VINTAGEGARDENS

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PRUNING ISSUE

ALSO INSIDE:

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Pruning Roses—Breaking all the Rules

We learn from science and debunk outdated notions

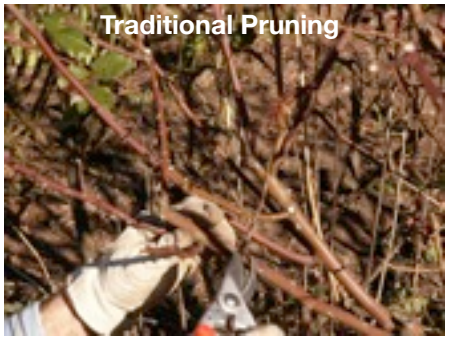
—Gregg Lowery

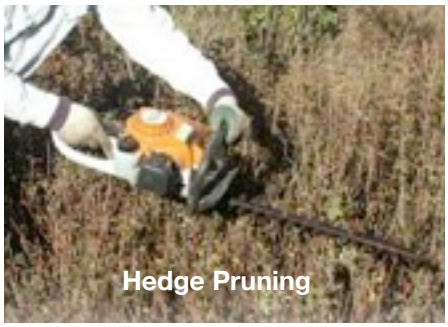
In the 1990s the Royal National Rose Society held the first scientific trials to study the effects of pruning on roses. At their rose trial fields, in the Gardens of the Rose at Chiswell Green, the society planted side-by-side blocks of roses that were treated in three different manners. The first block was pruned in what was determined by consensus to be a standard British method of rose pruning, thinning old wood, opening the centers of the plants and shortening the bushes to 18 to 24 inches high. The second block was 'rough pruned,' with all stems hand pruned back to a single level, square cut, and plants not thinned. The third block was simply sheered back with mechanical hedge clippers to contain the plants within the spaces allotted them in the beds, but not taking the plants down substantially in height.

In deciding what to observe and study, the committee came up first with a short list of the goals that they believed to be the reasons why gardeners prune. These they arrived at again by consensus, based upon what members of the society voiced. The following list of these goals are stated as premises for why we prune roses:

- To encourage larger and more perfect blooms
- To increase the quantity of bloom
- To prevent disease from establishing on the plants

If, like me, you find these familiar reasons that you have heard for pruning your roses, you may be surprised, even shocked by the results.


Traditional Pruning


Hedge Pruning


Unpruned Shrub

By observing floral form, counting flower stems, and observing and quantifying the presence of disease on each plant, the trials took stock of the effects of pruning over a period of nearly a decade. The RNRS membership engaged in a spirited debate as each round of reports were published, and many experienced, long-time rose growers were outraged at the results.

A preliminary report after three years suggested that 'regardless of the method of pruning, the roses all do well.' Subsequent updates in the journal seemed to confirm this, and a firestorm of controversy ensued. So is there any real value in careful hand-pruning of roses, or should we just sweep through the garden with a chain saw and control growth a simpler way?

Jon Dodson of Mottisfont Abbey has recently shared with me a letter published in the RHS journal *The Garden* in 2007 from David Bartlett who worked on those pruning trials and their aftermath. David indicated that the hedge sheared plants took much longer to prune because of the tedious job of raking prunings from the bushes. and, he noted that this group also exhibited die-back and disease which soon spread to the other blocks of hand pruned plants. In the end eleven of the twelve blocks of trial plants had to be completely replanted.

Is traditional pruning the only way?

As a collector of found roses, I have long been sceptical of the notion that roses won't thrive unless we carefully control them with pruning. The


The Vintage Gardens Tee Shirt—now available on our web site!

hundred-year-old rose plants that I have encountered in cemeteries, unpruned, unwatered, and uncultivated, tell the story. If you let a rose grow unchecked, it will do what it must do to thrive; it will grow. Its roots will cut deeply into the soil to secure moisture and seek nutrients, and these deep roots will pay off over time, allowing the plant to survive long periods of drought.

There remains however a reason for pruning that was not measured by the study. We prune to limit the size of the plants. While this may seem obvious, it is usually overlooked when we get down to the question of what is the best method for pruning roses. The traditions of rose culture that are communicated in most of the books we read, really have grown from the formal French-style rose gardens of the early 20th century. In these geometrically designed spaces, roses are used as masses of color,

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MORE ROSES ONLINE!

We have just completed adding all of the roses from our summer 2008 production to our website. Don't miss ordering these treasures while we still have them to offer.

