	20	kg/ha
K <sub>2</sub> O	Basal	10	kg/ha
N	Topdress_early	0	kg/ha
P <sub>2</sub> O <sub>5</sub>	Topdress_early	0	kg/ha
K <sub>2</sub> O	Topdress_early	10	kg/ha

## Varieties

Name	Country	Maturity (days)	Traits
Improved kunde – early maturing	KE	70	Early Cowpea (kunde) for short rains; good grain and leaf yield.

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
Dual-purpose Cowpea (kunde)	TZ	80	Grown for both grain and fodder; good drought tolerance.
Local kunde landrace	KE	75	Preferred taste and leaf quality; moderate yield.

### **Fertilizer recommendations**

<u>Stage</u>	<u>Product</u>	<u>Rate</u>	<u>Notes</u>
Basal	NPK 10-26-10 or DAP (small dose)	40	Provides starter phosphorus for Cowpea (kunde) root growth and nodulation.
Topdress (optional)	Muriate of potash (MOP) or NPK with K	20	Target fields with potassium deficiency; helps grain filling and plant strength.

### **Pests and diseases**

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Aphids	pest	Clusters of small green/black insects on young shoots and undersides of leaves; leaves curl and plants look sticky.	Encourage natural enemies (ladybirds, lacewings), avoid overuse of chemicals and use selective sprays only when heavy infestations are seen.
Flower thrips	pest	Silvering and browning of flowers, poor pod set, deformed pods in Cowpea (kunde).	Plant early, avoid very late sowing and use recommended insecticides only when damage is severe.
Pod borers (Maruca and others)	pest	Holes in pods, webbing and damaged seeds inside pods.	Scout during flowering and early podding, and use recommended biopesticides or insecticides early when damage starts.
Cowpea weevil (in storage)	pest	Small holes in stored Cowpea (kunde) grain and powdery dust in bags.	Dry grain well, use airtight storage or treated storage technologies and clean stores between seasons.
Leaf spots and blights	disease	Brown or black spots on leaves; severe cases cause early leaf drop.	Use clean seed, rotate with non-legume crops and avoid overcrowding.
Root rots	disease	Plants of Cowpea (kunde) wilt and die, roots are dark and rotten in wet spots.	Improve drainage, avoid planting kunde in low, waterlogged areas and rotate fields.

### **Yields**

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
Smallholder rainfed (low input)	0.7	0.4	1	Local kunde types, little or no fertilizer, basic weeding.
Smallholder rainfed (improved management)	1.2	0.8	1.6	Improved Cowpea (kunde) varieties, recommended spacing and timely pest and weed management.
High input / irrigated	2	1.5	2.5	Good varieties with reliable water and strong pest control.

### **Season calendars**

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Semi-arid and medium rainfall areas (long rains)	Mar–Apr	Jun–Jul

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Semi-arid and medium rainfall areas (short rains)	Oct–Nov	Jan–Feb
TZ	Central and northern dry zones	Dec–Jan	Mar–Apr

### **Region suitability**

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
KE	ASAL (arid and semi-arid lands) and coastal lowlands	High
KE	Medium altitude mixed crop–livestock areas	High
KE	Very wet, high altitude zones	Low
TZ	Central plateau and northern drier zones	High
UG	Drier cattle corridor and mixed farming areas	Medium

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