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Center for Smart Agriculture

Protected floriculture



Module 3: Production technologies followed for
Protected cultivation of different flowers
Session 21: Protected cultivation of gladiolus



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INTRODUCTION

Common name: Gladiolus, Sword Lily

Other name: queen of bulbous flowers

Family: Iridaceae





Types

Large flowered Hybrids

- Strong and erect flower spike grows with the height of 120 to 150 cm and florets of 10 to 15 cm

Primulunus

- Small flowers with funnel-shaped are grows in mid-season with a height of 100 cm and florets of 5 to 10 cm

Miniatures

- This is an early types of flowers and good for cutting with spike height is 60 to 100 cm and florets of 5 to 7.5 cm



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Soil & climate

- A fertile, sandy-loam soil enriched with organic manure is perfect for growing this crop and soil pH should be under neutral to slightly acidic in nature.
- prefers sunny conditions
- requires at least 80 % of total sunlight for proper growth and flowering.
- Gladioli likes cold weather with 15 to 25⁰C in day and 5 to 10⁰C in night.
- The flowers are affected by dry air and high temperature.



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Bed preparation

Spacing: 25-30 cm X 15 cm





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Methods of Propagation

- Corm and cornel
- The corm should be 4-5 cm diameter and about 50-60 g.



Corm Treatment

- Gibberellic acid - for breaking the dormancy.
- *Tricoderma viride* @8 g/liter water
- Dithen M-45 @2.5 g/liter or Bavistin @0.5 g/liter



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Sowing

- 15th August to 15th December is the main sowing time in Indian plains.
- Gladiolus can be sown with the interval of 15 days from first sowing for getting continuous flowers from plant.
- Gladiolus corm or cormels are soaked with water for one night before 2 to 3 weeks of sowing time.
- Then it placed in a dark shade place & cover with gunny bags for good and quick sprouting.



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Irrigation

Flood method: Flood irrigation should be done 3 to 4 days before sowing the gladioli corm.

Furrow method: irrigation can be given two times in a week and during winter season irrigation can be given once in a week.

Drip method: Drip irrigation method is an appropriate solution of irrigation system under poly mulching conditions.

❖ Irrigation should be reduced 4-7 days before harvest of flowers.



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Harvesting & yield

- The flowers can be harvested from 60-120 days after sowing of corm.
- The spikes can be picked while still in tight bud stage.
- Lift the corms when leaves turn yellow and start drying after picking of the gladiolus flower.
- Snap off the old corm and new corms are stored in a dry and frost free place.

Yield

- 130000-187000 spikes/hectare



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Post-Harvest Handling

Flowers:

The cut spikes of gladiolus should be immediately put in water upto 30 cm depth for one hour.

Grades	Stem length	Number of flowers
Fancy	> 107 cm	16
Special	> 96 cm upto 107 cm	15
Standard	> 81 cm upto 96 cm	12
Ultility	< 81 cm	10



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- To prolong the life of the gladiolus flower, cut 1.5 cm of the spike from the base and put again under fresh water on alternate days.

Corms:

- After harvesting, the corms are cleaned and it can be store in cold storage at 4 to 10 degree Celsius temperature and will takes nearly one and half to two months after flowering for the corms to attain maturity and planting out again.
- The corms may be stored after treating them with fungicides.



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Thank you