SAKATA®

Gerbera Majorette

Cultural Information for: Gerbera 'Majorette' Annual
Common Name: Gerbera / Transvaal Daisy
Botanical Name: Gerbera jamesonii
Seed Count: 7,100/ounce 250/gram
Optimum Germination Temperature: 72-75ºF / 22-24ºC
Optimum Growing Temperature: 68-70ºF / 20-21ºC
Optimum pH: 5.8 – 6.2
EC – Plug: 0.4 – 0.8 mmhos/cm **(1:2)** / 0.9 – 2.0 **(SME)** / 1.1 - 2.6 **(Pour Thru)**
EC – Finishing: 0.9 – 1.3 mmhos/cm **(1:2)** / 2.1 – 3.5 **(SME)** / 2.7 - 4.6 **(Pour Thru)**

Plug Culture: 7 weeks (128 / 8 x 16 tray)

Stage 1 (days 1-5) Single sow coated seed into a 128-cell tray filled with a sterile, well-drained media with good aeration. A long fiber or short fiber peat with 30% perlite works well. A steady temperature of 72-75°F/22-24°C yields the best results. Gerbera is photosensitive during germination, so no top cover is needed. However, to maintain enough moisture, a thin cover of vermiculite may be needed. Alternatively, cover trays with remay/argyle (fiber-bound polyester cloth). If using a germination chamber, provide a minimum 10-foot candles/110 lux of incandescent light for 12 hours per day.

Stage 2 (days 6-14) Seedlings have emerged and cotyledons are present. Provide good air movement and an air temperature between 68-70°F/20-21°C. Lower air humidity to 70% and fertilize, around day 10, with 50-75 ppm N from a well-balanced calcium nitrate-based fertilizer. Gerbera is sensitive to boron and iron deficiency. Therefore, maintain media pH between 5.8-6.2 and supply 0.25 ppm of boron when fertilizing. It is important to allow the seedlings to become dry in between watering, but not to the point of wilt, as excess moisture and salts cause distortion.

Stage 3 (days 15-42) As seedlings progress, increase the fertilizer concentration to 100 ppm N. The young foliage is sensitive to fertilizer salts so rinse foliage lightly with clear water following fertilizer applications. The use of calcium nitrate-based fertilizers combined with 20-10-20 every 2nd or 3rd watering works well to maintain proper pH and healthy foliage. Moisture stress is the best option to control plant height. Alternatively, apply B-Nine® (daminozide) at 1,500-2,500 ppm/0.15-0.25% as plants fill in. During dark weather apply HID lighting at 300-500-foot candles/3,200–5,400 lux up to 14 hours. Under high light conditions (>5,000-foot candles/54,000 lux) seedlings benefit from a light shade of 30-40%.

Stage 4 (days 43-49) The plugs should have 4 true leaves and are approaching transplant stage. Transplant on time to avoid root bound plugs. Overgrown transplants take longer to finish and produce less flowers on smaller plants. Reduce fertilizer levels and lower the temperature down to 62°F/17°C to tone the plants.

NOTE: Burying the plants too deep and covering the crown with soil causes blindness.

Transplanting to flower: 7- 9 weeks

Potting: Select a sterile well drained media with good aeration. Majorette is a versatile series, suitable for growing in 5 and 6 inch / 12.5 and 15 cm pots with one plant per pot. It also is ideal for larger containers with multiple plants.

Spacing: Initially, keep pot tight for the first four to five weeks. Then, space before leaves cover the crowns of other plants. Plant crowns require sunlight to form buds. A lack of proper spacing causes tip abortion, delayed flowering, lower bud count and longer leaves.

Temperature:
Ideally, maintain as close to a zero DIF as possible, with 68-70°F/20-21°C days and 66-68°F/18-20°C nights. At dawn, drop the temperature 5-7°F / 3-4°C for two hours. Avoid dropping the temperature below 60°F/16°C, as this delays flowering and increases production time.

Watering and Fertilization: Gerberas perform best if allowed to dry slightly between watering. Initially, fertilize at 100-150 ppm N using a well-balanced calcium nitrate-based formulation. Once established, increase to 150-200 ppm N for best performance. A pH above 6.0 induces iron and manganese deficiency, characterized by interveinal chlorosis. A lack of magnesium initially results in interveinal chlorosis (yellowing) of older leaves. Optimum K : Ca : Mg ratio is 4: 2: 1. Boron deficiency is characterized by deep dark green foliage, crinkled leaves and tip abortion so apply 0.25 ppm of boron when fertilizing. Cal/Mag formulations, such as 15-5-15, work well combined with 20-10-20 as needed to maintain proper pH level.
NOTE: A pH below 5.5 can induce iron and manganese toxicity; characterized by black spots.

Lighting: Gerbera flower bud initiation is related more to quantitative light calories received than by photoperiod. If the day length is less than 12 hours, supplemental lighting, up to 14 hours, at 40 watts per square meter is recommended. A photoperiod greater than 14 hours promotes stretching. During the short days of winter, supplemental lighting will greatly increase the quality of the plant. Optimum light level is between 4,000-6,000-foot candles/43,000-65,000 lux. 14 moles of light per day is optimum.

Growth regulators: An application of B-Nine (daminozide) 14-21 days after transplanting at 1,500-2,500 ppm /0.15- 0.25% is recommended to control plant height and open the crown for light penetration. A second application 10-14 days later may be necessary. Majorette is a standard Gerbera variety and additional PGR applications may be necessary depending on the pot or pack size used. Avoid spraying after the buds are pea-sized as this reduces stem length and flower size.

Pests and Diseases: Major pests include aphids, broad mites, cyclamen mites, leaf miners, thrips and whiteflies. Major diseases include alternaria, phytopthora, powdery mildew, pythium and sclerotinia.

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Crop Time: In general, Gerbera Majorette flowers in 14-16 weeks from sowing depending on time of year and light levels.

May Flowering Schedule

Action	5 inch / 12.5 cm	6 inch / 15 cm
Sow – 128 cells	Week 2	Week 2
B-Nine 0.25%*	Week 7	Week 7
Transplant	Week 9	Week 9
B-Nine 0.25%*	Week 11	
Flower	*Week 18*	*Week 18*

Additional PGR may be required depending on climate and growing conditions.

Factors that favor compactness (shorter flower stems and leaf petioles)

* Transplanting on time
* Close to zero DIF with morning temperature drop
* Nitrate-based fertilizer
* Moisture stress
* High light
* Photoperiod =/< 14 hours

"All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North American conditions and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best."

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