

FarmLens Ltd

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



Crop details

Kale / Collard

Brassica oleracea var. acephala

Family: Brassicaceae

Categories

Vegetables

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Quick stats

Family	Brassicaceae
Typical harvest	23.0 t/ha
Varieties	48
Pests and diseases	112
Seasons	48

Crop profile

Growth habit	annual
Days to harvest	120
Main uses	Leaves cooked as vegetables, often fried or boiled and eaten with ugali or other staples.
Pollination	insect
Origin and where it grows	Kale / Collard (sukuma wiki) is one of the most common leafy vegetables around homes, towns and irrigation schemes across East Africa.

Weather, soil and spacing

Best temperature	15 - 22 °C
Rainfall	600 - 900 mm/yr
Altitude	800 - 2600 m
Best pH	6.2 - 6.8
Soil type	Deep, fertile, well-drained loam or sandy loam rich in organic matter so Kale / Collard (sukuma wiki) can keep producing leaves.
Row spacing	60 cm
Plant spacing	45 cm
Planting depth	1.5 cm
Seed rate	0.5 kg/ha
Nursery days	30

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 leaves cooked as vegetables, often fried or boiled and eaten with ugali or other staples..

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

Where it grows: Kale / Collard (sukuma wiki) is one of the most common leafy vegetables around homes, towns and irrigation schemes across East Africa.. Grouped under: Vegetables.

#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
2	Early topdress	21	CAN 26% N	100 kg/ha	N: 26, P?O?: 0, K?O: 0	Apply between rows when soil is moist; irrigate or lightly incorporate.
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3	Topdress after first harvests	45	Urea 46% N or CAN + SOP	80 kg/ha	N: 30, P?O?: 0, K?O: 20	Supports continuous leaf production of Kale / Collard (sukuma wiki). Repeat smaller doses based on crop colour and vigour.
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Nutrient requirements

<u>Nutrient</u>	<u>Stage</u>	<u>Amount</u>	<u>Unit</u>
N	Basal	50	kg/ha
P?O?	Basal	60	kg/ha
K?O	Basal	60	kg/ha
N	Topdress_early	50	kg/ha
P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	40	kg/ha
N	Topdress_after_pickings	40	kg/ha
P?O?	Topdress_after_pickings	0	kg/ha
K?O	Topdress_after_pickings	40	kg/ha
N	Basal	50	kg/ha
P?O?	Basal	60	kg/ha
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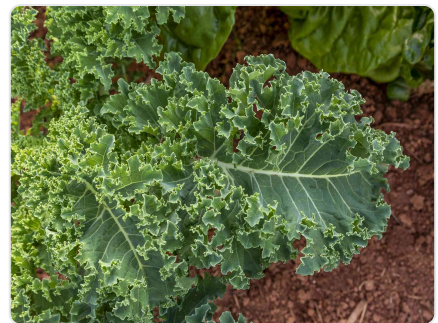
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N	Topdress_after_pickings	40	kg/ha
P?O?	Topdress_after_pickings	0	kg/ha
K?O	Topdress_after_pickings	40	kg/ha
N	Basal	50	kg/ha
P?O?	Basal	60	kg/ha
K?O	Basal	60	kg/ha
N	Topdress_early	50	kg/ha
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Field images



Varieties

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
Sukuma wiki local	KE	75	Traditional type, tolerant and widely adapted, moderate yield.
Improved collard-type sukuma wiki	KE	80	Broad leaves, good regrowth and higher yield with good management.
Hybrid kale/collard	TZ	80	Uniform plants, dark green leaves and good market quality.
Sukuma wiki local	KE	75	Traditional type, tolerant and widely adapted, moderate yield.
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Fertilizer recommendations

<u>Stage</u>	<u>Product</u>	<u>Rate</u>	<u>Notes</u>
Basal	NPK 17-17-17 or 15-15-15	250	Gives balanced nutrients for early sukuma wiki growth.
Topdress (N source)	CAN 26% N or urea	100	Apply one or two times during vegetative growth and regrowth.
Topdress (K source)	Sulfate of potash (SOP) or high-K NPK	80	Improves leaf quality and strength.
Organic	Well-rotted manure or compost	8000	Apply before planting to boost soil organic matter and water holding.
Basal	NPK 17-17-17 or 15-15-15	250	Gives balanced nutrients for early sukuma wiki growth.

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Topdress (K source)	Sulfate of potash (SOP) or high-K NPK	80	Improves leaf quality and strength.
Organic	Well-rotted manure or compost	8000	Apply before planting to boost soil organic matter and water holding.
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Pests and diseases

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Diamondback moth	pest	Small green caterpillars making small windows and holes in Kale / Collard (sukuma wiki) leaves, often starting in nurseries.	Use netting on nurseries, destroy crop residues, rotate with non-cabbage crops and use Bt or other selective insecticides when needed.

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Cutworms	pest	Seedlings or young sukuma wiki plants cut at or just above ground level.	Prepare land early, control weeds and apply spot treatments or baits if damage is high.
Aphids	pest	Clusters of small insects on young leaves and stems of Kale / Collard (sukuma wiki), curling leaves and sticky honeydew.	Encourage natural enemies, wash off with water jets on small plots and use selective insecticides/biopesticides when severe.
Flea beetles	pest	Many small round holes, mainly on young leaves of sukuma wiki; leaves look shot-holed.	Keep nursery and field weed-free, use fine netting on nurseries and apply recommended insecticides if necessary.
Black rot	disease	Yellow V-shaped patches on edges of Kale / Collard (sukuma wiki) leaves, dark veins and stunted plants.	Use clean seed, avoid overhead irrigation late in the day and rotate with non-brassica crops.
Downy mildew	disease	Yellow patches on upper leaf surface with grey-white mould underneath, especially in cool, wet conditions.	Improve air circulation, avoid overcrowding and use protectant fungicides when conditions favour disease.
Alternaria leaf spot	disease	Dark spots with concentric rings on leaves of Kale / Collard (sukuma wiki), leading to leaf drop.	Remove infected leaves, avoid overhead irrigation where possible and use fungicides when necessary.
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Yields

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
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Backyard / low-input sukuma wiki	12	8	15	Small amounts of manure, little fertilizer, irregular picking and basic pest control.
Open-field Kale / Collard (sukuma wiki), improved management	22	15	30	Good varieties, regular picking, recommended fertilizer and good pest management.
Irrigated, high-input sukuma wiki	35	25	45	Continuous picking with irrigation, fertigation and strong pest and disease control.
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Backyard / low-input sukuma wiki	12	8	15	Small amounts of manure, little fertilizer, irregular picking and basic pest control.
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Season calendars

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Highland and peri-urban sukuma wiki zones (rainfed)	Most of the year where moisture is available	First picking from about 6–8 weeks after transplanting, then regular harvests.
KE	Irrigated Kale / Collard (sukuma wiki) belts	Any time with reliable water	Continuous pickings for several months.
TZ	Highland and mid-altitude vegetable zones	Cooler, moist periods or with irrigation	Multiple pickings starting 1½–2 months after transplanting.
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Region suitability

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
KE	Highland and mid-altitude vegetable belts	High
KE	Peri-urban areas near towns	High
KE	Very hot, dry lowlands without irrigation	Low
TZ	Highland and irrigated Kale / Collard (sukuma wiki) areas	High

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
UG	Mid- to high-altitude vegetable-growing zones	High

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