# The Rookie Rosarian - November <br> In The Beginning 

By Robert B. Martin, Jr., Master Consulting Rosarian, Vice President of the American Rose Society, petrose@aol.com
Suppose you are new to roses. You have planted a small rose garden and you'd like to grow good roses. But you have more questions than answers. Where do I start? What do I feed them? How do I protect their health? To answer these and other beginner questions I begin this month another year-long series of "The Rookie Rosarian". It is not, however, just for the rookie, but should also be useful to many experienced rose gardeners as a refresher course on the basics.

Many readers will recall that I published this series in Rose Ramblings in 2009-2010, when Dona was Editor. At the time, Dona and I had recently moved to the San Diego area from Arizona and had begun our first garden at a rented house in Escondido. Now, having completed five years at the home we own in Escondido, I have thought to update and revise the original series to reflect my experiences and changing opinions.

For those unfamiliar with my history, I first began growing roses in 1971 at a new house in Irvine, California. Beginning in 1977, I gardened for more than 25 years in Pasadena, California, which has a climate very similar to Escondido. That incidentally is no coincidence. Pasadena is in Sunset Climate Zone 21 and when we moved to the San Diego area, the first thing I looked for was the comparable zone to Pasadena. Add to that six years of growing roses in the difficult heat of Arizona and I feel confident I can steer the rookie San Diego rosarian in the right direction.

Please keep in mind that I intend to provide instruction that is applicable to the San Diego area in particular and Southern California in general. Roses perform differently in different parts of the country and so readers in other areas should keep this in mind. Also please note that my plan is to give answers and not so many explanations of the reasons behind them. I approach this subject with the view that the rookie rosarian wants to know what to do. The "why" can wait for another day.

So where do I start? Let us begin at the beginning...

## Make a Commitment

The first thing you must do is to make a commitment. Commitment is uncommon these days but the fact remains that growing good roses requires that you make a commitment to do so. Roses require attention and care. So let's be clear at the outset - if you are not prepared to make a commitment to care for your roses then you should abandon the idea of growing roses. It is as simple as that.

The commitment is primarily of time. How much time is required? There are studies that say that roses require more time for their care than any other landscape plant. I am slightly skeptical of this but then I don't regard time in the garden with my roses as work.

And I am convinced that the amount of time required is trivial compared to the rewards that are achieved.

But let's talk numbers. I have calculated that basic maintenance of a large rose garden at a very high level of quality takes about 2-3 minutes per rose bush per week. Here I am speaking of a garden with several hundred roses and there are economies of scale in dealing with larger numbers of roses since, for example, it takes a fixed amount of time to get the tools and supplies out and to put them away. Therefore a rose garden of perhaps a dozen roses will require nearly as much time as one twice that size.

For the rookie, a good rule of thumb is that care of your bushes will require about 3-5 minutes per bush per week. So, a garden of 36 roses might require as much as two hours of attention per week. This is not much time and it is also good exercise that will add even more time back to your life span.

The key, in all events, is regularity. It will not do to ignore the roses for three weeks and then spend a couple of hours in the fourth. In fact, it takes considerably more time to repair the damage caused by lack of regularity.

Remember then this simple truth: "Your roses don't care what your excuse is for not having cared for them. Instead, they will perform accordingly." If you want good roses, you must make a commitment that you will care and work in your rose garden every week. You can skip a week, and perhaps even two now and then, depending on the time of year and the condition of your roses. But remember, as the author Ray Reddell once observed, "With roses there is always something to do." So be prepared to look at your rose gardening as a regular exercise.

## What's Your Zone?

The hippie question, "What's Your Sign?" has been replaced in gardening forums with "What's Your Zone?". The question has reference generally to the USDA climate zones, which are based on the average annual minimum temperature. San Diego, like most of Southern California is in USDA Zones 9-11 where freezing temperatures are a rarity. As a result, the USDA zones in San Diego are of little interest to rose gardeners.

More useful are the Sunset Climate Zones, which you can read about online at http://www.sunset.com/garden/ climate-zones. I have attached a graphic that shows the distribution of those zones in San Diego county. As you can see they vary from the coast to inland areas. Most of us are in Zones 20 and 21, which are both influenced in varying degrees by the damp coastal inflows and the hot air coming off the desert. It is a useful homework
 assignment to learn your climate zone and the relative influences of the climate.

## The Right Place

The next thing to do is to consider the location of your rose garden. As in all real estate, growing good roses is about location, location and location. Hopefully you've put yours in the right location. If not, see what you can do to change that.

Roses are sun plants and will not prosper in deep shade. How much sun you ask? I have seen statements that roses need six hours of sun a day, or at least four, or some other number. I have never found these numbers particularly useful since depending on the time of year, the number of hours of sun during the day in San Diego ranges from about 10 in mid December to 14 in mid June.

The better rule is to select a location where your roses will get sun about half the day. The sun moves across the sky in the south so a Southern exposure is much preferred. Also, there are subtle differences in morning and afternoon sun and as a general rule morning sun is better. Don't worry too much about this - if the rose is in sunshine half of the day it will do well.

Roses do not like to compete for sun, water or fertilizer with other plants. So, they must not be planted under trees or too close to large shrubs. The biggest natural enemy of the rose is the tree. Tree roots choke roses, rob them of nutrients and the canopy deprives them of the sun. You also need to be cautious of the practice of planting "companion plants" among roses. Although in theory this can provide a nice English garden look, be certain that it makes the job of caring for your roses tougher. The best companion for a rose is another rose.

Air circulation is important to roses. Therefore roses should not be planted too close together or too close to walls. In San Diego, the proper spacing for large roses is at least 3 feet on centers, and 4 feet for roses on Fortuniana rootstock. Don't believe the smaller numbers you will read in most works on rose growing as these are typically based on conditions elsewhere. Climbers require even more room, 4-6 feet apart and a structure on which to grow. Miniature roses planted in the ground should be grown on minimum 2 -feet centers, while minifloras and larger miniatures need to be even farther apart.

## Water, Water \& Water

The next three most important factors in growing roses are water, water and water. Hand watering is laborious and will add considerably to your care time. So it is good to have a automatic system. It is also best if you have one or more stations on your controller that operate only the system that waters the bed of roses and not those that water the lawn or other plants. This allows you to calibrate the water to your roses exactly so you don't have to water your lawn as much as your roses.

I pause here to comment on the drought. Southern California is a desert and droughts have long been a fact of life. They have also become a political fact of life since most droughts nowadays are man-made (or more properly judge-made) because of a lack of political will to make water available to urban areas and because of environmentalists who insist that we dump half of the fresh water in the state into the ocean. Roses don't care about politics and they will not respond to restrictions that ask them to cut back on their water use. Roses need water. This may mean you have to pay more for your water, or - more likely -- it will mean that you need to reduce the watering of your lawn, other plants, and perhaps even the time spent on your daily shower.


San Diego County, like all of California, is on watering restrictions with an objective of cutting back water usage by $35 \%$ of the average usage in 2013. The restrictions vary from one water district to another, as does the target percentage. In most areas there are restrictions on the use of pop up sprinklers. For example, in the county area of Escondido we can water with sprinklers only before 10 am or after 4 pm , on Friday and Monday, with no more than 10 minutes per station. That is not enough water for roses and you will have to study the restrictions in your area to determine how to get your roses watered.

In our area, neither hand watering nor drip irrigation are subject to the restrictions on pop up sprinklers. All of our roses in the ground are watered with Netafim Techline CV driplines with pressure compensating emitters on 12-inch centers that radiate water throughout the soil, delivering water directly to the rose's root zone. An alternative is a soaker hose like the Dramm 17010 ColorStorm Premium 50 Foot Soaker Garden Hose. Drip irrigation on timers greatly simplify the task of watering roses while complying with watering restrictions.

## Prepare the Soil

If you intend to add new roses this year (you do - don't you?), now is a good time to prepare your soil for the January planting. Mark out the location of the roses using the spacing described above. Dig a hole about two feet in diameter and 2 feet deep for each plant. Clear out the rocks and roots in the removed soil. If the soil looks as if it might have some life to it save about half of it and mix it with a good organic planting mix. Otherwise, use only the planting mix. Fill the hole back up with the mixture and water regularly as if there were a rose there, at least until the rains come.

Then look at your handiwork and try to imagine what you'd like to see in the rose bed. I'll tell you how to plant them in the next issue.

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# The Rookie Rosarian - January <br> Planting and Pruning 

By Robert B. Martin Jr., petrose@aol.com

January is the time to plant and prune roses. While rosarians in colder climates are sitting by the fire reading rose catalogues, we who live in Southern California have work to do. You can start pruning just about anytime after Christmas and that is usually when the bareroot roses begin to arrive in the local nurseries. You can both plant and prune throughout January and through about Valentine's Day.

## Pruning

Pruning time normally sends rose growers back to their books and out to pruning demonstrations and lectures to refresh their memories on the principles of pruning. There they will encounter numerous instructions on proper pruning technique, some of which are contradictory, and much of which scares them into thinking that if they don't do it exactly right, something terrible will happen to their roses. Don't believe it. You can't screw up the pruning of a rose. (Actually you can, but this would require you to cut under the bud union, which is something I have actually seen done, so let us just say that it is very hard to screw up the pruning of a rose.)

In an effort to bring some order to this confusion I once developed ten simple principles that provided guidance on pruning large roses - hybrid teas and grandifloras. I no longer believe two of them - or maybe it's because I've gotten older and more economical - so now there are eight. These I describe below. And, with minor modifications, mentioned at the close, these eight principles also apply to pruning floribundas, shrubs, miniature and miniflora roses. Climbers require a somewhat different approach that I will also describe at the end.

