

FarmLens Ltd

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



Crop details

Sword bean (Canavalia ensiformis)

Canavalia ensiformis

Family: Fabaceae

Categories

Legumes & Pulses

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Quick stats

Family	Fabaceae
Typical harvest	5.7 t/ha
Varieties	1
Pests and diseases	5
Seasons	1

Crop profile

Growth habit	climber
Days to harvest	120-180
Main uses	Green manure; pulse
Pollination	insect
Origin and where it grows	Tropics

Weather, soil and spacing

Best temperature	22 - 30 °C
Rainfall	900 - 1500 mm/yr
Altitude	0 - 1600 m
Best pH	5.5 - 6.8
Soil type	Light to medium soils
Row spacing	100 cm
Plant spacing	50 cm
Planting depth	3 cm
Seed rate	25 kg/ha

Simple notes for farmers

About the crop: This crop has a growth habit described as "climber". Harvest typically starts about 120-180 days after planting.

Main use: Farmers mostly grow this crop for green manure; pulse.

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

Where it grows: Tropics. Grouped under: Legumes & Pulses.

Best climate: 22 - 30 °C; 900 - 1500 mm/yr; up to about 1600 m a.s.l.

Soil: Best at pH 5.5 - 6.8; light to medium soils.

Farmer guide (Mwongozo wa Mkulima)

<u>Planting</u>	Direct-seed at onset of rains; provide trellis or allow to sprawl as green manure.
<u>Transplanting</u>	Not transplanted.
<u>Irrigation</u>	Rainfed in humid zones; irrigate during dry spells to support flowering/pod set.
<u>Fertigation</u>	Minimal N (fixing legume); ensure P and K; add S/Ca if deficient.
<u>Pest scouting</u>	Scout for pod borers and beetles; maintain sanitation and timely picking.
<u>Pruning and training</u>	Train vines on supports where seed yield is the goal.
<u>Harvest</u>	For green manure, incorporate at flowering; for grain, harvest when pods brown and seeds hard.
<u>Postharvest</u>	Dry seed to ~12% moisture; store cool/dry; cook/process thoroughly before food use.

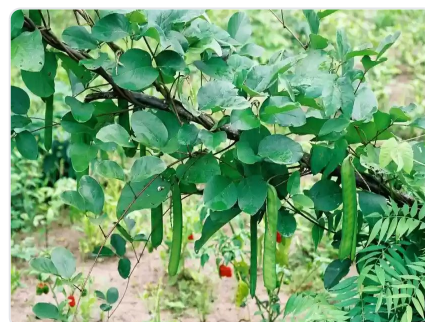
Nutrient schedule (Mbolea kwa Hatua)

#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
1	Basal	0	NPK 15-15-15	50 kg/ha	N: N/A, P?O?: N/A, K? O: N/A	Or DAP+MOP equivalent; keep away from seed inoculant
2	Early pod set (opt.)	40	Sulfate of potash (SOP)	40 kg/ha	N: N/A, P?O?: N/A, K? O: 20	Skip if soil K is adequate

Nutrient requirements

Nutrient	Stage	Amount	Unit
N	Basal	0	kg/ha
P?O?	Basal	20	kg/ha
K?O	Basal	20	kg/ha
N	Topdress	0	kg/ha
P?O?	Topdress	0	kg/ha
K?O	Topdress	20	kg/ha

Field images



Varieties

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
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Local Canavalia	KE	150	Vigorous
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Fertilizer recommendations

<u>Stage</u>	<u>Product</u>	<u>Rate</u>	<u>Notes</u>
Basal	NPK 15-15-15	50	Or banded P+K sources
Pod set	Sulfate of potash (SOP)	40	Apply only if K is low

Pests and diseases

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Pod borers	pest	Pod damage	Frequent picking; sanitation
Pod borers (Helicoverpa/Maruca)	pest	Bored pods; seed damage	Flower-pod scouting; threshold sprays; timely harvest
Leaf beetles	pest	Defoliation; shot-holes	Early control if severe; conserve natural enemies
Aphids	pest	Leaf curl; honeydew/sooty mold	Control ants; soft insecticides; encourage predators
Root rots (Rhizoctonia/Pythium)	disease	Damping-off; root lesions	Well-drained fields; seed treatment; avoid overwatering

Yields

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
green manure	8	4	12	Biomass (DM)
green manure (biomass DM)	8	4	12	Dry matter biomass
rainfed seed	1	0.6	1.8	Clean seed under good management

Season calendars

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Humid lowlands	Mar-Apr	Jul-Nov

Region suitability

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
KE	Humid lowlands	High
TZ	Coastal belt	High
UG	Lake Victoria basin	Medium

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