- Growing From The Bottom Up -

THE FOUNDATION FOR BEAUTIFUL ROSES

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Determining the planting location of a rose bush or rose bed is as important as preparing the soil. Many new rose growers plant their first roses only a few feet away from the house - a microclimate that usually produces adverse results. Roses planted close to south or west-facing walls can be affected by excessive heat; North-facing walls create too much shade; Roses planted beneath the roof overhang can suffer from lack of soil moisture and usually good air circulation is not present in these locations. Though many of us may not have optimal rose growing conditions in our yards, we still love roses and strive to do the best we can with what we have. This article will provide recommendations on selecting the planting site and rose bed soil preparation to give your rose garden the foundation it needs to thrive.

When selecting a planting site I recommend creating a bed away from the house, accessible from all sides, which receives a minimum of six hours of full sun a day. Morning sun is preferred (but not mandatory) as it evaporates the previous night's dew and lessens the conditions favorable for fungal attacks (mainly blackspot). Take note of neighboring trees, and the species of tree. The small canopy tree located in yours or your neighbor's yard may not shade the planting site today, but several years from now may cover the entire bed in shade. If you are selecting a site during the summer months be mindful of where shadows may fall in the winter months due to the lower azimuth of the sun.

Another factor to consider when selecting a planting location is soil drainage – and there are several components to review. The first is to avoid low areas where water tends to collect. Roses that have "wet feet" and are growing in poorly drained soil will not thrive. Short of avoiding wet areas, exploring ground water levels is also necessary. There are two simple tests that can be performed to determine whether the planting site has high ground water and is poorly drained. Ground water is saturated soil, and when the soil is saturated it does not drain. The time of year in which this test is conducted is important. Unlike many other areas of the country, Florida has a wet season and a dry season. Florida's precipitation levels have an effect on ground water levels. Generally ground water levels fluctuate twelve to eighteen inches between the wet and dry seasons. Additionally, ground water levels will be lower at the beginning of the wet season and higher at the end of the wet season. Conversely the same is true with the dry season – the beginning of the dry season will start with high ground water levels and then decline as the dry season ends.

One test method is to dig a narrow hole approximately 36 inches deep. A posthole shovel is excellent for this task, but any suitable equipment will suffice. When the hole is completed let it stand open for one full day. Allowing the hole to remain open allows the water to be released from the surrounding soil and fill the hole. Any water observed in the hole reflects the depth of the ground water in the soil. Measure the distance to the water from the top of the hole.

Remember, there is generally a twelve to eighteen inch variation in ground water levels depending on the season. This is your general guide. If testing during the wet season (June thru

September) we want the water level in the hole to be a minimum of 18 inches down from the top of the hole; and if testing during the dry season (October thru May) the ground water should be at the very bottom of the hole or absent at 36-inches.

A second testing method (if you are not comfortable with the first method) is to fill the hole with water. Check the hole after five to six hours and if water is still present in the hole then it is very likely the site has poor drainage and high ground water levels.

These two site conditions, sun duration and drainage, cannot be overcome if roses are planted on a site that does not meet these minimal criteria. However, a poorly drained or high ground water location can support a healthy and vibrant rose garden by utilizing raised beds. It is not my intent to discuss the numerous materials that can be employed to build raised beds, however it should be noted that structures, such as block or wood are not always required to construct raised beds. The beds can simply be mounded.

Additional minor factors to consider when selecting a planting site is the proximity to a water source. Can the existing irrigation system be adapted to the bed? A word of caution, roses require much more water than your lawn and other established planting beds. If you are watering your lawn and/or other beds at the same time as your roses based on the irrigation requirements of roses you may encounter problems (mainly fungus or weeds, like dollar weed) in the lawn and your other non-rose beds. Therefore it is recommended that a separate irrigation system or zone be used to irrigate your rose bed. It is also convenient, but not mandatory, to consider the proximity of the bed to a hose bib. Surely you don't want to drag 150 feet of hose to water your roses. Also consider the proximity to neighbors, pets and other animals. Our rose cultural practice usually requires spraying of pesticides. Careful selection of the planting location is important to be certain spray drift and overspray will not affect neighbors or pets.