As with any project, the place to start is with a plan. Thus the first rule is:

## 1. Plan Your Pruning From the Ground Up.

Most rose growers start the pruning process from the top, standing over their roses and nibbling away with pruning shears as if they were barbers giving their roses a trim. This wastes time; it is also ineffective. The purpose of pruning is to select the strong, healthy canes that will support this year's growth. The stuff at the top is last year's history. Get down on your knees (sit down if it's more comfortable) and look at the bud union and the canes that come from it. Think about new growth and turn to rule number 2 :

Miniature before and after pruning


Hybrid Tea before and after pruning

Floribunda before and after pruning

## 2. If It's Too Old To Cut It, Cut It.

Identify the newest canes. They are the ones that are the greenest. Then identify any older canes. (If your bush is young--say two to three years old--you may not have much in the way of older canes.) Like people, they are the ones that are craggy and gray. This is not the time for nostalgia. The old gray ones usually have weak spindly growth on them and are in the way of brand new canes that are now only a gleam in the bud union's dormant eyes. Use your loppers or handy pruning saw and cut the old buzzards off flush with the bud union. When this is accomplished, turn to rule number 3:


## 3. If It's In the Way, Cut It Away.

New growth needs room and the ideal plant grows out from the center. Identify any canes that cross directly over the center and cut them off with your loppers or pruning saw flush with the bud union or, as is more generally the case, flush with the cane from which they have decided to grow in the wrong direction. Also, identify any canes that are seriously crowding each other. If they are not too close you can wedge them apart with a piece of stem cut from the plant. If not, cut them out with your loppers or pruning saw, again flush with the bud union or the cane from which they are growing. The remaining canes are now your bush and are ready to be pruned back - leading to the next rule:

## 4. The Height Is As Simple As 1-2-3.

The relative merits of severe versus light pruning are debated at length in the rose literature. Most proponents of severe pruning are from areas that require winter protection for their roses. Since the cold is going to kill back long canes anyway this makes sense. The proponents of very light pruning are either too fainthearted, or have an inordinate love of bushy foliage and small blooms on short stems. In our Southern California climate, neither approach makes sense. Mentally divide the cane into three equal parts and prepare to remove the top one-third. Before you do, however, proceed to rule number 5:

## 5. For All You Do, This Bud's For You.

If you are unusually lucky, exactly $2 / 3$ rds of the way up the cane (or $1 / 3$ rd down depending on whether you have now stood up) will be an outward facing bud eye. Bud eyes are found at the intersection of the cane and a leaflet of five. They will also develop from what looks like an expanded band on the cane. Sometimes they are obvious; other times less so. There should be several and the generally preferred ones face out. But it is not necessary to be slavish to the outside eye rule. Where the canes come out at a 45 -degree or greater angle, a cut to the outside facing eye can often result in a horizontally spreading bush with canes that fall of their own weight. This is particularly true of bushes that tend to naturally grow horizontally. A cut to an inner facing eye in such cases will usually produce a cane that goes straight up, the best way for roses to grow. What if there are no properly placed bud eyes? Find one and work with what you've got. If you haven't got any, double check your eyesight and if there are really no eyes of promise conclude that God didn't intend the cane to live anyway. This brings us to a very important and seemingly heartless rule:

## 6. When In Doubt, Cut It Out.

Many rose growers are somewhat squeamish about pruning, for fear they will harm a plant that produces such beautiful and delicate blooms. Don't let the blooms fool you - a rose bush is one tough cookie. How else could the rose have survived without the loving care of rosarians for hundreds of millions of years? The bush will take care of itself, so if you're puzzling about whether to leave that little stem that, although unpromising, might do something - cut it off. This takes us to rule number 7:

## 7. Leave No Leaves.

Strip all the remaining leaves. They too are last year's history. You want new leaves that can get a good start without catching fungus infections or facing attack from the bugs hanging around the old leaves. After this, your bush should be looking pretty bare and you can wrap up your work with a little advice that sounds like it came from Mom:

## 8. Clean Up After Yourself.

Gather up all the canes, stems, leaves and miscellaneous stuff you've generated, bag it up and throw it away. While you're at it, yank the weeds from around the bush and get rid of all the dead leaves and dried up old petals lying around. All of last year's fungus and insect problems are lying around in this stuff waiting for the new blooms. And don't bother to compost it. Rose canes don't decompose well and the spores, eggs and other things in the mess will survive composting efforts quite well. Finally, lay down some new mulch to make things look real neat. Your Mom will be proud of you and will love the roses that bloom in the spring, tra la.

As mentioned, the above rules also generally apply to floribundas and shrubs, however the trick here is to prune more lightly and to not worry about leaving thin stems. The rules also generally work on miniatures, minifloras and polyanthas; however, since they are usually growing on their own roots, you can leave a lot more canes. In fact, careful pruning can get rather tedious so some growers simply prune off the top third with hedge shears like a shrub and get pretty good results.
Climbers make long canes and typically bloom from lateral stems coming off those canes. So you don't want to cut back the long canes. Instead, the objective is to train them (the fancy term here is "espalier") so that the canes are as horizontal as possible. This encourages the lateral growth and the resulting blooms. So the best thing to do with climbers is to wrestle with them and tie them up so that they will grow as you want them to grow. You can remove the leaves and all the scrawny stuff that is not going anywhere.

## Planting

Roses that arrive in the local nurseries generally do so as bareroot roses, even when not sold as such. Some nurseries still follow the old-fashioned approach of selling bareroot roses in sand or sawdust, but this has become somewhat rare. Many simply obtain the roses pre-packaged from the wholesale supplier; others receive them bareroot and pot them up on arrival. Consider them all bareroot roses unless you know they have been in the container for a while.

At the beginning you should take a 32 -gallon trash can and fill it nearly to the top with water. If you are a believer in magic - or just want to do something magical that might make a difference -- add a tablespoon of Jump Start. You could also grind up eight aspirin tablets and throw them in as well. I sometimes throw in other magical ingredients depending on what I believe at the moment. Then remove the bareroot rose (s) from their package or container and place them in the trash can with the water covering them if possible. You can get six or eight roses in a trash can; just be careful in shoving them in that you are not breaking canes and roots.

The roses should be kept in the water for a minimum of 24 hours and ideally 48 to 72 hours. I'm not sure what the outside limit is but can tell you I've kept roses in water for over a month without adverse effect.

You should note from this advice that you cannot buy roses at the local nursery and plant them the same weekend. Mail order roses generally arrive midweek and should be promptly removed from their packages and put in water. Mail order roses and those in packages tend to be more dried out so they should get at least 48 hours in the water.

I start all of my roses in containers and it has been many years since I have planted bare root roses directly in the ground. A container, however, is simply a moveable hole and since most rookies will want to get their roses in the ground I will describe the planting as if the hole is in the ground.

The first thing to do is dig a hole. "How big?" you ask. I have seen precise measurements given for rose holes but the answer is that it depends on the size of the root system of the rose that you intend to plant. The objective is to have a hole that is plenty large enough to accommodate the root system without having to bend the roots or trim them. There are occasional long heavy roots that may need to be trimmed but this is unusual; preservation of the root system is your objective.

The next thing to do is to select and prepare a planting mix. My soil in Pasadena and Arizona was heavy clay as is much of the soil in Southern California. Clay soils hold water and need to be amended to permit drainage. On the other hand, my soil is Escondido in decomposed granite that drains like crazy. It needs to be amended to promote water retention. So you're going to need to know what your soil is and how it drains. If you're not sure, then dig a hole and fill it with water to see how fast it drains. If the water is still there the next morning, you have clay soil and need to improve drainage. If the water is all gone in an hour or two, you need to improve the water retention of the soil.

In selecting a planting mix you want organic matter such as composted tree parts. What goes with it depends on your soil. Peat moss holds water, as does clay. Vermiculite is a clay that is closely related to bentonite, which is better known as kitty litter. Perlite and sand provide for drainage and air spaces. Do not use a planting mix in a clay soil that contains vermiculite. Don't add sand or perlite to a sandy soil. Read the label on your planting mix. If your natural soil is halfway decent, you should throw some in the wheelbarrow with your planting mix. I use about $1 / 3^{\text {rd }}$ natural soil and the rest is a planting mix augmented sometimes augmented with vermiculite (remember - I have fast-draining soil.)

Put some of the planting mix at the bottom of the hole and then add a handful of triple super phosphate or a $1 / 2$ cup of bone meal. Put it in piles or mounds; do not mix it in the mix or just scatter it around. Then cover it with more planting mix and build a mound in the center of the hole.

Remove the rose bush from the water. Examine the root system and cut off any broken roots. Then examine the canes. Remove obviously twiggy growth and any broken canes. Hopefully you'll have remaining the three good canes a \#1 rose is supposed to have. Examine each cane to find an outward facing bud eye or ribbed growth area and cut just above it at a $45^{\circ}$ angle with the angle away from the bud eye.

Set the rose on the mound and determine where the bud union is in relationship to the surface of the ground. (The bud union is the big knob where the canes are attached to the rootstock.) Laying a yardstick or other straight edge at the level of the hole will help with this. You will want the bud union to be about an inch above the ground's surface. Since a rose will settle, it is best to see that the bud union stands out about two inches above the surface of the ground. Build up the mound with additional soil until the rose is at the right level. The roots should then be spread on the edge of the mound and not folded back.

Then fill in the hole with your soil and firm it with your hands. (Do not use your feet to firm soil around a new rose.) Fill the planted hole with water (the water from your trash can will do) and allow it to drain; this will cause the soil to settle. Add additional soil to complete the hole and then keep adding until you have built a mound that covers the bud union. Gently water the rose with a water wand but be careful not to wash the soil off the bud union.

Thereafter keep the mounded soil moist and water regularly. After several weeks when new growth emerges you can begin to slowly wash the mound off the bud union. There is no reason to be in a hurry
 about this and it will happen in time anyway.

Your roses are off to a good start; next month we'll start thinking about a disease and pest control program.

# The Rookie Rosarian... Health Maintenance Organization 

By Robert B. Martin, Jr., petrose@aol.com

February is a relatively quiet time in the rose garden. Your roses are pruned, the beds are neat and there are even a few leaflets pushing out from the canes. Feeding will not start until March and the April bloom seems a long time away. It is therefore a good time to stop and think about the organization of a health maintenance program for your garden so that your roses bushes in April will be healthy and the blooms abundant.

Roses, like all living things, face threats to their health. There are pests and diseases that attack roses and prevent them from reaching their potential. Some roses are much more resistant to disease than others but few roses have much advantage in their attraction


Above: Bob Martin's 'spray fashion' in his garden to pests. So even if you have focused on acquiring "disease resistant roses," you will still need to take some steps for control. Remember, the control of rose pests and diseases is as important to the health and beauty of a rose as are, say, antibiotics and flea control to the health of your cat or dog.

## Regularity

The key to any effective pest and disease control program is regularity. Established pest populations are very difficult to get back into control; established diseases are even more difficult to eradicate. So the point is to establish a regular program aimed at prevention, in the case of disease, and early detection and control, in the case of pests. I spray at least every two weeks during the prime rose growing seasons, i.e. from February to mid-June and in September and October. During show season I often spray weekly. But as an exhibitor I am after a high level of control. A rookie looking primarily for a beautiful garden display will find a program that calls for spraying every 2-3 weeks will be adequate.

## A Good Sprayer

There are many choices among sprayers; the key is to get something that works well for your garden. Durability is a plus as you are going to use this tool often. More important is to get a size adequate to spray your garden in one pass without
 refill. A good rule of thumb is that one-gallon of spray mixture will service about twenty-four large bushes. A miniature for this purpose counts as $1 / 3$ rd of a bush; a climber counts as two bushes. Count your roses, allow some room for planned future plantings, and get a sprayer of appropriate size.

My sprayer is the 5 -gallon Spotshot Battery Powered Sprayer from Rosemania that comes with a 50foot hose. That is a serious sprayer appropriate to our large garden of 420 bushes. You will likely need something much smaller.

## Good Coverage

Effective spraying requires good coverage of the bush. Spray your roses in two passes. Turn the spray nozzle upside down and spray the bottom side of the foliage first (being sure not to spray in your face or upwind). Then turn the nozzle around and go over the bushes from the top. Spray to the point of run-off. The leaves should glisten and just be beginning to drip.

