

## 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

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

#### Crop profile

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

#### Weather, soil and spacing

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

<b><u>Planting</u></b>	Direct-seed at onset of rains; provide trellis or allow to sprawl as green manure.
<b><u>Transplanting</u></b>	Not transplanted.
<b><u>Irrigation</u></b>	Rainfed in humid zones; irrigate during dry spells to support flowering/pod set.
<b><u>Fertigation</u></b>	Minimal N (fixing legume); ensure P and K; add S/Ca if deficient.
<b><u>Pest scouting</u></b>	Scout for pod borers and beetles; maintain sanitation and timely picking.
<b><u>Pruning and training</u></b>	Train vines on supports where seed yield is the goal.
<b><u>Harvest</u></b>	For green manure, incorporate at flowering; for grain, harvest when pods brown and seeds hard.
<b><u>Postharvest</u></b>	Dry seed to 712% 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**

Name	Country	Maturity (days)	Traits
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Local Canavalia	KE	150	Vigorous
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### **Fertilizer recommendations**

<b><u>Stage</u></b>	<b><u>Product</u></b>	<b><u>Rate</u></b>	<b><u>Notes</u></b>
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**

<b><u>Name</u></b>	<b><u>Type</u></b>	<b><u>Symptoms</u></b>	<b><u>Management</u></b>
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**

<b><u>System</u></b>	<b><u>Typical</u></b>	<b><u>Min</u></b>	<b><u>Max</u></b>	<b><u>Notes</u></b>
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**

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

### **Region suitability**

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