



THE NOVUS NEWSLETTER  
OF THE  
THE TIDEWATER ROSE SOCIETY  
October 2016



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## October Meeting

The seventh meeting of the Tidewater Rose Society's eighty-first year will be held at the Norfolk Botanical Garden in Norfolk, Va. 23518 at 2:30 p.m., on October 16, 2016. The board meeting will be at 1:45. Weather permitting we will tour the Norfolk Botanical Garden's Rose Garden, which should be at its peak.

*Sunni*



'New Abracadabra' by Rahul Kumar

Courtesy of the American Rose Society - <http://www.rose.org/gallery>  
[http://www.rose.org/wp-content/uploads/2015/07/NewAbracadabra\\_RahulKumar.jpg/](http://www.rose.org/wp-content/uploads/2015/07/NewAbracadabra_RahulKumar.jpg/)

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## From the President's Desk

Happy fall everyone! The temperatures are finally cooler. Unfortunately, most of our roses have been trashed due to the wind and rain from Hurricane Matthew. But later the cooler temperatures should provide some beautiful blooms this month and in to next month.

Now is the time to clean up the garden to get a head start on next year. You should continue spraying until daytime temperatures are below 60 degrees F on a consistent basis. Also continue to make sure your roses are well-watered to help them be ready for the winter temperatures. We should also be checking for insects and treating when appropriate. The fertilizing is done for the year so that the roses can get ready for winter.

You should also be deciding which roses need to be shovel pruned. If they are not living up to your expectations or have become a disease magnet it may be time to move on to a new rose that will give you what you are looking for. This month's meeting will help you with that.

Send any pictures you would like to share to [tidewaterrosesociety@gmail.com](mailto:tidewaterrosesociety@gmail.com), or bring them in to the meeting. We'd like to feature these images in the future releases of this newsletter.

Please remember to share your love of roses with the community and encourage others who feel as you do to come to our meetings. I hope to see you Sunday, October 16, 2016, at the Holly Room at the Norfolk Botanical Garden.

*Pat Quinn*

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## **2016 TRS APPOINTMENTS & RESPONSIBILITIES**

Sunni Burns (1<sup>st</sup> VP)

Hugh Cox (2<sup>nd</sup> VP)

Eve Price

Sunni Burns

George Wilson

Patricia Wilson

Pat Quinn

Program Chairwoman

Membership Chairman

Treasurer

Newsletter Editor

Property Manager

Parliamentarian

Hospitality Chairwoman

# Gardening Tips

## Rose Pests and Spraying

by Mark Huss

### Introduction

This article is primarily about spraying roses to prevent disease pests and deter insect pests. These sprays are generically called "pesticides." I first discuss the safety issues that anyone who sprays should be aware of. I then briefly discuss the diseases and insects which are our biggest problems here in the northeast (I hope to later expand this to be less parochial). Next, I describe fungicides and list several good for roses. Finally, I discuss some eco-friendly solutions and alternative products.

I am an avid rose gardener who lives in southeastern Pennsylvania, USA. The information contained here is based on my experiences in my garden as well as a lot of reading. I spray fungicides regularly in season and insecticides little to not at all, strictly on an as-needed basis.

**Note:** The specific pesticide product descriptions below and suppliers mentioned are for informational purposes only and do not indicate an endorsement by the author or society. Many of the products discussed are not available in your local store and will need to be ordered from mail-order companies such as [Rosemania](#), [Muncy's Rose Emporium](#), or Perfect Products.

### Sprays: How toxic is toxic?

#### SIGNAL WORDS AND LD50s

One important aspect of understanding chemical safety is recognizing the differences in the toxic potential of pesticides. Pesticides are grouped into four subgroups based on their ability to cause lethality (death) or to damage the eyes or skin. The standard measure of lethality is known as the lethal dose 50 (LD50). The LD50 value for a pesticide is the dose (grams/kilograms of body weight) of the pesticide that will kill 50% of an exposed population (of mice or rats or other test animals). The lower the LD50 value, the more toxic the pesticide.

The most toxic pesticides carry the signal word **DANGER** on the label, are listed as highly toxic and are classified by the Environmental Protection Agency as Category I pesticides. Based on lethality information, it would only take ingestion of a few drops of a liquid or about 3.5 grams (remember that there are 454 grams per pound) of a solid to kill a 150 lb man. Category I pesticides with this lethality potential can only be applied by licensed applicators, and are not available for general use by the home gardener. However, some pesticides available to the home gardener are listed as Category I pesticides based on their ability to produce severe skin and/or eye damage. These pesticides include: **Orthenex**,

Vendex, **Isotox**, **Mavrik 2E**, **Captan** dust or powder, **Triforine EC**, **Lime Sulfur** and Copper Sulfate (99%+).

