Producing New Roses by Grafting

By Jim Small, Consulting Rosarian

With the exception of miniatures, few modern roses grow on their own roots. Typically, large roses are grafted or budded onto an understock like *Rosa multiflora* or Dr. Huey. The advantages of this form of asexual reproduction include, in many cases, more vigorous growth of the scion (twig grafted onto understock) and the ability to produce a large number of offspring from a limited amount of budwood. In Florida, it has been found that roses are healthier and produce more blooms when grafted onto fortuniana, a rootstock native to China. Rootstocks like multiflora and Dr. Huey do not tolerate our sandy soils with high populations of nematodes as well as fortuniana. All roses marketed by Nelson's Roses are grafted on this rootstock. Grafting roses is easy and allows one to produce new roses bushes that are better suited to our Florida climate. Many miniature roses also grow more vigorously when grafted.

The first thing you are going to need is some rootstock. You have probably noted suckers growing on your roses from below the bud union (area where the scion is grafted). These suckers will have differently shaped leaves from that of the grafted rose. Cut the sucker from your rose and divide it into 8-12 inch sections. Make sure you know which side is up. Remember that the leaf axils are always below the bud. With a knife, lightly scrape the bark about an inch up from the bottom, moisten this area in a cup of water, and dip it into rooting powder. The rooting powder contains a plant hormone (auxins) that stimulates the growth of roots. Put some good quality potting soil in a six-inch diameter pot, moisten it and allow the water to drain. Now make a hole in your pot with a pencil and put the rooting powder covered stem into the hole. Cover the cutting with a plastic bag and frame or a clear, two liter, soda bottle. The idea is to have 100% humidity about the cutting. Store it in an area with filtered sun where is does not get too hot. Areas under a shade tree or on a back porch are usually good locations. It will take about 6 weeks to root your fortuniana. Expect about 40% of the cuttings to "take" using this method. A mist house will increase the "takes" to about 80%.

Now that you have the fortuniana rooted, it is time to do some grafting. You will need the rootstock, a scion (the shoot to be grafted), a very sharp knife, plastic bags, coathangers, and some grafting tape. Clean your knife and rose clippers with rubbing alcohol to reduce the chance of contamination with virus. Now select the budwood from the rose you want to produce. You will need a section containing three

buds. I usually cut it off a spent flower stem. Use buds at the axils of leaves with 5-7 leaflets. Cut the stem at the top of the lower bud, count up two buds, and cut it again, just **above** the third bud. You should now have a stem with two viable buds. Now using a sharp knife, slice a "V" in the cane below the first bud of your scion. Quickly make a slice in the understock (the fortuniana), spread it open with your knife, and insert the "V." Tape the two together with magic tape, grafting tape, etc. I personally use Parafilm, a product that can be obtained from scientific supply houses. Make a frame in your pot using 2 coat hangers and cover the whole pot and new graft with a plastic bag. I use duct tape to seal two bags together to cover the entire rose and pot. Leave the new rose in a shaded spot for 4-6 weeks. Do not open the bag for any reason.

After the elapsed time has expired, punch one hole in the bag with a pencil the first day, two the second day, three the third, etc. After 7 days, remove the bag and water the rose. Keep the rose in the shade another 7 days. Step the rose up into a three-gallon pot and gradually move it into the sun. Give it a tablespoon of a complete rose fertilizer and allow it to grow in the pot about 7 months. It should be ready to plant in your garden after that time.

Modifications of the above technique include covering your graft with a clear 2-liter soda bottle instead of using the plastic bags and coat hangers. Another variation would be to do chip budding instead of the typical cleft graft described above. In this technique, one cuts a chip out of the rootstock stem and then a like chip from your budwood that contains a bud. Use Parafilm to tape the bud-containing chip to the area of the rootstock from which you removed the chip. Make a tiny hole in the Parafilm just over the bud. You don't need to do anything else with this technique except wait. If you get a 'take" the attached bud will grow a stem. Cut the understock stem just above the growing bud and remove all the suckers. This is probably the easiest method of grafting but is one that I use very little. Although it works well, it takes a lot longer to produce a mature bush. Ultimately, you end up with a quality bush with either technique.

You may have noted that many of the roses you purchase have a tag saying that asexual reproduction is prohibited. Therefore, you cannot legally graft anything with a plant patent. Still there are many roses that were never patented and others for which the patent has expired. OGRs are all fair game. There are many reference books available that will tell you which roses are currently patented.

Grafting your own roses is easy, fun, and a natural extension of your rose growing hobby. A large number of varieties can be successfully (and legally) propagated in you own back yard. Give it a try. What have you got to lose?

The above article by CFRS member Jim Small was recently recognized by the American Rose Society as a "2002 Award of Merit" winner. Congratulations Jim! This article originally appeared in the Wind Chimes, October 2002 issue.