FarmLens Ltd

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Crop details

Gypsophila (baby's breath)

Gypsophila paniculata

Family: Caryophyllaceae

Categories

Oil & Industrial

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Quick stats

Family	Caryophyllaceae
Typical harvest	6.0 t/ha
Varieties	3
Pests and diseases	9
Seasons	3

Crop profile

Growth habit	perennial
Days to harvest	365
Main uses	Cut flower filler in bouquets and arrangements, dried flower and decorative use.
Pollination	insect
Origin and where it grows	Cool-season floriculture crop grown in highland/temperate areas, often under greenhouse or net-house conditions.

Weather, soil and spacing

Best temperature	10 - 20 °C
Rainfall	600 - 800 mm/yr
Altitude	1200 - 2600 m
Best pH	6.5 - 7.5
Soil type	Well-drained, light to medium-textured loams or sandy loams; prefers "sweet" (near-neutral) soils and is sensitive to waterlogging.
Row spacing	40 cm
Plant spacing	20 cm
Planting depth	2 cm
Seed rate	0.5 kg/ha
Nursery days	35

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 cut flower filler in bouquets and arrangements, dried flower and decorative use..

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

Where it grows: Cool-season floriculture crop grown in highland/temperate areas, often under greenhouse or net-house conditions.. Grouped under: Oil & Industrial.

Best climate: 10 - 20 °C; 600 - 800 mm/yr; up to about 2600 m a.s.l.

Soil: Best at pH 6.5 - 7.5; well-drained, light to medium-textured loams or sandy loams; prefers “sweet” (near-neutral) soils and is sensitive to waterlogging..

Farmer guide (Mwongozo wa Mkulima)

Planting	Use healthy, uniform seedlings or rooted cuttings. Plant on raised, well-drained beds with neutral to slightly alkaline soil. Firm around roots and water in well.
Transplanting	Transplant during cool hours; avoid planting too deep to protect the crown. Provide temporary shade or mist in hot, dry conditions after transplanting.
Irrigation	Keep soil moist but never waterlogged. Use drip or micro-irrigation to avoid wetting foliage, which encourages diseases. Reduce irrigation slightly before harvest to reduce lodging.
Fertigation	Apply balanced NPK with emphasis on Ca, Mg and micronutrients for strong stems and branching. Use frequent, light fertigation pulses rather than heavy doses.
Pest scouting	Check regularly for aphids, thrips, leaf miners and spider mites, especially on tender shoots and flowering stems. Monitor for crown and root rots and botrytis on stems.
Pruning and training	Pinch young plants early to encourage branching and more flowering shoots. Provide netting or simple support to prevent lodging of fine stems.
Harvest	Harvest when 30–50% of florets on a branch are open and white, depending on market preference. Cut in the cool of the day with sharp tools and avoid crushing stems.
Postharvest	Immediately place stems in clean water or preservative, pre-cool and hydrate well. Grade into bunches with uniform stem length and floret opening, then sleeve and store in cold chain.

Nutrient schedule (Mbolea kwa Hatua)

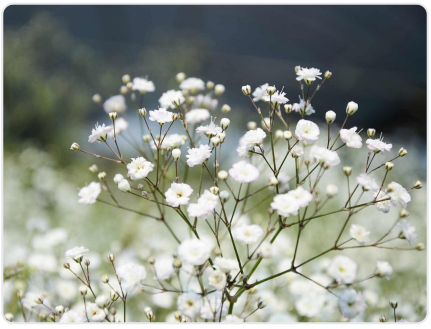
#	Stage	DAP	Product	Rate	Targets (kg/ha)	Notes
1	Basal at planting	0	NPK 17-17-17 + compost	160 kg/ha (plus 5–8 t/ha compost)	N: 27, P?O?: 27, K?O: 27	Broadcast and incorporate thoroughly into raised beds before transplanting seedlings or cuttings.
2	Early growth topdress	30	CAN 26% N	90 kg/ha	N: 23, P?O?: 0, K?O: 0	Apply along rows on moist soil or via fertigation in smaller, frequent doses.
3	Flowering K boost	70	Sulfate of potash (SOP)	80 kg/ha	N: 0, P?O?: 0, K?O: 40	Apply during main flowering periods to strengthen stems and improve spray quality; use SOP to avoid chloride stress.

