

Side-Grafting Apricots and Other Stone Fruits

In April 2012, I went out on a very warm day to bark graft sweet-cherry scions onto a cherry rootstock that had grown into a small tree. I found that in spite of the temperatures, that it was difficult to “lift” the bark off the cambium and insert scions beneath it. In a later conversation with **Dan Whitney**, my grafting mentor, I learned that side-grafting is a much better technique than bark grafts for topgrafting stone fruits—not just apricot, but also cherries, plums, and peaches. This past spring Dan used 10,000 side grafts to topwork 7,000 apricot trees from one older cultivar to three others, and only a few of the grafts failed. A few years ago, he topgrafted nectarine trees in May with side grafts and had a 90% success rate. (I consider topgrafting peach or nectarine in the spring is the ultimate challenge in grafting tree fruits.) Dan said that his own experience attempting to make bark grafts on sweet cherry was similar to mine.

From Dan’s experience, side grafting is best done when the understock is between bud swell and full bloom. The technique works best if the understock is between 1 and 2-1/2 inches in diameter, can be done up to 3” diameter with little difficulty but is more or less hopeless if the understock is over 4 inches in diameter. The scions must be fully dormant when the grafting is done. Dan believes the biggest reason stone-fruit grafts fail is because they begin to push buds before a graft union is formed. The key is collecting scionwood when it is at maximum dormancy (January), not allowing it to dry out, and keeping it absolutely dormant and moist in storage at 28° to 30°F. It is better to graft a bit late than too early, and the danger of severe frosts should be largely past. Dan made some sweet-cherry bark grafts and side grafts early in the growing season and some of them failed after they were exposed to very cold weather because the callus tissue was killed by the cold.

The first step in the process, given that you have dormant scionwood in storage, is to prepare the understock. Dan usually cuts off some of the branches first and then shortens by 1/3 to 1/2 the branch that the side graft will be made onto. Part of the reason for this is that he wants to remove some of the shoot-tip auxins (plant growth regulators) that not only inhibit side-shoots from forming on a fruit tree but also have a tendency to inhibit the graft from sprouting also. Dan said that this fall, he found an apricot side graft that he had made on a rather large tree this past spring. It was alive but had only grown 1/4 inch because of the auxins’ inhibitory effects.



#4 -- Slicing into the understock

To begin, make a slice about 1-1/4 to 1-1/2 inches long into the understock trunk or branch to form a flap and expose the cambium. (photo #4)

Sharpen the lower end of the scion to form a wedge 1-1/4 to 1-1/2 inches long whose sides taper equally. (photos #1-3)



#1 -- Scion -- 1st cut

Side-Grafting -- continued



#2 -- Scion - 2nd cut



#3 -- Scion - narrow edge view

Insert the wedge under the bark flap, matching as much cambium to cambium as possible. (photos #5-7)



#5 -- Scion is ready to insert



#6 -- Inserting the scion



#7 -- Scion wedge in cambial contact

Then, wrap the graft in a spiral manner to tightly bind the flap to the scion and both to the understock. (photos #8-9)



#8 -- Beginning to wrap the graft area

Side-Grafting -- continued



#9 -- Securing the wrapped area

White, stretchy plastic grafting tape works best for this. Seal the finished graft by painting it with Doc Farwell or another latex-based tree paint. **Wilson's Irrigation and Orchard Supply** in Union Gap, WA sells both these materials.

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Once the buds on the scion begin to grow leaves, and an inch of shoot growth, and it is clear that the graft has taken, cut off the understock just above the union. This will channel the tree's sap and energy into the scion and force vigorous growth. As with bark grafts, you may want to

provide support in the form of a stake to the new growth if it very vigorous, so that it does not break off in the wind.

What are the factors that make this an advantageous method to graft stone fruits?

One very important one is that it can be done in cool temperatures when it is impossible to "lift" the bark to make bark grafts. Furthermore, there is no need to make a tongue as is the case with whip-and-tongue grafts. The technique involves relatively little shock to the understock. (By comparison, cleft grafting is a very brutal technique.) The growing parts above the graft bring moisture and nutrients right past the graft. Dan comments that the problem in fruit-tree grafts in general is that apples tend to get too much moisture in their graft union whereas stone fruits seem to have too little. For that reason, the scion tends to dry out. (I recall attempting to bark-graft pluots in March 2009 and having extreme frustration in trying to lift the bark.) This style of graft, with understock buds breaking above it and drawing sap, has the ability to keep the grafting site more moist.

If the worst happens and the graft fails, there is relatively little damage to the understock from the technique. The relatively large amount of cambial contact gained by this technique (as opposed to chip budding, for example) may improve the odds for success and also means that vigorous growth from the scion should result once the graft takes.

AIG Roster

Included with the newsletter is a current copy of the roster. Please review it and let me know if any information is outdated or otherwise erroneous so that it can be corrected.

Dues. If you want to continue receiving this Newsletter, please send in your dues before March 1st if you have not already done so. The rate for 2012 membership in the group remains at \$7.00. **(Make check payable to Robert Purvis.)**

Please send in a report later this year of how your apricot trees did, when they bloomed, when they ripened, fruit size, quality, and quantity, or other items that are of interest. I'll also print comments on plums or peaches. Thank you to the people who already renewed, and thank you also to all of you who turned in reports on your trees.

---Bob Purvis

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