

2007 AWARD OF MERIT WINNER

Why We Spray---Should You Do It Too?

By Gaird Hamilton, Consulting Rosarian

The rose is considered by most to be the “Queen of Flowers”, and as such has gotten the royal treatment in many a garden. I was reading the President’s Message by Steve Jones in “The American Rose” for March 2007, in which he advocated that we promote the growing of landscape and disease free roses. Forget those which need spraying. People are into fast and easy roses, and spraying is not an option. He talked more about the reason for the decline in membership in societies, the fact that most people do not exhibit roses and societies should focus on making rose growing easier for the new member.

I decided to begin my article with some of my thoughts on rose growing. First, I feel that growing roses of whatever type you like should be for bringing you joy. If you feel that the time spent in your garden is an odious chore, you shouldn’t be gardening. Some people haven’t a lot of time to devote to the yard and a few easy care roses might be what they want. I can understand that. If, however, you really love the long stemmed roses from a modern hybrid tea, and yet you settle for something less, then go back to the statement that your roses should bring you joy.

Our cool coastal climate is great for growing some roses, but other varieties need more sun or heat to bloom properly. Also, besides being a good climate for roses, this is a nice moist home for fungus spores. If you wish to raise roses with no kind of spraying you must be very selective. Talk to long time growers who don’t spray to find some varieties that you like. You also should be

aware that you may have to tolerate a certain amount of defect on your leaves. If you have done it right, you may be very happy with the results.

In my previous articles on spraying, I have emphasized the latest and best fungicides or at least the ones that we use and know. I will still do that but first I will give you instructions where you can use easily obtained supplies in your local nursery. I will explain the rating system so that you will be able to tell just how dangerous a product is. You should always read the label good and figure out just what quantity of concentrate should be used for how much water. I like to write the amount that I use per spray batch in big letters on the can or bottle so as not to make a mistake some other time. Always keep the concentrate in the container that it came in. You would not want anyone to make a mistake in the future.

Now to the ratings: Category I - Highly toxic, the signal word is Danger, SkullX, or Poison. A few drops of concentrate will kill a 150 pound man. Category II Moderately toxic, the signal word is Warning, and a teaspoon or so will kill the same man. Category III Slightly toxic, and the signal word is Caution, and it takes between an ounce and a pint of concentrate to kill the man. Category IV, the signal word is Caution, and it take over 1 pint of concentrate to kill that man. At this level when it is diluted to a spray it would be impossible to drink enough to cause you much of a problem. That does not mean not to follow the precautions on the label.

Now back to those fungicides which you can get in most nurseries. If you want to use them, the ones which I would recommend are : Spectracide Immunox, and Bayer Advanced Garden Disease Control for Roses Flowers and Shrubs. Both of these products are rated at Caution. I would not recommend Ortho Rose Pride Products because they have ratings of Warning or Danger depending on which fungicide they use. If you need an insecticide too, Bayer has other garden products which contain an insecticide and a miticide. We try to avoid using an insecticide as much as possible to keep the beneficial insects, frogs, and so forth in good healthy condition.



Pesticides can enter the body through the mouth, the skin, or the lungs. When you are mixing or spraying do not eat or smoke until you are showered and cleaned up. This is no time for shorts and a Hawaiian shirt. Be sure and wear clothing which covers as much skin surface as possible. This includes good

footwear as the skin on the feet can pick up a lot of spray from the grass. When you spray try to do it early in the morning when there is no wind. You can be sure though that many times right after you start spraying the wind will come up. If it does, just keep very conscious of the direction that it is blowing, and stay out of the drift as much as possible. If you have a large number of roses to spray often, then it is really a good idea to wear a respirator which is rated for use with paints and chemicals, etc. We got one for me at Piersons and one for Pat at www.rosemania.com, so I know that they are widely available. After you finish spraying always clean up your sprayer, wash your gloves off (unless disposable) with soap and water, clean your respirator, put all of your clothes in the washing machine and wash separately, wash your glasses, and take a shower. By then if you are like me, it's time for a coffee break.

Another reason for spraying in the early morning besides the lack of wind is that the bees are not as active early, and also it gives your roses ample time to dry. All fungicides list the number of hours until it is considered safe to enter the sprayed area and you will want to keep friends, neighbors, children and pets out of the affected space to the best of your ability. Of course if there are cats in your household they feel that they are in charge and will probably be out inspecting your work. Never spray your roses when the temperature is over 80 degrees and make sure that they are well watered before spraying because otherwise you may burn the foliage.

In today's world there are widely differing attitudes when it comes to the use of chemical sprays. I believe that if it is necessary to spray your roses to maintain them in the lovely state that you wish them to be, you should do so You should,

however, be considerate of your neighbors and avoid spraying when the spray would drift onto their yard, especially if there are family or pets outside. Remember how you would feel to see someone with protective clothing, looking like a space man, spraying an unknown substance which is drifting over your children. If you are considerate and careful, they will undoubtedly enjoy your lovely rose garden almost as much as you do. After all a beautiful neighborhood raises the value of their home too.