Nutrient requirements

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

Nutrient	Stage	Amount	Unit
K?O	Basal	60	kg/ha
N	Early_growth	40	kg/ha
P?O?	Early_growth	10	kg/ha
K?O	Early_growth	40	kg/ha
N	Production_flush	30	kg/ha
P?O?	Production_flush	0	kg/ha
K?O	Production_flush	50	kg/ha

Field images


Varieties

Name	Country	Maturity (days)	Traits
White gypsophila selection	KE	365	Fine, dense sprays of white florets suitable for export bouquets and fillers.
Tintable gypsophila type	TZ	365	Good structure for tinting/dyeing for coloured arrangements and bouquet work.
Local gypsophila/flower filler type	UG	365	Adapted to local highland conditions, used by florists as filler and dried flowers.

Fertilizer recommendations

Stage	Product	Rate	Notes
Basal	NPK 17-17-17 + compost	160	Apply and incorporate into raised beds prior to planting to provide base fertility and organic matter.
Vegetative/branching	CAN 26% N	90	Apply 3–5 weeks after planting or deliver via fertigation to support branching and canopy build.
Flowering quality	Sulfate of potash (SOP)	80	Apply during key flowering phases to enhance stem strength and floret quality while avoiding chloride buildup.

Pests and diseases

Name	Type	Symptoms	Management
Aphids	pest	Clusters on soft shoots and flower stems, honeydew and sooty mould, distorted growth.	Maintain weed control, use biological control agents where possible and apply selective measures only when thresholds are exceeded.
Thrips	pest	Scarring and flecking on small florets, brown tips and reduced decorative quality.	Use sticky traps, maintain hygiene, net or screen vents, and implement IPM controls focusing on buds and flowers.
Spider mites	pest	Fine webbing on undersides of leaves, speckling and bronzing, dried foliage in heavy infestations.	Avoid severe water stress, maintain good humidity balance and introduce predatory mites where feasible.
Leaf miners	pest	Serpentine mines in leaves, cosmetic damage and reduced photosynthesis.	Remove infested leaves, keep weeds low, and use traps and targeted IPM tools as needed.
Cutworms and small caterpillars	pest	Chewed stems and leaves near the base, cut seedlings, occasional bud damage.	Good field sanitation, weed control and early intervention when damage is first observed.
Crown and root rots	disease	Stunted plants, yellowing, wilting, rotten crown/root tissues especially in poorly drained spots.	Ensure excellent drainage, avoid over-irrigation, raise beds and rotate away from problem sites.
Botrytis (grey mould)	disease	Grey mould on stems, florets and foliage in cool, humid conditions; postharvest decay.	Avoid overhead wetting, improve ventilation, harvest dry stems and maintain cleanliness in production and pack house.
Fusarium / vascular wilts	disease	One-sided wilting, yellowing and brown vascular tissue in stems and roots.	Use clean planting material, avoid reusing contaminated beds and rotate crops in affected blocks.
Nutrient/physiological disorders	disorder	Weak, lodging stems, pale foliage or chlorosis between veins, small or uneven sprays.	Balance fertilization (especially Ca, Mg, Fe and B), avoid excessive N and maintain appropriate EC and pH in irrigation water.

Yields

System	Typical	Min	Max	Notes
Open-field / low-input gypsophila	3	2	4	Represents modest stem biomass; in practice, growers often track stems/ha (~150–250k stems).
Greenhouse / net-house managed	6	4	8	Good fertigation, support and pest management; 250–400k stems/ha/year depending on system.
Intensive export floriculture	9	6	12	High plant density, precise fertigation and year-round production with strong quality grading.

Season calendars

Country	Region	Planting	Ha
KE	High-altitude floriculture belts	New beds can be established much of the year where irrigation is available; cooler months favoured for establishment.	Fir

Country	Region	Planting	Ha
TZ	Northern and southern highlands suited to floriculture	Plant when temperatures are moderate and irrigation is assured, commonly in cooler seasons.	Co
UG	Highland and cooler mid-altitude areas with floriculture potential	Plant at onset of reliable rains for open systems or any time under irrigation and mild temperatures.	Re

Region suitability

Country	Region	Suitability
KE	Highland floriculture zones with cool nights and good irrigation infrastructure	High
TZ	Northern/southern highlands and irrigated mid-altitude valleys suited to cool floriculture crops	High
UG	Highland and cooler mid-altitude zones with reliable water supply and good drainage	High