## Know Your Enemy

Those who turn to the rose texts to learn of the pests and diseases that attack roses will often come away discouraged. For example, Ortho's book "All About Roses" has diagrams showing dozens of pest and diseases attacking a single stem. But this is silly and in San Diego it isn't really that hard. For simplicity's sake there are pests and there are diseases. Of the pests that attack roses there are three of prime importance in San Diego. These are aphids, thrips and spider mites. Control methods which focus on these pests often keep down the population of other less common pests. Of the rose diseases there are also three of importance, powdery mildew, rust and collectively the water-borne fungi that cause anthracnose, downy mildew and blackspot.

## Vigilance

Prevention is the key to disease control and therefore the application of a fungicide with every spraying is necessary. Pests need be addressed only when they appear. It is easier to be vigilant when you know what to look for and when. Weather conditions and the progress of growth are the major factors in the appearance of both disease and pests so it is helpful to learn the conditions that foster their appearance.

Aphids attack new growth and favor conditions with cool nights and warm sunny days. They are usually found on the newly developing buds and typically appear in March to reach their height in April. The threat of aphids continues until the weather gets hot and abates


Botrytis during the summer, only to reappear in September with the new growth of the fall bloom. Thrips are the tiny winged insects that crawl in the blooms themselves, particularly the white and lightly colored blooms. They appear later in the season, typically in May and are in full force by June. Again they abate in the summer to reappear, usually with less intensity, in the fall. Spider mites are microscopic arachnids that appear on the Aphid giving birth to live young undersides of leaves and turn them yellow. Left unattended they can defoliate a plant in a few days. They like hot conditions and are the primary pest of summer.


Chilli thrip damage


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Powdery mildew, distinguished by white growth on young foliage, is encouraged by cool nights and bright summer days. It arrives usually in tandem with aphids. Rust is the fungus with the bright orange pustules on the under-
 sides of leave; it prefers cool moist conditions and is more often encountered in coastal areas. Heat stops rust, which is seldom seen in summer. Anthracnose, downy mildew and blackspot are difficult for
 rookies - and experts for that matter - to recognize. These are water-borne fungus diseases and require long periods of wet conditions - conditions that only occur during the rainy season, assuming we have a rainy season. Anthracnose is actually the more common disease in San Diego and is often confused with downy mildew or black spot. Anthracnose appears generally as small irregular black, purple or reddish brown spots - usually near the edges of leaves that do not have the feathery edge of black spot or the irregular purple markings of downy mildew.


Anthracnose

## A Ros-EIQ

Pest and disease control require specialized products. Which products are best is often a subject of debate and may require tradeoffs between toxicity and effectiveness. Many serious rosarians have environmental or health concerns that affect their selection of such products. Others want simply the product that works the best ("if it flies, it dies"). I use what I consider to be a bal-


Blackspot anced approach. I select an effective product for an existing known problem but given the choice between several effective approaches will select a product that has the least adverse effect on the environment.

How do I determine this? I start with the EIQ - the environmental impact quotient - an idea pioneered by scientists at Cornell University who established a standardized way to look at pesticides to determine their relative dangers to humans and the environment. They calculated and made available on the internet a number that estimates the environmental impact of a pesticide by


Botrytis


Downy mildew taking into account toxicity to natural enemies, wildlife and humans, degree of exposure, aquatic and terrestrial effects as well as soil chemistry. The numbers range roughly from 10 to 100 , the higher the number - the greater the negative environmental impact.

I then adjusted the number in the manner directed by considering the amount and frequency of application for roses - obviously the more you use, the more the effect. The result is what I call the Ros-EIQ. My detailed charts on this have been published in several places, as well as an explanatory article. If you are interested I would be happy to send you a copy on request.

Based on my study, my fungicide of choice is Compass. It has the lowest Ros-EIQ of any fungicide and although initially expensive, is very cheap on a per application basis. Compass is a strobilurin fungicide, as are the newer fungicides, Heritage and Pageant, which are also effective. I alternate Compass with Banner Maxx (also sold as Honor Guard or as a generic propicanazole). Those with smaller gardens, or who simply want to find a product at the local nursery or home improvement store, could use Bayer's Advanced Disease Control, the active ingredient of which is the same as Banner Maxx. For those who prefer products that have accepted followings by organic gardeners, the new Serenade Biofungicide (Bacillus subtilis) is an organic fungicide that controls all major rose diseases. It has a Rose-E-IQ that is less than any fungicide except Compass.

It should be noted that the chemical imidacloprid is the most widely used insecticide in the world, but has also been implicated in the collapse of bee colonies. This appears to have more to do with agricultural use of seeds that have been treated with imidacloprid and the likelihood that spraying your garden roses with a tiny amount is going to have any effect on bee populations is remote. Still it is good practice to not spray any insecticide when bees are active.

Speaking of Bayer, most of its "Advanced Garden Products" are endorsed by the American Rose Society and are a very effective and sensible line of over-the-counter products. The main drawback to buying products over-the-counter is that the manufacturers water them down to make them safer for morons with a resultant increase in cost to the rest of us.

For my part, I pretty much ignore insects other than aphids and thrips since the others generally do only spot damage, and I can control them with water or hand picking.

Nearly anything - including your grandmother's perfume - will kill thrips on contact. The problem is that all their relatives come to the funeral the next day. The most effective solution I have found - and it's not much - is the environmentally sensitive Conserve SC, a translaminar spray that contains spinosad. There are other spinosad products on the market, some in your local nursery.

Mites can usually be controlled with a water wand spray on the undersides of the leaves at the base. For a big attack I now prefer Tetra San 5 WDG, which you can get at Rosemania.com. Bayer's 3-in-1 Insect, Disease \& Mite Control also contains a miticide along with its insecticide and fungicide. Whatever is used, the key to mite control is to understand their 3-day cycle. If you are troubled by mites be sure to apply your control measure again in 3 days to wipe out the new generation that will appear after the first spraying.

## The Impossible Dream

Keep in mind that complete disease and pest control is an impossible dream so do not become discouraged. Just as we come to expect colds and occasional disease in our lives we should come to expect there will be pests and disease in our gardens. But the fact that efforts at complete elimination have diminishing returns should not blind you to the fact that very good returns can be realized from modest efforts at health maintenance. And since those returns come in the form of beautiful roses, they can be very handsome indeed.

The foregoing approach is primarily effective against powdery mildew. If it is rainy and wet, then something will need to be done to prevent the water-borne fungus diseases. Here the product of choice is something that contains mancozeb, a broad spectrum fungicide containing manganese and zinc ions for control of black spot, alternaria leaf spot, and anthracnose. It is also effective against downy mildew and botrytis. Mancozeb is also closely related to maneb and zineb. Mancozeb is marketed under a number of product names, including Dithane M-45, Fore TO, Manzate 200DF, Pentathlon DF and Protect T/O.

For aphids, the chemical imidacloprid is all you will really need. I prefer it in the concentrated version known as Merit 75WP. However, it is also the active ingredient in Bayer's Complete Insect Killer where it is combined with cyfluthrin, which is also an effective insecticide with a low Ros-EIQ.

# The Rookie Rosarian - March 

A Dietary Road Map<br>By Robert B. Martin, Jr., petrose @aol.com

In my first installment of The Rookie Rosarian, I stated my intention in this series to provide instruction on growing roses applicable to San Diego in particular and Southern California in general. I also stated my plan was to give answers and not so many explanations of the reasons behind them. I remind the reader of these intentions because this month I set forth a dietary road map for feeding your roses for the entire year. This road map is fairly specific and is also one to which I could devote a great deal of explanation of why it works. But I won't - you're just going to have to trust that it will.

## Keeping the Faith

Roses reward you in proportion to your effort. Nowhere is this principal more important than in feeding roses. Roses are heavy feeders and their need for nutrients is continuous. The key to any successful feeding program is regularity. Roses do not care how good your excuse is for passing up a feeding; they simply respond accordingly. Of course with roses even modest efforts produce beautiful results; however faithful efforts produce spectacular results. So you do not have to follow this dietary road map exactly. But the more you stay on the path the better your results will be.

In this regard you may remember that I am an exhibitor. Many rosarians think there is a difference between an exhibitor's feeding schedule and the feeding schedule a rookie or casual rosarian might adopt. But the roses don't know whether or not you are feeding them to produce exhibition blooms, they just know if the nutrients are there. The road map I set forth in this article is the same basic schedule I intend to follow this year. You should follow it too if you want the very best blooms without regard to whether you intend to show them, to cut them for the house, or just simply to enjoy them in your garden.

## Mixing and Measuring

Fertilizers contain a given quantity of nutrients and it is important to measure how much is applied. This is not to suggest this is a chemistry project and that exactness is necessary. But wild guesses as to how much is being applied also will not do. If you have not already done so get yourself a set of kitchen measuring cups and spoons to devote to your roses and use them.

Soluble fertilizers are mixed with water usually at a rate of one tablespoon per gallon. You should therefore have some means of measuring your applications. For years I have mixed my fertilizers in a 32 -gallon Brute trashcan of water and applied them to the bushes by hand with one -gallon Rubbermaid pitchers. This has the virtue of delivering exact
 quantities but is time consuming. You could also use a hose end applicator for this purpose; some come with a dial and others are set up to simply mix about one tablespoon of dry soluble fertilizer with a gallon of water. Other rosarians mix their solutions and use a siphon device for application with a hose. Here I can recommend Grow
 More's outstanding Siphon Mixer, which really works. Select a method you are comfortable with given the number of roses you have to feed.


Dry fertilizers can be scooped out of the package with the appropriate measuring cup and slung around the rose. I like to empty the bag into my wheelbarrow, which makes it easier to push around the garden. It is also a good idea to measure how much dry fertilizer you can hold in your hand. My hand holds exactly $1 / 4$ cup and using this fact I can feed my roses by tossing the appropriate number of handfuls around each rose.

Experts typically advise that fertilizers should be applied around the "drip line" of the rose, i.e. the natural circle where water would drip off the leaves. This is useful knowledge but it's not really that important. I just throw dry fertilizers around the rose and dump the soluble fertilizers directly on it. It's like with hand grenades and horseshoes - close is good enough.

The rates I recommend are for a full size rose whether hybrid tea, grandiflora, floribunda, shrub or OGR. Miniature and miniflora roses may be fed about $1 / 2$ to $3 / 4$ as much depending on size. Climbers and very large shrubs should be fed twice as much.

## Bloom Cycles

Roses bloom in cycles and in Southern California we can expect six bloom cycles in the year. There are two in the spring, two in the summer, one in the fall, and one that drifts into the beginning of winter. The first spring bloom-which is always the very best-generally arrives about the middle of April, just prior to the time of our annual San Diego rose show. The weather is a factor in this and may delay or speed up the cycle by a week or so. There are also differences depending on whether your climate is coastal or inland. For our purposes we will assume the first bloom will occur in mid-April. Thereafter the late spring bloom, which is also very good, will occur in the early part of June. The two summer cycles occur late in July and August. You should plan to moderately prune your roses around Labor Day for the excellent fall bloom that occurs in the late October. The roses will then recycle for a last bloom but with the advent of the rains and the cold, it is often sporadic and ragged.

