FarmLens Ltd

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Crop details

Jute Mallow

Corchorus olitorius

Family: Malvaceae

Categories

Vegetables

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Quick stats

Family	Malvaceae
Typical harvest	12.3 t/ha
Varieties	48
Pests and diseases	96
Seasons	48

Crop profile

Growth habit	annual
Days to harvest	60
Main uses	Young leaves cooked as a sticky vegetable (mrenda/mto) eaten with ugali and other staples; sometimes dried for later use.
Pollination	self
Origin and where it grows	Jute mallow (mrenda/mto) is a common African leafy vegetable, grown in home gardens and small fields in warm and moderately wet areas of East Africa.

Weather, soil and spacing

Best temperature	20 - 30 °C
Rainfall	600 - 900 mm/yr
Altitude	0 - 1800 m
Best pH	6 - 7
Soil type	Well-drained loam or sandy loam with good organic matter so Jute mallow (mrenda/mto) can grow fast and leafy.
Row spacing	30 cm
Plant spacing	15 cm
Planting depth	1 cm
Seed rate	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 60 days after planting.

Main use: Farmers mostly grow this crop for young leaves cooked as a sticky vegetable (mrenda/mto) eaten with ugali and other staples; sometimes dried for later use..

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

Where it grows: Jute mallow (mrenda/mto) is a common African leafy vegetable, grown in home gardens and small fields in warm and moderately wet areas of East Africa.. Grouped under: Vegetables.

Best climate: 20 - 30 °C; 600 - 900 mm/yr; up to about 1800 m a.s.l.

Soil: Best at pH 6 - 7; well-drained loam or sandy loam with good organic matter so jute mallow (mrenda/mto) can grow fast and leafy..

Farmer guide (Mwongozo wa Mkulima)

Planting	Prepare a fine seedbed. Sow Jute mallow (mrenda/mto) seed in shallow rows, cover lightly with soil and water gently. Thin crowded seedlings so plants have enough space to branch and produce many leaves.
Transplanting	If nursery is used, transplant healthy seedlings 3–4 weeks after sowing, watering before lifting and after planting.
Irrigation	Keep soil moist during germination and early growth. Later, regular watering after each harvest helps plants regrow quickly and maintain soft leaves.
Fertigation	Under drip, apply small, frequent doses of nitrogen and potassium to support leafy growth of Jute mallow (mrenda/mto), but avoid very heavy nitrogen close to harvest.
Pest scouting	Check fields weekly for leaf-eating caterpillars, aphids and leaf spots on Jute mallow (mrenda/mto). Inspect young shoots and lower leaves carefully.
Pruning and training	Begin harvesting by cutting the soft tops to encourage branching. Later, harvest leaves and tender shoots regularly instead of uprooting plants.
Harvest	Start harvesting 4–6 weeks after emergence when plants are 20–30 cm tall. Harvest in the cool hours for best colour and stickiness.
Postharvest	Keep harvested Jute mallow (mrenda/mto) in shade, avoid crushing and transport quickly. For drying, spread thinly on clean mats or racks in shade with good air flow.

Nutrient schedule (Mbolea kwa Hatua)

#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
1	Basal before sowing	0	NPK 17-17-17 or 15-15-15	100 kg/ha	N: 17, P?O?: 17, K?O: 17	Broadcast lightly or apply in bands and incorporate into top 10–15 cm of soil before sowing Jute mallow (mrenda/mto).
1	Basal before sowing	0	NPK 17-17-17 or 15-15-15	100 kg/ha	N: 17, P?O?: 17, K?O: 17	Broadcast lightly or apply in bands and incorporate into top 10–15 cm of soil before sowing Jute mallow (mrenda/mto).
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2	Early topdress	14	CAN 26% N	60 kg/ha	N: 16, P?O?: 0, K?O: 0	Apply between rows on moist soil and lightly cover or water in.
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2	Early topdress	14	CAN 26% N	60 kg/ha	N: 16, P?O?: 0, K?O: 0	Apply between rows on moist soil and lightly cover or water in.
3	Topdress after first major cut	35	Urea 46% N or CAN	40 kg/ha	N: 18, P?O?: 0, K?O: 0	Apply after cutting to encourage strong regrowth.
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Nutrient requirements

Nutrient	Stage	Amount	Unit
N	Basal	25	kg/ha
P?O?	Basal	35	kg/ha
K?O	Basal	35	kg/ha
N	Topdress_early	25	kg/ha
P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	20	kg/ha
N	Topdress_after_cut	20	kg/ha
P?O?	Topdress_after_cut	0	kg/ha
K?O	Topdress_after_cut	20	kg/ha
N	Basal	25	kg/ha

