

Crop: Gerbera
Scientific Name: Gerbera jamesonii (Compositae)

I. Introduction

- A. Gerbera originates from Transvaal, South Africa and was named after a German naturalist, Traugott Gerber.
- B. The plant is usually referred to as Gerbera or Transvaal daisy.
- C. The flowers develop on a hairy stalk. Stem lengths vary from 25 to 40 cm (10-16 inches). The flowers come in many bright pastel colors.
- D. The flowers are 5-12 cm (2-5 inches) across.
- E. Gerbera is a perennial grown as an annual.

II. Cultivars, Clones, Breeding, Development

- A. Breeding is aimed to develop cultivars with vigorous growth, compact growth habit and continual flowering on sturdy stems.
- B. 'Happipot Mix' is vigorous growing and include red, rose-pink, salmon, orange, yellow and cream colored flowers.
- C. 'Tempo Mix' is an F-1 hybrid with better uniformity than the 'Happipot Mix'. Flower colors include scarlet, orange, yellow, rose and pink shades.
- D. Other available varieties are 'Festival Mixture F1', 'Fantasia', 'Lido Mixture', 'Parks Mix', 'Small's Pot Gerbera' and 'Sunburst Mixture'.

III. Flower Induction Requirements

- A. Flower induction is controlled by the total amount of light received.
- B. Gerberas do not respond to photoperiod.

IV. Environmental Requirements

A. Light

1. Flowering and growth is best under high light intensities.
2. High light immediately after germination is critical for rapid, vigorous plant development.

B. Temperature

1. To ensure proper seed germination, the media temperature should be 20-21°C (68-70°F).
2. After transplanting, plants should be grown at 18-21°C (65-70°F).

C. Water

1. Gerbera required high amounts of water and should never be allowed to completely dry out.

D. Nutrition

1. Constant feed of 200 ppm nitrogen, phosphorous and potassium is required after the plants are established.
2. Maintain the pH at 5.5 - 6.0. Plants are unsusceptible to iron deficiency when the pH exceeds 6.0
3. The addition of iron chelate and magnesium at 25-50 ppm is suggested to maintain a deep green leaf color.

V. Cultivation

A. Propagation

1. Gerbera is propagated by seed or vegetatively by tissue culture.
2. Seed is the most commonly used form of propagation, although the seed is expensive and often produces seedlings that lack uniformity.

3. Seed propagation

- a. There are 6,000-8,000 seeds per ounce.
- b. Seed should be kept in moisture-proof packets and stored under cool conditions.
- c. Leftover seed should immediately be resealed and kept in a refrigerator.
- d. Seed kept in room temperature lose their germination capacity rapidly.

B. Planting and Media

1. Suitable sowing medium is a mixture of 60% perlite and 40% peat.
2. Cover the seed with a thin layer of vermiculite.
3. For uniform germination, maintain 20-21°C (68-70°F) and keep the seeded flats evenly moist.
4. Germination will occur in 7-14 days.
5. About one month after emergence, the plants develop 2 true leaves. Transplant at this time to 5 cm (2 inch) pots.
6. The plants will be ready for a second transplant one month later. Plant into 13 or 15 cm (5-6 inch) pots.
7. Gerbera branch heavily from the soil line. It is therefore important to plant the crowns slightly above the soil line.

C. Spacing

1. During the first month, the plants can be grown pot tight.
2. Final spacing should be at least 30 cm (12 inches). Larger varieties will require 35-38 cm (14-15 inches).
3. Production in 10 cm (4 inch) pots requires a final spacing of 18-25 cm (7-10 inches).

D. Growth Regulators

1. B-Nine controls the length of the flower stalks.
2. One B-Nine application at 2,500 ppm, 10-14 days after transplanting is recommended. In some instances, a second application may be necessary.

VI. Problems

A. Insects

1. White fly is the major insect problem.
2. Aphids, leaf miners, spider mites and thrips can also be troublesome.

B. Diseases

1. The soil-borne pathogens *Pythium*, *Phytophthora* and *Rhizoctonia* can severely damage gerbera production. Seedlings are especially susceptible to these diseases. Good sanitation including sterilization of the media, containers, tools and benches decreases the disease attacks.
2. The seedlings are also highly susceptible to *Botrytis*. Preventive fungicide drenches are recommended.
3. Powdery mildew caused by *Erysiphe polygoni* can severely decrease the appearance of a gerbera crop.

C. Other

1. Low light intensity during production may result in too tall flower stems or large leaves.
2. Flowers hidden in the foliage can be caused by too high nitrogen levels, allowing plants to dry out, too much growth regulator or a too low growing temperature.
3. Poor drainage results in stunted growth.

4. Plants that wilt and die were probably planted too deep and infected by crown rot.

VII. Scheduling

| Growing Time for Cultural Segment | Cultural Procedure | Temperature |
|-----------------------------------|-------------------------------------|--|
| | Sow seeds | Media: 20-21°C (68-70°F) |
| 5-6 weeks | ↓ Transplant to 5 cm pots | Day: 25°C (77°F) Night: 16°C (60°F) |
| 4 weeks | ↓ Transplant to 13 or 15 cm pots | Day: 21-27°C (70-80°F) Night: 16°C (60°F) |
| 6-7 weeks | ↓ Flowering | |