When preparing a rose bed or planting hole it is important to concentrate on preparing the soil correctly. Once roses are planted and growing it is very difficult, if not impossible, to correct mistakes. Garden writer Marian Crane wrote in *If I Were Beginning Again,* "If I wanted to have a happy garden, I must ally myself with my soil; study it and help it to the upmost, untiringly … Always, the soil must come first". Entrench your rose growing culture with the soil coming first. The soil is the foundation of your rose garden; don't skimp on this part, you do not want to start over. The quality of your soil before planting has a definite effect on the outcome of your roses.

There is an old adage that goes something like this … "Never plant a $5.00 plant in a .50 cent hole". This is especially true of roses, (and these days roses cost considerably more than $5.00!) By properly amending the soil, we are striving to provide the optimum cultural conditions for our roses to flourish. Different rosarians use many different recipes to prepare their soil for planting roses. Discussed in detail below are two methods I have used to amend the soil for rose plantings. I have found these methods successful in my garden. These are the "bed method" and the "hole method".

THE BED METHOD: I am a firm believer in amending the soil in the entire planting bed. Consider that roses grown in our area for the most part are grafted onto Fortuniana rootstock, and that Fortuniana roots spread in the top 12 – 14 inches throughout the entire bed (sometimes up to 15 – 20 feet away from the bush). It won't be long for the roots to extend beyond the planting hole and into non-amended soil.

Once you have decided on the shape and size of the bed, the grass will need to be removed. (Assuming the bed is in a grassy area.) You will find many differing recommendations,

including spraying the turf with herbicides, etc. My preference is to remove the turf, and then spray any emerging grasses and weeds after the turf has been removed. Removing the turf is additional work, but it reduces the chances of weeds emerging in your rose garden, especially Bermuda grass. Further, the existing grass will take a considerable length of time to decompose, and is much harder to rototill into the soil. In the case of raised beds, where all the soil and amendments are prepared over the turf, the grass creates a dense mat that can further impede drainage. Depending upon the size of the bed, the turf can be removed with a spade for smaller areas or by renting a sod cutter for large areas.

Once the grass is removed and the area is free of weeds its time to add the amendments. Three amendments will be mixed into the native soil: peat moss, pine bark soil conditioner (also known as pine fines), and mushroom compost. All three are organic materials and contribute to the soil blend in different ways.

The peat moss, Canadian or Florida peat, provide little nutritional value on its own. But the moisture and nutritional holding capacity of peat moss is well known and has been used in the horticultural industry for many years. Pine bark fines are incorporated due to the organic matter they add to the soil, the large particle size adding in aeration of the soil. Pine bark soil conditioners are also reported to deter nematodes.

Mushroom compost is a magic soil amendment. It is used primarily due to its organic content and secondly for its nutritional value. Mushroom compost also helps hold soil moisture and enhances the development of beneficial soil microorganisms. Jim McNeely of NutrTech Compositing Systems, Inc. stated "The increased organic matter loading (in mushroom compost) will eventually increase the tilth and texture of the soil producing "unknown growth factors" and numerous other benefits in the soil such as disease resistance, erosion prevention and pest deterrence that cannot be supplied by chemical fertilizers alone." Do not miss out on incorporating this magic amendment.

Three inches of each amendment (peat moss, pine bark soil conditioner and mushroom compost) are used to amend the soil in the planting bed. The example provided below illustrates the methodology for estimating the quantities needed.

