

Crop details

Categories

Passion fruit (passion)

Fruits & Nuts

Passiflora edulis

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Family: Passifloraceae

Quick stats

Family	Passifloraceae
Typical harvest	18.7 t/ha
Varieties	3
Pests and diseases	6
Seasons	3

Crop profile

Growth habit	climber
Days to harvest	365
Main uses	Fresh fruit, juice, flavouring for desserts and drinks; vines can also provide some fodder after pruning.
Pollination	insect
Origin and where it grows	Passion fruit (passion) grows well in cool to warm highland and mid-altitude areas of East Africa with good rainfall and support for vines.

Weather, soil and spacing

Best temperature	18 - 28 °C
Rainfall	1000 - 1500 mm/yr
Altitude	1000 - 2200 m
Best pH	5.8 - 6.5
Soil type	Deep, well-drained loam or sandy loam with plenty of organic matter. Passion fruit (passion) dislikes very heavy, waterlogged soils.
Row spacing	300 cm
Plant spacing	200 cm
Planting depth	30 cm
Seed rate	kg/ha (check local recommendation)
Nursery days	60

Simple notes for farmers

About the crop: This crop has a growth habit described as "climber". Harvest typically starts about 365 days after planting.

Main use: Farmers mostly grow this crop for fresh fruit, juice, flavouring for desserts and drinks; vines can also provide some fodder after pruning..

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

Where it grows: Passion fruit (passion) grows well in cool to warm highland and mid-altitude areas of East Africa with good rainfall and support for vines.. Grouped under: Fruits & Nuts.

Best climate: 18 - 28 °C; 1000 - 1500 mm/yr; up to about 2200 m a.s.l.

Soil: Best at pH 5.8 - 6.5; deep, well-drained loam or sandy loam with plenty of organic matter. passion fruit (passion) dislikes very heavy, waterlogged soils..

Farmer guide (Mwongozo wa Mkulima)

<u>Planting</u>	Raise seedlings or use rooted cuttings. Plant Passion fruit (passion) at the start of the rains next to posts or wires. Use large, manured holes and firm the soil around the plant. Install the trellis before vines become long.
<u>Transplanting</u>	Transplant when seedlings are strong and hardened. Do not disturb roots too much. Water immediately after transplanting.
<u>Irrigation</u>	Keep soil moist but not flooded, especially during flowering and fruit filling. In dry areas, drip or spot irrigation helps maintain continuous flowering and fruiting.
<u>Fertigation</u>	Under drip, apply small, regular doses of nitrogen and potassium during growth and fruiting. Reduce heavy nitrogen late in the season to avoid overly vegetative vines.
<u>Pest scouting</u>	Walk along the trellis every week and check leaves, flowers and fruits for aphids, fruit flies, woodiness symptoms and leaf spots. Remove and destroy badly diseased or malformed fruits.
<u>Pruning and training</u>	Train Passion fruit (passion) to a single stem up to the wire, then allow 2–4 main arms along the trellis. Remove weak, tangled and very old shoots to keep the vine open and productive.
<u>Harvest</u>	Harvest when fruits have full colour (purple or yellow, depending on type) and start to wrinkle or drop when fully ripe. For fresh market, pick when fully coloured but still firm.
<u>Postharvest</u>	Collect fruits gently into clean crates. Keep in shade and avoid wetting fruits. Do not pack in sacks to prevent bruising and juice loss.

Nutrient schedule (Mbolea kwa Hatua)

#	<u>Stage</u>	<u>DAP</u>	<u>Product</u>	<u>Rate</u>	<u>Targets</u> <u>(kg/ha)</u>	<u>Notes</u>
1	Basal at planting	0	Well-rotted manure + P fertilizer (e.g., DAP or TSP)	8 kg/hole manure + 50–100 g P fertilizer	N: 0, P?O? : 0, K?O: 0	Place manure and P in each Passion fruit (passion) hole, mix with topsoil and avoid direct contact with young roots.
2	Early growth topdress	45	CAN 26% N or NPK 17-17-17 (light)	40 g/plant	N: 0, P?O? : 0, K?O: 0	Apply in a ring 20–30 cm away from the stem.
3	Pre-flowering feed	90	NPK 17-17-17 or 15-15-15	60 g/plant	N: 0, P?O? : 0, K?O: 0	Strengthens vines and supports flowering.
4	Fruit filling high K	150	High-K fertilizer (e.g., NPK 12-12-24 or SOP blend)	80 g/plant	N: 0, P?O? : 0, K?O: 0	Improves fruit size, juice content and skin strength.