This winter we hope to propagate a large number of roses from our Old European collection. These will be released in May & June 2009.

The Green Rose Garden

Planting, cultivating and maintaining roses for a better planet

By Gregg Lowery

As we enter a new era of consciousness about the effects we have on our planet, much criticism is leveled on the cultivation of roses. They are looked upon as coddled pets that require the use of harmful chemicals, and drink too much of our dwindling water supply. But is this true, or are outdated methods of rose cultivation the real problem rather than the roses themselves?

Revival of interest in old roses has taught some new lessons, and opened our eyes to how roses really grow and thrive with little interference from the gardener.

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masses to be shaped and constrained within the architecture of the garden. Keeping the plants short, or closely tied to a trelliswork or an arbor, was a part of the design. A trial that compares mechanical vs. handwork to impose this constraint on plants does not in the end address the question of why we choose to garden with roses in such an outmoded way.

During the past hundred years or so, the predominance of Hybrid Tea roses in gardens, and the prevailing notion that rose gardens were neatly groomed, geometric parterres of flower color have tended to blind us to the true nature and habits of roses. The revival of interest in old roses and wild roses called for a new

understanding of how roses grow. These shrubby plants seemed more at home in gardens of a more relaxed style where vines, perennials and complimentary flowering shrubs mingled together creating a romantic atmosphere.
Having made a romantic garden of that sort myself, I've come to understand that even that seemingly uncontrolled effect requires pruning as I attempt to balance the competing forces of nature within the romantic mix.

The Zen of rose pruning

The RNRS study, contrary to what I had been told at one time, did *not* include a control block of unpruned roses. I am confident that such a block would have far out-performed any group of pruned roses. When we prune we do it *not* for the benefit of the roses, but for the aesthetic balance in our gardens.

Thirty years of pruning at roses has helped me to understand that getting to know the rose before you prune it should be rule #1. You might call it 'Zen and the Art of Rose Pruning!' If we observe a plant, note how it has grown, where it seems to be putting its most recent energy, we will understand better the organism that we are about to diminish.

Woody plants are highly efficient organisms that do not waste energy. When one branch is over-shadowed by another, the plant gradually diverts its energy toward the branch higher up, more exposed to sunlight, and more capable of effective photosynthesis. Eventually an older branch, buried within may die out altogether. Yet before that branch dies most of its fluids and nutrients move through the vascular system of the plant to feed active and successful new growth elsewhere. We may scowl at a fading cane on a rose bush and say to ourselves, 'that one is useless', but it truth, the plant will continue to find it useful. We ought to recognize that we want to remove that cane simply because we can't bear the thought of leaving half-dead canes on the plant—they look so untidy!

A rose bush in December can be a tattered-looking complex of crossing and awkward stems, a confusing mass that is utterly incomprehensible. In fact it is a highly organized system, more flexible and versatile than your computer. The system is simple, repetitive and predictable. The parts are color coded; brown for used-up, yellow-green for fading, gray for mature, green for youthful, and reddish-green for juvenile.

Our job is to pay attention to those cues, and to evaluate what parts of the plant are healthy mature canes, youthful canes full of unbroken growth buds and soft new growth. We want to retain the best of the mature wood, and the new strong shoots that have hardened off and have the potential to grow lots of

new shoots next year. We should be restricting what we cut out to dead wood, fading and superceded canes, and soft growth at the top and outside of the plant. Pruning then gets restricted to the growth that the plant has mostly used up, and to the burst of new flowering growth on the outside of the plant.

Easier said than done!

This approach to pruning may sound logical, but as soon as we get into the garden to apply the concept we can easily be overwhelmed by the mass of growth on just one plant. It takes some time to develop the habit of looking in this way. But I do believe that it is a skill that each of us can learn, and once learned is much more straightforward than the sort of rules of pruning that are commonly taught.

Some of the most widely espoused pruning dos and don'ts just don't ring true when you try to apply knowledge of how plants grow, and logic. My favorite misdirections include these:

Always prune to an outward-facing bud! The premise here is that we don't want the plants to grow in on themselves and to become crowded in the center. The assumption is that

if we prune to just above a growth bud, the plant will produce its strongest new growth from there.

But if you observe plants, in the spring after you have done your work, you'll notice that more often than not the plant produces a much stronger growth from the next bud down, or even the bud below, that is not pointing in the same direction. Plants grow in ways that will always be mysterious to us; they are responding to the direction of the sun, the shade caused by new growth on other branches, the ambient light in a particular direction that is governed by walls, trees and other plants around them. It might be possible after many years of observing a plant to get a better grasp on how the plant's growth responds to conditions, but for simplicity's sake, I remain humble in the face of this great mystery, and ignore the advice.