These dates are rough approximations. One of the very important skills acquired in exhibiting roses is to learn exactly how the roses in your microclimate perform and to time the blooms for important shows. This is also helpful information if you simply want to time blooms for a special occasion. So pay attention to how your roses perform and even take notes if you are so inclined as to when they bloom. This will help you to refine your schedule in years to come.

## The "Organic Base" and "Soluble Fertilizer"

The feeding program I recommend is based on a healthy application of organic fertilizers supplemented by an inorganic soluble fertilizer. I refer to the organic application as the "Organic Base".


This year as in years past, my Organic Base is BioStart 3-4-3, which Ruth Tiffany and the San Diego Rose Society make available to members as a fundraiser. It contains a number of nutrients, primarily organic, including blood meal, bone meal, kelp meal, fish meal, cottonseed meal, alfalfa meal, feather meal, worm castings, calcium rock phosphate and scrapings from the kitchen sink. I calculate you should use $1 / 2-1$ cup per bush. If you prefer, or are unable to find BioStart, you could substitute cottonseed meal, fish meal, chicken manure or any other organic product you can find at a good price.

I also like to use fish emulsion with - and sometimes instead of the Organic Base. There are several brands of fish emulsion available usually with a formulation of 5-1-1. My favorite is actually a liquid fish fertilizer called "Organic Gem", which is a hydrolysate, that being a cold en-
 zymatic process that preserves the natural fish proteins. I have never seen a California source; we pick up several cases at Singh Farms in Scottsdale when we visit Arizona. Ken Singh, incidentally, knows more about compost, fish fertilizer and organic gardening than anyone on the planet and it is always a pleasure to chat with him.

It is also my practice to add Jump Start to my fish emulsion at the rate of 1 Tbsp per 32-gallon trash can. This product by Grow More is an improvement over Su perThrive, which I used to use. This is optional. I believe it helps but have no hard evidence. Also, from time to time, I might scatter rabbit pellets around the roses (the kind you feed rabbits) along with my Organic Base.

There are many choices for an inorganic soluble fertilizer. An excellent choice is Magnum Rose Food 8-10-8, also sold in our fundraiser. It is a water soluble fertilizer that is mixed at two tablespoons per gallon. This is a formula for roses developed by Dr. Tommy Cairns, a chemist who knows more about roses than
 the average bear. Alternatives include Miracle-Gro All Purpose Plant Food 24-8-16, Miracle-Gro for Roses 18-24-16, and Vigoro All Purpose Water Soluble Plant Food 24-8-16. These are all applied at one tablespoon per gallon. There are also many other similar products that contain nitrogen at a rate of between $15 \%$ and $23 \%$. Buy the one that is the cheapest. For simplicity I will assume that they are all the same and will refer to them generically as your "Soluble Fertilizer".

Another excellent alternative that I use is Grow More Sea Grow, 16-16-16, which I alternate with Magnum Rose Food. It is a water soluble blend of botanical seaweed extract, blood meal, organic carbon, amino acids, carbohydrates, primary N-P-K plant foods, yucca extract and micronutrients. Since SeaGrow is a good blend of synthetic and organic ingredients, it can be used as both the Organic Base and the Soluble Fertilizer.


## On the Road

You should begin your feeding program around the beginning of March, which is roughly seven-eight weeks from the expected spring bloom in mid-April. Begin with the Organic Base. The objective is to activate the soil and provide each bush with a significant amount of slow acting nitrogen at the beginning of the bloom cycle, in the expectation that the slowly released nitrogen will become available to the plant over the next seven weeks. The beginning of March is also a good time to put down a thick organic mulch. I like to put down the Organic Base before applying the mulch.

During the subsequent weeks, you should supplement the Organic Base with the Soluble Fertilizer. As a general rule, you should feed your roses about every other week. A good objective is to use higher quantities of nitrogen at the beginning of the bloom cycle and then to tail off on the application of nitrogen as the bloom approaches, usually withholding additional nitrogen for the last week or two before the bloom cycle. In addition to the Soluble Fertilizer, it is a good idea to add Epsom Salts for magnesium at the beginning of the bloom cycle, and chelated iron about two-three weeks before the bloom to green up the foliage. I use them both and believe they have a lot to do with the healthy green foliage I have come to expect of my roses.

After the spring bloom you should start over again for the second bloom cycle using the same feeding program. After the second bloom cycle, now around mid-June, you should apply the Organic Base for the summer. I slow down feeding in the summer because there are no rose shows and summer is a lazy time anyway. My feeding will then drift to every 3-4 weeks until Labor Day approaches. Once again, you should return to the basic pattern used for the first two bloom cycles, for which you will be rewarded with a wonderful bloom in late October, just in time for the fall shows.

## All Done

Your work is now done. The roses will continue to bloom and the remaining fertilizer in the soil will carry them through the balance of the fall bloom and the winter. And, as you look back, you will see that you have had the most beautiful blooms you can imagine and your roses will look better than they have ever looked before. In this way they will have thanked you. And you will know the truth that roses do reward you in proportion to your effort.

Have a great trip.

# The Rookie Rosarian - April Bud, Bloom \& Beyond 

By Robert B. Martin Jr., petrose@aol.com

April is a wonderful month for roses. It brings the spring bloom that is always the best of the year. By now your garden is showing a little color and the bushes are full of buds. By the middle of the month your bushes will be in full bloom; in fact with the warm February and March, the full bloom will probably arrive in the early part of February. It is therefore time to enjoy the fruits of your labors. But, as always with roses, there are more things to do.

## Be Gentle with a Maiden Bush

A rose bush that you planted in January is a maiden bush. Even if it was a two-year field grown bush when planted, any bush that is less than three years old should be treated as a maiden. And a maiden bush should be treated gently.

Growth begets growth and a rose builds on itself in geometric proportions, particularly in its early development. The removal of new growth from a maiden bush carries a heavy cost in its future development. The guiding principle in dealing with the blooms and foliage of a maiden bush should therefore be one of caution and the resolution of doubt in favor of preserving the bush. Build your bush and God will put flowers on top. Do not cut long stems and be sure to preserve as many of the leaves as possible. The leaves are the solar panels that are essential to the energy of the bush. This is not to say that you should do nothing as I explain below. But keep in mind the primary rule: "Be gentle with a maiden bush."


Maiden rose bushes

## Disbuds for You

You should continue to have many developing buds in your garden. As the buds develop you will notice there are very few varieties that produce a single bud at the end of a developing long stem. Instead, there is typically a large central bud with several smaller buds on the side. It is in the nature of the rose to produce many buds. The largest one, at the end of the stem, is called the terminal bud. The others, growing typically
 from one or more leaf axils near the top, are called side buds. The removal of either the terminal bud or the side buds is called "disbudding" and can contribute to a more beautiful display of blooms.

You could if you like simply let each of the buds develop on their own and this attitude is just fine with a maiden bush. But if you elect this approach you can expect to get a single modest sized bloom at the end of the stem surrounded by some side buds. Later as the first bloom fades the side buds are likely to produce smaller blooms on very short stems. If, however, you gently remove the side buds with your finger before the terminal bud blooms you will concentrate the growth energy of the bush into the one bloom and produce longer stems and bigger blooms. The earlier this is done, the better the result will be.

If the side buds are very vigorous, or the rose is one that naturally blooms in clusters such as a floribunda or shrub, it is better to remove the terminal bud. This will concentrate all of the energy of the rose into the side buds and the result will be a very attractive spray of multiple blooms. For garden effect this is the best approach. It is also a good means of encouraging lateral stem and foliage growth in your maiden rose.


Making Cut Blooms Last
Do not let my admonitions discourage you from cutting some blooms. Cut roses are a great joy in the house, the office or as gifts. As I describe below you will have to cut off the bloom at some time or another in any event so feel free to do so as the blooms achieves its peak. But as I have said, be gentle.

The place to cut a rose is at the point just above a five-leaflet leaf. There in the leaf axil you will find a bud eye, which is the point at which the new stem growth will emerge. You may have heard about cutting at the second five-leaflet leaf and this rule is useful in the case of established roses. For a maiden rose it is better to cut to the first well-established five-leaflet leaf. The result will be a bloom with a short stem. But this is the way of the maiden rose. Enjoy what you get; next year the stems will be longer. For this year it is better to learn some techniques for making your cut blooms last.

Cut the bloom carefully and take it to a preparation area. Despite what you may have heard, there is no need to carry it in water or to immediately re-cut the stem under water. Just don't leave it out of water for too long.

If you have room give the stem and foliage a bath by immersing the rose up to its neck in slightly warm water. Adding a little vinegar to the water will acidify it and help the rose to take up water. It is also nice to wipe off the surface of the leaves to remove dirt, bird droppings, and spray residue; the effect will be much more attractive.

After cleaning put the rose in a container of clear, slightly warm water to which you have added some vinegar to lower the pH . Then put your rose in a place out of the sunlight in a cool well-ventilated place and allow it to repose for about an hour. The purpose of this exercise is to permit the rose to become fully hydrated; i.e. filled with water.

After the roses have reposed you can arrange them in a container of cool water to which you have added a commercial floral preservative such as Floralife or Chrysal. These preservatives typically have a nutrient (usually some form of sugar), an acidifying agent and a bactericide. You will find yourself pleasantly surprised by how much longer the cut roses will last when prepared in this fashion.

## Deadheading and Staking

By the end of the month the spring bloom will be petering out as the bushes regroup to prepare for the late spring bloom that will occur in the early part of June. I'll give you more information next month on preparing for the second bloom cycle; for now the emphasis is on deadheading and staking your roses.

Deadheading is the process of removing spent blooms. You could cut the bloom as it begins to fade down to a five-leaflet leaf as I describe above. However, with a maiden bush it is better yet to leave the bloom until the petals begin to fall and new growth is evident down the stem. This will guide you in where to cut the spent bloom. Cut the bloom at the point above the first vigorous new growth you see; this will often be at or very near the foliage just below the bloom head.

Spring growth can be very vigorous and hopefully you will have


Garden stakes and sledge hammer
 been rewarded in your effort by several long stems. Such stems can, however, make a bush top-heavy and drag the canes down. In extreme cases I have even seen the bush fall over of its own accord.

The solution to this problem is to stake your roses. Get a supply of six-foot stakes from your local nursery; I prefer the aluminum stakes ribbed with a green rubbery plastic. Drive the stake firmly into the ground with a 3-pound sledge next to your vigorous stems and tie the stems to the stake with green garden tape. This will keep the bush upright and the growth going up. I find that one stake will do for the typical large rose.


## Visit Other Roses

April, as I have said, is a wonderful month for roses and your garden is not the only one in bloom. The local gardens will also be in full bloom so this is a great time to take a look at other roses that you might consider for your own garden. Some of our members have open gardens; others do not mind a visit. Also the rose show season begins in early April with the San Fernando Valley Rose Society show on April 9, followed by our own San Diego Rose Society show at Liberty Station on April 16-17. These are followed by the huge District Convention Show at the Los Angeles Arboretum the following week, April 23. Rose shows present further opportunities to learn more about roses and visitors are always welcome. Perhaps I will see you there and you can tell me how your roses are doing. I'll bet they are doing great.

