

# FarmLens Ltd

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



Crop details

## Pearl millet

*Pennisetum glaucum*

Family: Poaceae

Categories

Cereals & Pseudocereals

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### Quick stats

<b>Family</b>	Poaceae
<b>Typical harvest</b>	2.2 t/ha
<b>Varieties</b>	48
<b>Pests and diseases</b>	96
<b>Seasons</b>	48

### Crop profile

<b>Growth habit</b>	annual
<b>Days to harvest</b>	85
<b>Main uses</b>	Grain for ugali and porridge, animal feed, cut-and-carry fodder, and dry stover for animals.
<b>Pollination</b>	wind
<b>Origin and where it grows</b>	Pearl millet (mawele) is widely grown in hot, dry and sandy areas of East Africa where maize often fails.

### Weather, soil and spacing

<b>Best temperature</b>	25 - 35 °C
<b>Rainfall</b>	300 - 600 mm/yr
<b>Altitude</b>	0 - 1500 m
<b>Best pH</b>	5.5 - 7
<b>Soil type</b>	Light, sandy or sandy loam soils; Pearl millet (mawele) grows well where soils are poor and dry, as long as they are not waterlogged.
<b>Row spacing</b>	60 cm
<b>Plant spacing</b>	25 cm
<b>Planting depth</b>	3 cm
<b>Seed rate</b>	4 kg/ha

### Simple notes for farmers

**About the crop:** This crop is annual; it grows and is harvested in one season. Harvest typically starts about 85 days after planting.

**Main use:** Farmers mostly grow this crop for grain for ugali and porridge, animal feed, cut-and-carry fodder, and dry stover for animals..

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

**Where it grows:** Pearl millet (mawele) is widely grown in hot, dry and sandy areas of East Africa where maize often fails..  
Grouped under: Cereals & Pseudocereals.







#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
3	Late topdress (pre-heading)	35	Urea 46% N (if rainfall is reliable)	30 kg/ha	N: 14, P?O?: 0, K?O: 0	Apply before Pearl millet (mawele) heads appear and when soil is moist.
3	Late topdress (pre-heading)	35	Urea 46% N (if rainfall is reliable)	30 kg/ha	N: 14, P?O?: 0, K?O: 0	Apply before Pearl millet (mawele) heads appear and when soil is moist.
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### **Nutrient requirements**

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

<u>Nutrient</u>	<u>Stage</u>	<u>Amount</u>	<u>Unit</u>
P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	10	kg/ha
N	Topdress_late	10	kg/ha
P?O?	Topdress_late	0	kg/ha
K?O	Topdress_late	10	kg/ha
N	Basal	20	kg/ha
P?O?	Basal	20	kg/ha
K?O	Basal	10	kg/ha
N	Topdress_early	20	kg/ha
P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	10	kg/ha
N	Topdress_late	10	kg/ha
P?O?	Topdress_late	0	kg/ha
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P?O?	Topdress_early	0	kg/ha
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N	Topdress_late	10	kg/ha
P?O?	Topdress_late	0	kg/ha
K?O	Topdress_late	10	kg/ha
N	Basal	20	kg/ha
P?O?	Basal	20	kg/ha
K?O	Basal	10	kg/ha
N	Topdress_early	20	kg/ha
P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	10	kg/ha
N	Topdress_late	10	kg/ha

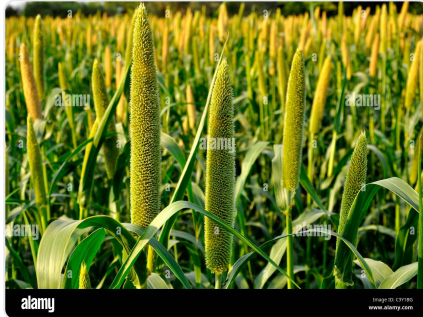
<u>Nutrient</u>	<u>Stage</u>	<u>Amount</u>	<u>Unit</u>
P?O?	Topdress_late	0	kg/ha
K?O	Topdress_late	10	kg/ha
N	Basal	20	kg/ha
P?O?	Basal	20	kg/ha
K?O	Basal	10	kg/ha
N	Topdress_early	20	kg/ha
P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	10	kg/ha
N	Topdress_late	10	kg/ha
P?O?	Topdress_late	0	kg/ha
K?O	Topdress_late	10	kg/ha
N	Basal	20	kg/ha
P?O?	Basal	20	kg/ha
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P?O?	Topdress_late	0	kg/ha
K?O	Topdress_late	10	kg/ha

### Field images



### Varieties

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
Improved mawele hybrid A	TZ	80	Early maturing Pearl millet (mawele), good grain and fodder yield, suited to low rainfall.
Open-pollinated mawele variety B	KE	90	Stable yield, good for grain and stover in semi-arid areas.
Local mawele landrace	KE	95	Well adapted to local conditions, preferred taste, lower yield than improved varieties.
Improved mawele hybrid A	TZ	80	Early maturing Pearl millet (mawele), good grain and fodder yield, suited to low rainfall.
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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	DAP 18-46-0	50	Provides phosphorus and some nitrogen for early Pearl millet (mawele) growth.
Topdress (tillering)	CAN 26% N	40	Supports tillering and early stem growth.
Topdress (pre-heading)	Urea 46% N	30	Apply with expected rainfall so nitrogen moves into the soil.
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## **Pests and diseases**

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Shoot fly	pest	Central shoot of young Pearl millet (mawele) dries up (“dead heart”) and many non-productive tillers appear.	Plant early with the rains, avoid very late planting and use seed treatment where recommended.
Stem borers	pest	Shot holes on leaves, dead hearts and tunneling in stems; weak or broken stems.	Destroy stover after harvest, rotate with non-cereal crops and plant on time.
Head worms and ear caterpillars	pest	Feeding in the ear, webbing, damaged and shriveled grains.	Plant Pearl millet (mawele) in a block with neighbours, monitor at heading and harvest promptly.
Birds	pest	Grains pecked from heads, exposed panicles and fallen grain under plants.	Use bird scaring, synchronized planting and early-maturing varieties where birds are a serious problem.
Downy mildew	disease	Chlorotic streaks on leaves, stunted plants, malformed “green ear” instead of normal heads.	Use resistant Pearl millet (mawele) varieties, clean seed and crop rotation.

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Smut disease	disease	Black powdery masses replacing individual grains or parts of the head.	Use clean, treated seed and remove and destroy affected heads.
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## Yields

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
Smallholder rainfed (low input)	1	0.5	1.5	Local mawele seed, little or no fertilizer, basic weeding.
Smallholder rainfed (improved management)	2	1.2	3	Improved Pearl millet (mawele) varieties with recommended fertilizer and timely weed control.
High input / irrigated	3.5	2.5	4.5	Good varieties, irrigation and full fertilizer and pest management.
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### Season calendars

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Semi-arid lowlands (long rains)	Mar–Apr	Jul–Aug
KE	Semi-arid lowlands (short rains)	Oct–Nov	Feb–Mar
TZ	Central and northern dry zones	Dec–Jan	May–Jun
KE	Semi-arid lowlands (long rains)	Mar–Apr	Jul–Aug
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### **Region suitability**

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
KE	ASAL (arid and semi-arid lands)	High
KE	Coastal drylands	High
KE	High rainfall highlands	Low
TZ	Central semi-arid plateau	High
UG	Drier cattle corridor areas	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.