The next most toxic pesticides carry the signal word **WARNING** on the label, are listed as moderately toxic and are classified as Category II pesticides. It would take ingestion of 1 teaspoon to 1 ounce of a liquid or between 3.5 grams to 35 grams of a solid Category II pesticide to kill a 150 lb man. Pesticides in this category include: Cygon 2E, **Daconil 2787**, **Diazinon 25%**, Metalaxyl (**Subdue 2E** or Ridomil), **Rubigan** (some preparations), Permethrin and Nicotine.

Members of the third most toxic group of pesticides carry the signal word **CAUTION** on the label, are listed as slightly toxic and are classified as Category III pesticides. These pesticides require ingestion of between 1 ounce to a pint of a liquid or 35 to 350 grams of a solid to be lethal to a 150 lb man. Pesticides in this category include: **Avid**, Carbaryl, Mavrik Aqua Flow, **Captan 50W**, **Immunox**, Maneb, **Mancozeb**, Manzate, **Rubigan**(WP, EC), **Sentinel** (cyproconazole), Pyrethrin, Acephate (**Orthene**) and **Malathion**.

The least toxic group of pesticides also has the signal word **CAUTION** on the label, but is listed as toxic and classified as Category IV pesticides. These pesticides require amounts greater than a pint for a liquid or greater than 350 grams for a solid to cause death in a 150 lb man. Pesticides in this group include: Benomyl, Copper Sulfate solutions, Diatomaceous Earth, Sulfur WP, Neem Oil and Safer Soap.

It is important to note that *none of the categories are listed as nontoxic*. That means that even though a pesticide has only a small likelihood of being harmful, caution should always be used when handling these chemicals, particularly in concentrated form.

### **PROTECTIVE GEAR**

Clothing – wear long sleeves and pants (no shorts), rubber shoes, rubber, latex or nitril (NOT cloth or leather) gloves

Goggles – Use the chem-lab variety (with covered vents) not "sunglasses."

Respirator – Use a "gas mask" (cartridge type), not a dust mask – remember, if you can smell it, it's getting in your lungs!

## **SPRAY SAFETY**

### **BEFORE YOU SPRAY**

- Remove pet bowls, children's toys, etc., first.
- Don protective gear before mixing, and mix in a well-ventilated area.
- Read the label **BEFORE USE**.
- Use pesticides for their recommended use only
- Use the recommended amount
- Keep pesticides in their original containers in a safe place

- Use caution when using the concentrated forms (LD50)

## **WHEN YOU SPRAY**

- Spray only on still (not breezy) days
- Never smoke, drink, or eat while spraying
- Keep children, pets, and other adults out of the area

## **AFTER YOU SPRAY**

- Clean all equipment, gloves, and goggles
- Wash spraying clothes in separately
- Shower and shampoo as soon as possible

## **Fungus Problems**

Fungal diseases are probably the number one problem for rose growers. Fungi are tiny organisms that parasitize the host plant and spread via microscopic spores. Some fungi disfigure the plant but some can defoliate and kill a susceptible rose bush. Roses vary widely in their susceptibility to fungal infection. Some (for example, rugosa species and near-hybrids) almost never are bothered, others (most fragrant hybrid teas, for example) are "fungal magnets."

It is much easier to prevent a severe fungal infestation than to control it once it gets established. Cultural practices that discourage fungus include:

- Plant your roses with plenty of space around them for air circulation. Plan for the mature bush size when you plant!
- Avoid getting the foliage wet late in the day. Water roses from the bottom, and in the morning.
- Remove diseased leaves as soon as you see them. They cannot be cured and can contain thousands of spores waiting to infect the next leaf or bush.
- Regularly clean up all leaf litter and debris from around the plants. This is another common place for spores to accumulate.
- Prune out damaged or diseased canes as soon as you find them. Disinfect pruners between cuts.

You can avoid a lot of trouble by selecting varieties that are known to be disease-resistant. Note: Ask a local rosarian about this, do not trust the catalog descriptions! Of course, many people want to grow fragrant Hybrid Teas (and other susceptible varieties). It is for those folks this article is intended.

Listed below are the most common fungal diseases in our (northeastern US) area. Most of the fungicides listed [below](#) are labeled for most or all of these diseases.