# The Rookie Rosarian The Second Bloom 

By Robert B. Martin, Jr., petrose@aol.com

Your wonderful first bloom cycle is drawing to a close and you are encouraged by how well your roses are doing. But this is only the beginning for in San Diego the first spring bloom cycle is followed by six weeks or so by an excellent second bloom cycle. This second bloom cycle typically occurs in the first to second week of June depending on the amount of the usual "June Gloom" weather we experience. Those who show roses at the San Diego County Fair will find this timing fortuitous.

## Complete Deadheading

Since you have been faithfully following my advice (haven't you?) the roses have been deadheaded carefully all through the first bloom cycle. They haven't? Well, okay, there have been a lot of blooms and you've fallen a little behind. So now's the time to catch up; in fact you can now deadhead to the second fiveleaflet leaf down from the spent bloom since the growth is getting on nicely. Better yet look for the new growth out of the lower leaf axils and cut to that new growth.

This is also the time that you should get rid of all of your blind shoots. Blind shoots are stems that have failed to produce a flower; instead they often produce leafy growth at the end called "poodle growth". If the stem hasn't produced a flower it isn't going to do so, so imagine that it did and simply deadhead the imaginary bloom. You can even imagine that it won queen of show in another dimension if you are really into fantasy.

## Watch for Basal Growth

This is the time of the year when you will get the most basal growth from your bushes. Basal growth is strong new growth from near and above the bud union. A strong new cane from this area is referred to as a basal break and is to be encouraged since these will be the strong new canes of your rose bush. So look for this growth and encourage it by making room for it to come through. Also avoid stepping on it or dragging your garden hose around it so as to break it off. And, as it gets bigger and stronger, stake it up so that it will grow straight and tall. I like to give extra water to plants with strong basal growth on the theory that the growth will need it.


## Increase Staking

The need for staking your rose bushes will greatly increase during the second cycle so be alert to this. As I have said be sure to stake strong new growth, particularly growth that seems destined to making a candelabra which is an explosion of bloom at the top that matches the term. Tall sprays will also have appeared late in the first bloom cycle and it is essential that you stake these as well. If this sounds like you are destined to have a stake at each rose and a lot of
 growth tied up with green garden tape it is. And that is exactly how our garden is beginning to look.

> 'Dick Clark' bush
> with candelabra
> growth pattern


## Increase Water

The three most important factors in growing roses are water, water and water. As the weather warms it will become necessary to increase your watering to three to four times a week. Container roses will require an extra day a week. Summer is not that far away and the strong growth you will continue to experience before then will require extra watering.

Along this line it is a good time to take a good look at the level of mulch around your roses. Mulch conserves water and feeds the soil. The mulch applied after winter pruning may still be in good order but if it is looking a little thin an addition may be in order

This is also the time to begin regular water-wanding of your bushes. Roses like to be showered - particularly as the weather warms. Wash off the undersides of your leaves at least once a week and while you are at it come down with the water wand over the top of the foliage to wash off dirt, pests and powdery mildew spores. Contrary to popular belief, powdery mildew abhors overhead watering and it is now hot enough to have little concern about the water-borne fungus diseases. It is however a good idea to leave enough time in the day for the water to dry off before nightfall.

## Pests of the Season

Aphids continue to be a nuisance through the second bloom cycle so you should continue the control measures you have already adopted. In addition the second cycle normally brings an increase in thrips. If, however, your garden is like mine they have already been there for weeks. These are those tiny insects you find in the blooms themselves, particularly in white roses. I'd like to be able to give you a sure fire solution to the problem of thrips but there is none. Your control measures for aphids should provide some relief but mostly you will have to grin and bear them.

As the weather heats up you should be alert to the arrival of spider mites. These are tiny arachnids that congregate on the underside of your leaves, typically starting at the bottom of your plant, and suck the moisture from them. Yellow leaves at the bottom of the plant should be examined regularly on their reverse sides for the telltale salt and pepper look and fine webbing that is their mark. At this time of year the water-wanding of the undersides of the leaves will usually provide adequate control.

If you have been plagued by rust the warmer days will soon do it in for good. Powdery mildew will, however, continue to be a major disease problem through to the second cycle. So continue to be vigilant with your control measures until summer.

## Summertime Soon

"Until summer" I say - yes summer is not far away. But for now the second cycle is on the horizon and roses in June are most beautiful. We'll talk about summer then.

# The Rookie Rosarian What To Do This Summer 

By Robert B. Martin, Jr., petrose@aol.com

"Has summer come without the rose,
Or left the bird behind?
Is the blue changed above thee,
O world! or am I blind?"
Arthur William Edgar O'Shaughnessy (1844-81)

Summer is not the best time for our roses. The blooms tend to be small and some varieties actually have fewer petals than during the other times of the year. As temperatures go over 90 degrees a rose will transpirate, i.e. give off water, faster than it can take it up. Exposed canes actually get sunburn. And so the rose suffers. What it needs during the summer is the same thing you do - it needs to keep cool. So your gardening objective is to go easy on the roses during the summer and to hold them in reasonably good shape until Labor Day when you can moderately prune them for the beautiful fall bloom.

## Under-pruning

The first thing you could do for summer care is optional - you could under-prune your roses. "Underpruning" is a term I invented to describe the practice of removing the lower foliage from the rose bush. To un-der-prune you first get down on your knees to inspect the bottom of the bush. Snap off all of the leaves at the bottom to perhaps one-foot of the ground. Remove any leaves touching the ground. Also remove the next several rows of leaves, particularly those that are beginning to yellow or show signs of disease. This process will reveal a number of blind and short shoots that accomplish no purpose. Remove them by simply snapping them off with your gloved fingers.

As the structure of the bush becomes more clear you will discover small or thin shoots at the bottom which have no prospect of producing substantial blooms or which cross the center of the rose. Remove them as well. This process will also often reveal basal and lateral breaks of new growth appearing from the underside of the bush. These should be given room to develop. Be heartless and remove any lower growth that might inhibit their reach to the sun. Your purpose is in part to encourage this new growth.

When done the rose will again look like a shrub rather than a tangled mass of foliage. Airy and free the roses will be in a position to face the rigors of summer.

## Preserve Upper Foliage

Although under-pruning is optional, you must be diligent throughout the summer in preserving the upper foliage. The upper foliage plays a very important role in keeping your roses cool during the summer. The leaves provide a canopy that shades the canes and the base of the bush thereby keeping them cool and preventing sunburn on the canes. In addition, the leaves have pores primarily on their undersides (called stomata) from which the rose gives off water in its internal process of keeping itself cool. You should therefore avoid cutting long stems during the summer and should also avoid removing leaves to shape the bush. It is also important to keep the leaves as disease free as possible so they can do their job and not simply turn yellow and fall off.

## Check that Mulch

As part of the process of keeping your bushes cool it is important to keep their root system cool as well. This can be done with a heavy layer of mulch. Examine your mulch and if it is getting spare add some more on top. I like to see at least a 2 -inch layer of mulch during the summer time - more is better.

## Water, Water, Water...

As always the three most important factors in growing roses are water, water and water. For summer there is a fourth - water some more.

Roses on automatic sprinklers should be watered three to four times a week depending on temperatures and whether your soil holds moisture or drains rapidly. Water restrictions may require that you reduce water - be sure to examine those restrictions carefully. It may be necessary to let your lawn (you still have a lawn?) go brown or to reduce watering of other plants to meet those restrictions. The roses, however, know nothing of water restrictions and simply fail to perform with inadequate water.

Roses in containers should ideally be watered an average of five times a week, in fact when the weather is over 90 degrees container roses should be watered daily. If you are in to measuring the amount of water required, a full size rose bush should receive about one and a half inch of water or about 8 gallons per week. Do not worry about over watering your rose; the worry in the summer is under watering.

## Water-Wanding

The principle tool for the summer care of roses is the water wand. Some of us have specially built water wands; most use a commercial water wand such as the Dramm Colormark Waterwand (available at A. M. Leonard for around $\$ 36)$. The latter is a high quality wand with a heavy duty brass shut-off, foam cushion hand grip and premium aluminum tubing.

The water wand should be used at least weekly. Turn it so that the head is upside down and use it to wash off the undersides of your leaves. This will blast off the spider mites and
 will also open and cleanse the stoma. Then turn it right side up and come down over the top of the foliage with a strong shower to wash off dirt, pests and pow-
 dery mildew spores. Water-wanding can be done at about anytime during the day, however it is a good idea to leave enough time in the day for the water to dry off before nightfall.


## Spider Mites

Summer and its accompanying hot weather present ideal conditions for the proliferation of spider mites. Mites start at the bottom and yellow the leaves as they travel up-
 wards; uncontrolled they can defoliate the entire bush. Underpruning will have cut off their most likely avenue of approach and will also make it easier to wash them off the underside of the leaves. Regular water-wanding will then keep them under control.

If mites get out of control some extra work is required. Use the water wand to wash off the undersides of the leaves. Then exactly three days later do this again. This will wipe out the hatchlings
 that came from the eggs that were stuck in the webbing when you did it the first time. Having thus disturbed an entire generation it will take them sometime to get established again.

Other than mites, most of the pests and diseases of roses suffer in the summer heat as well. Powdery mildew occasionally makes a stand but can be controlled by the wa-
 ter wand. The cutter bees will arrive and make interesting circular cuts in the leaves but they can be ignored as they cause no permanent damage. During many summers, I controlled mites and all other pests and diseases for the entire summer by water-wanding without once having to resort to a chemical control. You can do this too.

## Stay Cool

Keep your roses cool this summer. And keep yourself cool as well. You can do both by generous use of water; heck why not put on your bathing suit when you are water-wanding and sprinkle yourself? And don't work too hard. It's summertime - and the living is easy.


NOTE: On the following page is an article which appeared in the May/June issue of A merican Rose magazine of the American Rose Society and it reprinted here courtesy of the American Rose Society.

# The Rookie Rosarian 

## The Fall Bloom

By Robert B. Martin, Jr., petrose@aol.com<br>Master Rosarian and Vice-President, American Rose Society

With proper care rose bushes grown in the San Diego area will normally reward their grower with five plus bloom cycles during the year each of which will last about two weeks. The first, and always the best, occurs in mid to late April. A second very nice cycle then usually follows in early June.

Two summer bloom cycles, usually marked by smallish blooms on short stems, then normally occur in the heat of early August and by Labor Day. These are followed by the fall bloom cycle in mid October. A final minor bloom cycle, representing the rose's last gasp, then may occur in December depending on the weather. By then the rains (hopefully) and the cold will often cause balled and sparse blooms, which sometimes last to the beginning of the new year.

The fall bloom cycle has the potential of being the second best bloom cycle of the year rivaling the late spring cycle and exceeded only by that in the early spring. But in order for this to be so it is necessary that rosarians make preparations so that the roses can achieve their maximum potential at this time of year.

