



Jaguar™

GERBERA JAMESONII

Minimum Germination Rate: 90%

Seed Product Form: Raw

FLOWERING

Flowering Mechanism: Irradiance (primary); plants initiate at the 4 – 5 leaf stage on approximately day 28 with HID light for 16 hours OR total 14 – 24 mols (4,050 – 6,500 foot candles) for 3 – 4 weeks.

Flowering Type: Facultative long-day plant – high irradiance, temperatures higher than 68°F (20°C) will enhance flowering.

PLUG CULTURE:

The timing approximations are based on optimal culture recommendations below:

Germination 1 (approximately day 1 – 4): From the time a seed is sown until radicle emergence takes place; usually with the root penetrating the media and some cotyledon development. Humidity in the air is 95 – 98% (humidification); media moisture saturated (5). Expect radicle emergence in 3 – 4 days.

Cover: No cover is needed. Seeds require light for germination.

Media: Avoid media compaction to allow for root penetration.

- pH: 5.3 – 5.5; higher pH will promote iron and manganese deficiency.
- EC: 1 – 1.2

Light: If using a germination chamber, providing a light source of 10 – 100 foot candles (100 – 1,000 lux) will improve germination. Optimum daylength during **Germination:** 16 hours.

Moisture: Saturated (5), from day 1 – 3 or until radical emergence (approximately day 4). If you are unable to dehumidify on day 4, decrease the starting moisture level from saturated (5) to a wet (4+).

Humidity: 95 – 98% from day 1 – 4 or until seed coats are shed.

Temperature: 76°F (24°C) until radical emergence.

Fertilizers: 14-4-14 or 17-5-17 at 60 – 70 ppm nitrogen to maintain an EC of 1 – 1.2.

Germination 2 (approximately day 5 – 7): From the time cotyledon is observed until it is fully expanded. The roots have expanded throughout the media. Dehumidify from 98% to 40% moisture in the air.

Media: • pH: 5.3 – 5.5

- EC: 1.2 – 1.5

Light: 2,000 – 2,500 foot candles (20,000 – 25,000 lux); 6 – 8 mols of light.

Moisture: Media moisture should alternate between a saturated (5) to moist (3) within 18 hours at radical emergence. Approximately day 5: Begin alternating between a wet (4) and a moist (3).

Dehumidify: Lower relative humidity to 40 – 50% (approximately day 5). Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

Temperature: Once cotyledons are observed, reduce temperature to 74°F (23°C) and gradually reduce further to 72°F (22°C) in the next 2 – 3 days.

Fertilizers: 17-5-17 at 60 – 75 ppm nitrogen as needed to maintain an EC in the soil of 1.2 – 1.5.

Fungicides: Preventative fungicide may be applied for soilborne diseases between day 5 and 7.

Plug Bulking/Flower Initiation (approximately day 8 – 28): The time it takes for the shoots to proportionately fill the plug cell and for roots to develop throughout the media. Induction and initiation may occur; if buds are present, they should be few in number and small in size.

Media: • pH: 5.5 – 5.8

- EC: 1.20 – 1.5

Light: 3,500 – 5,000 foot candles (35,000 – 50,000 lux); 12 – 18 mols of light.

Temperature: 68° – 70°F (20° – 21°C) with a 5 – 8°F (2° – 4°C) DIF or drop in the morning two hours before sunrise to approximately 9 a.m.

Moisture: It is critical to allow adequate dry back between watering. Alternate between moisture level wet (4) to medium (2). Allow the soil to approach medium (2), before re-saturating to wet (4). If media is allowed to dry back further than (2), root damage may occur resulting in a lack of iron uptake.

Fertilizers: 17-5-17 or 20-10-20 depending on light levels, at 125 – 150 ppm nitrogen and to maintain an EC of 1.25 – 1.5 in the soil. Supply 8 – 12 ppm phosphorus, supply 1.5 ppm iron and 5 ppm boron.

Growth Regulators: At this stage, no growth regulators should be needed.

Fungicides: Preventative fungicide may be applied for Rhizoctonia, Pythium and Phytophthora.

Initiated Bulking (approximately day 29 – 48): Seedlings develop from juvenile to mature, usually determined by the number of leaves present (cultivar specific). Seedlings are receptive to initiation and flower bud development.

Light: Provide 3,500 – 5,500 foot candles (35,000 – 55,000 lux) or 12 – 20 mols of light.

Temperature: 68° – 72°F (20° – 22°C) with a 5° – 10°F (2° – 5°C) DIF or drop in the morning two hours before sunrise to approximately 9 a.m.

Moisture: Alternate between moisture levels wet (4) and medium (2). Allow plants to dry back completely between watering. Too much water and fertilizer will cause deformed plants with a thick leaf. Drying back the plants should take place within an 18-hour period.

Fertilizers: 17-5-17 or 20-10-20 depending on light levels, at 125 – 150 ppm nitrogen and to maintain an EC of 1.25 – 1.5 in the soil. Supply 8 – 12 ppm phosphorus, supply 1.5 ppm iron.

Fungicides: Preventative fungicide may be applied for Rhizoctonia, Pythium, and Phytophthora.

GROWING ON

The timing approximations are based on optimal culture recommendations below:

Use care not to plant too deep, slightly higher than the soil line from the plug tray. Place plants pot to pot to be final spaced in approximately three weeks.

Transplant to Finish (approximately day 49 to finish): Optimize plant shoot and root growth, which is usually a 1:1 ratio. Flower buds are usually present and developing.

Media: • pH: 5.5 – 5.8

- EC: 1.5 – 1.75

Light: Provide 4,000 – 6,000 foot candles (40,000 – 60,000 lux); 14 – 22 mols. Provide 11 – 13-hour daylength.

Temperature: Start at 70° – 72°F (21° – 22°C) for the first two weeks and then lower the temperature to 65° – 68°F (19° – 20°C); using a 5° – 10°F (2° – 5°C) negative DIF or drop in the morning two hours before sunrise to approximately 9 a.m.

Moisture: Alternate between moisture levels wet (4) and medium (2). Allow media to approach level (2) before re-saturating to wet (4).

Humidity: 40 – 50%

Fertilizers: Constant feeding with a 17-5-17 fertilizer at 150 – 200 ppm to maintain an EC in the soil of 1.75 – 2.5. Under high light conditions a 20-10-20 fertilizer can be used. Supply 8 – 12 ppm phosphorus, supply 1.5 ppm iron.

Growth Regulators: Jaguar normally does not need growth regulators. Under long day conditions >16 hours they can help reduce leaf size and tone the crop. For smaller containers and 4" (10 cm) pots, apply B-Nine (daminozide) at 2,500 7 – 10 days after potting.

Fungicides: Preventative fungicide may be applied for Rhizoctonia, Pythium and Phytophthora.

TECHNIQUES TO ENHANCE POST HARVEST QUALITY

When to Treat: 1 – 2 weeks prior to finish or shipping.

Fertilizer: Potassium nitrate drench at 150 ppm nitrogen.

Common Diseases: Foliar – Altermaria, Botrytis and Powdery Mildew; soilborne – Phytophthora, Rhizoctonia and Pythium. Monitor moisture and humidity levels and use preventative fungicide drenches.

Common Pests: Aphids, Fungus Gnats, Shore Flies, Broad Mites, Cyclamen Mites, Spider Mites, Thrips, Whitefly and Leafminers. Use pesticides according to label directions.

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