Nutrient	Stage	Amount	Unit
P?O?	Basal	35	kg/ha
K?O	Basal	35	kg/ha
N	Topdress_early	25	kg/ha
P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	20	kg/ha
N	Topdress_after_cut	20	kg/ha
P?O?	Topdress_after_cut	0	kg/ha
K?O	Topdress_after_cut	20	kg/ha
N	Basal	25	kg/ha
P?O?	Basal	35	kg/ha
K?O	Basal	35	kg/ha
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K?O	Topdress_early	20	kg/ha
N	Topdress_after_cut	20	kg/ha
P?O?	Topdress_after_cut	0	kg/ha
K?O	Topdress_after_cut	20	kg/ha
N	Basal	25	kg/ha
P?O?	Basal	35	kg/ha
K?O	Basal	35	kg/ha
N	Topdress_early	25	kg/ha
P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	20	kg/ha
N	Topdress_after_cut	20	kg/ha
P?O?	Topdress_after_cut	0	kg/ha
K?O	Topdress_after_cut	20	kg/ha
N	Basal	25	kg/ha
P?O?	Basal	35	kg/ha
K?O	Basal	35	kg/ha
N	Topdress_early	25	kg/ha

Nutrient	Stage	Amount	Unit
P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	20	kg/ha
N	Topdress_after_cut	20	kg/ha
P?O?	Topdress_after_cut	0	kg/ha
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N	Basal	25	kg/ha
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K?O	Topdress_after_cut	20	kg/ha
N	Basal	25	kg/ha
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K?O	Basal	35	kg/ha
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P?O?	Topdress_early	0	kg/ha
K?O	Topdress_early	20	kg/ha
N	Topdress_after_cut	20	kg/ha

Nutrient	Stage	Amount	Unit
P?O?	Topdress_after_cut	0	kg/ha
K?O	Topdress_after_cut	20	kg/ha
N	Basal	25	kg/ha
P?O?	Basal	35	kg/ha
K?O	Basal	35	kg/ha
N	Topdress_early	25	kg/ha
P?O?	Topdress_early	0	kg/ha
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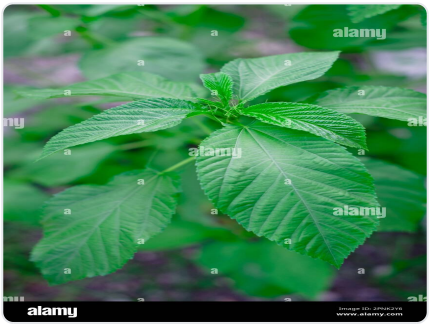
N	Topdress_after_cut	20	kg/ha
P?O?	Topdress_after_cut	0	kg/ha
K?O	Topdress_after_cut	20	kg/ha

Field images



Varieties

Name	Country	Maturity (days)	Traits
Local Jute mallow (mrenda)	KE	55	Common in homesteads, good taste and stickiness in sauces.
Improved leaf Jute mallow	KE	60	More uniform plants, larger leaves and higher yields.
Local Jute mallow (mto) selections	TZ	60	Adapted to warm, low to mid-altitude areas and tolerant to short dry spells.
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Fertilizer recommendations

Stage	Product	Rate	Notes
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.

Stage	**Product**	**Rate**	**Notes**
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.

Stage	Product	Rate	Notes
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
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Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.
Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.
Basal	NPK 17-17-17 or 15-15-15	100	Balanced start for Jute mallow (mrenda/mto) at planting.

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Topdress (N source)	CAN 26% N or urea	60	Apply once or twice based on leaf colour and crop vigour.
Organic	Well-rotted manure or compost	6000	Apply and mix into soil before planting to improve soil structure and water holding.

Pests and diseases

Name	Type	Symptoms	Management
Leaf-eating caterpillars	pest	Holes and torn leaves on Jute mallow (mrenda/mto), sometimes damage on growing tips.	Handpick on small plots, conserve natural enemies and use Bt or other recommended insecticides when necessary.
Aphids	pest	Clusters of small insects on tender shoots and young leaves, curling and yellowing leaves and sticky honeydew.	Avoid excess nitrogen, encourage natural enemies and treat with selective insecticides or biopesticides based on scouting.
Whiteflies	pest	Small white insects on the underside of leaves causing yellowing and sooty mould growth.	Monitor regularly, remove heavily infested leaves and use recommended insecticides when numbers are high.
Spider mites	pest	Fine speckling, bronzing and webbing on leaves, especially in hot, dry weather.	Maintain some humidity, avoid dusty conditions and use miticides/biopesticides where needed.
Leaf spots and blights	disease	Small brown or dark spots on leaves of Jute mallow (mrenda/mto) that can merge and cause yellowing.	Avoid overhead irrigation late in the day, improve airflow, rotate crops and remove badly affected leaves.
Root and stem rots	disease	Sudden wilting, yellowing and rotting at the stem base, often in waterlogged spots.	Grow on raised beds or well-drained soils and avoid overwatering or standing water.
Leaf-eating caterpillars	pest	Holes and torn leaves on Jute mallow (mrenda/mto), sometimes damage on growing tips.	Handpick on small plots, conserve natural enemies and use Bt or other recommended insecticides when necessary.
Aphids	pest	Clusters of small insects on tender shoots and young leaves, curling and yellowing leaves and sticky honeydew.	Avoid excess nitrogen, encourage natural enemies and treat with selective insecticides or biopesticides based on scouting.
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Leaf spots and blights	disease	Small brown or dark spots on leaves of Jute mallow (mrenda/mto) that can merge and cause yellowing.	Avoid overhead irrigation late in the day, improve airflow, rotate crops and remove badly affected leaves.
Root and stem rots	disease	Sudden wilting, yellowing and rotting at the stem base, often in waterlogged spots.	Grow on raised beds or well-drained soils and avoid overwatering or standing water.
Leaf-eating caterpillars	pest	Holes and torn leaves on Jute mallow (mrenda/mto), sometimes damage on growing tips.	Handpick on small plots, conserve natural enemies and use Bt or other recommended insecticides when necessary.

