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Crop details

Watermelon (tikiti maji)

Citrullus lanatus

Family: Cucurbitaceae

Categories

Fruits & Nuts

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Quick stats

Family	Cucurbitaceae
Typical harvest	25.7 t/ha
Varieties	3
Pests and diseases	5
Seasons	3

Crop profile

Growth habit	climber
Days to harvest	90
Main uses	Fresh fruit eaten raw, juice, fruit salads and roadside sales.
Pollination	insect
Origin and where it grows	Watermelon (tikiti maji) is widely grown in warm and dry to semi-humid parts of East Africa, especially under irrigation or in sandy riverbeds.

Weather, soil and spacing

Best temperature	22 - 30 °C
Rainfall	500 - 700 mm/yr
Altitude	0 - 1500 m
Best pH	6 - 6.8
Soil type	Light, sandy to sandy-loam soils that warm up quickly and drain well. Watermelon (tikiti maji) prefers deep soils with good organic matter.
Row spacing	200 cm
Plant spacing	80 cm
Planting depth	3 cm
Seed rate	3 kg/ha

Simple notes for farmers

About the crop: This crop has a growth habit described as "climber". Harvest typically starts about 90 days after planting.

Main use: Farmers mostly grow this crop for fresh fruit eaten raw, juice, fruit salads and roadside sales..

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

Where it grows: Watermelon (tikiti maji) is widely grown in warm and dry to semi-humid parts of East Africa, especially under irrigation or in sandy riverbeds.. Grouped under: Fruits & Nuts.

Best climate: 22 - 30 °C; 500 - 700 mm/yr; up to about 1500 m a.s.l.

Soil: Best at pH 6 - 6.8; light, sandy to sandy-loam soils that warm up quickly and drain well. watermelon (tikiti maji) prefers deep soils with good organic matter..

Farmer guide (Mwongozo wa Mkulima)

Planting	Prepare well-tilled, weed-free land. Plant Watermelon (tikiti maji) directly in the field at the start of the rains or when irrigation is available. Place 2–3 seeds per station at about three fingers deep and thin later to one strong plant.
Transplanting	Can also be raised in trays and transplanted carefully with a soil ball, but most farmers direct-seed.
Irrigation	Keep soil moist at germination and early growth. Avoid stress at flowering and fruit setting. Reduce irrigation as fruits approach full size to improve sweetness and reduce splitting.
Fertigation	With drip, start with more nitrogen for leafy growth and change to higher potassium as flowering and fruit filling begin. Apply small doses frequently.
Pest scouting	Check leaves and young shoots weekly for aphids, leafminers and beetles, and fruits for fruit flies and chewing damage. Also watch for leaf spots and powdery mildew.
Pruning and training	Normally vines are left to spread. Remove very late, weak or diseased vines and excess fruits on small plants so that remaining fruits grow bigger.
Harvest	Harvest when the fruit belly (where it rests on the soil) turns from white to creamy yellow, the tendril near the fruit has dried, and the fruit makes a dull sound when tapped. Do not wait until vines are completely dry.
Postharvest	Cut fruits with a short stalk instead of pulling. Keep out of direct sun after harvest and avoid dropping or rolling fruits roughly to prevent cracking.

Nutrient schedule (Mbolea kwa Hatua)

#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
1	Basal at planting	0	NPK 17-17-17 or similar	150 kg/ha	N: 25, P?O?: 25, K?O: 25	Apply along the row or around hills and cover lightly before seeding Watermelon (tikiti maji).
2	Early vine growth	21	CAN 26% N or urea (light)	60 kg/ha	N: 16, P?O?: 0, K?O: 0	Side-dress near plants when vines start to run; avoid fertilizer touching stems.
3	Pre-flowering boost	35	NPK 12-12-24 or high-K blend	80 kg/ha	N: 10, P?O?: 10, K?O: 16	Encourages flowering and early fruit set.
4	Fruit filling high K	50	Sulfate of potash (SOP) or other K source	60 kg/ha	N: 0, P?O?: 0, K?O: 30	Improves sweetness and rind strength of Watermelon (tikiti maji).