Always make your pruning cuts on a 45 degree angle. The explanation given for this widely followed practice goes something like this: the angled cut will allow moisture from dew or rain to run off the fresh cut and not collect, harboring bacteria which will enter the wound and damage the cane. When you place the high side of the angled cut above the it will serve to protect the growth bud from damage.

Angled pruning cuts however produce a larger surface wound than cuts that are made straight across the stem. A larger wound takes more energy for the plant to seal over and heal. And the idea that an angled cut would shed water better than a straight cut is based on the mistaken premise that rose canes grow straight up, when in fact most canes grow at an angle to the perpendicular. So, a straight cut will always be tilted toward the ground, shedding any excess moisture. And, any cut made a quarter of an inch above the growth bud will help to protect the newly emerging shoot. More importantly, straight cuts are easier to make; the classic angled pruning cut must be carefully observed from just the right point of view to get right. A straight cut is easy to perform from any perspective. You'll do a lot less moving around the plant in order to prune it well.

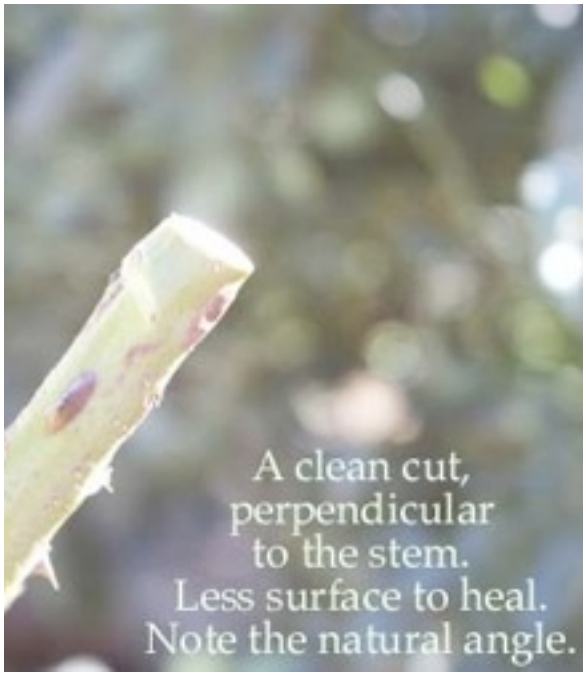
Open up the center of the plant. The idea is that plants grow too crowded for their own good, and need to be opened up and exposed to sunlight within. This allows better air circulation within the plant, resulting in less disease, as rose diseases thrive in semi-humid conditions.

While there may be value in getting sunlight into a plant, the result will be that the plant usually will fill in that space with new growth, often coming from larger growth buds lower down on the canes where the canes are thicker. This in fact creates lots of soft growth inside the plant, and soft, leafy growth is more susceptible to disease than woody canes. Anyone who has grown Tea Roses in a hospitable climate is likely to have noticed that many cultivars do NOT renew themselves with new basal canes when thinned in this manner. their main branches are few, long-lived and

PRUNING MYTHS CHALLENGED

LEFT: PRUNING TO AN OUTSIDE-FACING BUD WON'T ALWAYS PREVENT A PLANT FROM GROWING IN ON ITSELF

RIGHT: THE STRAIGHT PRUNING CUT PERPENDICULAR TO THE STEM



very productive of tip growth that blooms continually.

An un-pruned rose will tend to build up most of its growth on the outer shell of the plant; it continues to increase its overall size on the outside, building and building. New canes will appear whenever conditions favor them; a shaft of light where the plant opens from the weight of branches that bow outward, for instance. When you are trying to limit the size of the plant, pruning below this bushy outer shell will tend to bring light further into the bush, and new growth from within, lower down on the plant will likely result. This is in fact the way that I prune many of my roses, because I am trying to limit their ultimate size. I try not to prune hard, but rather to keep the roses close to their mature dimensions in order to allow good root growth as well as a natural, graceful shape to the variety. By removing the outer shell of this year's growth I can expect new shoots to come from both the tips of canes, and from points lower down on the canes, inside the plant. In this way the plant gets its size limited, but also renews cane growth on the inside.

After pruning pick up and destroy all fallen rose leaves! The argument is that rose leaves harbor disease spores that will cause new infestations next spring. These fungal spores are so virulent that you should not even put them in compost heaps but send them off in plastic bags to the local landfill.