People frequently comment that our rose leaves look good enough to eat, and we have sprayed on a regular schedule from the first time right after pruning in Winter or Early Spring, usually every two or three weeks until sometime in the Fall. If we lived in the warm dry inland areas of the state, we would probably not spray after Spring. As you will see when I talk about the fungus spores, our hours of wet foliage any time of the year is the problem. Since fungicides do best when used as a preventative, a regular schedule keeps the spores from infecting your foliage at any time. If you do not wish to spray that much, you could watch carefully for conditions to be right for infestation by each of our major fungus types, and then quickly spray when needed. Using this method, if your foliage was wet for over seven hours without drying and the temperature was right, then you could spray with a fungicide which has what they call a kick back effect of enough hours to still be effective. I guess that you could say that it is kind of like a morning after pill.

If you have a good sprayer of the right capacity for the number of roses which you wish to treat, spraying should not be that bad of a job. You want one capable of doing an even job of delivering the same strength of spray to all of the plants and capable of spraying the bottom of the leaves as well as

the top. With our 700+ roses we have a Mantis sprayer which has a capacity of 12 Gallons. It is battery powered and is easy to roll around the garden. The spray comes out in a nice heavy mist. There are much smaller sprayers which do a fine job on a smaller garden. It is a decision which needs to fit the needs of your garden and the physical capabilities of the individual. This would be a good subject to ask for advice from a long time gardener or a Consulting Rosarian.

The fungus diseases are more serious than the insect problems. The main ones are **blackspot, powdery mildew, rust and downy mildew.** *Blackspot* needs the presence of water and our kind of moderate temperatures to develop, 60-75 degrees is best. The spores must be continually wet for at least 7 hours for infection to occur. The spores also overwinter on debris under the bushes which is a good reason to keep a sanitary garden. Usually the black spots which are the main symptom of the disease appear first on the lower limbs of the rose and then work up to the top. If left to develop further, these leaves will turn yellow and then fall off leaving the bush more and more defoliated. When you see blackspot leaves on a rose you should pull them off and burn them. Remember that fungicides are preventative sprays and once the leaf has spots nothing will remove them.

Powdery Mildew usually occurs here later in the year as it needs dry days followed by cool moist nights of around 60 degrees. The spores are spread by air currents and can develop rapidly under the right conditions. It shows up on new growth first with a white powdery appearance.

Rust happens mainly in coastal areas like ours as it requires continuous moisture like fog to spread. It causes bright orange powdery patches on the undersides of the

leaves. The leaves will then turn yellow and die. We personally have almost never had rust, but then we do spray our roses.

The toughest fungus disease around here is one that most of the country does not even know exists except for greenhouses. This disease is *downy mildew*. It requires an ideal combination of temperature and moisture to be a problem. It is killed by temperatures over 80 degrees and the spores will not germinate at temperatures under 40 degrees. To spread it needs very high humidity around 60 degrees. A warm Summer rain can bring on an infestation of downy mildew with amazing speed. It appears as irregular purple patches on the leaves, sometimes in a jagged line down the center of the leaf. It also causes purple areas on stems, usually the best and most vigorous ones. The buds get tiny, shoots wither, and in the worst case without treatment, the bush may die.

Back near the beginning of this article I mentioned several good sprays which can be bought at most nurseries and garden centers. These were good effective fungicides which are rated caution, which is good. There are some of you, I know who are only interested in the various organic sprays which are sold by these same places. I do not use them so can only say to talk with the professional at your nursery or use a Consulting Rosarian who is familiar with their effectiveness here in the cool coastal zone.

The fungicides which I use come in two basic types. There is the systemic or single site type in which the fungicide penetrates the leaves and works against one necessary part of the structure of the fungus. Some such as Immunox and Banner Maxx are sterol inhibitors, (also, Funginex, but it can cause irreversible eye damage). Others such as Cleary's 3336 and Benomyl work on a different site. These systemics work very

well against blackspot, powdery mildew, and rust, but do nothing against downy mildew. The down side is that since they work against a single site, the fungus can build up resistance to them unless you alternate between types.

The other basic type is the contact or multi-site surface protector type. The contact type forms a barrier on the leaf surfaces against many different fungi. These include Daconil, and Mancozeb. These can be alternated too with a systemic to avoid resistance buildup.

If you need downy mildew protection there have been several changes in recent years. Subdue in its various forms is no longer used for downy mildew. The main fungicide used is Aliette. We also use a new one called Stature DM. It seems to be also quite effective. Contact sprays such as Daconil and Mancozeb (under its many names) are also used as preventative sprays.

If you have a lot of roses and are willing to buy more expensive fungicides there is one called Compass which is marvelous. It works about on everything including botritis. It is a Category IV, Caution which is made from some kind of mushrooms. It is not as expensive as its price would indicate since you mix in a very small amount (one tablespoon per 12 gallons). We are currently using Banner Maxx and Stature DM followed in 2 to 3 weeks by Compass and Aliette, and then back to the first.

Enjoy your roses, we do!