

FarmLens Ltd

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

Crop details

Pyrethrum

Tanacetum cinerariifolium

Family: Asteraceae

Categories

Oil & Industrial

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Quick stats

Family	Asteraceae
Typical harvest	0.9 t/ha
Varieties	3
Pests and diseases	6
Seasons	3

Crop profile

Growth habit	perennial
Days to harvest	365
Main uses	Dried flowers for extraction of natural pyrethrins used in insecticides; some cottage use as dried spray.
Pollination	insect
Origin and where it grows	Cool highland crop grown mainly in temperate and high-altitude tropical regions with reliable moisture and good drainage.

Weather, soil and spacing

Best temperature	12 - 22 °C
Rainfall	900 - 1300 mm/yr
Altitude	1500 - 2800 m
Best pH	6 - 7
Soil type	Deep, well-drained volcanic loams or loam soils with good organic matter and friable structure.
Row spacing	60 cm
Plant spacing	45 cm
Planting depth	1 cm
Seed rate	1 kg/ha
Nursery days	60

Simple notes for farmers

About the crop: This crop is perennial; once planted it can keep producing for many years. Harvest typically starts about 365 days after planting.

Main use: Farmers mostly grow this crop for dried flowers for extraction of natural pyrethrins used in insecticides; some cottage use as dried spray..

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

Where it grows: Cool highland crop grown mainly in temperate and high-altitude tropical regions with reliable moisture and good drainage.. Grouped under: Oil & Industrial.

Best climate: 12 - 22 °C; 900 - 1300 mm/yr; up to about 2800 m a.s.l.

Soil: Best at pH 6 - 7; deep, well-drained volcanic loams or loam soils with good organic matter and friable structure..

Farmer guide (Mwongozo wa Mkulima)

<u>Planting</u>	Raise seedlings in a cool, well-managed nursery or trays and transplant when 6–8 leaf stage. Plant in moist, well-prepared beds at correct spacing.
<u>Transplanting</u>	Transplant on a cool, cloudy day or late afternoon. Water seedlings well before lifting and after transplanting, and mulch around crowns.
<u>Irrigation</u>	Keep soil moist but not waterlogged, especially during establishment and spike/flower development. Avoid long dry spells which reduce flower yield.
<u>Fertigation</u>	Where drip is available, apply small, regular doses of N and K from early growth through peak flowering while avoiding lush, disease-prone growth.
<u>Pest scouting</u>	Scout for leaf spots, crown and root rots, aphids, thrips and caterpillars. Remove diseased plants promptly and maintain open, aerated canopies.
<u>Pruning and training</u>	Remove dead leaves and spent flower stalks to encourage new flowering shoots. Keep beds weed-free and avoid smothering crowns.
<u>Harvest</u>	Pick flower heads when fully open but petals still firm and white, before browning. Multiple pickings are done every few days during peak flushes.
<u>Postharvest</u>	Dry flowers quickly under shade or low-temperature dryers to preserve pyrethrin content and colour. Store dry flowers in cool, dry, well-ventilated conditions in breathable bags.

Nutrient schedule (Mbolea kwa Hatua)

#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
1	Basal at planting/transplanting	0	NPK 17-17-17 + compost	150 kg/ha (plus 5–8 t/ha compost)	N: 26, P?O? : 26, K?O: 26	Band or broadcast and incorporate into topsoil before transplanting seedlings.
2	Early growth topdress	45	CAN 26% N	100 kg/ha	N: 26, P?O? : 0, K?O: 0	Apply around plants on moist soil, then lightly earth up or mulch.
3	Flowering/flush support (optional)	120	NPK 20-10-10 or similar	70 kg/ha	N: 14, P?O? : 7, K?O: 7	Apply after a heavy picking flush or at start of main flowering season in high-producing fields.

Nutrient requirements

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

<u>Nutrient</u>	<u>Stage</u>	<u>Amount</u>	<u>Unit</u>
K ₂ O	Basal	30	kg/ha
N	Early_growth	30	kg/ha
P ₂ O ₅	Early_growth	0	kg/ha
K ₂ O	Early_growth	20	kg/ha
N	After_harvest_flush	20	kg/ha
P ₂ O ₅	After_harvest_flush	0	kg/ha
K ₂ O	After_harvest_flush	30	kg/ha

Varieties

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
Highland pyrethrum selection	KE	365	High pyrethrin content, suited to cool highland zones with regular picking.
Early-flowering pyrethrum type	TZ	330	Earlier establishment and flowering for shorter cool seasons.
Local pyrethrum landrace	UG	360	Adapted to highland homestead plots, used for local insecticidal preparations.

Fertilizer recommendations

<u>Stage</u>	<u>Product</u>	<u>Rate</u>	<u>Notes</u>
Basal	NPK 17-17-17 + compost	150	Apply before or at transplanting with 5–8 t/ha compost or well-rotted manure.
Early growth	CAN 26% N	100	Apply 6–8 weeks after transplanting when plants are well established.
After heavy pick	NPK 20-10-10	70	Light dressing after a major flowering/picking period in intensively managed fields.

Pests and diseases

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Aphids	pest	Colonies on young shoots and flower stalks, sticky honeydew and sooty mould; distorted growth.	Encourage natural enemies, avoid heavy nitrogen that favours aphids, and spot-manage severe patches where necessary.
Thrips	pest	Silvery patches and speckling on leaves and flower heads, deformed petals and reduced flower quality.	Maintain good field hygiene, avoid excessive dust and moisture stress, and monitor flower heads during peak flushes.
Cutworms and soil insects	pest	Seedlings cut at base or missing plants in newly transplanted fields.	Well-prepared, weed-free beds before transplanting; where severe, spot treatments and replanting of affected gaps.

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Leaf spots / blights	disease	Brown or dark lesions on leaves, sometimes with yellow halo; premature leaf senescence.	Improve airflow with correct spacing, avoid overhead irrigation late in the day, and remove heavily infected debris.
Crown and root rots	disease	Yellowing and wilting plants, rotted crowns or roots in wet patches; plants easily pulled out.	Ensure well-drained soils, avoid waterlogging, raise beds in heavy soils, and remove dead plants promptly.
Powdery mildew (cool, humid periods)	disease	White powdery growth on leaves and stems, reduced vigour and flowering in severe infections.	Maintain open canopies, avoid overcrowding and excessive N, and remove heavily infected plant parts.

Yields

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
Low-input rainfed (dried flowers)	0.4	0.2	0.6	Smallholder fields with limited fertilizer and irregular picking; yields spread over many pickings.
Managed highland (dried flowers)	0.8	0.5	1	Improved varieties, balanced NPK and good weed control; regular picking during flowering peaks.
Intensive well-fertilized (dried flowers)	1.5	1	2	High plant density, good nutrition and moisture, and careful harvest/handling for industrial extraction.

Season calendars

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Cool highlands (e.g. Rift highlands, high elevation zones)	At onset of long or short rains in cool highland zones, avoiding very hot or extremely wet periods.	Light picking may start
TZ	Northern and southern highlands	Start of cool rainy season in highland areas with good drainage.	Multiple picking flushes
UG	High altitude belts with cool temperatures and reliable rainfall	At onset of main rains in highland communities growing pyrethrum.	Perennial picking cycle

Region suitability

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
KE	Rift Valley and other highland zones above ~1,800 m with cool climates	High

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
TZ	Northern and southern highlands with cool, moist conditions	High
UG	Highland belts around key upland districts with cool temperatures	High

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