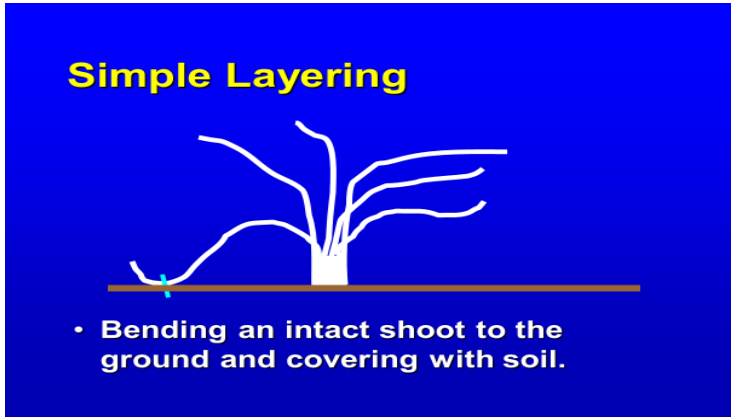
Plant Propagation Lab Exercise
Module 3



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VEGETATIVE PROPAGATION
AIR LAYERING OF CAMELLIA DEMONSTRATION

An introduction to plant propagation laboratory exercises by:
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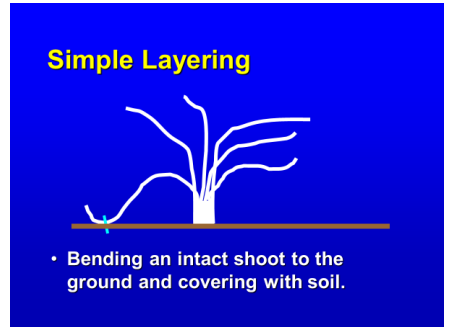
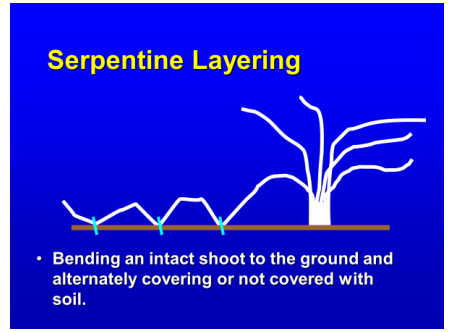
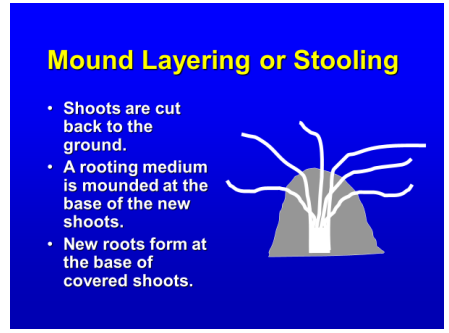
Layering Techniques –

- The simplest form of layering is bending a shoot or shoot tip to the ground and covering it with soil.
- Serpentine layering involves multiple layers of the same stem.
- Mound layering or stooling can be accomplished with shrubs planted in the ground or in a pot.
- Air layering utilizes the same concepts as ground layering, but the layered stem is in the canopy of the plant and not on the ground.







Steps common to layering techniques

- Light is excluded from a portion of the stem which impacts auxin concentrations.
- A rooting substrate is available for root growth
- The flow of carbohydrates from the shoot tip to the roots is interrupted which provides building blocks for new root development
- Contact of the layer with the stem (xylem) is maintained which maintains nutrient and water supply to the developing layer.
- The mother plant continues to support the propagule (layer) during root development.

Steps for making an air layer:

1. Remove leaves or small twigs around the wound
2. Girdle the stem
3. Cover the wound area with moist sphagnum, peat or coir
4. Cover rooting substrate with plastic and seal each end
5. If using a clear plastic, cover this with foil or a black plastic
6. Monitor substrate to ensure the layer is not wet
7. Check for rooting by lightly squeezing the layer and checking for firmness
8. When layers are firm, check for visible roots and if present, the stem can be cut from the mother plant and potted

Materials

- Bucket filled with water
- Sphagnum moss
- Pliers
- Small knife
- Rooting hormone
- Paintbrush
- Labels
- Clear plastic wrap
- Foil or black plastic

Steps for making an air layer: