

Laboratory Exercise # 11

Grafting and Budding; Making Finished Apple Grafts

Part A – GRAFTING

Reference: Text illus. chapters 12.

Objective: To develop proficiency in grafting

Procedure:

Before you begin, work with the instructors to examine the grafts you did last week to determine ways to improve your budding and grafting techniques. A few students will be selected to do budding and grafting of special reserved scions.

1. If you are not confident in your grafting and budding abilities continue practicing the techniques you worked on last week. If you need help feel free to call on your lab instructor. Use as much practice plant material as you need – but don't waste it.
2. Using the apple rootstock plants potted up earlier, graft the available scion material to them.
 - a. apple rootstock EMLA 7 / dormant apple scion – whip and tongue graft
 - b. apple rootstock EMLA 7 / dormant apple scion – Field craft top grafter machine
 - c. apple rootstock EMLA 7 / dormant apple scion – Plesa – 2 omega cut graft.
3. Be sure you have labeled each plant with your name, lab section and the scion cultivar used. Leave them in the greenhouse at least 2 weeks, or until you leave for the summer.

Part B - BUDDING

Reference: Text : chapter 13

Objective: To develop proficiency in budding.

Procedure:

1. If you are not confident in your grafting and budding abilities continue practicing the techniques you worked on last week. If you need help feel free to call on your lab instructor. Use as much practice plant material as you need -- but don't waste it.
2. Using the apple rootstocks potted up earlier in the semester, bud the available scion material to them.
 - a. apple rootstock EMLA 7 / dormant apple bud -- chip bud by hand
 - b. apple rootstock EMLA 7 / dormant apple bud – chip bud using the Fieldcraft chipbudder
 - c. apple rootstock EMLA 7 / dormant apple bud -- T - bud by hand

3. Place all grafted plants on the shaded bench in the propagation greenhouse. Be sure you have labeled each plant with your name, lab section and the scion cultivar.
4. Leave them there at least 2 weeks, or until you leave for the summer. When you retrieve them, cut the rootstocks off immediately above the scions.

Part C – Score the Redbud / Honeylocust seeds stratified 10 weeks and planted 2 weeks ago

Seedlings are in Zone 21 on the bench designated for your lab section. Use the data sheet provided to your group to record your data. Turn in all the data for Lab 1 in class tomorrow, April, 2nd. You may pot up any seedlings you wish to keep and place on the Zone 21 bench 4 where potted up plants are kept.

If you have time you may make one or two additional grafts using scion material of your choice.

Resource Books for Grafting and Budding:

Hartmann, H.T., D.E. Kester, F.T. Davies & R.L. Geneve. 2002. *Hartmann and Kesters' Plant Propagation: Principles and Practices*, 7th edition. Prentice Hall. (Excellent information on propagation by grafting)

Garner, R.J. 1993. *The Grafter's Handbook*. Sterling Publishing Co. Inc.

Macdonald, B. 1986. *Practical Woody Plant Propagation for Nursery Growers*. Timber Press, Inc.

Many resources are available on the web, although most are not as complete or as informative as your textbook. One of the better links is:

Missouri State University
<http://muextension.missouri.edu/xplor/agguides/>