

Center for Smart Agriculture

Applied Hi-Tech Horticulture



Module 2: Innovative Technologies in Hi-Tech Horticulture Session 11: Different types of nursery raising in vegetables and flowers



Type of nursery raising

- **1.Fruit Plant Nurseries**
- 2. Vegetable nurseries
- **3.Ornamental nurseries**
- 4. Medicinal and Aromatic Plant Nurseries
- **5. Hi-Tech Nurseries**



Ornamental nurseries



Nursery Raising for Vegetables and Flowers

Type of nursery raising 1. Conventional method

- Raised bed
- Flat bed nursery
- Sunken bed nursery

2.Plug tray method

3.Poly bags planting system



1. Raised bed nursery



Raised nursery bed





Onion



Tomato



2. Seedling raising in Plug tray/ Pro tray











Advantages of plug tray

- •Easy to weed control
- •Germination per cent of seed is more.
- •No soil borne diseases.
- •Less growing season and higher yield.
- •More efficient use of surface area.
- •Seedling can be raised in off season like rainy season.
- •Easy to control disease and pest.
- •Uniform, healthy and quick root growth with quality seedling.
- •Good for small size vegetable and ornamental seeds
- •No soil-borne fungus or virus infection due to soilless sterilized media.
- •Easy to transport.
- •Reduced field management cost.



Methods of plug tray nursery raising Plug tray size: 72-800 cells cavity For vegetable: 98 and 104 cells cavity is best For drumstick and Papaya: 40 and 50 cells cavity are used.





Procedure

□Trays are filled with the growing medium and tapped gently to fill the cell properly.

□Seedling trays are drenched using Carbendazim 2g/l or Copper oxychloride(3g/l).

□Seeds are treated with Carbendazim (0.2g/100seed) or Captan (0.2g/100g seed) are sown one per cell.

covered with a thin layer of the above growing medium and watered lightly with rose cane
Filled trays are staked one above the other and covered with plastic sheet.
Seeds are taken 4-6 days after sowing according to temperature and humidity



□Trays are shifted to a greenhouse and placed on the raised bed covered with a plastic sheet immediate after germination.

Trays are watered twice a day maintain appropriate moisture. Seedlings are drenched with 0.2% 19:19:19 + trace elements at 15 days after germination.

□Seedlings are sprayed using acephate (0.75g/l) to prevent infection by thrips. Hardening is done by exposing them gradually to sunlight and by reducing the frequency of watering.

□Seedlings will be ready for planting after 25-30 days after sowing.













3.Poly bags planting system

Most of the cucurbits like watermelon, musk melon, bottle gourd, pumpkin, cucumber, ridge gourd, bitter gourd and snap melon are propagated in different size of polythene before main field preparation and also germinate in winter season as compare to direct sowing seeds.





THANK YOU