# BLACK SPOT

## SYMPTOMS

- Black spots with fringed edges appear on upper leaf surfaces.
- Infected leaves eventually turn yellow and drop.
- In severe cases, a plant may lose most or all of its leaves.

## KEY BLACK SPOT FACTS

- Its spores over winter on dead leaves and infected canes
- Its spores must stay wet for 6 to 12 hours to germinate.
- Its spores are most often spread by splashing water (rain or otherwise).
- It thrives in warm, humid weather.
- The fungus penetrates into the leaf tissue.

Black Spot is probably the single biggest problem for those of us in the humid Eastern US. Other problems come and go, but black spot can defoliate and eventually kill a susceptible rose bush. Rose varieties vary widely in their susceptibility to black spot, with Hybrid Tea, Grandiflora, and Floribunda being in general the most susceptible. I have also noticed that fragrant roses tend to be susceptible.

Black spot (generally classified as *Diplocarbon Rosae*) is a pathogenic and contagious fungus, which infects and penetrates rose leaves and produces a multitude of spores which can then infect other leaves. Spores are most often spread by the splashing of raindrops or overhead watering. It is incurable in the sense that once a leaf is infected, there is no cure for that leaf, and it is best removed as soon as possible to prevent it infecting other leaves. Although an infestation of black spot cannot be cured, it **can** be prevented.

One way to avoid black spot is to only plant rose varieties which are resistant to it. Examples of highly resistant varieties include [Knock Out](#), [Carefree Beauty](#) and [Cherry Meidiland](#). Most Rugosa hybrids (e.g., [Hansa](#)) are also highly resistant. I grow all of these and they *never* get sprayed.

If you want to grow roses that look like the florist rose (high-centered Hybrid Tea) in this area, you'll have to do some spraying.

The simplest and safest spray is water. If you regularly wash the foliage with a spray of water to rinse off the spores before they germinate, you can greatly reduce the rate of infection. (Do this early in the day so that the foliage can dry relatively quickly).

There are also a number of spraying materials you can buy which are formulated to kill or prevent fungus, including black spot. The advantage of a commercial spray is that you only

have to apply it every week or two (the water spray must be done every couple of days.). The disadvantage is they all cost money, and are toxic to some degree.

## **POWDERY MILDEW SYMPTOMS**

- Young leaves get a wrinkled, curled-edges appearance.
- Infested leaves have a white, powdery look.

## **KEY POWDERY MILDEW FACTS**

- It flourishes when there is little or no rainfall, humidity is low during the warm days and high during cool nights (Spring/Fall in the northeast).
- The spores spread easily by wind to neighboring bushes.
- The fungus stays on the leaf surface, therefore Contact Fungicides work better than Systemics (see the [discussion](#) below).
- New products are available which can eradicate this pest (e.g., E-RASE (Jojoba oil))

Powdery Mildew is another contagious fungal infestation. It rarely is a serious problem in this area, as the conditions necessary for it to thrive (warm days and cool nights) only occur briefly here in the spring and fall. However, it can ruin the foliage of a rose for exhibiting, so it must be dealt with in that situation. Plus, it is just plain ugly!.

## **DOWNY MILDEW SYMPTOMS**

- Angular purplish-red or brown areas may appear on leaves; leaves may appear scorched.
- The blotches tend to be limited by leaf veins, resulting in a somewhat blocky pattern.

## **KEY DOWNY MILDEW FACTS**

- It only flourishes in cool, damp conditions (Spring/Fall)
- The onset of the disease is rapid. If conditions are ideal, the spores can germinate in as little as four hours and form viable colonies in as little as three days.
- Downy mildew usually starts at the top of the plant.
- The spores invade from the undersides of the leaves.

Downy Mildew is another contagious fungal infestation. It rarely is a serious problem in this area, as the conditions necessary for it to thrive (warm days and cool nights) only occur briefly here in the spring and fall. However, it can rapidly defoliate susceptible rose cultivars, so it must be dealt with if you grow any of these.

## **Insect and Mite Problems**

Conventional chemical controls are available to control all of the bugs listed below. In these thumbnail descriptions, I discuss alternative methods of control when available.

Note: Many of the "traditional" controls are toxic to birds and/or fish. Read the label carefully. Remember, birds eat bugs, and whatever you spray is getting into the groundwater at some level.

### **APHIDS**

Aphids are small green to brown insects which infest the tips of new growth. They secrete a sticky sugary substance that ants love. Except in severe cases, they are not a threat to the plant. The best way to get rid of aphids is to knock them off with a jet of water.