To understand why this is so it is useful to first consider the cyclical character of the rose bloom. As will be seen from some observation and calculation there are usually about six weeks from the end of one bloom cycle to the beginning of the next. The period from the winter pruning to the early spring cycle takes about eleven weeks. These periods are not hard and fast as their length depends on a number of factors. These factors generally operate to extend the cycle because even at optimum conditions a rose still needs a given amount of time to grow and bloom.

The most important factors in this process are heat and the amount of sunshine, both of which accelerate the bloom cycle. This explains why the early spring cycle is the longest and the summer cycles are the shortest due to the difference in the amount of daily sunlight and average daily temperature.

Another important factor is the type of rose itself. For reasons not fully understood some roses take
longer than others to cycle, sometimes much longer. Shrubs, floribundas and the heavily petaled hybrid teas fall in this category. Others, such as many of the old garden roses, simply do not have the recurrent genes of some of the more modern roses. In fact many of the species and older roses do not recycle at all.

These important factors, it will be noted, are generally beyond the rosarian's control. One can plant the rose to expose it to more sun and select varieties that recycle more rapidly. But beyond this factors such as weather and genes cannot be so easily manipulated.

But there are some factors that can be controlled. These include pruning, watering, fertilization, and, to some extent, disease control. The most important of these is pruning.

Although rosarians may love the rose for its bloom, the rose itself regards the bloom as a step on its way to its objective of reproducing itself through the production of hips and their enclosed seed. When the blooms are left on the rose to fade a chemical signal is sent by the rose to turn its processes to the setting of hips. This results in a reduction of blooms. An objective of the fall pruning is to eliminate all of the spent blooms to encourage the rose to undertake another excellent cycle of bloom rather than setting hips.

Water is also very important in the summer. A rose transpirates water which means that it takes up water through its roots and gives it off through the leaves. The leaves are like solar panels drawing energy from the sun. The transpiration process keeps them cool. As can be expected - the hotter it gets - the more water is used. At temperatures over 86 degrees a rose will transpirate more water than it has available.

The rose also draws up nutrients through the transpiration process. If there is little water it simply cannot feed as well. Even with ample supplies the process moves so rapidly that the rose cannot use all the nutrients passing through. Both of these factors explain the small blooms and short stems of the summer cycles.

The drawing to a close of summer begins to change this result. Although in Southern California the weather stays hot through September the average temperature soon begins to drop. The days are shorter and the nights cooler. As a result if the roses are prepared for fall blooming, the results can be very rewarding.

The time to prune for fall blooming begins at Labor Day and continues for several weeks. This is a major pruning second in importance only to the all important winter pruning. The process is, however, quite different.
In my previous article on summer care I advised that you should avoid cutting long stems during the summer and should also avoid removing the upper foliage. If you have followed this advice you should find that you have some pretty tall roses with long willowy stems emerging from long willowy stems. Many rosarians refer to these stems on stems as "dog legs" because that's what they look like. Often you will find two or three and sometimes even more dog legs coming from the main cane. Since the stems become progressively smaller as they emerge from the stems below the result is some pretty thin stems at the top.
The objective of fall pruning is to reshape the bush to its normal size and to encourage strong stems to support the excellent fall bloom. This involves cutting the tall long stems down one or two dog legs so that the new growth will emerge from a thicker lower stem. The procedure is simple. Grasp each bloom and decide how many dog legs to remove. Then look down the stem to which you intend to cut and identify a fiveleaflet leaf with a promising bud eye, preferably one facing out. What you are looking for is a viable bud eye that will be the source of new growth. The ones that are black or look burned at the tip are not. The ones that have thrown out a stub with a couple of new leaves are also not. The viable ones are swelling and either pink or green. A practiced eye soon can distinguish between those with a future and those with only a past.
Once you have found the bud eye, cut the stem at an angle slightly above it just as in winter pruning. You will be dealing here usually with much smaller stems than in the winter because you are trying to encourage the growth from an active growing plant rather than the commencement of new growth from a dormant or semi-dormant plant.
Having pruned the top you can and should remove any yellowed and dying bottom leaves. In the alternative a strong spray of water will blow them off to be raked from the garden.

Following the pruning examine your watering schedule. This summer has been mild but still has periods of hot weather. And, with vacations and summer time activities it is likely that your roses have not being given enough water to make the drive to a full fall display. Resolve now to give them more water.
It is also time to rededicate you fertilization program. Pull out the dietary road map that was published in the March issue and follow the fall instructions. But be careful here and don't feed more than is recommended. The heat will cause the rose to draw up the nutrients more rapidly and the result can be leaf burn. Water well before fertilizing so that the plant will be full of water and can't immediately suck up a bunch of nutrient filled water.

Finally be aware that spider mite season continues. Spider mites love heat and multiply vigorously to defoliate your rose from the bottom up. The tell tale sign is rapid yellowing of leaves at the bottom center of the plant where they are protected.

The simplest control for spider mites is to use your water wand to spray the under sides of the leaves to wash them off. With more severe infestations a miticide may be necessary. No matter what control is used it is very important to know that the eggs of mites hatch in about three days (which explains how they can get the upper hand so fast) and those eggs are much tougher to kill than the mites themselves. If you have an infestation you should wash the mites off or kill them with a miticide. Then three days later you should do it again. This will kill the juveniles before they can start to reproduce again. Controlled in this fashion it could be weeks or more before the mites are reestablished enough for concern.

The fall will also result in the return of powdery mildew however it should not be anywhere near as serious as in the early spring. Powdery mildew likes cool nights and bright sunny days. Undertake now a program of prevention if you want show quality blooms.

Admittedly this entire process seems like a lot of work - particularly since it is still hot to work in the garden this time of year anyway. But summer is nearly gone and you could always use the sun exposure to finish off your summer tan. And when the tan is faded in October you will have beautiful roses to remember it by.

# The Rookie Rosarian: Picking the Right Rose 

By Robert B. Martin, Jr., petrose@aol.com<br>Master Rosarian and Vice-President, American Rose Society

With this installment I bring to an end this year-long series. You've learned the proper mental attitude of commitment, the right place for a rose and the importance of water. You've learned about planting and pruning, how to protect the health of roses, what to feed, disbudding, deadheading and staking. You've learned about the second bloom cycle, summer rose care, even more about water and the fall bloom. You are no longer a rookie.

And, if you have been faithful, your roses have been the best ever - or at least most of them have. Others - well others have frankly not done so well. Maybe they were old roses, or poorly placed. Or - more likely - they were poorly selected. That is because the most common rookie mistake is to pick the wrong rose. It is therefore time to consider replacing those roses that are not performing well with roses that will - roses that you will love and that will fill your yard with beautiful blooms. And, even if all your roses are winners, a true rosarian always has room for new roses. Planting of those roses will not come until about the third week in January, but October is a good time to consider what to buy and place some orders.

## The Types of Roses

The number of named roses is bewildering to rookie rosarians. Be of good cheer for it is bewildering to advanced rosarians as well. A good place to start in making sense of names is to recognize that roses can be sorted into a much smaller number of classifications. This sorting is imperfect and although it can lead to long dialogues between expert rosarians it works just fine for our purposes.

The most popular rose class is, and has been for many years, the hybrid tea. A hybrid tea is generally a medium to tall growing shrub displaying the large pointed buds and high centered form that most people identify as a rose. Blooms are usually presented one to a stem or in small sprays of multiple blooms.

There has been much written - too much in fact - that suggests that hybrid teas are chemically dependent prima donnas that are on their way out in popularity. They are not and this is nonsense. Today's hybrid teas - as with most modern roses - are generally disease resistant and healthy growers. Hybrid teas are still by far the most popular garden roses and totally dominate the florist rose industry. And it is probably because of their success that rosarians with other agendas, such as advancing their own political views on the allocation of natural resources, single out the hybrid tea for criticism. And unfortunately, many of today's larger rose growers find themselves struggling to survive by attempting to sell "easy-care" landscape shrubs to an increasingly disinterested public. Why are they disinterested? Perhaps it is because the roses they offer are essentially uninteresting shrubs with drab, formless blooms whose only merit is disease resistance and are too soon lost in the landscape.

The floribunda, another form of modern rose, is so named because of an expectation that it will produce an abundance of blooms. Originally a floribunda was a cross of a hybrid tea with the multiple clusterflowered low growing polyantha. The result was a relatively compact plant that produced an abundance of blooms in clusters, making a superb landscape specimen.

Many floribundas still meet this description. But the term has also become a description for a plant that produces hybrid tea form blooms that are too small for a hybrid tea. At the same time, rose introducers have been pushing the idea that a landscape rose is a shrub with the result that many obvious floribundas have now been introduced under the shrub label.

The grandiflora is a class adopted in the U.S originally to explain 'Queen Elizabeth', which has the size and large blooms of a hybrid tea but the flowering habit of a floribunda. The class never gathered much favor and roses classed as grandifloras have over the years proved a mixed bag of dissimilar roses. More recently, Weeks Roses has re-pioneered the concept with grandifloras that are basically large floribundas such as the outstanding 'Wild Blue Yonder'.

The miniflora is intermediate between the floribunda and miniature rose, both in the size of the bloom and of the bush. The class was added to the list of ARS approved horticultural classifications in 1999, and initial expectations were that it would accommodate the small floribunda-type bushes being introduced in Europe under names such as "patio" roses. In the U.S., however, it became an immediate favorite of exhibitors with the result being that the best minifloras are typically smaller versions of the hybrid tea.

Smaller than a miniflora, the miniature rose typically has 1 -inch blooms on perhaps a two-foot bush. As with all classes, there are variations, from the smallest miniature - sometimes referred to as a microminiature with grain-sized blooms to climbing miniature roses that grow ten feet tall.

I have long considered classifying a rose as a "shrub" as about as useful as classifying it as a "plant". Although the term is intended as a marketing term to imply a good landscape plant, the class has become a hodge-podge of dissimilar roses, ranging from climbers with single blooms, such as 'Sally Holmes', to cluster blooming shrublets like 'The Raven', disease-resistant landscape plants such as 'Knock Out', and the English Roses, which are due a class of their own.

Climbers are well known to rose enthusiasts and gardeners alike, with their dramatic statement of color and the vertical interest they add to the garden. Roses of course, do not actually climb, in the sense of a plant like ivy that attaches itself to a wall with tendrils. Instead a climbing rose produces very long canes that must be trained to a structure, such as a wall or pergola.

The polyantha class was introduced in 1875 and traces to a rose known as Rosa multiflora 'Polyantha'. It shares many of the Rosa multiflora traits including its distinctive fringed stipules and the production of numerous blooms borne in panicles at the tops of branches. However, from the beginning polyanthas differed in several important respects, the most important being its dwarf blooms, its dwarf bush form and its repeat blooming habit. It is a forerunner of the floribunda class and makes an outstanding "ground cover" rose, a widely marketed type of rose that has no official class.

In a small effort to sort out the confused shrub class, a separate show category has been created for "classic shrubs", a term defined to include four family classifications, principally the hybrid rugosas and hybrid musks. Hybrid rugosas are rugged landscape roses with typically rough (rugose) foliage and the ability to survive in extreme conditions. Of most interest are the hybrid musks, which tend to make small blooms in very large clusters on large growing shrubs that rival climbers.