We are indebted to a scientific study done at the University of California at Berkeley in recent years. It showed that while green leaves can harbor fungal spores, once the leaves die, the fungi die on them. This leaves us with a simple cleanup process, and one that obeys the basic rules of recycling in the plant world. All leaves when dead decompose and add to the soil the nutrients that were stored in them. They become compost. If we want to avoid the possibility that some of those leaves will stay green and keep fungi alive, we need only cover the leaf litter on the ground with a light covering of decomposed organic matter—mulch. They will then die completely and become an additive to the soil to enrich it.

To Work!

Our work is now a simpler process. We aren't trying to think of all of the pruning we MUST do for the health of the plant. We understand that we only prune to make the plants fit in their places in the garden. And, we'd like to complete our work and look upon it as aesthetically satisfying. Nothing gives me a greater sense of accomplishment than garden cleanup and tidying. But now I strive to do the least harm, rather than the greatest good for the plants when I prune.

Selecting the right rose for the right place makes rose pruning a much easier task. When there is room for a variety of rose to grow to maturity without yearly hard pruning, there is less pruning involved and we get more quickly to the end of the work. I always love standing back and thinking how well my plants have grown each year, and how happy they appear when I interfere with them less.

Our Farewell to Garden Valley Ranch

For the past three years we have offered our one gallon roses at Garden Valley Ranch in Petaluma, as well as a pickup service for customer orders. As of January 1st, 2009 we will no longer offer gallons or nursery pick up there.

We have enjoyed our relationship with this amazing rose enterprise, but due to limitations of space in their nursery, and the difficulties managing our plants so far away, we can no longer continue to split our time between Petaluma & Sebastopol. All orders will now be shipped.

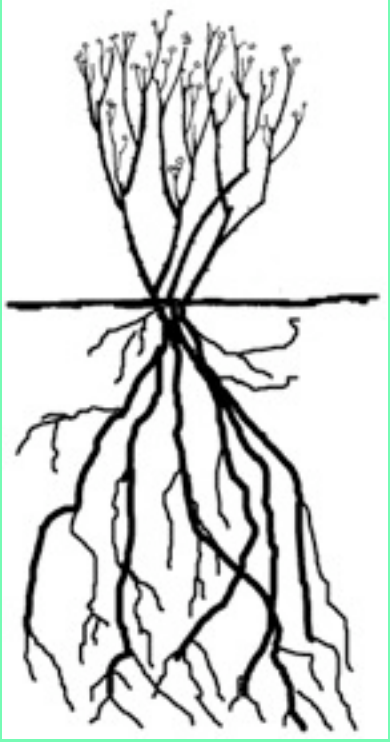
Below:
Dead rose foliage may be left on the ground to decompose and add to the soil. Only living green leaves will harbor disease, and these can be covered with mulch to start the process. Don't waste the precious organic matter your roses shed each year.

Science in recent years has focused attention on some of the myths behind how we cultivate roses, and has provided a new vision of how to grow roses green.

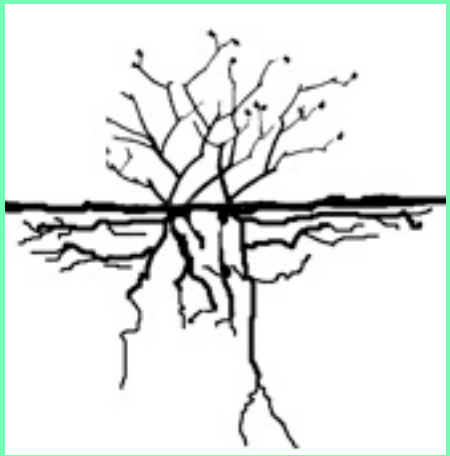
We share with you some of what we have learned that may help you to grow your roses proudly, knowing that not only are you not contributing to damaging our fragile environment, but that growing roses can be beneficial to the planet! As gardeners we engage in several activities to promote our roses, planting, watering, feeding, preventing damage by disease and insect pests, and pruning. Each of these activities can be directed in ways that will benefit the roses, the garden, the neighborhood and the world.

Planting

Rather than obsess over methods of digging the hole to plant a rose in, take stock of your own soil and climate. Is your soil light and sandy, heavy clay, shallow with hardpan just beneath, poorly drained or well drained? Do you have rain year round, or only during a wet season? Do you have an abundance of rain or little? When you plant a rose consider how it is to thrive.



