



Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

Center for Smart Agriculture

Protected floriculture



Module 3: Production technologies followed for
Protected cultivation of different flowers
Session 18: Protected cultivation of anthurium



Centurion
UNIVERSITY
*Shaping Lives...
Empowering Communities...*

INTRODUCTION

Common name: Gerbera, African
daisy, Transvaal daisy or
Barberton daisy

Scientific name: *Gerbera jamesonii*

Family: Asteraceae





**Centurion
UNIVERSITY**

*Shaping Lives...
Empowering Communities...*

Cultivars of gerbera





Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Conditions most suitable for gerbera cultivation

- Ideal temperature is 20-30°C
- Ideal relative humidity (RH) 70-75% during day time and below 80% at night
- Light Intensity: 400 watt/sq m



Centurion
UNIVERSITY
Shaping Lives...
Empowering Communities...

Growing media

- Soil pH: 5.5 to 6.5
- The EC of soil should not exceed 1 mS/cm.
- Sterilisation is done to reduce the infestation of *Phytophthora*, *Fusarium*, *Pythium*.
- Disinfection can be done by use of formaldehyde or Hydrogen peroxide.



Centurion
UNIVERSITY
*Shaping Lives...
Empowering Communities...*

Bed preparation

Length: depending on the length of the poly house

Width: 65 cm

Height: 45 cm

Gap between two beds: 30 cm





Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Planting density

- **Spacing:** 35 cm × 30 cm
- To maintaining such spacing six plants can be accommodated per square metre. Thus, for planting in 1000 square metre of polyhouse, 6000 seedlings will be required.





Centurion
UNIVERSITY
*Shaping Lives...
Empowering Communities...*

Intercultural operations

- Regular weeding should be practiced in every two weeks to keep the gerbera beds weed-free.
- Generally, in gerbera the following intercultural is recommended as good practice.
- Removal of the older leaves.
- Hoeing and loosening the soil around for proper aeration.
- **Nipping** of the buds that develop within the first two months.



Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

Irrigation

- Electrical conductivity and pH of the soil and irrigation water should be checked in every two months and optimum level should be maintained.
- The concentration of pH and EC of irrigation water should be maintain upto 6.5- 7.0 and < 0.7 dS/m.
- Gerbera requires approximately 500 to 700 ml water per plant daily.
- During summer season, foggers can be used for few seconds to maintain relative humidity of polyhouse atmosphere.
- The RH should not exceed 90%.



Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

Fertigation

- After three weeks of plantation N:P:K 19:19:19 @ 0.3 g/plant should be applied every alternate day for first three months during the vegetative phase to have better foliage.
- During flowering stage, N:P:K 16:8:24 or N:P:K 20:20:20 + 13:0:45 @ 0.3 g/plant every alternate day should be applied for more flowers and better flower quality.



Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

Harvesting of Flowers

- The first flowers are produced 8-10 weeks after plantation. Ideal flower with stalk length 45-55cm and diameter 10-12 cm. The flowers are harvested when the outer two rows of disk florets are perpendicular to the stalk. 3 cm stem should be left from the lower part of the mother plant during harvesting.
- The heel of the stalk is cut by giving an angular cut. Gerbera produce 240-250 flowers/m² (6 plants /m²).



Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

Post-Harvest Handling

- Immediately after cutting the cut end of the stalk is put in 2-3 cm water for four hours at 14-15⁰C.
- Commercial bleach or Sodium Hypochlorite @ 7-10 ml/lit of water or mixture of Citric acid and Ascorbic acid (@ 5ml each/lit of water) can be mixed to increase vase-life.
- Sleeves of the individual flower are packed with polythene bag and bundles are made containing of 10 flowers. Then these are graded as per colours, packed in cartoons and send to the market.



Centurion
UNIV
Shaping Life
Empowering





Centurion
UNIVERSITY
Shaping Lives...
Empowering Communities...

Thank you