An "Old Garden Rose" is a rose either in existence, or from a class in existence, prior to 1867, the date of introduction of the supposed first hybrid tea, 'La France'. This covers a lot of ground and there are OGRs of every size and form, and that fit every garden application.

## The Qualities of a Good Rose

So, what, in my opinion, makes a good rose?" I have this notion, which is not radical, that people value roses for their flowers. When a buyer at the florist shop asks for a dozen roses, he is not usually asking for 12 stems with glossy foliage and no blooms. If he wanted such a response he would probably ask for holly. Nor would he be satisfied on being handed those same stems with a floppy, non-descript semi-double bloom at the top - even if he were told it was a knockout. And when the gardener goes to the nursery to select roses for the garden, he looks at pictures of the blooms not of the plant.

I grow roses because I love the blooms. I also love to show roses. Therefore the first (and second) characteristic of a good rose is that the blooms should be abundant and beautiful. I am not interested in spending time tending puny bushes that produce occasional blooms, no matter how good those blooms are at a show. I know that most of the blooms I grow are never going to a rose show anyway because they will bloom at the wrong time. But I also know I can increase the odds of getting a rose to a show if I can increase the number of blooms the bush produces.

I also want those blooms to be beautiful. Beauty - to my eye - is a matter of form. I love a wellformed rose bloom. It can be any form, whether the classic hybrid tea form, the form of a single 5-petalled bloom, or the shallow cup of a button-eyed Old Garden Rose or shrub. It can also be the form of the cluster, ranging from the panicles of a polyantha to the spray of a floribunda. Beauty of the rose takes many forms and what I like is when those forms are flawlessly portrayed. And it is no coincidence that this is also what the judges like at a show.

## (Picking Roses, continued from page 6)

Abundance of bloom requires vigor and a plant to support it. So I like a vigorous plant for the garden. I also like what I call a "mannerly" plant, one that is uniformly shaped and well clothed with foliage against which the blooms are beautifully portrayed. I also like a rose to stay where I planted it and to occupy its assigned space and no more.

A vigorous rose needs to be a healthy rose. A fiction widely embraced is that a little disease or insect damage doesn't do much harm to a rose. The truth is that a rose grows through the process of photosynthesis, which is carried on in its foliage. Damaged foliage stunts growth with an ultimate decline in blooms. Growers of florist roses spray to prevent damage to the foliage. That is why I spray as well.

At the same time it is easier to keep a healthy rose clean than one that is prone to disease. I therefore strongly favor healthy roses that require a minimum of spraying to keep them healthy.

## Where to Buy Roses

Before turning to my recommendations on what to buy, I think it useful to make note of where to buy roses. It continues to be desirable to buy roses bare root. Bare root roses may be purchased at local nurseries and by mail order. They become available in middle to late December at the local nurseries and are shipped mail order throughout the bare root season, which, in San Diego, extends from the middle of December to Valentine's Day. Mail order nurseries ship to order, however, and often sell out of their popular varieties. Mail order should therefore be placed now in October.

An exception to this rule are roses on Fortuniana rootstock. These are available only by mail order and only in small containers since they cannot be bare-rooted. Roses on this rootstock are much more vigorous and it is worth the extra cost if you can find them.

The main advantage in buying a rose at your local nursery is that you get to see what you are buying. A number one plant is supposed to have three reasonably sized canes. But more important than the canes is the root system. It is good to shop where the bareroot roses are kept in sawdust or sand as you can examine the root system when the rose is removed for inspection. Packaged roses are much less desirable because you cannot see the root system and the roots are often trimmed to fit in the package. Some nurseries pot up their roses and again you cannot see the roots and, depending on the size of the pot, the roots may have been severely trimmed.

Another advantage of the local nursery is that you can get delivery of the rose when you want it. You can plant roses all through January in San Diego and up until Valentine's Day. Mail order roses have this funny habit of showing up midweek or just before the weekend you had planned the Super Bowl Party.

Mail order sources generally have the advantage of providing a larger selection and more uniform quality. But it is usually necessary to order early as popular varieties often sell out. Now is a good time to get your mail order catalogues.

## What to Buy

Roses perform differently in different environments and climate. It is therefore very important in selecting roses to learn how they perform in your immediate area. This is a main reason to belong to your local society. Also you should visit local public rose gardens to see how the roses you have in mind might perform. Mid-late October is an excellent blooming time for roses in the San Diego area so consider a trip to the garden at Balboa Park, or those of your fellow society members - to see what is doing well this time of year.

To stimulate your thinking here is my list of sure-fire vigorous, free flowering roses for the San Diego area, grouped by color classes. All are excellent garden roses and most also show well as cut flowers or show specimens.

Here's a rainbow display of some of the roses listed that might interest readers.
See the pages following this for a more detailed description of these and many more.


## Pink

'Baby Grand', Min, mp, 1994. A clear pink miniature with quartered OGR form that blooms constantly on a compact bushy plant with medium green matte foliage.
Dancing Pink, Fl, dp, 1993. The best new floribunda in our garden. The semi-double blooms are Hot Pants pink and come in huge, attractive sprays that blanket the bush. The bush is very vigorous. The color is clean, lasting and like a neon sign in the garden.
'Dona Martin', HT, lp, 2012. My lavender/pink sport of the awesome Randy Scott with all of its qualities, including long stems and beautiful foliage. The color is variable, from pink to mauve. It is a Queenly rose I felt appropriate for the name of my eternal companion.
'Flower Girl,' S, lp, 1999. A vigorous shrub that makes massive sprays of small soft apricot pink semi-double ( $8-15$ petals) blooms that fade to white, presented on long slender arching stems.
'Grumpy', Pol, mp, 1956. My favorite of the Seven Dwarfs, it makes abundant clusters of small pom-pom blooms in multiple shades of pink. The bush is dwarf (I had to say that) with dark green glossy foliage. It is often sold as 'Doc', there being continuing confusion over the identity of several Dwarfs.
'Hot Princess', HT, dp, 2000. A florist rose that presents large neon pink blooms that spiral into pinpoint centers. The bush is vigorous with long straight stems and glossy green foliage.
'Marriotta', Min, dp, 1989. An unusual decorative miniature with dahlia-shaped blooms of deep pink, presented on a compact free-flowering plant with disease resistant foliage.
'Pink Pet', Ch, mp, 1928. An OGR with small pink pom-pom blooms with a button eye on a low-growing (3 ft , free flowering plant that resembles a polyantha.
'Rose de Rescht', P, dp, 1880. A relatively compact bush of perhaps 3 feet x 3 feet, which produces bright fuchsia/cerise red rosette blooms that are typically tucked into its dense green foliage. The blooms are abundant and have a strong damask fragrance. The blooms are relatively small, perhaps $21 / 2$ inches across, but generally perfect in their form, round and with their 100 or so petals arrayed in perfect symmetry.
'Sexy Rexy', Fl, mp, 1984. A classic floribunda that produces an abundance of large well-formed clusters of large pom-pom pink blooms on a medium, but compact bush, with excellent disease-resistant foliage. As a cut rose, it is long lasting and it also refrigerates well.
'The Fairy', Pol, lp, 1932, The best known and most widely grown polyantha. It produces small, flat double pink blooms over a dense spreading bush with glossy disease-resistant foliage that reflects its breeding with the species rose, Rosa wichurana.

## Pink Blend

'Bashful', Pol, pb, 1955. One of the nicest of the Seven Dwarfs, a small quiet, unassuming single (5-petal) rose with a white eye. The bush is dwarf, with dark green rugose foliage and attractive sprays.
'Berries 'n' Cream', LCl, pb, 1999. A tall climber with striped pink and white lightly petaled blooms presented with glossy foliage.
'Bouquet Parfait', HMsk, pb, 2000. A monster bush that produces huge clusters of pink parfait blooms that are extraordinary as cut specimens. Occupies lots of room and has a tendency to mildew but the blooms bring forgiveness of these faults.
'Foolish Pleasure', MinFl, pb, 2003. A big horse of a bush with near-floribunda size clean pink blooms with a cream center and excellent form. The bush is upright, tall and clothed with glossy dark green foliage.
'Gemini,' HT, pb, 2000. May well be best hybrid tea - it is a vigorous upright rose that produces many blooms of coral pink with a cream reverse. The blooms have classic hybrid tea form and come one to a stem but more often in clusters if not disbudded. The leathery, disease-resistant foliage is well placed on the stems and frames the blooms well.

## (Picking Roses, continued from page 9)

'Hannah Gordon', Fl, pb, 1984. A tall growing bush with dark green glossy foliage presents lightly petaled ( $20-25$ petals) large blooms of cream tinged in raspberry. Often sold as "Nicole".
'Joy', Min, pb, 2008. Superb pearlescent blooms, white with a pink edge, with consistent delicate form produced individually and in attractive sprays. The bush is of medium size, somewhat sprawling, with matte disease resistant foliage. The No. 1 show rose and certainly the best miniature rose available.
'Neil Diamond', HT, pb, 2014. Classified as pink blend, this actually displays abundant, highly fragrant red and white striped blooms with initial good form. The bush is very tall, vigorous and healthy.

## Red

'Altissimo', $\mathrm{LCl}, \mathrm{dr}$, 1966. A tall stiff upright climber with dark green foliage that produces very large 7 petalled dark red velvety blooms.
'Black Magic', HT, dr, 1997. A florist rose with deep red velvet-like blooms that have excellent spiral form. Nice glossy foliage.
'Francis Dubreuil', T, dr, 1894. A compact bush that produces deep crimson cupped blooms with a powerful fragrance.
'Lavaglut', Fl, dr, 1978. A medium upright bus that produces numerous massive clusters of small velvet dark red ruffled blooms.
'Let Freedom Ring', HT, mr, 2004. An upright vigorous bush that produces many nice medium red blooms with excellent classic hybrid tea form.
'Mister Lincoln', HT, dr, 1965. An old favorite with blooms a deep velvety red, nicely formed with a strong damask fragrance. The bush is very tall and it's a strong grower with lots of bloom and leathery, dark green foliage that compliments the bloom well.
'Mr. Caleb', HT, mr, 2010. A show quality hybrid tea that produces solid red blooms that are perfectly round, perfectly formed, and of good size. The bush grows at an unhurried pace, and requires some patience.
'Oh My!', Fl, mr, 2013. Oh my! - one of my favorite new floribundas. It is a hugely vigorous upright bush that abundantly produces large bright fire alarm red velvet blooms with good substance. Foliage is nice and clean.
'Tammy Clemons', MinFl, mr, 2013. A vigorous bush that produce clean dark red blooms of excellent form on nice straight stems. One of the very best new minifloras.
'The Squire', S, dr, 1982. One of the best David Austin English roses, has huge dark red quartered blooms with good old rose fragrance. The bush is tall, bushy with dark green foliage.
'Verdun', Pol, mr, 1918. A short upright bush that produces huge sprays of grape-colored carmine purple blooms in very large clusters of 25-50 blooms,
'Veteran's Honor', HT, dr, 1999. An excellent rich red hybrid tea with large blooms of exquisite form. It is a big grower but still the stems can have trouble carrying the heavy blooms
'Wing-Ding', Pol, mr, 2006. A superb polyantha that produces large clusters of scarlet orange-red blooms. The foliage is of medium size, dark green, and semi-glossy, clothing the upright bush well.

