

2007 AWARD OF MERIT WINNER

Are Your Roses Sulking?

By Nanette Londeree

The dog days of summer are with us, bringing with it a bounty of blooms to the garden. All of your diligent work - feeding, watering and deadheading the roses is paying off with an abundance of gorgeous flowers. Well, most of them anyway. There may be a rose or two that looks perfectly healthy, but hasn't put out a single bloom in months. And it hasn't grown an inch! Nothing. Nada. Zero. Zip. Zilch! Even with the same care as the rest of your roses. There are no bugs, disease, and it's not wilted – so what's going on?

Like most living things on the planet, roses aim to complete their mission – to live and reproduce. That's what those dazzling flowers are all about – reproduction (at least from the plant's point of view!) And like most plants, they need the basics in order to do it; light, air, water and nutrients, pretty much in that order. If any of the basics are in short supply, the plant will go into survival mode, doing just enough to stay alive. It won't be producing flowers - that takes too much energy.

If you see a plant “sulking” – doing nothing, no new growth, no flowers, it may be that the plant has sunk into summer dormancy, a result of environmental stress. This can be caused by extremes in temperatures, insufficient light or water, inadequate nutrients, poor soil aeration, or any combination of these. It's generally a survival response to adverse environmental conditions. You're familiar with dormancy that occurs during winter; as the days shorten and temperatures fall, the plants drop their leaves, stop flowering, and “take a rest.” The plants regular metabolic activity is minimized to help it conserve energy and the normal life cycle of the plant development is temporarily suspended. That's normal. Dormancy in roses at this time of year isn't; the plant should be putting out lots of new growth and flowers. Those blooms may be on the small side as the plants processes are generally working faster due to high temperatures. If your plant is shutting down, you need to find out what is stressing it. And note whether the problem is affecting a single plant, a group of plants or a good part of the garden. That may help you figure out what the culprit is.

Many types of plants go into dormancy when daytime temperatures are high. Most plants metabolic processes gradually shut down when temperatures exceed 96°F. When plants transpire (just like we perspire), they lose moisture; the higher the temperatures, the greater the loss of water. If too much water is lost, the plant will wilt; however, if there is just barely enough to keep the plant going, it won't wilt, it just appears to be inactive – no growth, no flowers.

The most common cause of dormancy in summer is drought stress – otherwise known as “not enough water.” Roses are made up primarily of water; in order to grow and flourish, they need an adequate supply of this vital liquid. And, as water is transported from the soil to the plant through its roots, the water needs to be in the soil available to those roots. Sitting on top of the soil, or even dampening the top inch of the soil won't do the plant much good. It needs to penetrate into the soil, to the general depth of the majority of roots.

Some things to consider – if you're watering by hand, is the flow from your hose or watering can sufficient in volume and duration to really soak into the soil to a depth of 1 – 2 feet? A full grown hybrid tea rose needs around five to seven gallons of water per week when the temperatures are mild; figure a lot more than that during one of our heat waves. That means that if you water two to three times a week, each

time you need to be providing two to three GALLONS of water, around the base of the plant. Do you have clay soil that isn't mulched? It can dry out quickly and become an almost impenetrable surface that water runs right off of, merely wetting the top half inch or so of soil. Are there shallow rooted plants near the base of the rose? They may be robbing the rose of the valuable liquid. Competition from nearby trees? They can be incredible hogs that will suck away the water you thought you were giving to your rose.

Automated irrigation systems can be a real blessing for the roses and the rosarian. While it's vital to design and install them correctly, it's equally important to routinely check to see that the system is working as intended. If you're using a drip system, are you delivering enough volume each time you water? If you need to give the plant two gallons of water each time you water, you'd need two emitters, each with a one gallon per hour flow rate, running for one hour. Very often, we set the timer only to run for a portion of an hour. Unless you have high flow emitters, you may be wasting water because it's not getting to the roots. Also, emitters in a drip system can easily get clogged and block all output, so carefully check your emitters throughout the growing season.

Another potential cause of inadequate water is damage to the roots that reduce the uptake of water. When digging around your roses, you may unintentionally sever plant roots. Or it may be root eaters - pocket gophers can eat a portion of the plants roots - not enough for the plant to wilt, but enough to reduce the amount of water the roots can transport. You may see no outward sign of the pest, just a plant that's sulking. Dig around the plant and assess whether there are any apparent tunnels, or visible damage to roots. Certainly if you see a fan-shaped mound of finely pulverized soil near your roses, it's pretty likely that gophers are your problem.

The good news is that drought stress is easy to fix. Give your plants plenty of water. Slow volume, long duration deep watering that you confirm is reaching those roots. Dig around the plant the day after you water - you should have nice, evenly moist soil to the depth of your rose roots. Within a matter of weeks, the plant should be adorned with lovely new leaves with flowers not too far behind.

If your inactive plant is relatively new, you may have a different problem altogether, totally unrelated to drought stress. If the sulking plant is in a space previously occupied by a different rose that you removed, you may be seeing symptoms of "soil sickness." Also referred to as "rose replant disease", there are many different theories as to the cause of this malady, ranging from allelopathy, microorganic deficiencies, mineral deficiencies, fungal build up in the soil, nematodes and autotoxicity. While not well understood, it's been observed throughout history in many different plants, and can even affect different types of plants within the same family. As there is no definitive cause for this condition, there is no "cure." Your best bet is to prevent the problem. When you pull out a rose, replace the planting hole with fresh soil before planting a new rose. The soil you take out is perfectly fine in another part of your garden where you're growing something other than roses.