

Pests, Pesticides and an economical approach

Opinions of Master Rosarian who does use fungicides as a preventative and only uses insecticides selectively.

- Most European countries do NOT allow the use of pesticides to control problems with roses.
- Many breeding programs only sell roses that have a proven record of doing well against various fungi.
- Example Kordes (German), Ping Lim, Jackson and Perkins, Edmunds, Weeks, etc offer an ever-widening range of **No Chemical** rose options.
- That said rose show winners almost exclusively are won by rosarians that use chemicals to obtain what the judges refer to as winners.
- All that said most fungicides are very safe if used as directed. Insecticides tend to be more toxic. Also, over the past 50 years the manufacturers of these pesticides are aware of the public's opinion and have developed ever safer products.
- If you do use chemicals stick to the Caution level only and read the labels, wear protective clothing and do not spray if its windy.

LD50 Toxicity – level of chemical in concentrated form to kill 50% of rats (swallow) in mg/kg.

Signal Word on Label	Toxicity Category	Acute-Oral LD ₅₀ for Rats	Amount Needed to Kill an Average-Sized Adult	Notes
<i>Danger – Poison</i>	Highly Toxic	50 or less	Taste to a teaspoon	Skull and Crossbones; Keep out of Reach of Children
<i>Warning</i>	Moderately Toxic	50-500	One to six teaspoons	Keep out of Reach of Children
<i>Caution</i>	Slightly Toxic	500-5,000	One ounce to a pint	Keep out of Reach of Children
<i>Caution</i>	Relatively Non-Toxic	>5,000	More than a pint	Keep out of Reach of Children

Other methods to impact are dermal(skin), eyes and inhalation are all different levels of LD50(toxicity). Also need to consider toxicity to fish (ground water run off), insects (kill friendly, e.g. bees), animals (pets) and birds. The smaller the subject the higher the likelihood of causing death.

Common Insects, Spiders
and Mites in Cincinnati.

Identification

Aphids

Spring most likely April – May.
Also in the Fall.

Look for the telltale green or
white specks on the buds and
peduncle



Classic Thrip Damage – brown discoloration on petals.



Thrips Damage

If you open the petals and look down
Into the flower you will see thrips.
Particularly noticeable on white roses

Big deal if planning to enter in Rose Show.

Rose Slugs & leave cutter bees – Lots of different types but similar results



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Rose Rosette Virus (RRV) – number 1 problem for rose industry



RRV caused by virus injected into the rose via the Eriophyid Mite. Research ongoing to produce resistance.

Once **infected** bush must be removed and destroyed. Talstar (Bifenthin), Forbid and Akari have been found to be effective when mite is present??

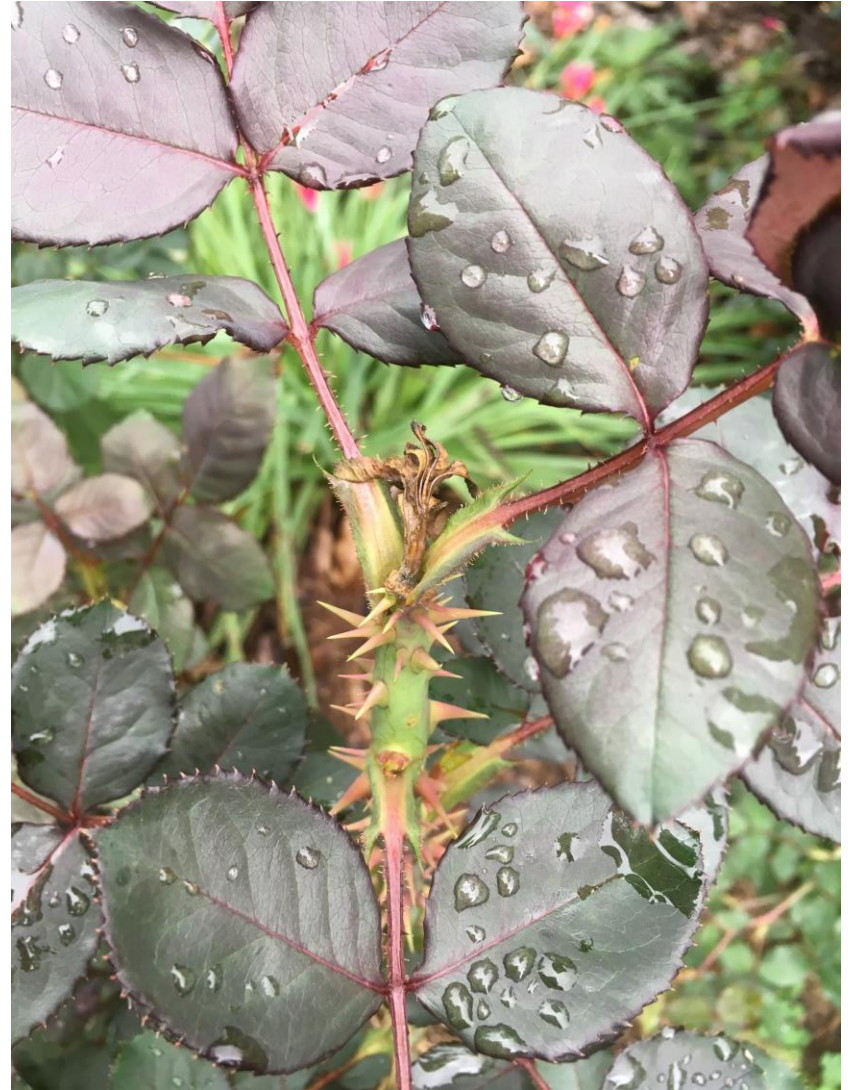
Almost impossible to see with naked eye.