Controls:

- Diazinon, malathion, methoxychlor, acephate (Orthene), carbaryl (Sevin), pyrethrins, Mavrik (see below), Talstar (see below), Merit (see below)

### **Alternative Controls:**

- Water jet
- Insecticidal soap

### **THRIPS**

Thrips are very tiny insects which use their scraping mouthparts on rose flower petals, which creates brown spots on the petals. This is the only problem they cause, so they are primarily a problem for exhibitors and other perfectionists. They (annoyingly) seem to prefer lighter colored petals on which the damage is most obvious.

Controls:

- Diazinon, Sevin, malathion, methoxychlor, Orthene, Avid
- **Conserve SC:** This is a very effective new spinosad insecticide. Spinosad is derived from a soil dwelling bacteria. Studies at Ohio State University found that Conserve was significantly better than Orthene at controlling thrips while retaining high numbers of beneficial insects. Conserve also works great for control of budworms, bag worms, fall webworms, gypsy moth, and spruce budworms. It also is labeled for gall midge.

### **Alternative Controls:**

- Insecticidal soap



## ROSE MIDGE

The rose midge is a tiny mosquito-like insect about 1 mm long. It lays eggs in the tips of new rose growth, including flower buds. These hatch into tiny maggots that feed on the rose. The maggots then usually drop off the rose to the ground to pupate, after which the new growth turns black and dies. These "burned tips" are the warning flag that the midge has invaded. Unlike the other bugs discussed so far, this one can be serious, because in the extreme case, you'll end up with a garden full of rose leaves but no flowers! There are chemical controls available, but I'm not aware of any "envio-friendly" means for controlling this pest.

Controls:

- **Diazinon granules** sprinkled in soil along with **Orthene** sprayed on emerging growth.

**Alternative Controls:**

- NONE

## CATERPILLARS

This heading encompasses a number of different insects, all of which cause damage by eating the leaves and sometimes the flower buds. This is rarely dangerous to the plant, but it can be disheartening to see plump buds with holes munched into them. A eco-friendly solution for many of these is called BT, which is a bacteria that only attacks caterpillars that munch on the plant you've sprayed.

Controls:

- Sevin, Orthene

**Alternative Controls:**

- Bacillus thuringiensis (Bt)

## BEETLES

This heading also encompasses a number of different insects, all of which can cause serious damage to foliage and flower. The most infamous in the northeast is probably the Japanese Beetle, but the Cucumber Beetle is also a major pest in these parts, and also the sneaky Chafer Beetles -- these brown bugs only come out at night, and can only be "caught in the act" by flashlight.

Neem and botanical pyrethrin are somewhat effective on the leaf chompers. The best eco-solution is to get a cup of soapy water and go around knocking the beetles off your roses into the cup. Japanese Beetles tend to drop while taking flight which makes them easier to catch. My young nephews enjoy going beetle-hunting for chafers with flashlight in hand.

Controls:

- **Cucumber Beetles**
  - **Mavrik:** This is one of the few pesticides Rosemania has found that will control cucumber beetles. Also controls aphids, thrips, whiteflies and offers some limited

control of mites.

- **Talstar/bifenthrin:** Another effective all-purpose pesticide that will work on aphids, thrips, and cucumber beetles. Rosemania prefers Talstar to Mavrik for cucumber beetles. Supposedly safe for birds and mammals, but not available for sale in some states (including NJ and NY). Lasts much longer than older types.
- **Japanese and Chafer Beetles**
  - Orthene, Sevin, methoxychlor
  - **Merit:** Bayer - Purcell product for aphids and Japanese Beetles. Rosemania originally used this product to control aphids that had become resistant to Orthene. According to them, "wow, does it really work! The big bonus was how effective it was on Japanese Beetles. It really knocks them down and without the high toxicity of Sevin."

### **Alternative Controls:**

- Hand-picking, Neem-based products (but not Green Light brand)

## **SPIDER MITES**

These nasty critters not only attack your roses but many other plants (both inside the house and in the yard) as well. They are microscopic mites which suck the juices out of the leaves of plants causing them to turn gray and die.

They are most active in hot, dry weather. Several generations are usually present so traditional controls must be repeated to get all the critters. (Note: new products can control all life stages in one application.)

Controls:

- **Avid**
- **Floramite:** a selective miticide that provides outstanding control of mite pests on ornamental plants. Floramite produces quick knockdown through contact activity and long residual control of more than 21 days. It is effective on a variety of species of mites and all life stages of Tetranychid spider mites (including the eggs!) And because of its novel mode of action and selective nature, Floramite is easy on predacious mites and beneficial insects.
- **Hexygon:** Another selective miticide, Hexygon is a highly active mite ovicide and larvicide. It provides effective control of major tetranychid mite species with long lasting residual activity, yet is non-disruptive to beneficial mite and insect species.

