

Crop details

Leucaena

Leucaena leucocephala

Family: Fabaceae

Categories

Forages & Fodder

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Quick stats

Family	Fabaceae
Typical harvest	11.0 t/ha
Varieties	3
Pests and diseases	6
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Crop profile

Growth habit	perennial
Days to harvest	365
Main uses	High-protein forage (cut-and-carry, hedgerows, grazing), fuelwood, poles, green manure and alley cropping.
Pollination	insect
Origin and where it grows	Tropical and subtropical multi-purpose tree legume widely used in pasture, agroforestry and hedgerow systems.

Weather, soil and spacing

Best temperature	20 - 30 °C
Rainfall	700 - 1200 mm/yr
Altitude	0 - 1800 m
Best pH	6 - 7.5
Soil type	Deep, well-drained loams or sandy loams; tolerant of moderately poor soils once established but sensitive to very acidic, waterlogged sites.
Row spacing	100 cm
Plant spacing	50 cm
Planting depth	2 cm
Seed rate	6 kg/ha

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 forage (cut-and-carry, hedgerows, grazing), fuelwood, poles, green manure and alley cropping..

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

**Where it grows:** Tropical and subtropical multi-purpose tree legume widely used in pasture, agroforestry and hedgerow systems.. Grouped under: Forages & Fodder.

**Best climate:** 20 - 30 °C; 700 - 1200 mm/yr; up to about 1800 m a.s.l.

**Soil:** Best at pH 6 - 7.5; deep, well-drained loams or sandy loams; tolerant of moderately poor soils once established but sensitive to very acidic, waterlogged sites..

### **Farmer guide (Mwongozo wa Mkulima)**

<b><u>Planting</u></b>	Seed can be direct sown in lines or raised in a nursery and transplanted. Scarify or soak hard seed in hot water that has cooled before sowing. Plant into moist, well-prepared rows or pits.
<b><u>Transplanting</u></b>	Where seedlings are raised in bags or trays, transplant at 20–30 cm height with good root ball; plant at the same depth as in the nursery and water well.
<b><u>Irrigation</u></b>	Keep soil moist during establishment; once deep-rooted, Leucaena is drought-tolerant but regrowth between cuts improves with supplementary moisture.
<b><u>Fertigation</u></b>	Being a legume, Leucaena fixes N once nodulated. Focus nutrients on P, K and S at planting and occasionally in high-removal systems; avoid heavy N.
<b><u>Pest scouting</u></b>	Scout seedlings for damping-off, termites and browsing damage. On established trees, monitor for Leucaena psyllid and defoliators on new flushes.
<b><u>Pruning and training</u></b>	For hedgerows and cut-and-carry, cut back (coppice) stems 0.5–1.0 m above ground to encourage leafy regrowth. Avoid letting plants become tall, woody trees if forage is the main goal.
<b><u>Harvest</u></b>	For cut-and-carry, harvest leafy shoots every 6–10 weeks depending on growth and rainfall. Avoid over-stripping leaves; leave some foliage for regrowth.
<b><u>Postharvest</u></b>	Feed fresh or wilt slightly to reduce bloat risk. When making hay, mix with grasses to improve drying and prevent leaf shatter. Do not feed large amounts alone to naive animals at once.

### **Nutrient schedule (Mbolea kwa Hatua)**

#	<b><u>Stage</u></b>	<b><u>DAP</u></b>	<b><u>Product</u></b>	<b><u>Rate</u></b>	<b><u>Targets (kg/ha)</u></b>	<b><u>Notes</u></b>
1	Basal at planting	0	NPK 10-20-20 (or similar P-rich blend) + lime/compost as needed	100 kg/ha	N: 10, P?O?: 20, K?O: 20	Apply in planting rows or pits and mix with soil before sowing/transplanting; avoid direct contact with seeds or roots.
2	Post-establishment PK boost	90	NPK 0-20-20 or similar PK blend	80 kg/ha	N: 0, P?O?: 16, K?O: 16	Apply once plants are well established and before or just after the first heavy cut.
3	K replenishment (intensive systems)	180	MOP (KCl) or sulfate of potash	60 kg/ha	N: 0, P?O?: 0, K?O: 36	Use where many cuttings remove large biomass and soils are low to moderate in K.

