Gerbera Protocol

montiplanta

DANZIGER
IMAGINE MORE

BOTANICAL DESCRIPTION

- Originally from South Asia and introduced in South America.
- Its natural conditions are Tropical Rainforest
- Hybridization began in the 19th century

Taxonomy	
Kingdom:	Tracheobionta
Subreino:	Tracheophyta
Edge:	Magnoliopside
Class:	Asteridae
Subclass:	Asteral
Order:	Asteraceae
Family:	Mutisioideae
Subfamily:	Mutisieae
Tribe:	Mutisiinae
Subtribute:	Gerbera L.
Gender	Tracheobionta

Cultivation Systems

Ground:

The soil must be well drained.

Beds of 30-60 cm height should be built.

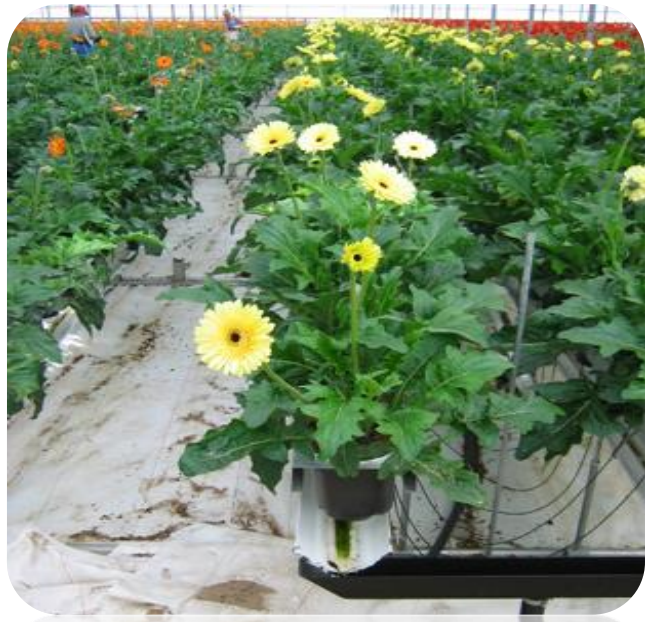
The pH should range between 5.5 and 6 max.

The soil must be disinfected against fusarium and nematodes

Soil

Hydroponic:

- The medium should have cocopeat with 50% long fibers.
- In hydroponics 10-15% higher productivity is obtained
- Take care of salinity and you should have better fertigation management



