

Fortuniana Grafted vs. Own Root Roses in Central Florida

By Dr. Malcolm M. Manners

I've had several conversations with local society members, lately, about the relative advantages and disadvantages of grafted and own-root roses. Much of what has appeared in print was written by authors in other climates and with different soil conditions than those of Central Florida. So I thought the subject might be worth an article. First some concepts:

The term "own-root" refers to roses that have been rooted from cuttings, divided, layered, tissue-cultured, or produced by some other method, which caused a branch to produce roots of its own.

In contrast, a grafted or budded plant is one in which a small piece of the desired flowering variety (the scion) was surgically attached to a root system from another rose (the rootstock, understock, or just "stock"). These two parts heal together, to become a single plant.

Budding is a type of grafting, and the terms are often used interchangeably. While methods of nursery production differ slightly, budded and grafted plants should behave identically in the garden, and any reference to "grafted" plants in this article is meant to include budded plants, as well.

Own-root plants have some significant advantages over grafted plants. Own-root plants are usually cheaper, since they take less time to produce, as well as less skilled labor and often less total labor. Own-root plants also tend to live longer than grafted plants in a soil to which they are well adapted. Also, if an own-root plant freezes to the ground, it will usually sprout back out from below the soil surface. The sprouts are still the original variety, so you haven't lost the plant. So, in many areas of the country, you may find own-root bushes 50 or more years old, sometimes much more. However, if a grafted plant freezes to the graft union, the rootstock may sprout out, but you will have lost the original grafted variety.

The biggest disadvantage of an own-root rose in Central Florida is that relatively few rose varieties are well adapted to our soil conditions. We have light, excessively well-drained, high-temperature soils, not at all ideal for most roses. While we can certainly improve the situation with the addition of generous amounts of organic matter, a problem we can't eliminate is nematodes – tiny worms in the soil. Most Florida soils are infested with many species of nematodes, some of which are entirely harmless, while others feed on plant roots. The most serious group on roses is the root knot nematodes (*Meloidogyne* spp.) If a rose is not resistant to these pests, it will not likely be successful on its own roots. Roses are not either absolutely resistant or susceptible; rather, there is wide variation from one rose cultivar to another, in the level of resistance. Often, an own-root plant will grow rapidly and healthily here, at first, then become less vigorous after a year or two, eventually becoming so unhealthy that it needs to be replaced. Others decline shortly after planting, while still others are highly resistant and may survive and thrive for many years.

The mere fact that a rose is grafted or budded does not insure that it is better adapted to a certain soil condition or more resistant to nematodes than an own-root rose would be. It is important to select a rootstock that is specifically adapted to your situation. It is by selecting a rootstock to match the local soil, that one can obtain a plant that is superior to an own-root bush of the same variety success.

Fortuniana, also sometimes known as "Double Cherokee," is currently the most popular rootstock in Florida. Fortuniana is also the most nematode resistant of all our rootstocks, allowing it to grow vigorously for 30 or more years. No one knows exactly how long such bushes may thrive, but the oldest grafted plants on Fortuniana in the State are probably around 40 years old, and some of them are still quite healthy. Plants on Fortuniana are sometimes slower growing during the first few months after planting, than plants on some other stocks, but once established, they quickly catch up with, and surpass the growth of plants on any other root system. Fortuniana makes a very far-reaching root system, extending out many feet from the bush. It is more drought-tolerant than any of our other

common stocks, and it is able to extract fertilizer nutrients from a wide variety of soils. Plants on Fortuniana ultimately grow to be unusually large. So, if you see an estimated height and/or width printed for a variety, you should assume that it will get substantially bigger if grafted on Fortuniana roots. With any grafted plant, it is important to watch for suckers -- stems growing out from the rootstock portion of the plant, below the graft. If allowed to grow, they will eventually crowd out the scion, and the graft will be lost. Many grafted plants are short-lived because no one bothers to desucker them. A convenient aspect of Fortuniana is that its leaves are drastically different from those of most other roses, so suckers are easily recognized in the garden, even when quite small.

