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Centre for Smart Agriculture

Production Technology of cut and loose flower



Module 1: Propagation Techniques in cut and loose flowers

Session 5: Applicability and principles of mist chamber



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Mist chamber is an enclosed structure in which artificially mist is generated for propagation of plants or seedlings.





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Advantages:

- Results faster rooting of cuttings.
- Create optimum microclimate for better root initiation and development
- Higher success rate found in propagation of hard wood cuttings.



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Disadvantages:

- Hardening of rooted cutting of rooted cutting is more difficult and requires careful attention.
- Under mist conditions oxygen deficiency can create problem.



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ESSENTIAL COMPONENTS

- 1.Structure:** Galvanized iron frame Structure
- 2.Cladding:** UV Stabilized Polyfilm / Poly carbonate Sheet
- 3.Forced Air Cooling System:** Corrugated Cellulose Pad and Axial Flow Fan
- 4.Fogging:** Overhead fogging system at the gutter height of mist chamber
- 5.Irrigation:** Knapsack sprayer/ Water & Fertilizer applicator boom irrigation system
- 6.Alluminate Screen:** to cut off the excess the sunlight in order to maintain the temperature inside the mist chamber
- 7.Shade Net:** Over the top of the mist chamber probably 70:30 will be preferred for the peak summers
- 8.Root trainer:** for sowing the seedlings
- 9.Inert Martial:** Coco peat, Perlite, Vermiculite



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OPTIONAL COMPONENTS

1. Benching System
2. Climate Control sensors
3. Horticulture Lights
4. Buffer Room
5. Seeder Machine



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PRINCIPLE:

In Mist Chamber, Relative humidity is maintained artificially at high level with the help of mist installations, which spray water under pressure. Fog formation induces rooting and acclimatization. High relative humidity facilitates better root initiation and cooling effect prevents the cutting from drying out. This method results in faster rooting of the cuttings, create optimum microclimate for better root initiation and development and higher success rate in propagation of hard wood cuttings. Temperature and humidity control in the mist chamber is effected through automated control systems.



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Thank you.....