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Domain

Smart Agriculture

Course

Management of high-value cut-flowers

Project topic

Media preparation for Dutch orse

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Growing Conditions

Dutch rose requires following essential climatic parameters.

- Light intensity should be of 40 to 60 thousand lux.
- Temperature preference during day should range from 24 to 28 degree centigrade, however, night temperature should be 18-20 degree centigrade.
- Relative humidity should be of 65 to 70 percent.
- Good quality water is essential and another important requirement is good growing medium.

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Media

- Dutch rose can be grown on soil as well as artificial growing medium like coco peat and rock-wool. But growing of this flower is commonly observed in soil.
- Preferably well drained and porous soil is required for better root growth and penetration. The soil pH should be between 6.5 to 7. Chlorosis is almost always a sign of high pH and the symptoms can develop very quickly. For correction of acidity lime application and for correction of alkalinity, application of gypsum can be done.
- Electrical conductivity of the soil should not be above 0.5 mS/cm.

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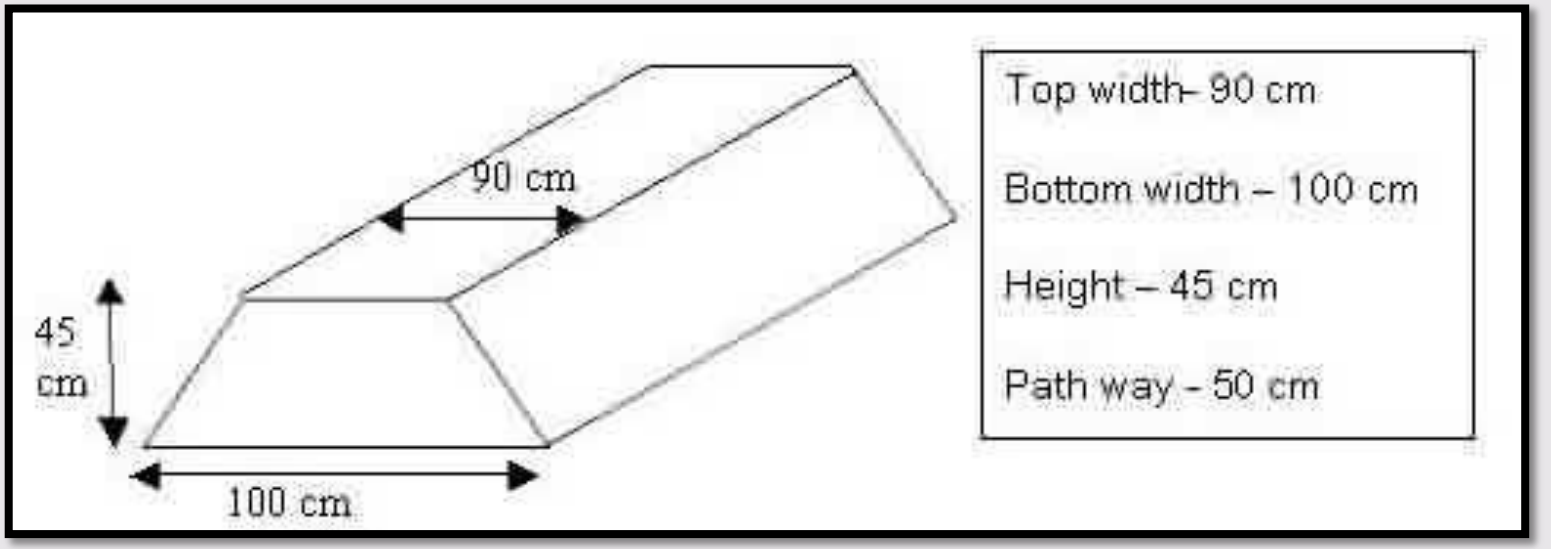
Bed preparation

Preparation of bed is an important task for Dutch rose cultivation. The dimensions of beds should be appropriate.

Bed height: 45 cm
The width of bed at the top: 90 cm
Width of the bed at the bottom: 100 cm
The pathway between two beds: 50 cm

For better drainage, gravel may be added with a thickness of 10cm. The soil should be porous. The beds should be sterilized.



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Sterilization of bed

As Dutch rose is a perennial crop and economic life is more than five years, soil sterilization is must for a healthy crop. Let's have a look into soil sterilization process. Soil sterilization can be done by mixing Hydrogen peroxide @ 35 ml/litre of water that is 3.5% solution of Hydrogen peroxide. One litre of solution is applied to 1 square metre area. This solution is evenly applied on beds. After 4 to 6 hours of treatment, the seedlings can be planted.

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Basal nutrients application

For 1000 square metre area the nutrients required are:

- Neem cake: 500 kg
- Farm yard manure: 1000 kg
- Sterameal: 100 kg
- Bone meal: 50 kg
- Single super phosphate: 75 kg
- Muriate of sulfate: 50 kg
- Magnesium sulfate: 10 kg
- Zinc sulfate: 2 kg
- Ferrous sulfate: 2 kg
- Borax: 1 kg
- Copper sulfate: 100 g and
- Ammonium molybdate: 50 g