

April in the Rose Garden

Consulting Rosarian Report

By Tom Mayhew, MCR

When April comes in the Penn-Jersey area, the roses have started to grow again and are showing their first leaves of the season. It is a relatively busy time in the Rose Garden and is a time for completing the work that may have started in March – pruning the established roses, planting new bare root roses and transplanting existing roses, fertilizing the roses, and spraying both the roses and the soil as a preventative measure against rose diseases and rose midge.

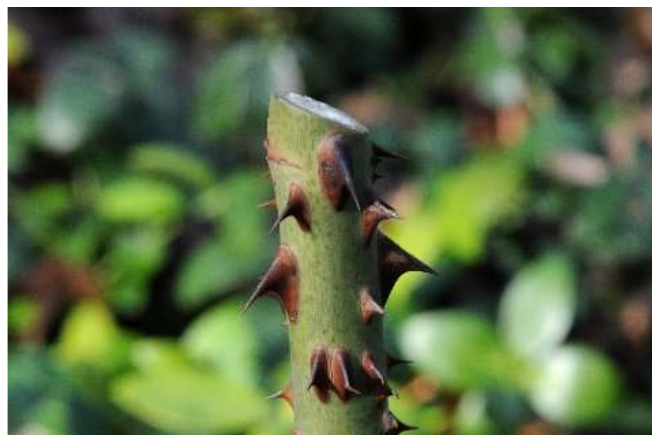
Rose Pruning: One of the first things to be done in the early spring is pruning your established roses. **For most roses, (but not once blooming roses), the major pruning should be done in the spring.** In the Penn-Jersey area (Zones 5-6), the signal for the time to start the spring pruning of the roses is when the forsythia blooms. This is weather dependent, but it usually occurs in late March or early April. If you want to have rose blooms in time for the June Rose Shows, you should finish your pruning by the middle of April.

Pruning Basics: The purpose of pruning is to eliminate the dead, diseased and damaged wood, remove the weak and useless growth, thin out and trim back the healthy canes and shape the rose bush. Pruning stimulates new growth, helps bring roses out of dormancy faster, promotes larger flowers and results in a healthier plant.

Spring rose pruning should include the ever-blooming modern roses, like hybrid teas, grandifloras, floribundas, polyanthas, minifloras and miniature roses. These roses produce their best blooms on new wood that emerges each spring. Repeat blooming Old Garden Roses, and repeat blooming climbers and shrub roses should also be pruned in the spring as needed. Once blooming Old Garden Roses and Species Roses and once blooming climbers **should not** be pruned in the spring. These roses bloom on old wood and if you prune them in the spring, you will cut away many of the potential flowers. Once blooming roses are generally pruned in the summer or fall after their blooming season is over.

In general, pruning should start by removing the dead, diseased and damaged canes. Some dead (black) canes may require cutting off all the way down to the base at the bud union. The remaining canes should be cut back to healthy tissue, which can be recognized by a white (not brown or black) pith center core showing after the cut is made. The cut should be made at approximately a 45-degree angle, about ¼ inch above a bud eye (at a leaf axil), which is facing outward and away from the center of the bush. A dormant bud eye is normally visible as a slight swelling above the surface of the cane. The cut should be made such that the high point of the cut is above the eye so that the cut slopes downward and away from the eye. This allows excess natural sap that rises to seal the cut (or excess sealing glue)

to pour down the opposing side of the cane and not interfere with the developing eye. After the cut is made, a drop of non-toxic glue, like Elmer's Glue (white Glue-all), on the cut can provide a protective barrier, sealing against cane borers and helping to keep the canes from dehydrating.



Pruning Cut ¼ Inch above Bud Eye at Approximately 45-degree Angle, Slanting Down Away From Bud Eye and Showing Healthy White Pith in Center of Cut

When pruning hybrid teas, which are the prime exhibition roses, the goal is to leave three to five healthy canes, in an open vase shape, and growing outward from the bush. Remove any spindly or weak canes especially those crowding the center of the bush. Clearing out the center of the bush will improve air circulation creating a drier environment that helps prevent fungal diseases. The remaining canes should be cut back to healthy tissue. For bigger and better exhibition blooms, but fewer blooms, prune low (hard pruning) leaving 6-12 inch canes. For a good garden display of more, but smaller blooms on a bushier plant, prune higher (moderate pruning) leaving 15-30 inch canes.