Hydroponic System

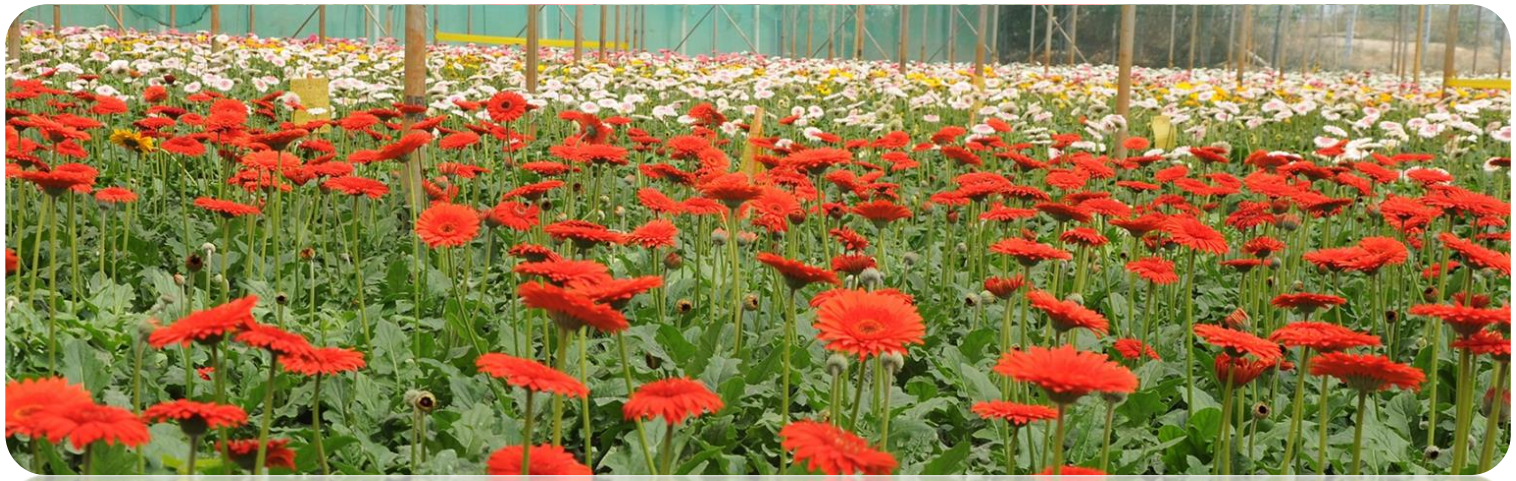
Growing Conditions

- Luminosity: The gerbera needs 12 hours of light and 12 hours of darkness to reach its maximum production, in places where this condition is not available or in very cloudy seasons it can be supplemented with artificial light.
- Humidity: A humidity of 60% (50% - 70%) must be maintained, lower percentages will reduce production and higher will increase Botrytis infections. Direct wind should be avoided, so curtains are important
- Temperature: It should be handled ideally from 25 ° C to 27 ° C during the day and 12 ° C at night, but it can withstand up to 40 ° C in the day and 25 ° C at night but it will affect productivity. Also lower temperatures will reduce productivity.

Hardening of the Plant

The Plant must have an excellent root development (40mm x 40mm plugs) and the leaves should not be too long (7 cm.), Due to the trip and the lack of light these can be lengthened, this must be avoided.

Since the gerbera evapotranspirates a lot due to its wide leaves and its roots cannot compensate for dehydration, it is very important to maintain a humidity of 60% and give 2 showers with shower during the first weeks.



Sowing System - Density

- In soil it should be cultivated at a density of 7 - 8 plants / m2 net, in beds 60 cm wide at a distance between 25 cm plant.
- In hydroponics you can use pots 20-25 cm in diameter x 40 cm high, the pots must be separated from the ground (suspended by cables or by table system), plastic can be placed at the base of the System to collect and / or recycle drainage

Irrigation and Fertilization

Balance: 2: 1: 3: 1: 0.5 N: P: K: Ca: Mg

CE: In soil: 1.1 to 1.6 (max), in Hydroponics: 2.2 to 3 (max).

The EC of the drainage should not be greater than 20% to the EC of the irrigation water.

Irrigation: More sensitive to excessive irrigation than lack of water. Irrigation must be at the minimum point necessary for plants to survive.

Pulses: 200 ml / plant / pulse, Soil: 4 pulses / day in summer and 2 in winter, Hydroponics: 6 to 8 pulses depending on conditions.

Never water after 4 hours before dark to have drier roots and oxygen availability. In very drained media several waterings per day are recommended.

Gerbera is very sensitive to herbicides! Reduce yields.

Pinch

- **From sowing to the first flowering, it takes about 6 weeks.**
- The first two or three flowers (weeks 6 and 7) should be punctured when they reach 2 cm in height (just remove the bud) to increase yield and quality.
- The harvest begins at week 8 after sowing and maximum production is reached at 4 months.