Example: The planting bed is 10 foot by 24 foot

Determine the area. 10' x 24' = 240 square feet

Determine the quantity of bulk soil amendments required:

Area of bed X 3" (3 inches ÷ 12 inches = .25 feet) =
cubic feet of material for bed

240 sq. ft. X .25 = 60 cubic feet ÷ 27 cubic feet per cubic yard =
2.22 cubic yards (or 2 ¼ cubic yards)

Our first step is to rototill the entire planting bed prior to adding any amendments. You can do this with a garden fork, but save your back and rent a rototiller. Strive to rototill to a depth of at least 8 inches and be sure the entire bed is evenly tilled. When complete rake the planting bed level. Then evenly spread a three inch layer of one of the three amendments over the surface of the bed (the order in which they are applied is not important). Rototill the first amendment until well mixed into the soil. Level the bed with a rake. Repeat the process for the second

amendment and again for the third. After the amendments have been thoroughly incorporated into the soil I recommend testing the pH, and adjusting, if necessary, before the bushes are planted. Roses grow best in a pH in the range of 6 to 6.8, with the optimum level at 6.5. It is much easier to adjust the pH before planting, incorporating the necessary adjusting chemicals deeply into the soil.

Your planting bed is now complete. To plant each bush, follow instructions given below in the "Hole Method", omitting the Fafard and mushroom compost from the "Hole Method" directions.

THE HOLE METHOD: This method can be used when planting a bush outside of a prepared bed, in a mixed border, in pots, or when replacing older roses that have been growing for many years in an existing rose bed. The amounts given are based on planting one bush in a planting hole approximately 24 inches in diameter by 12 to 14 inches deep. The following ingredients are recommended:

1 Bag Fafard #3B * (2.8 cubic feet);
3 gallons of mushroom compost – Fresh mushroom compost is preferred, not bagged**;
1 cup super phosphate;
½ cup fish meal;
½ cup Osmocote with minors (15-9-12)

The Fafard 3B needs to be wetted thoroughly before it goes in the planting hole. Place the dry Fafard into a 32-gallon garbage can, smaller containers or wheelbarrow, and soak the Fafard completely with water. You will be amazed how much water it will absorb. While your Fafard is soaking, dig your hole (approximately 24 inches in diameter by 12 - 14 inches deep). A 32-gallon garbage can lid makes a handy guide to mark the diameter of the hole. Once the hole is dug, place several inches of the wet Fafard in the bottom of the hole. Then take your rose, still in the pot, and set it in the center of the hole checking the planting depth by laying a stake across the hole to determine whether the level of the soil in the pot is slightly above the level of the soil in the bed surrounding the hole. Adjust the planting level by adding or removing the wet Fafard. Once the planting level is correct, add about a gallon of the compost and mix it into the Fafard in the bottom of the hole – then level out the area. Sprinkle ½ cup of super phosphate over the surface of the planting mix in the bottom of the hole and mix it into the top inch or so with your hand. Carefully remove the rose from the pot and place the root ball in the center of the hole. Make a little indention in the planting mix right next to the root ball. Into this indention pour the remaining ½ cup of super phosphate. Take ¼ cup of the Osmocote and sprinkle on the surface of the planting mix, in a circle about three or four inches out from the root ball. Take ¼ cup of the fish meal and sprinkle on top of the Osmocote. Fill the hole with more of the wet Fafard until it is filled to about 4 inches from the top of the planting hole. Add another gallon of the compost evenly around the root ball and incorporate into the planting mix Again add ¼ cup Osmocote and ¼ cup fish meal around the root ball. Fill the remainder of the planting hole with the wet Fafard until it is level with the surrounding soil. Then top off with the last gallon of compost, spreading the compost evenly over the entire surface of the planting hole. Mulch the area and water well (even though the Fafard was wet). For the first two weeks after planting you need to water daily, thoroughly watering the root ball and the width of the entire planting hole.

Successful rose growing, as with most endeavors, takes planning. Don't rush into the job. Your investment of time and money in proper site selection and bed preparation will provide you with the foundation required to grow beautiful roses.

***Fafard 3-B** is a soilless mix composed of 50% Canadian sphagnum peat moss, 25% aged pine bark, perlite and vermiculite. The mix also has dolomitic limestone (to adjust pH to 5.5-6.5), gypsum, a water-soluble nutrient charge, blue-chip (a slow release source of nitrogen) and a wetting agent. Most independent garden centers can order Fafard 3B for you. If you can not obtain Fafard 3B then look for a potting mix that is comprised of a similar ratio of ingredients.

** **Mushroom Compost** is available in bulk from The Yard Stop in Eustis, FL Phone: 352-357-9964