

FarmLens Ltd

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Crop details

Calliandra

Calliandra calothyrsus

Family: Fabaceae

Categories

Forages & Fodder

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Quick stats

<u>Family</u>	Fabaceae
<u>Typical harvest</u>	11.0 t/ha
<u>Varieties</u>	3
<u>Pests and diseases</u>	6
<u>Seasons</u>	0

Crop profile

<u>Growth habit</u>	perennial
<u>Days to harvest</u>	365
<u>Main uses</u>	High-protein fodder tree for cut-and-carry or hedgerows, fuelwood, green manure and soil conservation.
<u>Pollination</u>	insect
<u>Origin and where it grows</u>	Multipurpose fodder tree legume used across humid and sub-humid tropics, especially in East African highlands and mid-altitudes.

Weather, soil and spacing

<u>Best temperature</u>	20 - 28 °C
<u>Rainfall</u>	1000 - 3000 mm/yr
<u>Altitude</u>	0 - 2000 m
<u>Best pH</u>	5.5 - 7
<u>Soil type</u>	Prefers light to medium-textured, slightly acidic, well-drained soils but tolerates many low-fertility tropical soils.
<u>Row spacing</u>	100 cm
<u>Plant spacing</u>	50 cm
<u>Planting depth</u>	2 cm
<u>Seed rate</u>	5 kg/ha
<u>Nursery days</u>	60

Simple notes for farmers

About the crop: This crop is perennial; once planted it can keep producing for many years. Harvest typically starts about 365 days after planting.

Main use: Farmers mostly grow this crop for high-protein fodder tree for cut-and-carry or hedgerows, fuelwood, green manure and soil conservation..

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

Where it grows: Multipurpose fodder tree legume used across humid and sub-humid tropics, especially in East African highlands and mid-altitudes.. Grouped under: Forages & Fodder.

Best climate: 20 - 28 °C; 1000 - 3000 mm/yr; up to about 2000 m a.s.l.

Soil: Best at pH 5.5 - 7; prefers light to medium-textured, slightly acidic, well-drained soils but tolerates many low-fertility tropical soils..

Farmer guide (Mwongozo wa Mkulima)

<u>Planting</u>	Use scarified or hot-water soaked seed to improve germination. Raise seedlings in a nursery or sow directly in lines or pits at onset of rains on a well-prepared, moist seedbed.
<u>Transplanting</u>	Transplant bag-raised seedlings when 20–30 cm tall. Plant at same depth, firm soil around roots and water immediately; mulching helps early survival.
<u>Irrigation</u>	Maintain good moisture during establishment; once roots are deep, calliandra can bridge dry spells but grows best with regular rainfall or supplementary irrigation.
<u>Fertigation</u>	Emphasise P and K rather than N (legume fixes N). Split small PK dressings over the first year on poor soils to support root and nodule development.
<u>Pest scouting</u>	Check nurseries and young hedgerows for damping-off, termites, browsing damage and leaf-feeding caterpillars. On older trees, watch for psyllids on young flushes.
<u>Pruning and training</u>	For fodder, cut back to 0.5–1 m height to encourage leafy regrowth. Do not let plants become tall and woody where regular forage is needed.
<u>Harvest</u>	First light cut 8–12 months after planting. Thereafter harvest leafy shoots every 6–10 weeks depending on growth and rainfall, leaving some foliage for regrowth.
<u>Postharvest</u>	Feed fresh or wilt briefly and mix with grasses to reduce bloat risk. For hay, dry in thin layers and avoid rough handling that causes leaf shatter.

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 at planting	0	NPK 10-20-20 (or similar P-rich blend)	100 kg/ha	N: 10, P?O?: 20, K?O: 20	Place in planting pits or along rows and mix with soil before seeding/transplanting to avoid root burn.
2	Post-establishment PK support	90	NPK 0-20-20 or PK blend	80 kg/ha	N: 0, P?O?: 16, K?O: 16	Apply once plants are established and before the first heavy cutting, especially on light soils.
3	K replenishment (intensive cut-and-carry)	180	MOP (KCl) or sulfate of potash	60 kg/ha	N: 0, P?O?: 0, K?O: 36	Use where repeated harvesting exports large amounts of biomass from the field.

Nutrient requirements

<u>Nutrient</u>	<u>Stage</u>	<u>Amount</u>	<u>Unit</u>
N	Basal	0	kg/ha

<u>Nutrient</u>	<u>Stage</u>	<u>Amount</u>	<u>Unit</u>
P?O?	Basal	25	kg/ha
K?O	Basal	20	kg/ha
N	Mid_season	0	kg/ha
P?O?	Mid_season	10	kg/ha
K?O	Mid_season	30	kg/ha
N	Late_season	0	kg/ha
P?O?	Late_season	0	kg/ha
K?O	Late_season	20	kg/ha

Field images



Varieties

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
Highlands calliandra selection	KE	365	Adapted to coffee/dairy highland zones, good leaf yield and regrowth under frequent cutting.
Mid-altitude calliandra line	TZ	365	Performs well in mid-altitude fodder tree systems and alley cropping.
Local calliandra type	UG	365	Farmer-spread material used on boundaries, contour lines and around homesteads for fodder and fuelwood.

Fertilizer recommendations

<u>Stage</u>	<u>Product</u>	<u>Rate</u>	<u>Notes</u>
Basal	NPK 10-20-20	100	Apply in planting lines or pits before sowing or transplanting to support early establishment.
Mid-season (intensive systems)	PK blend (e.g. 0-20-20)	80	Use where calliandra is cut frequently for stall feeding and soils are low in P and K.
K replenishment	MOP (KCl) or sulfate of potash	60	Apply periodically on sandy or highly leached soils under intensive biomass removal.

Pests and diseases

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Calliandra psyllid and other sap-suckers	pest		Use tolerant material where available, avoid very dense, shaded stands and maintain plant vigour to recover after attacks.
Termites	pest		Reduce large termitaries near fields, avoid heavy piles of woody debris at bases and maintain good soil moisture at establishment.
Defoliating caterpillars	pest		Scout after rains when flushes appear; encourage birds and natural enemies; prune and remove heavily damaged shoots if needed.
Damping-off / nursery diseases	disease		Use well-drained nursery media, avoid overcrowding and overwatering, and rogue out diseased seedlings early.
Root and collar rots (waterlogging)	disease		Plant on well-drained sites or raised ridges; avoid prolonged waterlogging and compaction.
Nutritional/bloat issues in livestock	disorder		Introduce calliandra gradually, always mix with grasses or other forages and avoid feeding very large amounts to hungry animals at once.

Yields

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
Low-input hedgerows (DM)	5	3	7	Scattered lines on contours or boundaries with minimal fertilizer; used as supplementary fodder and green manure.
Managed fodder strips (DM)	10	6	14	Dense strips or blocks cut regularly for zero-grazing systems, with some PK fertilization and good moisture.
Intensive irrigated fodder (DM)	18	12	22	High-density plantings on fertile or manured soils with irrigation and frequent cutting for dairy feed.

Region suitability

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
KE	Highland and mid-altitude dairy/coffee zones, and suitable warm slopes with good drainage	N/A
TZ	Highlands and central corridor areas with 700–2000 mm rainfall and moderate temperatures	N/A
UG	Cattle corridor and highland dairy regions on well-drained soils	N/A

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