## Red Blend

'Double Delight', HT, rb, 1977. An old favorite with creamy white blooms edged in red with a strong spicy fragrance.
'Fourth of July', LCl, rb, 1999. A spectacular velvety red, white and yellow striped beauty that, unlike most climbers, will bloom profusely in its first season. It routinely makes spreading canes 10 to 14 feet in length. The blooms are large, semi-double and come in large free-flowering clusters all over the bush. The foliage is large, abundant and reasonably disease resistant.
'Ketchup \& Mustard', Fl, rb, 2011. Well named for its unique blooms with their deep red petals and mustard reverse, all presented with glossy foliage on a very large healthy bush. Blooms tend to come individually with occasional small sprays. Th ebush is string and vigorous.
'Playboy', Fl, rb, 1976. Although classified as a red blend the distinctive orange predominates in the blend. A single rose ( $6-9$ petals) with ironclad disease resistant foliage on a moderate spreading plant.
'Red Intuition', HT, rb, 2004. A highly unusual red on red striped hybrid tea produced on a big horse of a bush that keeps cranking out long stems with individual blooms - sometimes sprays - often with excellent circular, form.
'Roller Coaster', Min, rb, 1987. A miniature small climber (5-7 feet) with small striped semi-double (10-15 petals) blooms mixing red, yellow and white. The foliage is small, medium green and glossy.

## Mauve

'Blue For You', Fl, m, 2012. Makes unusual dusty mauve/purple blooms that come in well-formed, large sprays. The plant is vigorous and eager to grow and bloom.
'Cardinal de Richelieu', HGal, m, 1840. The purplest of all roses, with dark smoky purple button-eye blooms on a vigorous bush. A once bloomer but worth it.
'Elfinglo, Min, m, 1978. A superb micro miniature that makes small ruffled blooms in compact sprays on a very small plant with proportionate foliage. We have two in hanging baskets on the back patio and they are delightful to enjoy.
'International Herald Tribune', Fl, m, 1984. A smallish, low-growing bush that produces violet purple semidouble ( 20 petals) blooms in large trusses.
'Lauren', Pol, m, 2004. A wonderful upright polyantha that fairly leaps out of the ground with abundant sprays of violet purple semi-double shallow cupped blooms.
'Wild Blue Yonder', Gr, m, 2006. A legitimate grandiflora that grows as a large shrub with large clusters of red purple blooms on a vigorous, clean plant with dark green foliage. The blooms have a strong spicy fragrance and are also attractive as an open bloom.
'Yolande d'Aragon', Port, m, 1843. A tall upright woody plant that produces long stems topped by rich mauve -pink multi-petaled blooms well-formed with a center eye and a powerfully strong fragrance.

## White

'Darlow's Enigma', HMsk, w, 1995. A large bush often growing 10 feet high (or higher) and as much around. The blooms are small ( $11 / 2 \mathrm{in}$.), single, and pure white with bright yellow stamens, and appear abundantly in large clusters giving off a sweet, honey fragrance that fills the air around the plant and carries with the breeze. The foliage is abundant, dark green and impervious to disease.
'Gourmet Popcorn', Min, w, 1986. A polyantha sport of the miniature rose, 'Popcorn', that produces huge sprays of pure white semi-double blooms on a modest upright bushy plant with solid disease-resistant foliage.
'Green Rose', Ch, w, <1856. A botanical curiosity composed solely of sepals, all green sometimes touched in bronze on a moderate upright bush. Always in "bloom". Classified as white simply because there is no green color class.
'Iceberg,' Fl, w, 1958. Ubiquitous in San Diego and still the best white floribunda for the garden. A vigorous upright bushy shrub that is always in bloom and very vigorous.
'Irresistible’, Min, w, 1990. A tall upright (for a miniature) bush that produces abundant sprays and individual many petaled ( 43 petals) blooms of pure white.
'Lullaby', Pol, w, 1953. A delightful compact upright polyantha that produces small multi-petaled ( 75 petals) rosette blooms with a green pip in the center, nicely clothed in disease-resistant foliage.
'Randy Scott', HT, w, 2008. A cross of former No. 1 show roses, Crystalline x Moonstone, this new one is an even better exhibition roses. It has high-centered pure white blooms of exquisite form framed by leathery foliage - and then to top it off, it has wonderful fragrance.
Rosa rugosa alba, Species, w. Originating in Japan, and cultivated prior to 1799, this is a classic Rugosa that produces medium single white flowers with yellow tufted stamens among dark green wrinkled leaves. The blooms have a moderate, spicy fragrance and offer a reliable repeat bloom. The large round bushy plant spreads also by suckers and is very bristly. The foliage is known for its cleanliness, resistance to disease, hardiness and tolerance to adverse conditions.
'Sally Holmes', S, w, 1976. A vigorous climber classified as a shrub that produces large creamy white, single blooms in huge clusters that resemble a hydrangea.
'Tooth Fairy', Pol, w, 2009. A medium bush that produces numerous small sprays of dainty white single blooms with individual petals shaped like a tooth.
'Whirlaway', MinFl, w, 2005. A hugely vigorous miniflora with abundant large pure white blooms of exquisite form. Grows very tall with dark green foliage.

## Yellow

'Bee's Knees', Min, yb, 1998. Classified as a yellow blend, the blooms have many colors, dominated by yellow centers and pink-to-red edges. The color comes out best in bright sunshine but can be quite variable. The bush itself is large for a miniature, vigorous and very productive of blooms, set off nicely against abundant dis-ease-resistant semi-glossy foliage.
'Butter Cream', MinFl, my, 2002. My miniflora is the best. It has consistently beautiful 2 -inch hybrid tea form blooms of a clean medium butter yellow. The yellow is more prominent in cooler, overcast weather and shaded conditions; in hot sunny conditions the blooms tend to be whiter. The blooms appear one to a stem and have excellent substance. The bush itself is upright, typically about 3-4 feet tall, with medium green, semiglossy, disease-resistant foliage.
'Dancing Flame', Min, yb, 2001. Blooms are creamy yellow with red edges and impeccable hybrid tea form. The bush is medium, upright with light green foliage..
'Fairhope', Min, ly, 1989. An upright bush with disease-resistant foliage that produces perfect hybrid tea form white miniature blooms that long dominated the show tables.
'Family Holiday', MinFl, yb, 2014. Our San Diego national convention rose, it is a vigorous bush that produces long stems and well-formed blooms of bright yellow tinged in red. Foliage is very attractive too.
'Gold Medal', Gr, my, 1981. More of hybrid tea though classified as a grandiflora. It produces gold, wellformed blooms on a very tall plant. It blooms abundantly and has a sweet fragrance.
'Golden Celebration', S, dy, 1992. Huge golden multi-petaled (55-75 petals) deeply cupped blooms on a sprawling vigorous plant. Blooms have an intense fragrance.
'Graham Thomas', S, dy, 1983. One of the best of David Austin's English Roses, it has cupped blooms of a deep, golden yellow that appear on a tall-growing plant that makes a fine pillar or climber. The very fragrant blooms appear in large, well-shaped clusters that last a long time as a cut flower.
'Julia Child', Fl, my, 2006. The best yellow floribunda - it produces constant clusters of rich butter yellow cupped blooms that laugh at heat and disease. The bush is upright, mannerly and has glossy disease-resistant foliage.
'Molineux', S, dy, 1995. Multi-petaled (110 petals) medium yellow blooms of rosette form are produced on a medium upright bush with leathery foliage.
'Peace', HT, yb, 1945. The world's favorite rose - it is a yellow hybrid tea of globular form and not a washed out pink. Years of propagation have weakened many roses in cultivation. If you get a good one it will light your heart. Glossy disease resistant foliage
'St Patrick', HT, my, 1996. The best yellow hybrid tea. The bush is strong and vigorous and produces an abundance of very well formed deep yellow blooms edged in green. The greenish chartreuse cast varies with the temperature. The blooms have great substance and are exceptionally long lasting when cut.

## Apricot

'Evelyn', S, ab, 1992. A tall growing David Austin Rose with creamy apricot rosette blooms with numerous petals and a delicious cold cream fragrance. Blooms appear individually and in small clusters clothed in medium green semi-glossy foliage.
'Marilyn Monroe', HT, ab, 2002. A superb hybrid tea with soft apricot (blonde?) blooms that have great substance. Has excellent spiral form, good color and size, presented on a vigorous bush with numerous vicious prickles.

## Orange

'Hello Gorgeous!', Min, ob, 2011. Gorgeous indeed - the yellow and light orange blooms have excellent form and clean eye-catching color. The bush is very vigorous with distinctive clean lime green foliage and multiple show-quality blooms. The best of the new miniatures.
'Marmalade Skies', Fl, ob, 1999. Unusual large tangerine marmalade blooms produced in large clusters on a tall-growing floribunda with dark green glossy foliage.
'Mons Tillier', T, op, 1891. A tea rose with stems to support the bloom, this presents unique copper salmon colored dahlia-like cupped blooms that are produced on a medium upright bush.
'Paul Ecke, Jr.', S, ob, 2005. Very unusual single mahogany/orange red blooms with velvety brown edging. It's a tall growing upright floribunda wrongly classified as a shrub. The foliage is dark green and glossy.
'Powerhouse', MinFl, or, 2009. A miniflora with deep metallic orange blooms with long petals and stunning form. The bush is of medium height, upright with dark green foliage.
'Ring Of Fire', HT, ob, 2017. A new and awesome orange hybrid tea of classic form, with thick petals of great substance, derived no doubt from its pollen parent, Marilyn Monroe. The bush is a strong, upright grower and well productive of bloom on long straight stems.
'Tattooed Daughter', Min, ob, 2014. Named by me for my daughter, Elysia, this is a beautiful semi-double miniature with red on russet stripes. The plant is vigorous and does well in a moderate container.
'Treasure Trail', M, op, 2008. A modern Moss Moss that produces small to medium orange tan blooms of OGR form with a button eye and delicate moss on the sepals and stems. The bush is compact with dark green glossy foliage. A true treasure combining the best of old and new.

## Russet

'Hot Cocoa', Fl, r, 2004. A very vigorous -- even sprawling - huge grower with glossy foliage and nice sprays of an attractive and unusual smoky orange coloration.


[^0]:    Editor's Note: This article was submitted by our own Bob Martin (pictured to the right), and is the beginning in a series of articles by Bob entitled "The Rookie Rosarian". The articles will continue to appear in each of the Rose Ramblings issues of 2016. They offer a wealth of information on how to grow strong, healthy, beautiful roses from a Master Consulting Rosarian. I hope you enjoy the articles and am sure that you will find them very useful.

    Elaine Ornelas, Rose Ramblings editor