Nutrient requirements

Nutrient	Stage	Amount	Unit
N	Basal	40	kg/ha
P?O?	Basal	40	kg/ha
K?O	Basal	30	kg/ha
N	Early_growth	30	kg/ha

Nutrient	Stage	Amount	Unit
P?O?	Early_growth	0	kg/ha
K?O	Early_growth	20	kg/ha
N	Fruiting	20	kg/ha
P?O?	Fruiting	0	kg/ha
K?O	Fruiting	40	kg/ha

Varieties

Name	Country	Maturity (days)	Traits
Sugar Baby–type	KE	75	Small, round fruits with sweet red flesh; good for local markets.
Crimson Sweet–type	TZ	85	Oblong fruits, striped rind, firm red flesh; widely grown under irrigation.
Charleston Grey–type	UG	90	Elongated, large fruits suited to open-field production.

Fertilizer recommendations

Stage	Product	Rate	Notes
Basal	Well-rotted farmyard manure	8000	Mixed into planting rows or hills before planting Watermelon (tikiti maji).
Basal (inorganic)	NPK 17-17-17	150	Provides starter NPK for early growth.
Topdress (early)	CAN 26% N	60	Applied 2–3 weeks after emergence when vines start to run.
Topdress (fruiting)	High-K fertilizer (e.g., 12-12-24 or SOP blend)	80	Supports fruit filling and sweetness.

Pests and diseases

Name	Type	Symptoms	Management
Aphids	pest	Clusters on tender shoots, curled leaves and sticky honeydew with sooty mould.	Encourage natural enemies, avoid over-fertilizing with nitrogen and use soaps or selective insecticides when numbers are high.
Leafminers and beetles	pest	Silvery tunnels in leaves, holes and ragged leaf edges, slow growth when damage is heavy.	Early scouting, removal of heavily damaged leaves and use of recommended insecticides or biopesticides when needed.
Fruit flies (on ripe fruit)	pest	Stings on rind, internal rotting and maggots in cracked fruits.	Collect and bury or destroy cracked and damaged fruits; use bait traps where pressure is high.
Downy and powdery mildew	disease	Yellow patches or white powder on leaves, leading to early leaf drying and poor fruit filling.	Plant in open, well-aerated fields, avoid overhead irrigation late in the day and apply recommended fungicides/biocontrols at first signs.

Name	Type	Symptoms	Management
Fusarium wilt and vine declines	disease	Sudden wilting of vines, browning in the stem and roots, often patchy in the field.	Practice crop rotation, use clean seed and avoid planting Watermelon (tikiti maji) repeatedly on the same field.

Yields

System	Typical	Min	Max	Notes
Rainfed smallholder Watermelon (tikiti maji)	12	8	18	Limited fertilizer and no irrigation; yields strongly affected by rainfall.
Irrigated smallholder production	25	15	35	Good seed, fertilizer and pest control under furrow or drip.
Intensive commercial Watermelon (tikiti maji)	40	30	50	High plant population, drip irrigation and carefully planned nutrition.

Season calendars

Country	Region	Planting	Harvest
KE	Arid and semi-arid irrigation schemes	Any time with irrigation; often planned for holiday and dry-season markets.	About 2.5–3 months after planting.
KE	Coastal and lower mid-altitude zones	Onset of short or long rains on well-drained, sandy soils.	Late in the rainy season and early dry season.
TZ	Central and coastal plains with irrigation	Staggered planting to target market windows under irrigation.	2.5–3 months after planting depending on varie

Region suitability

Country	Region	Suitability
KE	Coastal belt and lower eastern/southern drylands	High
TZ	Central semi-arid plains and irrigated valleys	High
UG	Warm lowland areas with irrigation or light soils	Medium

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