

HOW I PROPAGATE ROSES

By Harold Baker

Let me start by stating that I am not touting that what I do is the one and only way to propagate roses. I am simply sharing with you what I do and that I am happy with the results. I would also like to state that I have been involved with roses for many years and I have never heard of anyone being hassled in any way for propagating rose for their own use. If you were to start selling certain varieties is when you would get into trouble.

When someone tells me that they do certain things I always want to know why. I expect you may be the same way. Therefore, I will try to explain.

A. Why do I propagate roses instead of buying them at a nursery?

- (a) You can tailor make a plant just the way you want it as far as the type of rootstock, height of the graft etc. and, by taking your time, you can produce a superior graft.
- (b) By exchanging bud wood with like-minded people around the country you can be growing new varieties before most nurseries have then available.
- (c) You will find that about 14 of 15 new varieties will be inferior to the roses that you already have. You can try them out, keep the winners and discard the losers without losing a lot of money.
- (d) If you search out superior specimens and use the best bud eyes from these specimens you can produce a superior bush for yourself.
- (e) It's lots of fun to wait, with great expectation, to see what the new blooms will look like.

B. Why do I use Fortuniana Rootstock? The sandy soils of Florida are teeming with Nematodes. These invade the roots of most rose rootstocks and led to the decline of the bush. Fortuniana rootstock has superior resistance to this pest. In addition, tests have shown that roses on Fortuniana Rootstock produce more blooms and larger blooms than the same variety grown on other rootstocks.

C. Why do I graft instead of bud onto Fortuniana? Because I can produce the bush much faster if I graft where I have the rose foliage producing energy and I can start with bud eyes that have already began to break.

D. Why do I make a V notch in the top of the rootstock instead of simply cutting a slit like most nurseries do? Because this enables me to make a superior graft. Time is money in a nursery so many of them simply slit the top of the Fortuniana because it is faster. But this causes problems. The only way the point of the V cut on the stem of the scion (desirable variety) can go all the way to the bottom of the slit is if the portion of the cane on each side of the slit is broken over, crimping the cambium layer and xylem tubes. This is a problem. If the point of the V is not driven all the way to the bottom of the slit this leaves a hole. This too is a problem. Cutting the V notch in the Fortuniana to match the V point on the scion takes a little longer but it has neither problem and produces a superior graft.

E. Why do I make my grafts about 8 inches above the bed when many nurseries place their grafts about 3 inches above the bed? Part of most nursery's sales are to people in areas that

have to be concerned with freezes. Therefore, they want to be able to protect the bud union. That is not a concern in my Central Florida location. Having the graft high makes everything easier. The high graft allows my Dramn system to water and liquid feed the entire surface of my rose bed without being blocked by low canes. Weeding, water wandling, spraying, feeding, mulching, and pruning are all easier.

- F. **Why do I use “Dip-n-Grow”, a liquid rooting compound instead of a powder?** Rooting powders lose potency with time. Since I do a limited amount of grafting, I fear that I would have to throw away much of the powder that I would buy. It is my understanding that Dip-n-Grow does not have this shelf life problem. Just to be safe I store it in my refrigerator. I am not aware of any loss of potency but, should this occur, it would be simple to change the Dip-n-Grow dilution ratio from 5 to 1 to a 3 or 4 to 1 ratio to compensate for this.
- G. **Why do I root the Fortuniana in the small tray compartments instead of larger cups or pots?** The small root ball on the Fortuniana allows me to use one hand to hold the Fortuniana/scion in the air and rotate it to wind the grafting tape onto the joint. If the Fortuniana is rooted in a cup or pot the weight of the cup or pot makes it necessary that I set it on the table. Then I must try to wind the grafting tape around a vertical, stationary joint. This requires more dexterity and patience than I possess.
- H. **Why do I pre root the Fortuniana instead of rooting and grafting at the same time?** It is my experience that I get essentially 100% success with my grafts. While my success rate with rooting the Fortuniana is good, it certainly is not perfect. In the wintertime I would even rate it as poor. If I graft onto unrooted Fortuniana, and the rooting does not take place, I lose the specimen even though the graft heals satisfactorily. I previously rooted and grafted at the same time to avoid having to wind the grafting tape around a stationary pre rooted start in the cups. After Ken Muncy showed me the small compartment rooting trays I adopted my present method, which I will describe. I find it to be a better way.

Now that I have given you all this background on why I do things the way I do, let me give you a step-by-step procedure on how I do it.