Harvest

- **The harvest must be done early in the morning, before temperatures are high.**
- The base of the peduncle is held and removed by a twisting movement. In this way, the insertion callus of the peduncle is detached without breaking it.
- The optimum cut-off point for the harvest of most varieties is when 2-3 rows of male flowers have been fully developed (2 or 3 rows of yellow anthers are displayed). The stems should be placed in a solution of water with bactericide at pH 4 prior to post-harvest transport.

correct

Incorrect

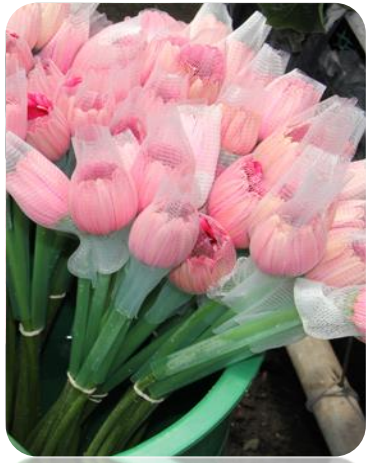
Postharvest

- **Solution: The postharvest solution must carry a bactericide to avoid rot in the stem and a pH of 4, the levels of ethylene that produces gérbera are low so it is not necessary to use STS. Sucrose (20/30 g / L) can be added to improve the flow of water inside the pedicel and provide a nutritious solution that promotes better hydration**
- To improve the absorption of the solution it is recommended to carry out a “dispatch”, this dispatch consists in removing the insertion callus and is approximately 3-5 cm. This can be done underwater to avoid aerial embolisms. The stems should be hydrated until packing and dry storage, which should be done as soon as possible after harvest (1 to 3 hours after harvest)

Use of Mesh and Sorbet

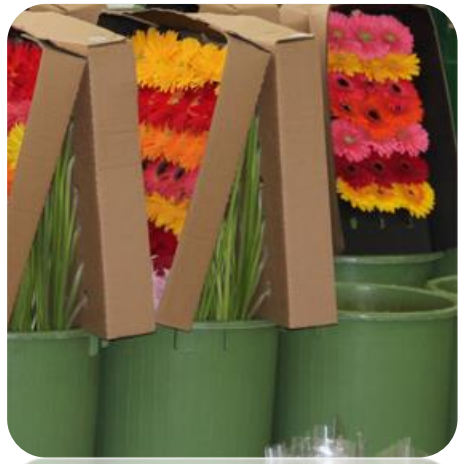
- Gerbera is a crop that is sensitive to curvature of the neck so it is advisable to use sorbet to avoid this phenomenon, it is recommended that the sorbet be placed immediately after harvest to avoid bending in transport until post harvest.
- The use of mesh in the inflorescence is recommended to avoid mechanical damage. The mesh can be placed before or after the harvest, but it is important that it is placed before post-harvest transport.

