

Chip Budding (Grafting)

Jim House

Olympic Orchard Society

Propagation by Grafting

Grafting is used to propagate plants and results in an exact genetic copy of a desired plant.

Types of Grafting

Classical Grafting: joins a *scion* (piece of wood containing buds) to a *rootstock* (stock) and is done during the dormant or late dormant period.

- Examples: Whip-and-tongue Graft, Owens Box Graft, Extended Saddle Graft, Cleft Graft.

Types of Grafting (Cont'd)

Bud Grafting (Budding):

Inserts a mature bud under the “slipped” bark of a host joining the bud with the host’s cambium. It is done during the limited time when the host’s bark “slips”, early to mid summer.

Types of Grafting (Cont'd)

Chip Budding:

A “chip” containing a **mature bud** and **wood** from the desired donor is placed on a complementary cut of the host to **align the cambia**, allowing fusion. Chip budding is done during the growing season (in our area August).

Chip Budding Schematic #2

Chip-Budding

This method of budding can be used whether or not the bark is slipping. More expert knife handling is needed, but once the basics are mastered, it is nearly as easy as "T"-budding. An advantage is that chip-budding can be done when the bark is not slipping. When done at the same time as "T"-budding, it heals more quickly and gives an even stronger union than the inverted "T."

cold.

After the scion wood has been cut from the tree, it should be tied in bundles, labeled, and stored under moist conditions in a temperature range of 40° to 45°F. The bundles may be stored in boxes of moist sphagnum or peat moss and placed in a cool cellar or refrigerator. Scion wood bundles wrapped with damp paper toweling, sealed in plastic bags, and placed in a refrigerator also store well. When you are ready to make scions, cut off and

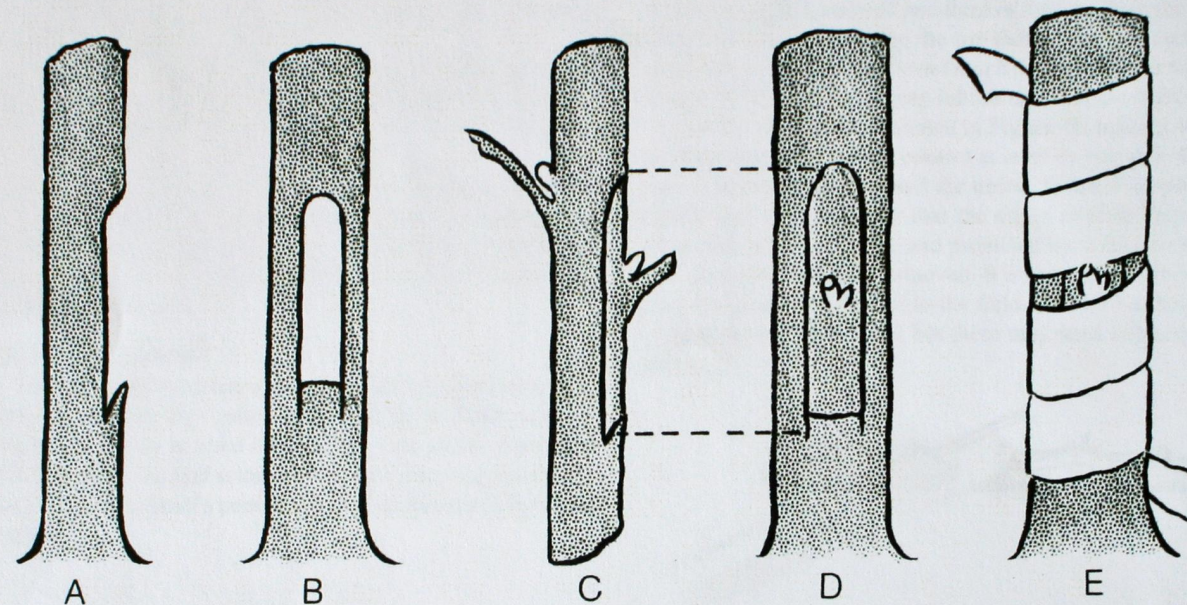


Figure 3. (a) Side view of stock cut for chip-budding. (b) Front view of stock cut. (c) Chip-bud shield. (d) Chip-bud set in stock. Note that if the chip-bud is smaller than the cut that has been made for it, the bud should be lined up with the edge of the cut to obtain cambium contact. (e) Polyethylene tape to seal chip-bud; only bud is left uncovered.

Principals of Chip Budding

- Use a mature or near mature vegetative bud
- Best time of year for our area is August
- Goal is to have the **graft Cambium overlay host Cambium**

Tools for Chip Budding



Chip Budding – A Good Bud



A Fruit Spur (Avoid These)



Chip Budding: Chip Removed from Donor



Chip Budding: Placing the Chip



Chip Budding: Chip Covered With Parafilm



Chip Budding: Graft Secured with Grafting Strip



Chip Budding: Grafts on an Espalier



Chip Budding: Black Diamond Peach The Following Spring



Chip Budding: Black Diamond Peach July the year after grafting



Yellow Spanish Cherry on a Salvaged Regrown Gisela 5 1 year old



Yellow Spanish Cherry on Gisela 5 1 year old



Chip Budding: 3 Plum Varieties on one Tree



Chip Budding: A Few References

“Propagating Fruit Trees”; Karl D. Brase; New York State Agricultural Experiment Station; Cornell University; Bulletin No. 773; March 1956

“Reproducing Fruit Trees by Graftage: Budding and Grafting”; L.P. Stolz and J. Strong; Univ. Kentucky College of Agriculture; Bulletin HO-39

“The Grafters Handbook”; R.J. Garner; 2013; Chelsea Green Publishing; ISBN