Rose Rosette is only spread by the eriophyid mite, not by wounds as with many diseases.

Spider Mite damage – usually underside of leaf



Classic Midge Damage– tips burnt. Branches look “blind”



Midge Control – Start in April

Insect		Insecticide	Active Ingredient	Price	Store
Rose Midge	URGENT	Bayer Complete Insect Killer for Soil and Turf	Imidacloprid 2F	\$12.97	Lowes
		Merit 2F	Imidacloprid 2F	\$49.99	Rosemania
		Cyonara 9.7 - Warning Label	9.7% Lambda-Cyha	\$20.59	Amazon
		Ortho Tree & Shrub	Dinotefuran		Forest Lytle & Sons

Cyonara 9.7: **WARNING LABEL** This product is extremely toxic to fish and other aquatic organisms. Do not contaminate water when cleaning equipment or disposing of equipment wash water. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Apply this product only as specified on this label. When making applications, care should be used to avoid household pets, particularly fish and reptile pets. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Pests: Determine the root cause and the level of urgency

PEST	Action Color	PESTICIDES - Examples	LEAST TOXIC / Economical	Store
Aphids	URGENT	Bifenthrin, Insecticidal Soap, Neem Oil, Merit	Neem Oil	Walmart
Spittlebugs	AS NEEDED	Bifenthrin, Merit	Bifenthrin	Lowes
Leafhoppers	AS NEEDED	Bifenthrin (Home Defense by Ortho), Insecticidal Soap, Merit, Sevin	Insecticidal Soap(Garden Safe)	Lowes
Scale Insects	AS NEEDED	Bifenthrin (Home Defense by Ortho), Insecticidal Soap, Merit, Sevin	Insecticidal Soap(Garden Safe)	Lowes
Spider Mites	URGENT	Bifenthrin (Home Defense by Ortho), Insecticidal Soap, Conserve	Insecticidal Soap(Garden Safe)	Lowes
Eriophyid mite RRV Vector	Effective	Bifenthrin (Home Defense by Ortho). Talstar, Forbid, Akari	14 day intervals	Lowes
Thrips	ACTION	Bifenthrin (Home Defense by Ortho), Conserve, Sevin	Bifenthrin	Lowes
Leaf-Cutter Bees	NO ACTION			
Beetles	AS NEEDED	Bifenthrin (Home Defense by Ortho), Neem Oil, Merit, Sevin	Neem Oil	Walmart
Rose Weevils	AS NEEDED	Bifenthrin (Home Defense by Ortho)	Bifenthrin	Lowes
Cane Borers	NO ACTION			
Rose Midge	URGENT	Bayer Complete Insect Killer for Soil and Turf	Imidiclopid	Lowes
Catepillars	AS NEEDED	Neem Oil	Neem Oil	Walmart
Snails & Slugs	AS NEEDED	Barrier around plant: Beer in saucer, salt, Copper sulfate, Neem Oil	Neem Oil	Walmart

The active ingredient: Bifenthrin is an effective insecticide for most of the above

Common Fungi in Cincinnati.

Identification

Blackspot – common throughout Ohio



Powdery Mildew – Cool nights and calm days



Botrytis – Common in the Fall & cooler nights.



Abraham Darby (David Austin rose) is particularly susceptible.

Downy Mildew – very similar to blackspot



Rose Mosaic Virus (RMV)



RMV is not transmitted through vectors (such as aphids); it is primarily spread through propagation of plant parts. either through use of infected rootstock or buds for budded roses, or cuttings taken from diseased plants.

You can't infect a healthy rose by using cutting tools you have use on an infected plant.

There are no known treatments for the elimination of RMV for the home gardener.

Fungicide Program for medium size rose gardens

Recommended Fungicide program for less than 100 rose bushes.

Spray **Honor Guard** plus **Mancozeb** after pruning in spring.

Add mancozeb every other 14-day intervals.

Alternate Honor guard with Bayer every 14 days. See below for suggested 14-day interval fungicide spray program

First spray after pruning  **Neem oil + Lime Sulfur (beware can clog sprayer nozzle) or Mancozeb**

1- **Mancozeb** (7 days after neem oil)

2- Honor guard (14 days after #1)

3- Honor Guard plus mancozeb (14 days after #2)

4- Honor guard (14 days after #3)

5- Bayer Disease Control plus mancozeb (14 days after #4)

etc until end of season - late October.



Fungicide	Active Ingredient	Action	Dose per gallon	Intervals	Risk of Resistance	Impacts Growth
Mancozeb	Metal based including Zinc	Broad Spectrum - Contact	1-2 tablespoons	1 per month	Low	No
Honor Guard	Propiconazole - thru' leaf	Broad spectrum - systemic	1/3 - 2/3 teaspoon	Every 14 days	Medium	Yes
Bayer Disease Control	Tebuconazole - thru' plant	Broad spectrum - systemic	1 1/2 tablespoons	Every 14 days	Medium	Yes

Lime sulfur can be used before green growth begins as effective fungicide – after spring pruning.