Nutrient requirements

<u>Nutrient</u>	<u>Stage</u>	<u>Amount</u>	<u>Unit</u>
N	Establishment	40	kg/ha
P ₂ O ₅	Establishment	50	kg/ha
K ₂ O	Establishment	40	kg/ha
N	Early_bearing	60	kg/ha
P ₂ O ₅	Early_bearing	20	kg/ha
K ₂ O	Early_bearing	70	kg/ha
N	Full_bearing	80	kg/ha
P ₂ O ₅	Full_bearing	25	kg/ha
K ₂ O	Full_bearing	100	kg/ha

Varieties

<u>Name</u>	<u>Country</u>	<u>Maturity (days)</u>	<u>Traits</u>
Purple passion (highland type)	KE	270	Best in cooler highlands; strong flavour and aroma, good for fresh juice.
Yellow passion (low to mid-altitude type)	TZ	270	More tolerant to warmth and some diseases; widely used for juice.
Improved KPF-type hybrids	KE	270	Selected for disease tolerance, high yield and good juice quality.

Fertilizer recommendations

<u>Stage</u>	<u>Product</u>	<u>Rate</u>	<u>Notes</u>
Basal	Well-rotted farmyard manure	8000	Applied in and around planting holes before or at planting.
Vegetative	CAN 26% N	60	Split into 2–3 small dressings during early growth along the row.
Flowering and fruiting	NPK 17-17-17 or high-K blend	120	Given in several small applications during heavy flowering and fruit set.

Pests and diseases

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Aphids and whiteflies	pest	Clusters on young shoots and leaves, leaf curling, honeydew and sooty mould.	Encourage natural enemies, avoid overuse of broad-spectrum insecticides and use soaps or selective sprays when needed.
Fruit flies	pest	Stings on the fruit, rotting pulp and maggots, premature fruit drop.	Use field sanitation, bait traps and recommended fruit fly control products.

<u>Name</u>	<u>Type</u>	<u>Symptoms</u>	<u>Management</u>
Mites	pest	Fine yellow speckling, bronzing of leaves and defoliation during dry conditions.	Maintain good moisture, avoid dusty conditions and use specific miticides or biopesticides when serious.
Passion fruit woodiness–like virus complex	disease	Distorted leaves, mottling and thick, hard fruits with small pulp cavity.	Use clean planting material, control aphids as vectors and rogue out badly affected vines.
Brown spot and leaf/fruit spots	disease	Brown or black spots on leaves, stems and fruits; fruits may crack.	Prune vines for better airflow, avoid overhead irrigation in the evening and apply fungicides/biopesticides during wet periods.
Root and collar rots	disease	Yellowing, wilting and sudden death, often starting on waterlogged or compacted spots.	Plant on raised beds or ridges, avoid waterlogging and improve drainage.

Yields

<u>System</u>	<u>Typical</u>	<u>Min</u>	<u>Max</u>	<u>Notes</u>
Homestead Passion fruit (passion) on simple trellis	8	5	12	Few vines, limited fertilizer and basic disease control.
Smallholder trellised passion orchard	18	12	25	Good planting material, manuring/fertilizer and regular pruning and spraying.
Intensive irrigated passion orchard	30	20	40	High input system with drip, fertigation and strong pest and disease management.

Season calendars

<u>Country</u>	<u>Region</u>	<u>Planting</u>	<u>Harvest</u>
KE	Cool and moist highland Passion fruit (passion) zones	Onset of long or short rains so vines establish with moisture.	Continuous harvest once vines start bearing, with peaks after r
TZ	Northern and southern highlands	Start of main rainy season on well-drained slopes.	Spread through the year after first fruiting, depending on plant
UG	Mid-altitude and high rainfall zones	Early rainy season to avoid dry stress at establishment.	Nearly year-round with peaks in drier, sunny months.

Region suitability

<u>Country</u>	<u>Region</u>	<u>Suitability</u>
KE	Central and Rift Valley highlands	High
TZ	Northern and southern highlands	High
UG	High rainfall mid-altitude and highland areas	High

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