

Plant Propagation Interactive Session #3

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Exam 2

- Class Average 84
- Class Median 86

- Questions not graded.
 - Multiple Choice #5 – propagation substrates
 - True and False #10 – Hardwood cutting
 - True and False #18 – Budding – genetic material
 - Page 9 – Grafting and Budding
- Question scaled.
 - Mist System Components – Scaled 3 points

Auxins

Auxin is required for initiation of adventitious roots on stems, and it has been shown that divisions of the first root initial cells are dependent upon either applied or endogenous auxin.

Question 2. Factors necessary for root initiation?

d. Auxin protectors, auxin, and borate.

Mist Controls

Basic Components of a Mist system

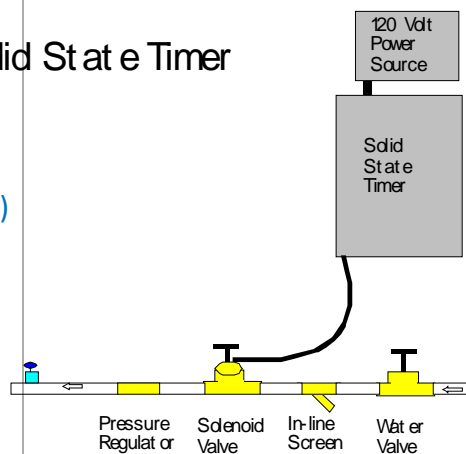
Plumbing

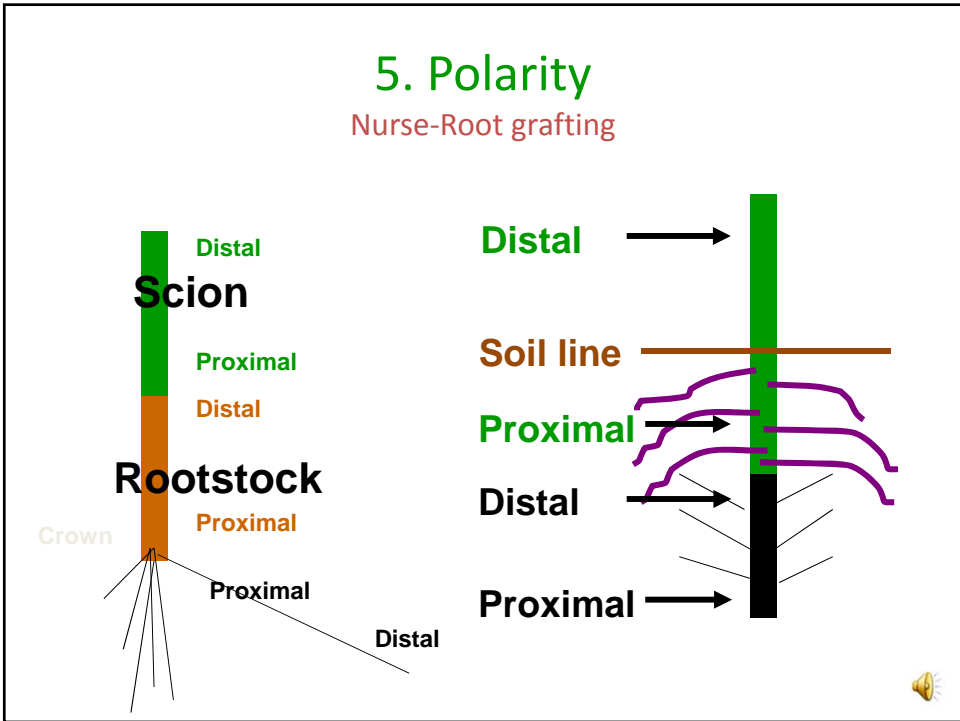
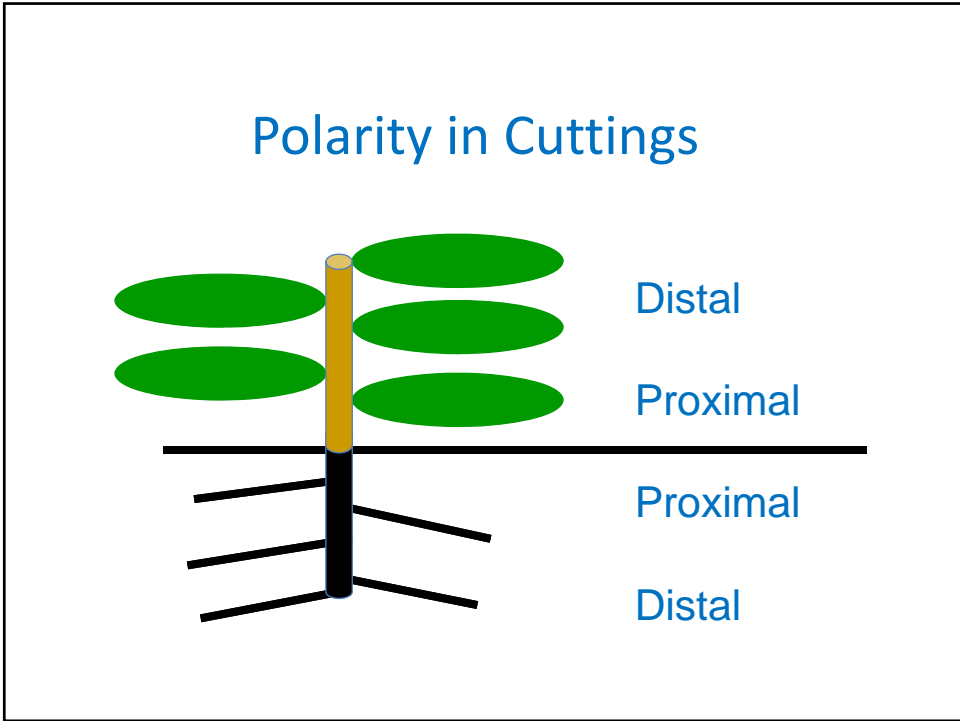
- Shut off valve
- Screen or Filter
- Solenoid Valve (Electric valve)
- Pressure regulator
- Mist nozzles

