FarmLens Ltd

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

Crop details

Wheat

Triticum aestivum

Family: Poaceae

Categories

Cereals & Pseudocereals

Generated: 2026-04-11 04:45

Quick stats

Family	Poaceae
Typical harvest	3.7 t/ha
Varieties	48
Pests and diseases	80
Seasons	48

Crop profile

Growth habit	annual
Days to harvest	120
Main uses	Flour for chapati, bread, mandazi, noodles and animal feed (bran).
Pollination	self
Origin and where it grows	Wheat (ngano) is mainly grown in cool, highland areas with reliable rainfall or irrigation.

Weather, soil and spacing

Best temperature	15 - 25 °C
Rainfall	400 - 800 mm/yr
Altitude	200 - 3000 m
Best pH	6.3 - 7
Soil type	Deep, well-drained loam or clay loam with good organic matter.
Row spacing	20 cm
Plant spacing	5 cm
Planting depth	3 cm
Seed rate	100 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 120 days after planting.

Main use: Farmers mostly grow this crop for flour for chapati, bread, mandazi, noodles and animal feed (bran)..

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

Where it grows: Wheat (ngano) is mainly grown in cool, highland areas with reliable rainfall or irrigation.. Grouped under: Cereals & Pseudocereals.

Best climate: 15 - 25 °C; 400 - 800 mm/yr; up to about 3000 m a.s.l.

Soil: Best at pH 6.3 - 7; deep, well-drained loam or clay loam with good organic matter..

Farmer guide (Mwongozo wa Mkulima)

Planting	Prepare a fine, firm seedbed. Drill Wheat (ngano) in rows or broadcast seed evenly, then lightly cover with soil. Plant at the start of the cool, rainy season.
Transplanting	Wheat (ngano) is almost always direct seeded, not transplanted.
Irrigation	Keep soil moist at germination and tillering, and avoid moisture stress at flowering and grain filling. Do not over-irrigate heavy soils.
Fertigation	With drip or sprinkler, split nitrogen into 2–3 small doses through the season instead of one big application.
Pest scouting	Walk the field every 7–10 days. Look for rusts (yellow/brown patches), leaf spots, aphids on stems and heads, and lodging (falling plants).
Pruning and training	No pruning needed. Focus on timely weeding, especially before the crop canopy closes.
Harvest	Harvest when most Wheat (ngano) heads are golden and grains are hard and no longer dent easily with a fingernail.
Postharvest	Cut and dry the crop in the field or on clean tarpaulins, thresh when dry and store grain in clean, dry and insect-free bags or silos.

Nutrient schedule (Mbolea kwa Hatua)

#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
1	Basal at planting	0	DAP 18-46-0 or NPK with phosphorus	80 kg/ha	N: 14, P?O?: 37, K?O: 0	Place fertilizer slightly below and to the side of Wheat (ngano) seed, not in direct contact.
1	Basal at planting	0	DAP 18-46-0 or NPK with phosphorus	80 kg/ha	N: 14, P?O?: 37, K?O: 0	Place fertilizer slightly below and to the side of Wheat (ngano) seed, not in direct contact.
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2	Topdress at tillering	25	CAN 26% N or urea	80 kg/ha	N: 21, P?O?: 0, K?O: 0	Apply when plants have 3–4 tillers, on moist soil.
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3	Topdress before stem elongation	40	Urea 46% N (if season remains good)	50 kg/ha	N: 23, P?O?: 0, K?O: 0	Apply before booting and when rain is expected so nitrogen can move into the soil.
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Nutrient requirements

Nutrient	Stage	Amount	Unit
N	Basal	40	kg/ha
P?O?	Basal	30	kg/ha
K?O	Basal	20	kg/ha
N	Topdress_tillering	40	kg/ha
P?O?	Topdress_tillering	0	kg/ha
K?O	Topdress_tillering	10	kg/ha
N	Topdress_stem_elongation	20	kg/ha
P?O?	Topdress_stem_elongation	0	kg/ha
K?O	Topdress_stem_elongation	10	kg/ha
N	Basal	40	kg/ha
P?O?	Basal	30	kg/ha
K?O	Basal	20	kg/ha
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K?O	Topdress_tillering	10	kg/ha
N	Topdress_stem_elongation	20	kg/ha

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P?O?	Topdress_stem_elongation	0	kg/ha
K?O	Topdress_stem_elongation	10	kg/ha
N	Basal	40	kg/ha
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Field images



Varieties

Name	Country	Maturity (days)	Traits
Improved bread wheat – highland	KE	130	Adapted to cool highlands, good baking quality, responsive to fertilizer.
Improved bread wheat – medium altitude	TZ	115	Medium-maturing Wheat (ngano) suited to mid-altitude, moderate rainfall areas.
Local ngano landrace	KE	125	Well adapted to local conditions, stable but lower yield than improved varieties.
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Fertilizer recommendations

Stage	Product	Rate	Notes
Basal	DAP 18-46-0	80	Provides phosphorus and some nitrogen for early Wheat (ngano) growth.
Topdress (tillering)	CAN 26% N	80	Supports tiller formation and early canopy growth.
Topdress (pre-booting)	Urea 46% N	50	Apply with good soil moisture to improve grain number and size.
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Topdress (pre-booting)	Urea 46% N	50	Apply with good soil moisture to improve grain number and size.
Basal	DAP 18-46-0	80	Provides phosphorus and some nitrogen for early Wheat (ngano) growth.
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Pests and diseases

Name	Type	Symptoms	Management
Rusts (stem, leaf and stripe rust)	disease	Small orange, brown or yellow pustules on leaves and stems; leaves dry early and plants may lodge.	Plant rust-resistant Wheat (ngano) varieties, avoid late planting and use recommended fungicides where necessary.

Name	Type	Symptoms	Management
Septoria and other leaf spots	disease	Brown or grey spots on leaves, sometimes with yellow halos; leaves die from the bottom upwards.	Use clean seed, rotate crops and plant varieties with good disease tolerance.
Aphids	pest	Green or black insects on stems and heads, sticky honeydew and sometimes sooty mould.	Encourage natural enemies, avoid excessive nitrogen, and use selective insecticides only when populations are high.
Armyworms and cutworms	pest	Chewing damage on leaves, cut seedlings and thin patches in the field.	Scout early in the season, control weeds and use recommended emergency controls when needed.
Fusarium head blight	disease	Bleached spikelets in heads, shriveled “tombstone” grains.	Rotate with non-cereal crops and avoid very high nitrogen and continuous Wheat (ngano).
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Yields

System	Typical	Min	Max	Notes
Smallholder rainfed (low input)	1.5	1	2.5	Local or saved seed, little fertilizer and basic weed control.
Smallholder rainfed (improved management)	3.5	2.5	5	Improved Wheat (ngano) varieties, recommended fertilizer and good disease control.
Irrigated / high input farms	6	4	8	High-yield varieties, irrigation and full nutrient and disease management.
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Season calendars

Country	Region	Planting	Harvest
KE	Highland Wheat (ngano) zones – long rains	Mar–Apr	Aug–Sep
KE	Irrigated schemes / cool off-season	May–Jun	Oct–Nov
TZ	Northern and southern highlands	Jun–Jul	Nov–Dec
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KE	Irrigated schemes / cool off-season	May–Jun	Oct–Nov
TZ	Northern and southern highlands	Jun–Jul	Nov–Dec
KE	Highland Wheat (ngano) zones – long rains	Mar–Apr	Aug–Sep
KE	Irrigated schemes / cool off-season	May–Jun	Oct–Nov
TZ	Northern and southern highlands	Jun–Jul	Nov–Dec
KE	Highland Wheat (ngano) zones – long rains	Mar–Apr	Aug–Sep
KE	Irrigated schemes / cool off-season	May–Jun	Oct–Nov
TZ	Northern and southern highlands	Jun–Jul	Nov–Dec

Region suitability

Country	Region	Suitability
KE	Hot, humid lowlands	Low
KE	Mt. Kenya and Aberdare slopes	High
KE	Rift Valley highland Wheat (ngano) belt	High
TZ	Northern and southern highlands	High
UG	Highland Wheat (ngano) areas	Medium

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