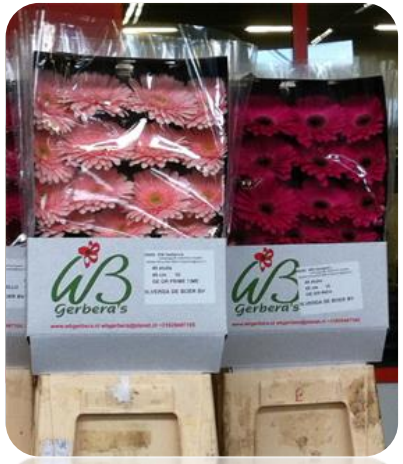


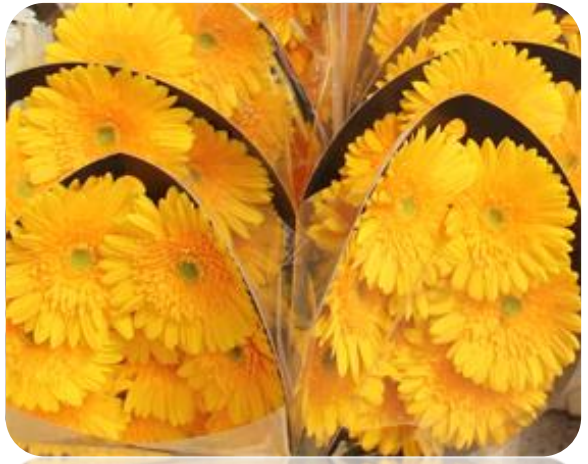



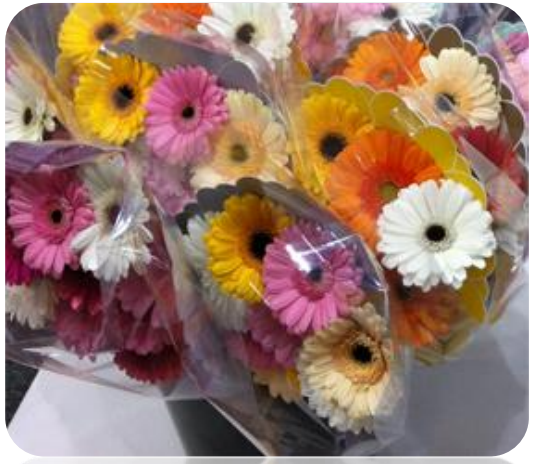
Packaging and Storage

- Bouquets are usually made from ten stems held with garters, making sure that the clamp catches the sorbet. Subsequently you can place plastic cap. Special packaging can also be used as seen in the images at the bottom.
- Storage is done in boxes horizontally to avoid bending. The optimum storage temperature is 4 ° C.
- When it is required to store for times longer than 2 days, it is advisable to store the stems cold (4 ° C) in a solution containing a bactericide and making sure to renew it every day to avoid rotting. It is not recommended to store the stems for more than 5 days because life in a vase will be drastically affected.





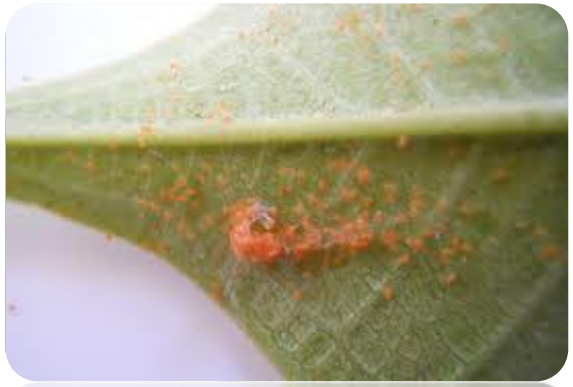


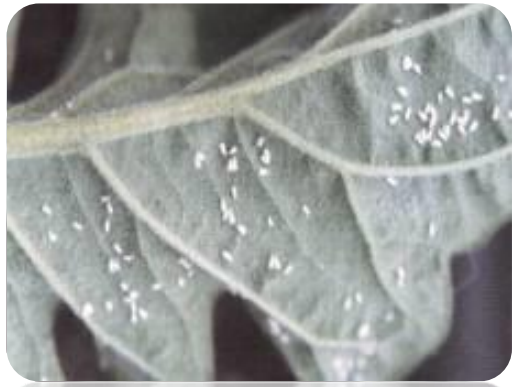


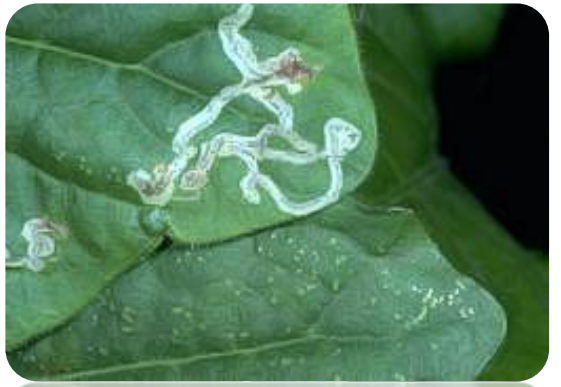
Plagues and diseases

PESTS:

- Aphids
- White fly
- Mites
- Minelayer
- Thrips
- Slugs
- Nematodes







DISEASES

- Botrytis
- Verticilium
- Oidio
- Pudricions (Fusarium, Rhizoctonia, Phytium, Phytoctora)
- Alternaria
- Virus

THANK YOU!!!