### **Alternative Controls:**

- Stiff jet of water applied to underside of leaves

## **CANE BORERS**

There are actually a few insects which cause the familiar "hole in the cane" syndrome. This generally does not hurt the plant, and I don't worry about it too much. Borers are actually beneficial (other than the holes they make). According to rosarian and entomologist Baldo

Villegas, "Cane borers should be considered a beneficial insects equal in rank to the lady beetles and the green lacewings." If the holes bother you, apply Elmer's glue to cane ends immediately after cutting, which will keep them out.

## **Fungicides**

Note: Most fungicides only prevent infestations and cannot cure leaves already infested.

### **Systemic (single-site) Fungicides**

- Readily absorbed by the plant
- Typically effective for 7 to 10 days
- Easiest for a fungus to become resistant to
- Examples:  
Strobilurin/Compass, Triforine/Funginex , Cleary's 3336, Banner Maxx, Bayleton

### **Contact (multi-site) Fungicides**

- Stay on leaf surface
- Prevent spores from germinating, or kill before plant is infected
- Deteriorate more rapidly, need to be reapplied at 5 to 7 days
- More difficult for a fungus to become resistant to
- Examples:  
Protect/Mancozeb, Dithane, Captan, Daconil 2787

### **Hints:**

- Rotate products! (Do not use the same product over and over).
- Lower the pH of your spray mixture (e.g., Indicate-5)
- Two fungicides mixed work better than one (U. Tenn. study)
- Best bet: Combine a Contact and a Systemic

### **Alternative Spray Products**

This closing section describes several eco-friendly solutions and some non-traditional supplemental products. I have not tried many of these so caveat emptor. I have had some success with neem-based products for leaf eaters and insecticidal soap for aphids.

#### **"NATURAL" SOLUTIONS**

One good source: [Gardens Alive](#) – (812)-537-8650

**Pyola** Insecticidal Spray – uses botanical pyrethrins and rapeseed oil to kill eggs, larva, and adults. Labeled for aphids, leafhoppers, leaf miners, scale, spider mites, thrips, sawfly larva and whiteflies. Also controls caterpillars as well as cucumber and Japanese beetles. Pyola is safe to use on fruit and vegetables right up to harvest day.

**Soap-Shield** – a new a new all-natural fungicide, combines copper with a naturally occurring fatty acid. On roses, controls black spot, downy and powdery mildew, gray mold and rust.

**Also:** - Shield-All II (neem as fungicide), Neem-Away (neem as insecticide), many other products.

Other good "natural" products: BioNeem, many Safer and Concern products, and Bonide (a baking-soda-type fungicide). Note: Green Light neem products (e.g., Rose Defense) have the natural insecticide (azarachtin) removed.

Editor  
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Virginia Beach, VA 23464

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UPCOMING ROSE AND FLOWER SHOW EVENTS & DATES  
FOR 2016

October 20 through 23, 2016

***"Fine Arts and Flowers"***

- Free Admission.
  - Virginia Museum of Fine Arts in Richmond
  - 200 North Boulevard Richmond, Virginia 23220-4007
  - Exhibits throughout the museum
  - Open 365 days 10AM-5PM daily
  - Open Thurs-Fri til 9 PM.
  - Virginia Beach Master Gardeners Fall Gardening Festival
- 

TIDEWATER ROSE SOCIETY MEETING DATES FOR 2016

Oct. 16, 2016

Holly Room

Nov. 20, 2016

Magnolia Room



# MEMBERSHIP RENEWAL

## *Tidewater Rose Society*

Affiliated with the American Rose Society

The membership year for the Tidewater Rose Society begins January 1 and ends December 31. New members who join October 2016 will be enrolled as members for the following year.

Please print the following information:

Name (Dr. & Mrs., Mr., Mrs., Miss, Ms.) \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Member ARS \_\_\_\_\_ Yes, I would like to join ARS \_\_\_\_\_

Tidewater Rose Society Membership: \$20.00 individual/Family.

Make checks payable to the **Tidewater Rose Society** and mail form with check to:

**Eveline Price**  
**1972 Edgewood Avenue**  
**Norfolk, VA 23518**

# Interested in growing roses?



**You are invited**  
to join the  
***Tidewater Rose Society***

**Affiliated with the American Rose Society**

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