EQUIPMENT USED FOR THE GRAFT

1"x2" board about 2 1/2" long
Small plastic scraper holding a replaceable single edge razor blade
Parafilm "M" Laboratory film
Eyedropper
Small test tube 5/8" in diameter by 3 1/2" long that holds 15 times the volume of the eye dropper
Vase to hold the test tube upright
"Dip-n-Grow" rooting compound
Small knife
16 oz. Styrofoam cups
Fafard #2 Soilless Mix
Perlite
Labels & permanent marking pen

EQUIPMENT USED FOR THE MIST HOUSE

10 minute timer with pins set to mist for 6 to 12 seconds 3 times during the 10 minute interval
A photocell or a cheap “security” timer to turn the 10 minute timer off at night
Solenoid Valve
Flora-Mist Fogger

WHAT I DO

1. I previously grafted and rooted the Fortuniana at the same time. Now I try to root the Fortuniana ahead of time. I have plastic rooting trays with compartments that are about 1 ½” square by 2 inches deep. I make a mixture of 2/3 Fafard #2 and 1/3 Perlite and thoroughly soak this mixture with water before filling the compartments.
2. Cut long canes of Fortuniana that are then recut into approximately 11-inch lengths. Make sure which is the bottom end. Remember the bud eye is always above the leaf. Use a razor blade to make a square cut on the bottom of the Fortuniana stick just below a bud eye. Use a small knife to scrap 2 strips of bark, each about 1-inch long, from opposite sides of the stem base. Then use the point of the knife to make 3 or 4 shallow slits the length of the scraped areas.
3. Dip the end of the Fortuniana for at least 6 seconds into the small test tube containing water and 3 eyedroppers full of Dip & Grow. This is to make a 5 to 1 mixture.
4. The prepared Fortuniana is inserted into the Fafard/Perlite mixture with the foliage on each stick facing in the same direction. Then, when the tray is placed in the mist house, it is placed so the foliage faces the sun. It is important for the best rooting of the Fortuniana that the mist house is in full sun.
5. Rooting of the Fortuniana takes place in about 4 weeks during the summer. In the spring and fall it takes about 6 weeks and in the winter 8 or more weeks.
6. When I get ready to graft I take a cutting from the desired variety (scion). Ideally the cane would have recently bloomed and the bud eyes would be very swollen or maybe even started to grow with less than a ¼ inch of growth. Each cutting should contain 2 sets of healthy leaves and have at least 1 inch of stem below the bottom set of leaves. The cutting is conditioned in warm water.
7. I put an old plastic tablecloth on the dining room table and do all my grafting there where I can be comfortably seated, have air conditioning, and good lighting.
8. I take the tray of rootstock out of the mist house and place it on the table. The cutting of the desired variety is held next to the various “sticks” of Fortuniana to select which stick best matches it’s diameter. This stick is slowly and carefully pulled from the tray so the delicate roots are not torn off.
9. I lay the Fortuniana horizontal with the top end resting on the board. Rotate the Fortuniana until the maximum amount of foliage is pointing toward the ceiling. Use the razor blade to cut off the Fortuniana about 1 inch above the top set of leaves. Then hold the razor blade straight up and down and press straight down to make an approximately ¾ inch deep V notch in the top of the Fortuniana leaving a small shoulder on each side of the V at the top.

10. Place the scion horizontally on the block of wood and rotate the scion so that the bottom leaf is pointing at the ceiling. Holding the razor blade straight up and down press down with the razor blade to cut a matching V point on the bottom of the scion. The sides of this cut are slightly longer than the V notch cut in the Fortuniana so a bare portion will be exposed after the two parts are joined together. Make the top of this V end just below the bottom of the bud eye in the scion.
11. Stick the two parts together with the bottom leaflet of the scion turned toward the side of the Fortuniana that has the most foliage. They should fit snugly together with the cambium layers lined up. Cut a piece of Parafilm about ¼” by 1 ½” and wrap the joint by rolling the 2 pieces using one hand while stretching the Parafilm tightly with your other hand. The entire joint including the exposed portion of the scion just above the Fortuniana is wrapped.
12. Prepare the Styrofoam cups ahead of time by using a pencil to punch 4 holes in the sides just above the bottom plus 1 hole in the center of the bottom. The newly grafted starts are planted in the cup using a wet mixture of 2/3 Fafard and 1/3 Perlite as before. However, now that we already have roots, a small amount of Osmocote and Superphosphate is added to this mix.
13. The cup is then watered and a nametag displaying the variety name and grafting date is inserted. A trigger bottle is used to apply a mist of water above and below the foliage to keep the grafted specimens, as well as the tray of rootstock, from drying out while additional specimens are prepared.
14. The cups are set in a plastic tray that has 3-inch square compartments before being placed in the mist house. Each cup is turned so that the maximum amount of foliage is facing the sun.
15. You can see the V notch graft through the Parafilm. When it initially heals it will make a white V. The graft is not well healed at this point. Wait until the graft turns brown. By this time there should be roots visible at the holes in the Styrofoam cups and it is time to remove it from the mist house. This will take about a month depending upon the time of the year.
16. The start is potted up in a 1 gal. pot and set in the shade and watered daily. After about a week it is gradually worked out into the sun. When staking the small starts it is important that the tie is made above the graft because, if it is only secured below the graft, the top may break off in high wind.