Name	Type	Symptoms	Management
Aphids	pest	Clusters of small insects on tender shoots and young leaves, curling and yellowing leaves and sticky honeydew.	Avoid excess nitrogen, encourage natural enemies and treat with selective insecticides or biopesticides based on scouting.
Whiteflies	pest	Small white insects on the underside of leaves causing yellowing and sooty mould growth.	Monitor regularly, remove heavily infested leaves and use recommended insecticides when numbers are high.
Spider mites	pest	Fine speckling, bronzing and webbing on leaves, especially in hot, dry weather.	Maintain some humidity, avoid dusty conditions and use miticides/biopesticides where needed.
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Leaf-eating caterpillars	pest	Holes and torn leaves on Jute mallow (mrenda/mto), sometimes damage on growing tips.	Handpick on small plots, conserve natural enemies and use Bt or other recommended insecticides when necessary.
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Name	Type	Symptoms	Management
Root and stem rots	disease	Sudden wilting, yellowing and rotting at the stem base, often in waterlogged spots.	Grow on raised beds or well-drained soils and avoid overwatering or standing water.
Leaf-eating caterpillars	pest	Holes and torn leaves on Jute mallow (mrenda/mto), sometimes damage on growing tips.	Handpick on small plots, conserve natural enemies and use Bt or other recommended insecticides when necessary.
Aphids	pest	Clusters of small insects on tender shoots and young leaves, curling and yellowing leaves and sticky honeydew.	Avoid excess nitrogen, encourage natural enemies and treat with selective insecticides or biopesticides based on scouting.
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Yields

System	Typical	Min	Max	Notes
Backyard / low-input Jute mallow (mrenda/mto)	7	4	10	Some manure, little fertilizer, irregular picking and basic pest control.
Open-field Jute mallow, improved management	12	8	16	Good spacing, regular weeding, recommended fertilizer and frequent harvests.
Irrigated or high-input Jute mallow (mrenda/mto)	18	12	25	Irrigation, fertigation and careful pest and disease control with repeated cuts.
Backyard / low-input Jute mallow (mrenda/mto)	7	4	10	Some manure, little fertilizer, irregular picking and basic pest control.
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Irrigated or high-input Jute mallow (mrenda/mto)	18	12	25	Irrigation, fertigation and careful pest and disease control with repeated cuts.
Backyard / low-input Jute mallow (mrenda/mto)	7	4	10	Some manure, little fertilizer, irregular picking and basic pest control.
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System	Typical	Min	Max	Notes
Backyard / low-input Jute mallow (mrenda/mto)	7	4	10	Some manure, little fertilizer, irregular picking and basic pest control.
Open-field Jute mallow, improved management	12	8	16	Good spacing, regular weeding, recommended fertilizer and frequent harvests.
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Season calendars

Country	Region	Planting	Harvest
KE	Lowland and mid-altitude Jute mallow (mrenda/mto) zones	Rainy seasons or with supplementary irrigation	4–8 weeks after emergence with repeated pickings.

Country	Region	Planting	Harvest
KE	Peri-urban irrigated vegetable belts	Most of the year with reliable water	Continuous harvest over several weeks.
TZ	Coastal and mid-altitude vegetable zones	Warm, wet periods and under irrigation	Multiple cuttings starting around 5–7 weeks after sowing.
KE	Lowland and mid-altitude Jute mallow (mrenda/mto) zones	Rainy seasons or with supplementary irrigation	4–8 weeks after emergence with repeated pickings.
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Region suitability

Country	Region	Suitability
KE	Lowland and mid-altitude smallholder vegetable zones	High
KE	Peri-urban homestead and irrigation schemes	High
TZ	Coastal and lake basin Jute mallow (mrenda/mto) areas	High
UG	Warm lowland and mid-altitude vegetable zones	High