Roses are woody shrubs that send dense roots deep into the soil seeking water and nutrients. You want to make sure they'll have adequate water down deep and adequate nutrients throughout the depth of the soil. The nutrients can be added most simply by mulching the soil surface as often as needed with organic matter. Soil organisms will feed on this and expel nutrients that the plant can consume. Mulch will also help maintain soil moisture, and even in moist soils, as it feeds soil organisms, it will encourage them to aerate the soil as they travel through in search of organic matter.



Above: Rose hard pruned, watered shallowly. Top: Rose moderately pruned, deeply watered.

So whether you dig a big hole and amend it well, or a small hole in unimproved ground, as long as you follow up by regular topdressings with good organic matter the plants should thrive. Remember to think globally but act locally—ask your local agricultural office for what you might add to improve your soil, and where to find it. And ask your friends and reach out to the Internet for advice that makes sense for your conditions.

There are many practices in garden making that are logically tied to the environment you live in. In areas of high rainfall, for example, it makes sense to build planting beds above the level of surrounding pathways for good drainage of the soil. But in a desert climate, pathways should be built higher than planted areas so that excess moisture drifts into the plantings.

Feeding

Your soil, no matter how poor, is full of organisms that feed on organic matter, digest it and expel nutrients that will feed your roses. Feed the soil and you feed the roses. We tend to think that man-made fertilizers are necessary for roses to thrive. But, more often they are wasted. Fertilizers that are do not decompose slowly go mostly unused by plants. They can build up in the soil and create conditions that suppress a healthy

community of natural soil organisms like worms, grubs, microscopic insects, fungi and bacteria.

If you simply concentrate on layering organic matter on the soil, yearly if necessary, you will feed the roses all that they can use. A burst of nitrogen-rich fertilizer may result in a burst of growth on your roses, but it will not sustain them. The more you use, the more you may have to use just to keep them growing well.

Watering

Roses are criticized for being thirsty plants. In fact they can be quite tolerant of drought. In my own garden I water monthly during our long, dry summers. The trick is to get the water down deeply in the soil where the woody roots have traveled in search of moisture. Frequent light watering results in soils that are dry down deep and moist at the surface, redirecting the rose roots toward the surface. The top 12 inches of the soil dries rapidly, stressing roses that are watered this way, and forcing repeated applications of water.

In the first year after planting, a rose bush may not have tapped deeply into the soil, and it may indeed need more frequent watering. But, our objective should be to encourage the plant's natural tendency to root deeply. Drip systems are an excellent way to water deeply, provided they are used correctly. Consider the total amount of water you give your roses each week. Instead of supplying that in small, frequent doses, hold off longer between waterings, and supply the same amount in one deep drink. You may not be able to go a month, but you can certainly water once ever week or every two weeks. It won't take more than a season or two to encourage deeper rooting. Drip systems should also be set up to apply water to several spots around the rose bush rather than to just one or two. Instead of a single emitter, or two, set your system up with three or four, or more emitters of lower gallonage for each bush. Even overhead watering can be very effective; but set your sprinklers to run late at night when evaporation will not waste much of the water. The lesson learned from the hundreds of old roses that have survived in California cemeteries, with no summer water and little care, is that left to their own devices roses are survivors, tough plants with a resilient constitution.

Applying a thick mulch of organic matter to the top of the soil will help to hold that moisture in the soil, so that it does not evaporate as rapidly. When we lay mulch in our garden we first lay down several layers of newspaper, or even cardboard. This helps to inhibit new weed growth, smothering seed and

Right: Le Rêve, descended from R. foetida, a dry-tolerant wild rose.

Far right: The Tea rose Duchesse de Brabant, growing in Australia with no summer water.

preventing germination. It also makes use of usable organic matter, the plant fibers in paper and cardboard, which you might otherwise send off for recycling. In the core statement of recycling, 'Reduce, Reuse, Recycle,' the message to reuse materials, before resorting to recycling, reminds us that the energy it takes to haul around waste for recycling elsewhere uses energy. Holding on to what is usable and then reusing it makes good sense. That's what we recommend to our customers to do with the paper and cardboard packaging that their roses arrive in.

