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GERBERA

Scientific Name :

Gerbera jamesonii

Family : **Asteraceae**

Common Name: **Transvaal Daisy, Barberton Daisy or African Daisy.**

Chromosome No: **2n= 50**

Origin : **South Africa**



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INTRODUCTION:

- Gerbera (*Gerbera jamesonii*) is commonly known as **Transvaal Daisy, Barberton Daisy or African Daisy.**
- It is ideal for beds, borders, pots and rock gardens.
- The flowers available in a wide range of colors and lend themselves beautifully to different floral arrangements.
- Used as cut flowers and the cut blooms have long vase life.



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MORPHOLOGY:

A plant is stem less and **tender perennial herbs**, leaves radical, petiole, lanceolate, deeply lobed, sometimes leathery, narrower at the base and wider at toe and are arranged in a rosette at the base. The foliage in some species has a light under surface.

The daisy-like flowers grow in a wide range of colors including **yellow, orange, cream-white, pink, brick red, scarlet, maroon, terracotta and various other intermediate shades.**





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ORIGIN AND HISTORY

- The genus *Gerbera* was named in honor of a German naturalist, **Traugott Gerber**.
- This is native to South Africa and Asiatic regions.
- In India they are distributed in the temperate Himalayas from Kashmir to Nepal at an altitude of 1300 to 3200 meters.
- *Gerbera* species of Indian origin are *Gerbera anandria*, *G. kunzeana*, *G. languinosa*, *G. macrophylla*, *G. nivea*, *G. ovalifolia* and *G. piloselloides*.



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SPECIES AND CULTIVARS:

The genus *Gerbera* consists of about 40 species.

- ***Gerbera jamesonii* is the only cultivated species.**
- ***Gerbera asplenifolia***
- ***Gerbera aurantiaca***
- ***Gerbera kunzeana***
- ***Gerbera viridifolia***



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IMPORTANT CULTIVARS:

Dusty

Flemingo

Fradaisy

Fredorella

Maron

Clementine

Nadja

Terraqueen

Uranus

Vesta

Belitis

Joyee

Kabada

Pascal

Romilda

Terra Parade

Terra Son

Valentine

Alexis

Amber

Anke

Apple blossom

Caprice

Ibiza

Hildegard

Marleen

Rozamunde

Salmorosa

Easter Star

Sympathic

Eastelle

Sunset

Thallasa

Pink Sensation

Nena

Goldspot

Nevada

Rosabella

Flora

White Sun

Asheley

Vino

Venturi

Sangriana

Sissy

Cocktail

Panorama

Aruba

Tropical

Diablo

Siby



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CLASSIFICATION

- There are **single** and **„double** types of gerbera.
- One or two rows of ray florets on the periphery of the disc and the rest are disc florets in the „single” types.
- In the „double” type, more than two rows of florets are present
They are further divided into
 - **Standard,**
 - **Spider and**
 - **Mini** depending on the size and shape of the flowers.



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PROPAGATION

➤ SEEDS

Gerbera is propagated by seed, by cuttings of side shoots and suckers.

- ❑ Seed is set if cross-pollinated.
- ❑ Sowing of seed may be done in almost any season.
- ❑ Seeds germinate in 15 to 20°C within two weeks; otherwise it may take up to 30 days.
- ❑ Plants from seeds will bloom in the second year and produce good flowers from the third year onwards.

➤ VEGETATIVE PROPAGATION:

- ❑ Side shoots, with some amount of heel, is utilized for.
- ❑ Divisions/ suckers, cuttings are also used.

➤ MICRO-PROPAGATION:





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Climatic Requirement:

- The optimum day and night temperature is **27°C** and **14°C** respectively.
- For flower initiation is 23°C and for leaf unfolding it is 25°C - 27°C.
- Sunny or semi-shady locations are good for gerbera cultivation.



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Soil Requirement:

- ❑ Soil pH should be between **5.5 to 6.5** or it should be maintained at this level to get maximum efficiency in absorption of nutrients.
- ❑ The salinity level of soil should not be more than 1 ms/cm. Therefore, as soon as you select the site, get the soil analyzed to decide its further reclamation.
- ❑ Gerbera are deep rooted plants and the roots go as deep as 50 to 70cm.
- ❑ The soil should be highly porous and well drained to have better root growth and better penetration of roots.



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BED PREPARATION

- In general, Gerberas are grown on raised beds to assist in easier movement and better drainage.
- The beds for planting should be highly porous, well drained and airy.
- Gravel/sand can be added at the bottom for better drainage.
- Organic manure is recommended to improve soil texture and to provide nutrition gradually.
- The upper layer of soil and FYM should be properly mixed.
- While bed preparation, add Single Super Phosphate (0:16:0) @ 2.5 kg per 100 sqft for better root establishment and Magnesium Sulphate @ 0.5 kg per 100 sqft to take care of deficiency of Mg.



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PLANTING:

- While planting Gerbera plants, the crown of plants should be 1-2 cm above soil level.
- As the root system establishes the plants are pulled down.
- Therefore, the crown must be above the ground level at planting and also throughout the life cycle.
- **Spacing- 40 x 30 cm sq or 30 x 30cm sq.**





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IRRIGATION:

- Avoid excessive watering to gerbera.
- Immediately after plantation, irrigate the plant with overhead irrigation for four weeks to enable uniform root development.
- Thereafter gradually change to drip irrigation. Drip irrigation is mainly for correct doses and fertilizer application.
- Generally, one dripper per plant is required.
- As a thumb rule, the soil should be moderately moist-however never having excessive water.



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MANURING AND FERTILIZATION:

- **25-75 t/ha** of well decomposed organic manure is required.
- **150:137:190 g NPK/m²** (40:40:40 g, three months at monthly interval)



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HARVESTING

Gerbera flowers are produced 7-8 weeks after plantation.

Harvesting is done when the two outer rows of the disc florets are fully expanded and perpendicular to the stalk.

Yield

The average yield is 240 flowers per sqm (6-7 plants/sqm).



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POST HARVEST HANDLING OF FLOWERS

- ✓ Cut the heel of the stem by giving an angular cut.
- ✓ Pack the flowers in a box with following dimensions.
- ✓ Immediately after harvesting, flowers put in water and kept for four hours at 7 to 8°C
- ✓ The cut flowers can be stored dry at 2°C in moisture – proof retentive boxes for two days
- ✓ If stored wet at 4 to 5°C, the flowers can be kept for 5 to 7 days.
- ✓ Always add 7 – 10 ml commercial bleach/Sodium Hypochlorite solutions in one litre water i.e. 1% solution.
- ✓ It has a maximum vase life of 7 to 8 days.
- ✓ Frequent re-cutting of stem ends is suggested.
- ✓ The flowers are relatively insensitive to ethylene.

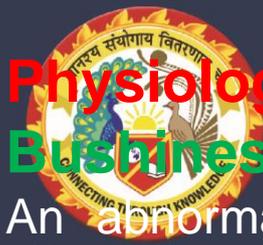


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DISEASES/ PESTS

- Aphids
- Greenhouse Whitefly
- Leaf Miner
- Mites
- Thrips
- Crown Rot.
- Root knot Nematode.
- Botrytis



Physiological disorder

Bushiness:

An abnormality characterized by numerous leaves, short petioles and small internodes, which gives some cultivars of gerbera a bushy appearance known as bushiness. Nodes are not clearly distinguished and no internode elongation is seen.

Stem break

It is a common post harvest disorder in cut gerberas. This is mainly caused by **water imbalances**. It could be ethylene controlled and associated with early senescence caused by water stress.



**THANK
YOU**