There are some roses that are excellent on their own roots. Some of the Chinas, for example, have been known to live 70 or more years, here in Lakeland, on their own roots. Old Blush, Louis Philippe and Archduke Charles are among this group of roses. Some Teas and Noisettes may also be grown for a number of years on their own roots, but I would caution you that, in nearly twenty years of searching, I have never found an own-root Noisette over 5 years old in the Lakeland area, nor have I found a Tea more than about that age, unless it was growing next to a concrete building or slab. On three occasions, I've seen very old plants of Mrs. B. R. Cant (a Tea) growing next to a building. We have a plant on our campus that is at least 40 years old growing right next to a concrete sidewalk. Note that nematodes don't do well under heavy mulches, and in this case, concrete is a "heavy" mulch! We've never found any other own-root Tea in this area, regardless of its proximity to concrete. In addition to the roses mentioned above, here is a list of all of the other roses I've ever found in Central Florida, growing healthily on their own roots: Pink Pet, R. laevigata (the Cherokee Rose), La Marne (Polyantha; it is FAR better on 'Fortuniana' though), Spray Cecile Brunner (Polyantha, also grown as Bloomfield Abundance), and 2 plants of Tausendschon (Hybrid Multiflora).

I wouldn't hesitate to recommend any of these roses on their own roots, for this area of the State. But I would not recommend any other own-root roses for Central Florida, unless you know that the variety has been grown successfully, for many years, or unless you are willing to replace the plant fairly soon. If you want to gamble, other Chinas seem most likely to be successful, followed by some of the Teas. Somewhat north of here, where the clay content of the soil is greater, the situation changes. Many roses do well there, on their own roots. This is probably because root knot nematodes do not thrive on heavy, clay soils. But that is not the case on our sandy, non-clay-based soils.

I think it is a very important observation that you just don't see old own-root bushes of other varieties in this part of the State. There must be a reason for that, and I think it is that the plants have all died, due to their inability to adapt to our soil and pest conditions. Many people are planting Tea roses on their own roots, in this area, now. I wish them luck and success, but until those plants become several years old and are seen to be still thriving, I won't recommend own-root Teas for this area. I would always elect to put them on Fortuniana roots, as I would all other roses not listed above.

One might ask if there are any disadvantages to a Fortuniana rooted bush. I can think of only two: It may be somewhat more cold tender than an own-root plant (not an important consideration anywhere in Florida), and it will require some sucker removal during the first few years. I don't consider either of these to be extreme disadvantages, and I think the advantages far outweigh them, in most cases.

March, 2013 Addenda:

Now, after another decade of observation, I still consider most of this article to be correct, but a few further comments here. 'Smith's Parish', one of the Bermuda Mystery Roses, has also proven to be good on its own roots for 10+ years, so that can be added to the list. You may hear recommendations from north Floridians about the benefits of own-root roses, but realize that from about Ocala northward, they often have considerable clay in their soils, so their situation is far different from our beach-sand soils.

Another concept, which I think most people miss in the own-root-vs.-grafted debate: People often think of those as two ways of growing roses. But just as a grafted rose on 'Fortuniana' is a very different plant than one grafted to 'Dr. Huey' (so "grafted" is not just one thing), in the same sense, if you grow 50 different varieties on their own roots, then you have 50 DIFFERENT root systems involved, each of which differs from all the others in its soil preferences, pH tolerances, disease and nematode resistance, vigor, etc. That is a profoundly important concept that is almost always ignored in a simplistic discussion of the topic. By choosing a specific rootstock well-adapted to one's local soil conditions (in our case, that would be 'Fortuniana'), we can improve the overquality of virtually any rose. So I actually prefer even the Chinas, 'Tausendschoen', etc., on 'Fortuniana' roots; they're just superior plants. There are a few exceptions: I've grown some David Austin roses, notably Graham Thomas ('Ausmas') and Heritage ('Ausblush'), which grow to be fantastically large, healthy shrubs on 'Fortuniana' roots, but they make very few flowers; they're just too vigorous. On the other hand, if grown own-root or on 'Dr. Huey' roots, they bloom frequently and consistently, on a much smaller bush that doesn't live more than 5 or 6 years.

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Dr. Manners was recently honored as a recipient of the 2013 "Great Rosarian of the World" award.