Disease and Insect Damage

The great lesson of the old roses learned by modern rose growers has been that each climate favors a particular group of roses. Tea and China roses thrive in the hot humid climate of the southern USA. The cold-hardy Gallicas and Rugosas fend off the worst that winter offers in the Northern US and Canada. The dry climate of the Southwest helps to protect disease-prone Hybrid Teas, Hybrid Perpetuals and Bourbons. In recent years a great experiment to identify 'Earth Kind™' roses, varieties that can be grown all over the USA in every climate has grown from work at Texas A&M University. An admirable effort, this has resulted in a rather short list of varieties which may aid growers in offering a manageable group of disease-resistant roses, but which belies the much larger and more interesting selection of roses that can be had if you simply choose those groups of roses that grow well in your climate.

We may all want however to try to grow roses which are not ideally adapted to our climate. Efforts over the past many decades have focused on obtaining a battery of chemicals to aid us in this folly. We suggest that you limit the number of varieties that take special care, and seek out varieties that will thrive.

If you are trying to control moderate outbreaks of disease on your roses consider trying a few measures that will make it possible to avoid using fungicides. Space your roses well; good air circulation cuts down on the conditions that help it to grow. Interplant with companion plants that are not roses, as a way of improving the design and beauty of your garden while achieving this elbow-room. Learn to live with rose foliage that is less than perfect. Remember that in nature many plants suffer from fungal and bacterial attacks to their leaves; they survive just fine.

Should you want a dose of help, stick with botanicals like Neem Oil, or the metallic sprays like copper, and sulfur. These will not leave behind residues that can be carcinogenic. And try to limit the application of these metallic sprays to winter dormant application, and to early spring when disease pressure is highest, just before the bloom.

Insecticides ought simply to be avoided. Many years of experience have taught me that any attempt to wipe out an insect pest simply destroys the balance of life in the garden. Killing off one insect invariably paves the way for another, often worse, and the imbalance from repeated spraying develops into a downward spiral in which you must continue to spray and spray. I include botanical insecticides in this aversion. Though they may not leave a harmful residue for us, they break the natural cycles just the same. Encourage birds, spiders, and other natural predators by making your garden an inviting habitat. Consider bringing in predatory insects to speed up the return of a balance in the garden. And even consider releasing some of the new microbial organisms that can help to reduce the population of insects like Curculio, the Snout Weevil, and the tiny Rose Midge, both of which damage and destroy flowers in the bud stage. With a bit of patience and some persistence you'll find that leaving bugs alone results finally in a modest amount of loss of beauty in the rose garden, and makes your gardening life infinitely more enjoyable.

Pruning

Perhaps the most visible sign of our control over our gardens is the effect that pruning makes. For many this is a chore, for others a great meditation and joy. What seems to be universally believed is that we must prune for the health and vigor of the roses.

We prune not for the sake of the plants however, but for our own sakes. Most pruning takes place simply because the plant grows larger than we want it to grow. A few simple suggestions may be helpful here.

1. *Learn to observe your plants well before you prune.* Remember that you are robbing them of stored energy when you cut out growth. Try to aim your pruning shears at those parts of the plant that the plant is not favoring; older, less productive growth, and dead wood.
2. *When sizing your roses downward don't reduce them by more than one-third of their size.* Hard pruning prevents the development of good, deep root systems, which in turn makes the plants more prone to stress in times of heat or drought.
3. *Leave them bushy most years; reserve thinning for every second or third year.* This gives the plants a chance to build momentum and to maintain large root systems.
4. *Trim your selection of plants: if you need a 3 foot shrub, don't banzai a 7 foot shrub to achieve that.* The selection of roses is extraordinary, and you can always find a plant that will mature to that 3 foot shrub that will please you.

5. *Don't clean up and dispose of rose leaves!* Let them fall to the ground to be recycled into the soil, or at the least, add them to your compost. Recent studies have shown that diseases present on rose leaves die as the leaves die. Once detached from the plants, leaves die within a matter of days.

A green rose garden is easy to attain. It may call for a shift in your thinking, and perhaps the rejection of an old set of ideas about cultivating roses. But what is undeniable is that once we begin to grow roses with thought and a new set of values, no one can criticize the result. Roses will use far less water, not demand the application of poisons, not result in the wasteful use of fertilizers and their life cycles can be integrated into the life of the garden. As woody shrubs they provide excellent biomass to help the planet breathe, and they replace lost natural habitats for countless species of animals and insects.

Pruning Classes in January with Gregg Lowery

Want to learn ALL about pruning? Sign up for one of Gregg's pruning classes coming up:

January 4th, Sunday
January 17th, Saturday
10 am to 1 pm
at Garden Valley Ranch

Sign up at the GVR website: www.gardenvalley.com

Proceeds Benefit The Heritage Rose Foundation