Hybrid Tea Rose after Pruning – In Open Vase Shape Here Dublin Is Pruned Leaving 4 Strong, 12 Inch Canes

The grandiflora and floribunda roses, which produce nice rose sprays with medium to large size flowers, should be pruned in a manner similar to the hybrid teas but prune on the taller side, 15-30 inches, and leave a few more healthy canes for a nice garden display. For a more complete discussion on pruning various types of roses with good illustrations, see page 108 of the American Rose Society endorsed **Ortho Books' Complete Guide to Roses**.



New Growth from the Bud Eye on a Pruned Hybrid Tea

Planting Roses: Possibly you bought some rosebushes, and now you are wondering **when, where** and **how** to plant the rosebushes and in **what** kind of soil. These roses might be dormant bare root plants purchased from a mail order nursery, or they could be potted plants bought at a local nursery. These two require slightly different approaches to planting; with the simplest being the potted rose. One advantage of starting with a potted rose is that it comes with its own soil in the pot. This minimizes but does not eliminate your efforts in preparing the soil for the planting. Also, while picking out a potted plant at the nursery, if in bloom, you can see the color and form of the rose bloom and smell the fragrance to see if you really do like the rose. **The basic method to planting a rosebush is to dig a big hole, amend the soil, plant the rose carefully and keep the roots watered (every 5-7 days). Don't fertilize for 4-6 weeks.**

When: In the Penn-Jersey area (Zones 5-6), a dormant bare root rose is best planted in the mid-March-April or the next best November-December time period. Dormant roses will be shipped to your house at the proper time for planting. A potted rose is best planted in the May-June time period or second best September-October period, although it may actually be planted anytime the ground is not frozen.

Where: A rose should be planted in a location with at least 5-6 hours of sunshine daily, preferably morning sun. The location should have decent soil with good drainage (roses don't like wet feet), good air circulation and no competition with tree roots. The drainage time for a one foot deep hole, full of water, should be less than one hour. **A good soil for roses to grow in is a sandy loam with plenty of organic matter (a rich sandy loam) with a pH of about 6.0-6.5.**

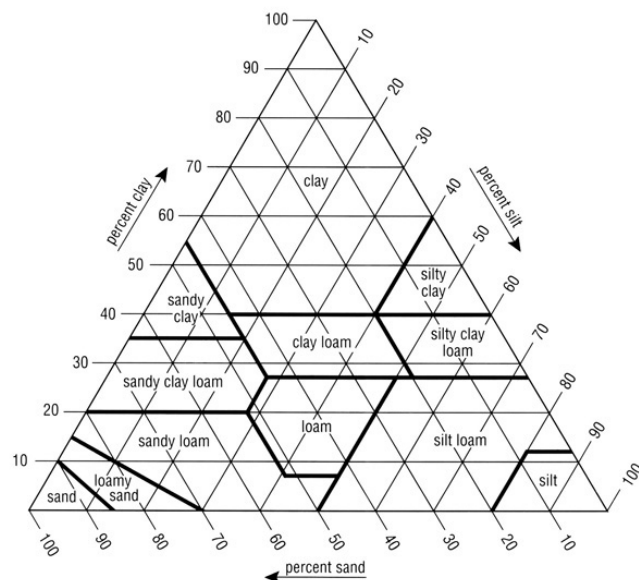


Chart showing the percentages of clay, silt, and sand in the basic textural classes.

Soil Triangle (USDA Soil Survey Manual Oct 1993 fig3-16)

More about Soil: A good soil for roses must be capable of supporting plant growth, by retaining some moisture and nutrients, but it should drain well and have space for air to provide oxygen to the plant's roots and for the living organisms in the soil. A typical good garden soil consists, by volume, of about 50% solid matter (inorganic mineral particles plus organic materials) with about 25% water and about 25% air. The inorganic part of the soil, that determines its texture, is made up of sand (relatively large particles), silt (medium size particles) and clay (very fine particles). The best soil mineral mixture, for roses and most plants, is loam, a mixture of 23% to 53% sand, 28% to 50% silt and 7% to 27% clay, where the total must add up to 100%. For example, a good loam mixture for roses might be 50% sand, 30% silt and 20% clay. Loam drains well, but retains enough water to promote plant growth while it has good aeration to allow roots to absorb oxygen and have room to grow. And loam has good nutrient-retaining properties. The American Rose Society Consulting Rosarian Manual recommends a sandy loam mixture with a sand/silt/clay ratio of about 60%/20%/20%. The organic part of the soil is made up of living and formerly living, but now dead, portions. The dead organic portion of the soil consists of the decomposing plant and animal material which eventually breaks down and is reduced to humus. Humic acid aids in breaking down inorganic materials into nutrients available to the plants. Organic matter improves drainage and aeration and helps the soil's moisture holding capacity. It acts like a sponge to hold water, nutrients, and oxygen, and then releases them as the soil dries out. The living organic portion of the soil includes a wide variation of life including bacteria, fungi, mycorrhizae, algae, nematodes,

