FarmLens Ltd

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Crop details

Pigeon pea

Cajanus cajan

Family: Fabaceae

Categories

Legumes & Pulses

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Quick stats

Family	Fabaceae
Typical harvest	1.6 t/ha
Varieties	48
Pests and diseases	96
Seasons	48

Crop profile

Growth habit	shrub
Days to harvest	180
Main uses	Green peas, dry grain for stews and porridge, and woody stems and leaves for animal feed and fuel.
Pollination	self
Origin and where it grows	Pigeon pea (mbaazi) is common in warm, semi-arid and medium rainfall areas of East Africa, often on field borders or mixed with cereals.

Weather, soil and spacing

Best temperature	18 - 30 °C
Rainfall	400 - 800 mm/yr
Altitude	0 - 1600 m
Best pH	5.5 - 7
Soil type	Well-drained sandy loam to loam soils; Pigeon pea (mbaazi) tolerates poorer, light soils better than many crops.
Row spacing	75 cm
Plant spacing	30 cm
Planting depth	4 cm
Seed rate	8 kg/ha

Simple notes for farmers

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

Main use: Farmers mostly grow this crop for green peas, dry grain for stews and porridge, and woody stems and leaves for animal feed and fuel..

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

Where it grows: Pigeon pea (mbaazi) is common in warm, semi-arid and medium rainfall areas of East Africa, often on field borders or mixed with cereals.. Grouped under: Legumes & Pulses.

Best climate: 18 - 30 °C; 400 - 800 mm/yr; up to about 1600 m a.s.l.

Soil: Best at pH 5.5 - 7; well-drained sandy loam to loam soils; pigeon pea (mbaazi) tolerates poorer, light soils better than many crops..

Farmer guide (Mwongozo wa Mkulima)

Planting	Plant Pigeon pea (mbaazi) at the onset of the rains. Place 2–3 seeds per hole along the row, cover with soil and thin to 1–2 strong plants per station.
Transplanting	Mbaazi is almost always direct seeded in the field, not transplanted.
Irrigation	Mbaazi is drought tolerant but still needs moisture for germination, flowering and pod filling. It can finish the crop on residual moisture after other crops are harvested.
Fertigation	As a legume, Pigeon pea (mbaazi) fixes nitrogen. Give a small starter phosphorus dose; extra nitrogen is usually not needed.
Pest scouting	Walk fields every 1–2 weeks. Look for pod borers, pod-sucking bugs, leaf spots and wilting plants.
Pruning and training	In perennial or ratoon systems, lightly prune old dry branches after harvest to encourage new shoots. Keep weeds low in the first 6–8 weeks.
Harvest	For green mbaazi, harvest pods when seeds are full and soft but still green. For dry grain, harvest when most pods are brown and rattle when shaken.
Postharvest	Dry pods or threshed grain of Pigeon pea (mbaazi) on clean tarpaulins. Dry until grains are hard, then store in dry, airtight containers or treated bags to prevent bruchids.

Nutrient schedule (Mbolea kwa Hatua)

#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
1	Basal at planting	0	NPK 10-24-10 or similar starter	40 kg/ha	N: 4, P?O?: 10, K?O: 4	Band fertilizer a short distance away from mbaazi seed, not directly in the planting hole.
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2	Optional K topdress (early flowering)	60	Muriate of potash (MOP) or NPK rich in K	20 kg/ha	N: 0, P?O?: 0, K?O: 12	Use on fields where Pigeon pea (mbaazi) is grown often and residues are removed.
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Nutrient requirements

Nutrient	Stage	Amount	Unit
N	Basal	10	kg/ha
P?O?	Basal	20	kg/ha
K?O	Basal	15	kg/ha
N	Topdress_early	0	kg/ha
P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	15	kg/ha
N	Basal	10	kg/ha
P?O?	Basal	20	kg/ha
K?O	Basal	15	kg/ha
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P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	15	kg/ha

