

Cultural Information for:	Gerbera 'Festival'	Annual
Common Name:	Gerbera / Transvaal Daisy	
Botanical Name:	Gerbera jamesonii	
Seed Count:	7,100/ounce	250/gram
Optimum Germination Temperature:	72-77 °F / 22-24 °C	
Optimum Growing Temperature:	68-70 °F / 20-21 °C	

Plug Culture – 7 weeks

Stage 1 (days 1-5) Single sow coated or raw seed into a 128 cell tray filled with a sterile and well drained media with good aeration. A slightly fertilized peat with 20% perlite works well. For optimum results a pH of 5.5 – 5.8, an EC of 0.7 mmhos (1:2 slurry) and a temperature of 72 °F / 22 °C should be maintained. Gerbera are photosensitive during germination, so no top cover is needed. However, if you cannot keep humidity between 70 and 75% a thin cover of vermiculite is recommended. If using a germination chamber provide a minimum 12 hours of incandescent light per day.

Stage 2 (days 6-14) Seedlings have now emerged and cotyledons are present. Provide good air movement and with an air temperature between 68-72 °F / 20-22 °C. Lower air humidity to 70% and fertilize with 50-75 ppm of nitrogen from a well balanced calcium nitrate based fertilizer around day 10. Gerbera are sensitive to boron and iron deficiency. Maintain media pH between 5.5 and 5.8 and supply 0.25 ppm of boron when fertilizing. It is important to allow the seedlings to become dry in between waterings, but not to the point of wilt, as excess moisture and salts promote distortion.

Stage 3 (days 15-42) Gradually increase the fertilizer concentration to 100 ppm nitrogen to maintain a media EC between 0.8 and 1.0 as seedlings progress. The young foliage is sensitive to fertilizer salts so rinse foliage lightly with clear water following fertilization. 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. During dark weather young seedlings benefit from supplemental HID lighting at 300-500 foot candles/3,200–5,400 lux up to 14 hours. Under high light conditions 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 flowers on smaller plants. Reduce fertilizer levels and lower the temperature down to 62 °F / 16 °C to tone the plants. Burying the plants too deep and covering the crown with soil leads to blindness.

Transplanting to flower – 6-10 weeks

Media: Select a sterile well drained media with good aeration. Optimum pH is between 5.5 – 5.8 with an EC of 1.2 to 1.5 mmhos.

Spacing: Initially, keep pot tight for the first four to five weeks after transplant. Then, space before leaves cover the crowns of other plants. Plant crowns require sunlight to form buds. Lack of proper spacing results in delayed flowering, fewer flowers and longer leaves.

Temperature:

Optimum day temperature is 72-75 °F / 22-24 °C and 65 °F / 18 °C at night. If the temperature drops below 60 °F / 15 °C, flowering will be delayed and production time will increase.

Watering and Fertilization: Gerbera perform best if allowed to dry slightly between watering. Initially, fertilize at 100-150 ppm nitrogen using a well balanced calcium nitrate based formulation. When established increase to 150-200 ppm nitrogen for best performance. A pH over 6.0 can induce iron and manganese deficiency characterized by interveinal chlorosis. A lack of magnesium initially results in interveinal chlorosis (yellowing) of older leaves. Boron deficiency is characterized by deep dark green foliage, crinkled leaves and tip abortion. Maintain the media pH between 5.5 and 5.8 and apply 0.25 ppm of boron when fertilizing. Pansy Special formulations at 150-200 ppm work well and provide higher levels of micronutrients, including boron. Alternate with 20-10-20 as needed to maintain proper pH levels. Ideal EC is 1.2 – 1.5 mmhos (1:2 slurry). A pH below 5.5 can induce manganese toxicity characterized by black spots.

Lighting: Gerbera require high light levels. 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.

Growth regulators: An application of B-Nine, 12-14 days after transplanting at 1,000-1,500 ppm is recommended to control plant height and open up the crown for light penetration. A second application 10-14 days later may be necessary. Festival 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 it reduces stem length and flower size.

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

Crop Time: 4 and 5 inch/10 and 15 cm. pots flower in 13-18 weeks from sowing depending on time of year and light levels. 1 plant per pot.