arthropods, earthworms and small mammals. A few of the living organic parts of the soil are destructive (i.e. voles), but most contribute positively to the health of the soil. The solid portion of a typical garden soil will often contain only about 5% organic matter with the remaining solid part as inorganic mineral particles, sand, silt and clay. When amending the soil, it is desirable to increase the organic portion to as much as 25% to 50% of the solid part of the soil, resulting in a highly organic soil mixture for the plants to grow in.

How: Dig a **big** hole approximately 18-24 inches deep and wide. Save the top third of the soil if it is good soil and discard any large rocks and the lower 2/3 of the soil. Make a balanced amended soil mixture consisting approximately of 1/3 saved garden topsoil, 1/3 organic matter like compost with manure and 1/3 a mixture of topsoil and sharp (coarse) sand, about half and half. The sharp sand to use is builder's coarse sand (not kid's sandbox, fine play sand). If your soil is already too sandy, then you might want to replace some or all of the sand in the mix with more topsoil or more organic material. If your soil is heavy dense clay, the addition of some gypsum and/or more sand will help break up the soil. You could even add some gravel, cinders or other coarse aggregates to the mix to help break up the soil to improve the water drainage. Commonly used organic materials include compost, packaged compost with about 10% manure or composed humus with 10% manure, leaf mold (shredded and composted leaves), sphagnum peat moss, packaged potting mix, shredded bark and dehydrated manure among others. One of the better potting mixes is Pro-Mix which contains 75% sphagnum peat moss with a wetting agent and some perlite and vermiculite. It also contains some mycorrhizae (fungus-roots) which forms a mutually beneficial relationship with the plant's roots. The mixing of the ingredients of the amended soil can be done in the hole you just dug for the rose, or it could be mixed in a wheelbarrow. If your top soil is acidic, you could also add a cup of pelletized limestone to the amended soil mixture. You could also add a handful of Soil Moist granules if you like, to help hold water. These granules act like miniature sponges to absorb and release water in the soil. You could also add a handful or two of 4 month slow release plant food like Osmocote (19-6-12) at this time. After thoroughly mixing, remove this good amended soil mixture from the hole and save it in buckets or in a wheelbarrow. If it is a dormant bare root plant, measure the distance from the top of the bud union to the bottom of the roots. If it is a potted plant, measure the depth of the soil in the pot plus any amount that may be needed to cover the bud union if not already covered. Put some of the saved good amended soil mixture into the hole until the depth of the hole is equal to distance you just measured. To provide a slow release source of Phosphorus, add one cup of Triple Super Phosphate (0-46-0), bone meal (4-12-0) or granular organic Rose-tone (4-3-2) to the soil at the bottom of this hole and mix it in. Do not add any other chemical fertilizer at this time.

For dormant bare root roses: cut off any broken roots and canes and trim remaining root tips back a little to white tissue. Soak almost the entire plant including roots, bud union and as much of the canes as possible in water overnight to hydrate the rose bush (10 days max). When ready to plant, add some more of the good soil and make a conical shaped mound in the bottom of the hole. Spread the roots of the plant out over the cone and add more soil positioning the rose so the bud union is just below the level of the ground, about one inch. Fill the hole using sequences of adding good soil and then water until the soil has settled slightly below ground level forming a saucer to hold water and mulch. A helpful suggestion, but not necessarily required, is to spray the entire exposed plant with an anti-transpirant like Wilt-Pruf to help seal the moisture in the canes. Using soil or loose mulch, like fine or mini-nugget pine bark mulch, mound up the rose as far as practical, but leave an inch of cane for observation. These procedures will help prevent the canes from drying out, especially from winds, during the few weeks while the dormant rose feeder roots are being established. When the plant starts to grow and produce leaves, gradually peel back the mound of soil or mulch to expose the new growth. A spray of water using a water wand on the end of a hose is helpful with this step.