### **Nutrient requirements**

<b><u>Nutrient</u></b>	<b><u>Stage</u></b>	<b><u>Amount</u></b>	<b><u>Unit</u></b>
N	Basal	0	kg/ha
P?O?	Basal	25	kg/ha

<u>Nutrient</u>	<u>Stage</u>	<u>Amount</u>	<u>Unit</u>
K <sub>2</sub> O	Basal	20	kg/ha
N	Mid_season	0	kg/ha
P <sub>2</sub> O <sub>5</sub>	Mid_season	10	kg/ha
K <sub>2</sub> O	Mid_season	30	kg/ha
N	Late_season	0	kg/ha
P <sub>2</sub> O <sub>5</sub>	Late_season	0	kg/ha
K <sub>2</sub> O	Late_season	20	kg/ha

## **Varieties**

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
Leucaena forage type (K8/K28-type selection)	KE	365	Good regrowth and high leaf yield in cut-and-carry and hedgerow systems.
Psyllid-tolerant Leucaena hybrid/selection	TZ	365	Improved tolerance to Leucaena psyllid, suited to warm coastal and mid-altitude zones.
Local Leucaena (subabool) type	UG	365	Farmer-spread material used on homesteads, boundaries and smallholder dairies.

## **Fertilizer recommendations**

<u>Stage</u>	<u>Product</u>	<u>Rate</u>	<u>Notes</u>
Basal	NPK 10-20-20 (or similar)	100	Apply in planting lines or pits before seeding or transplanting to support establishment.
Mid-season (intensive cut-and-carry)	PK blend (e.g. 0-20-20)	80	Apply in systems with heavy forage removal, especially on light soils.
K replenishment	MOP (KCl) or sulfate of potash	60	Use on low-K soils or where cut fodder is frequently exported from the field.

## **Pests and diseases**

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Leucaena psyllid	pest	Yellowing, curling and distortion of young leaves, honeydew and sooty mould, defoliation of new flushes.	Use more tolerant varieties or species, avoid large pure stands in high-pressure zones, encourage natural enemies and maintain tree vigour.
Termites	pest	Attack on roots and stems, ring-barking, lodging and death of young trees in dry conditions.	Avoid planting directly over large termitaries, maintain soil moisture where possible and remove dead wood that harbours colonies.

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Defoliating caterpillars (local complexes)	pest	Chewed leaves and defoliation, particularly on young shoots; reduced regrowth between cuts.	Scout regrowth flushes, encourage birds and natural predators, and cut back heavily damaged branches to stimulate fresh foliage.
Damping-off / seedling rots	disease	Seedlings collapse at the base in nurseries or poorly drained spots; patches of missing plants.	Use well-drained nursery media, avoid overwatering, and thin seedlings to reduce humidity.
Root and collar rots (in waterlogged soils)	disease	Stunted, yellow trees that die back; dark, rotten tissues at collar and root zone.	Plant on well-drained sites or ridges, avoid heavy, compacted clays and improve drainage where possible.
Nutritional/bloat issues in livestock	disorder	When fed in high amounts alone, some animals may show bloat or reduced intake due to high protein and mimosine content.	Introduce Leucaena gradually, mix with grasses and other forages and avoid sudden large intakes by hungry animals.

## Yields

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
Low-input rainfed hedgerows (DM)	5	3	7	Scattered hedgerows or field borders with minimal fertilization under smallholder conditions.
Managed forage strips (DM)	10	6	14	Densely planted strips with regular cutting and some P/K fertilization; often combined with grasses.
Intensive irrigated/very fertile (DM)	18	12	22	High-density planting with irrigation or high rainfall and good fertility; frequent cut-and-carry for dairies.

## Season calendars

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Warm mid-altitude and lowland dairy/beef zones	At onset of long or short rains so seedlings establish before long dry spells.	First light cut about 6–8 months after planting
TZ	Coastal hinterlands, central corridor and suitable mid-altitudes	Early in the rainy season for good establishment and deep rooting.	Cut-and-carry or hedgerow trimming throughout the year
UG	Cattle corridor and mid-altitude dairy belts	At onset of main rains on well-drained soils around homesteads and paddocks.	Green forage available most of the year on well-managed land

**Region suitability**

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
KE	Eastern, coastal, Rift and western livestock zones with warm climates and seasonal rainfall	High
TZ	Central corridor, coastal belt and suitable mid-altitude livestock areas	High
UG	Cattle corridor and surrounding mixed crop–livestock areas on well-drained soils	High

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.