Timing or water control

- Power source
- Timers or sensors

Solid State Timer





Genetic Limits of Grafting

- Within a Clone ?
 - Yes
- Clones within a species ?
 - Usually
- Species within a genus ?
 - Sometimes
- Between genera within a family ?
 - Remote!
- Between families ?
 - Considered impossible!



Time of Budding

Budding is accomplished during the active growing season.

Rely on actively growing rootstocks.

Depends on location in U.S. (heat)

Spring (March to early May)

June (May to early June)

Summer (mid-July to early September)



Timing of Budding

Budding techniques also rely on the availability of scionwood

- Spring budding relies on scion buds from dormant, stored budwood.
- June budding and Summer budding rely on quiescent (nonelongating) buds from the current season's wood.



Side veneer graft

Rootstock – shoots are usually dormant but root activity is recommended to aid in callus formation.

Scion – shoots are usually dormant – contain no leaves which may pull moisture from the scion.

Cleft Graft



Rootstock – shoots are usually dormant but root activity is recommended to aid in callus formation.

Scion – shoots are usually dormant – contain no leaves which may pull moisture from the scion.

Whip and Tongue graft

- Both the rootstock and scion are usually dormant



Chip bud

- Rootstock is generally dormant
- Typically the bark is not slipping.
- Scion is usually dormant.



Shield bud or T-Bud

- Rootstock is generally Active
- Typically the bark is slipping.
- Scion is a quiescent bud from the current season's wood.

T-Bud or Shield Bud

- Rootstock is generally Active.
- Typically the bark is slipping.
- Scion is a quiescent bud from the current season's wood.