For potted roses: temporarily put the pot into the hole to verify that the depth of the hole is right so that the top of the bud union is slightly below the ground level by about one inch. If not, make adjustments by adding or removing soil from the hole. If the rose will come out of the pot easily without breaking up the soil around the roots, then carefully remove the rose from the pot with the root ball and soil intact. However, if this is difficult, a better approach is to cut the bottom out of the pot with a pair of heavy-duty scissors, starting at a drainage hole. You may want to hold the cut-away bottom piece in place with your hand to help keep the soil in the pot while you do the next steps. Then, starting at the bottom of the pot cut half way up the side of the pot and then stop. Next cut a mark on the top rim to mark where the side cut is. Leave the plant in the partially cut away pot for support of the soil. Next, with the plant still in the pot, put it into the hole and position it where you like it. Then make sure you remove the cut-away bottom of the pot and discard it. Fill the hole almost to the top with the good soil mixture. Now, the soil around the roots will stay in place in the pot and you can cut downward on the pot from the spot that you marked on the rim until you reach the lower side cut. The pot will then be released and you can pull the loosened pot up and over the bush and out of the way to be discarded. Look around for the bottom of the pot to make sure it was previously removed. Add some more good soil and fill the hole with water and let it drain. Repeat this process until the soil has settled to a little below ground level, forming a saucer to hold water and mulch, and with the top of the bud union slightly covered with about an inch of soil. Next fill in around the bottom of the rosebush with a generous amount of mulch such as fine or mini-nugget pine bark. The mulch will slowly decay and from time to time, some more mulch will have to be added.

Water the newly planted roses regularly (2-3 gallons every 5-7 days) but do not fertilize until about 4-6 weeks after planting (or 4-6 weeks after new growth is observed on dormant roses). Then fertilize about once a month through early September with one cup per plant of dry granular organic Espoma Rose-tone or an equivalent, like Dr Earth Organic 3 Rose and Flower Fertilizer. If you prefer a liquid, use one gallon per plant of Miracle-Gro Water Soluble Rose Plant Food. Spray your newly planted rosebushes, every 2-3 weeks during the growing season, with a fungicide like Banner Maxx mixed with Pentathlon (Manzate or Mancozeb). Alternatives, in easy to use aerosol spray cans, include Orthenex and Immunox Plus, which combine insect and disease control and the insecticide/miticide disease control spray, Ortho's Insect, Disease & Mite Control.

Fertilizing: Established roses should be fertilized about once a month during the growing season starting at pruning time and ending in late August or early September. If you are a rose exhibitor, you may want to fertilize more often with smaller amounts of fertilizer to even out the feeding. You can fertilize with either a granular or a water-soluble fertilizer, either of which can be organic or chemical. Because the soil needs to warm-up for the organic part of fertilizers to become available to the plant, you may want to use a chemical fertilizer for your first fertilization in the spring (and also a week or two before a rose show). A good fast acting water-soluble chemical fertilizer, is the, foliar and root feeding Scotts Miracle-Gro Water Soluble Rose Plant Food (N-P-K = 18-24-16). The supplier recommends this be applied every 2 weeks and they sell a convenient hose end Garden Feeder and refills. There are also fast acting dry granular chemical fertilizers like (5-10-5) or (10-10-10). However, some of these dry chemical fertilizers may lack the other plant nutrients that are in fertilizers designed specifically for roses. A good slow acting granular organic fertilizer is Espoma Rose-tone (4-3-2), a highly organic fertilizer that contains all the essential plant nutrients. Mills Magic Rose Mix (6-5-1), Fertrell Rose Food (4-2-4) and Dr. Earth Organic 3 Rose and Flower Fertilizer (5-7-2) are other good slow acting organic fertilizers. **Recommendation: Fertilize every 4 - 6 weeks, starting at pruning time and ending in late August, with one cup per bush (½ cup for minis) of granular Espoma Rose-tone (or equivalent), sprinkled around the base of the rose bush and then scratched in.** If you want to add additional magnesium to the soil to aid the plant in producing new basal breaks, ½ cup per bush of Epsom salts could also be put down at the first fertilization in the spring. To keep from burning the roots, make sure the plants have plenty of water before you fertilize, especially with dry chemical fertilizers, and water again after the fertilizer is down. A good time to put down dry granular fertilizer is after there has been rain and you expect more soon. Roses need at least one inch of rain per week, or the equivalent of about two gallons of water per bush per week. A rain gauge in the yard is helpful to monitor this.

An alternative to the above, particularly for the small rose garden, is the use of slow-release fertilizers like four month Osmocote (19-6-12), three month Bayer Advanced Garden Rose Food (18-11-16) or Bayer's six week *All-in-One* Rose and Garden Care, a systemic disease and insect control plus fertilizer (9-14-9) or three month Scotts Miracle-Gro Shake 'n Feed Continuous Release Rose Plant Food (9-18-9).