Field images

Varieties

Name	Country	Maturity (days)	Traits
Early mbaazi variety – short duration	KE	140	Early Pigeon pea (mbaazi) for short rains; good for grain and some fuelwood.
Medium-duration mbaazi	TZ	170	Grown for both grain and firewood; fits well in mixed cereal–legume systems.
Local mbaazi landrace	KE	180	Traditional Pigeon pea (mbaazi) with preferred taste; more tolerant to local stresses but lower yielding than improved lines.
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Fertilizer recommendations

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Basal	NPK 10-24-10 or DAP (small dose)	40	Provides phosphorus for strong mbaazi roots and nodulation.
Topdress (optional K)	Muriate of potash (MOP)	20	Use mainly in K-deficient fields, especially where Pigeon pea (mbaazi) residues are removed.
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Pests and diseases

Name	Type	Symptoms	Management
Pod borers (Helicoverpa and others)	pest	Holes in pods, webbing and chewed Pigeon pea (mbaazi) seeds inside pods.	Plant early, scout from flowering, and use recommended biopesticides or insecticides at early podding if damage is starting.
Pod-sucking bugs	pest	Sunken or shriveled seeds, brown feeding spots on pods.	Avoid very late planting of mbaazi, keep field edges clean and use targeted sprays if numbers are high.
Aphids	pest	Clusters of small insects on young shoots of Pigeon pea (mbaazi), curling leaves and sticky honeydew.	Encourage natural enemies and use selective insecticides only when heavy infestations threaten the crop.
Wilt and root rots	disease	Sudden wilting and death of mbaazi plants; brown to black discoloured roots and stem bases.	Rotate with non-legumes, avoid poorly drained soils and use tolerant varieties where available.
Leaf spots and blights	disease	Spots on leaves that may join together, causing early leaf drop.	Use clean seed of Pigeon pea (mbaazi), avoid overcrowding and rotate crops.
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Yields

System	Typical	Min	Max	Notes
Smallholder rainfed (low input)	0.8	0.5	1.2	Local mbaazi types, little or no fertilizer, often intercropped with maize or sorghum.
Smallholder rainfed (improved management)	1.5	1	2	Improved Pigeon pea (mbaazi) varieties with good spacing, timely weeding and pest control.
High input / irrigated or ratoon systems	2.5	1.8	3	Well-managed mbaazi with reliable moisture and good pest management; can give grain over more than one season in ratoon systems.
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Season calendars

Country	Region	Planting	Harvest
KE	Semi-arid and coastal zones (long rains)	Mar–Apr	Oct–Dec
KE	Semi-arid zones (short rains)	Oct–Nov	May–Jul
TZ	Central and southern drier zones	Dec–Jan	Jun–Aug
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KE	Semi-arid and coastal zones (long rains)	Mar–Apr	Oct–Dec
KE	Semi-arid zones (short rains)	Oct–Nov	May–Jul
TZ	Central and southern drier zones	Dec–Jan	Jun–Aug
KE	Semi-arid and coastal zones (long rains)	Mar–Apr	Oct–Dec
KE	Semi-arid zones (short rains)	Oct–Nov	May–Jul

Country	Region	Planting	Harvest
TZ	Central and southern drier zones	Dec–Jan	Jun–Aug
KE	Semi-arid and coastal zones (long rains)	Mar–Apr	Oct–Dec
KE	Semi-arid zones (short rains)	Oct–Nov	May–Jul
TZ	Central and southern drier zones	Dec–Jan	Jun–Aug
KE	Semi-arid and coastal zones (long rains)	Mar–Apr	Oct–Dec
KE	Semi-arid zones (short rains)	Oct–Nov	May–Jul
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KE	Semi-arid and coastal zones (long rains)	Mar–Apr	Oct–Dec
KE	Semi-arid zones (short rains)	Oct–Nov	May–Jul
TZ	Central and southern drier zones	Dec–Jan	Jun–Aug

Region suitability

Country	Region	Suitability
KE	Coastal lowlands and semi-arid eastern Kenya	High
KE	Lower eastern mixed crop–livestock areas	High
KE	Very wet highland zones	Low
TZ	Central plateau and southern drier zones	High
UG	Drier mixed farming and cattle corridor areas	Medium

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