



Centurion
UNIVERSITY
*Shaping Lives...
Empowering Communities...*

Center for Smart Agriculture

Floriculturist



Module 2: Propagation and nursery raising technology of floricultural plants

Session 6: Nursery raising techniques



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Introduction

A nursery is a managed site, designed to produce seedlings grown under favorable conditions until they are ready for planting.

- ✓ The mother plants planted for vegetative and seed propagation
- ✓ Seed propagated plants are raised for sale simultaneously.



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Selection of site

- ✓ The site should preferably be located near marketing centres for easy transportation of the products with minimum or no damage.
- ✓ It is important to have or develop a perennial source of water inside the nursery.
- ✓ If need arises, wind breaks of tall plants like eucalyptus, aonla, seedling mango, etc. may be planted to provide necessary shade and protection.



Centurion
UNIVERSITY
*Shaping Lives...
Empowering Communities...*

2. Management of Nursery

Seedbed and nursery beds:

- ✓ For raising flower seedlings, some permanent or temporary structures for seed bed may be prepared.
- ✓ These beds will be minimum 0.5 to 0.75 m high from ground level.
- ✓ The beds may be 0.75m to 1.00m in breadth and length may be as per the availability of land.
- ✓ The nursery beds will be prepared for storing of perennial plants or the plants that should be kept for sale.



**Centurion
UNIVERSITY**

*Shaping Lives...
Empowering Communities...*



Flower seedlings in Nursery bed



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Collection and planting of mother plants

- ✓ The plantation of mother plants is an important work for developing a nursery.
- ✓ The mother plants must be true to the type and true to the variety.
- ✓ The plants should be properly labelled.
- ✓ Collection of exotic type of mother plants is a continuous process or job.
- ✓ The mother plants may be maintained properly for their vigorous growth; otherwise number of propagated plants will get reduced.



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Storage of dried, cleaned soil and compost manure

- ✓ For raising flower seedlings during rainy or early winter season, the soil and compost would be stored during hot or summer months.

- ✓ In rainy season, collection of dried soil and manure is very difficult. Without these, the seedlings cannot be raised during rainy season.



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Production of flower seeds

- ✓ The seeds should be produced carefully.
- ✓ If the quality of seed is good, the percentage of seed germination, seedlings vigour, vegetative and reproductive growth of the crops will be good.
- ✓ After harvesting of quality seeds, germination percentage of seeds and seedling vigour should be checked before marketing of seeds.



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Storage of propagated plants in nursery beds

- ✓ The propagated plants are planted in nursery beds for better growth or hardening the plants.
- ✓ In general, this type of nursery bed is prepared under partial shade.

Manuring:

- ✓ Manuring is to be done very carefully.
- ✓ Vigorous growth of plant is always attractive to the buyer.
- ✓ Again, heavy manuring is not beneficial for storage of plants.



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Watering

- ✓ The nursery should have a water source of its own.
- ✓ For this model, digging a well (12 m deep x 3 m dia) and installation of pumpset.

Plant protection

- ✓ Requirement of keen observation on attack of different pests and diseases
- ✓ If the mother plants are infected, the propagated plants will be infected also.



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Harvesting

Only completely ripe seeds are ready for harvesting.

Seed capsules should be covered with muslin cloth or by the paper bag before ripening which may burst while ripening. This will prevent loss of seeds.

Corms and bulbs are generally harvested when the leaves start yellowing or when they dry up.

These are dug out carefully without imparting any injury.



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

- ✓ Before harvest, nursery stock should be mature.
- ✓ The tissues are hardened against water loss and shrinkage.
- ✓ It is a common practice to defoliate shrubs and trees some days before they are to be dug out.
- ✓ This can be done by chemical defoliants, by withholding water or by hand.
- ✓ Live plants intended for transport are sent with a ball of earth around their roots.



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