Fungicide Spraying: At a reasonable cost, a good fungicide combination for spraying roses every 2-3 weeks is a "cocktail" mix, combining Banner Maxx at a rate of (½ teaspoon/gallon of water) with Pentathlon DF (formerly known as Manzate) at (½-1 tablespoon/gallon of water). Indicate 5 could be added to the mix as a spreader/sticker with a pH adjuster ingredient to help the spray mix spread more evenly on the leaves. Add only enough to turn the water mixture pink in color. Some variations to the above mix include the following. Honor Guard (propiconazole) is a lower cost generic alternative to Banner Maxx. Pentathlon LF (formerly known as Mancozeb) is a liquid alternative to the dry powder mix Pentathlon DF (Manzate). Fungicides have various modes of action against the fungal diseases. Some act in a systemic (single-site) way while others act on contact (broad spectrum, multi-site). Pentathlon DF (Manzate) and Pentathlon LF (Mancozeb) are the only fungicides that will actually kill blackspot spores. They are contact killers and therefore are good to use in the early spring spraying to kill over-wintering blackspot spores. If you want to further enhance the preventative action in the spray mix, consider adding Compass (¼ teaspoon/gallon) to the mix. Compass is an effective weather resistant fungicide that has both contact and systemic characteristics. Heritage is a somewhat less expensive alternative to the very expensive Compass. You might also add Immunox to the mix to help prevent mildew. When you combine products like these in a "cocktail mix", use each fungicide at its recommended strength. Some of the sprays mentioned here are available from local garden centers but many have to be purchased from online suppliers. Banner Maxx, Honor Guard, Pentathlon DF, Pentathlon LF, Compass, Heritage, Immunox and Indicate 5 are available on the web from Rosemania at www.rosemania.com or Primary Products at www.primaryproducts.com. Spray in the morning or late afternoon to avoid the hottest part of the day and don't spray on windy days. For your safety, use chemical resistant Nitrile gloves when you are handling chemicals (especially toxic concentrates), and wear protective clothing, glasses and a hat when spraying the roses. Take a shower when finished.

Mulching: After pruning, and the first fertilization and fungicide spraying of the season have been done, add some of your favorite mulch, where needed, to help reduce moisture evaporation and keep the weeds down. Bagged mini-nugget or fine pine bark mulch are some of the good ones to use. This mulch is organic and will slowly breakdown over the years. It will act to replenish the organics in the soil as they slowly decompose into humus. As the organic mulch decays, earthworms will draw it down into their burrows to continually nourish the soil.

Insecticides and Rose Midge: In order to help protect the environment, I don't use insecticides unless I have an insect problem that has been identified and I think the problem is significant enough to require some appropriate action. This is the essence of the **Integrated Pest Management (IPM)** approach. However, if you have had trouble in the past, with the small, mosquito-like rose midge, you might consider putting down an insecticide soil treatment. The rose midge seems to prefer hybrid teas, where their tiny larvae destroy the tips of new growth and developing rosebuds, leaving you with burned and shriveled growth. This results in a "blind shoot" and no flower. The tiny, hard to see rose midge has a 10-14 day life cycle, part of which is spent in a cocoon in the ground under the rose bushes. The soil treatment should be put down around and under the rose bushes soon after pruning in late April and then possibly again in May and/or August if you see evidence of rose midge activity. One bit of evidence, besides burnt stem tips, excessive blind shoots and lack of flowers, is the presence of partially damaged rose blooms that are bent over to look like daffodils. Among the possible treatments, two products that list rose midge on the foldout label are Bayer Advanced Lawn Complete Insect Killer for Soil and Turf (liquid) (claims: 3-month protection, covers 5000 square feet) and Bayer Advanced Garden Rose & Flower Insect Killer (liquid) (claims: lasts 30 days, covers 500 rose bushes). Both come in a ready-to-spray container with a hose end connection (no mixing). Either of these two Bayer Advanced liquid products could be used as a soil drench for a rose midge treatment. Both contain Merit's active ingredient, the systemic compound imidacloprid.

After the work is done: Make yourself a cup of tea, and sit down and watch the roses grow as you think about May when it will be warm and the roses will start to bloom again and their sweet fragrance will be in the air. ☺

Recommended Reading:

Complete Guide to Roses Ortho Books

A Year of Roses by Stephen Scanniello

The Encyclopedia of Roses by Judith C. McKeon

Consulting Rosarian Manual American Rose Society

<http://soils.usda.gov/technical/manual>



Crimson Glory - A Fragrant Hybrid Tea Rose