



# THE OHIO STATE UNIVERSITY

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COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

## Homeowner Control of Grape Black Rot: Fungicides and Timing

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### Using Fungicides to Control Grape Black Rot in Backyard Plantings

Black rot is generally controlled very effectively in commercial grape vineyards largely due to the fact that there are several very effective fungicides that are readily available to commercial growers. For homeowners in certain urban areas it may be difficult to find these fungicides or to find a dealer that will sell you a small quantity of the fungicide. Home owners should realize that there are no “Restricted use Fungicides” and therefore commercial fungicides can be purchased by any one if you can find a place to buy them. This differs from many insecticides and herbicides that are “Restricted Use”, meaning you must have a pesticide applicator's license in order to purchase and apply them. My main point here is that if you are serious about growing black rot free grapes, you may want to consider the use of some of these commercial fungicides.

There are several fungicide products that are marketed specifically for home owners. There are actually very few fungicides in this category that are effective for controlling black rot. In addition, you are not supposed to use a fungicide on grape unless it says “For use on grapes” on the pesticide label. Most homeowner products I have seen do not list grapes on the label. They are mostly for ornamentals, vegetables, lawns or fruit trees. I will mention a couple of home owner products that should be fairly easy to obtain and should do a good job of controlling black rot. Of these products, IMMUNOX FUNGIGIDE™ does have grapes on its label. Having said that, I am not aware of any programs or enforcement agencies that are checking to see what home owners are spraying on fruit crops in their back yards.

### What Fungicides Are Effective for Controlling Black Rot?

#### Some Common Fungicides Used by Commercial Grape Growers for Black Rot Control Protectant Fungicides

**Mancozeb**, and **Ziram** are all highly effective against black rot. Because these fungicides are strictly protectants, they must be applied before the fungus infects or enters the plant. They protect fruit and foliage by preventing spore germination. They will not arrest lesion development after infection has occurred.

**Mancozeb** provides an excellent foundation for a protectant spray program for grapes in Ohio. It is a good protectant fungicide that will provide good to excellent control of downy mildew and Phomopsis cane and leaf spot in addition to black rot. The major problem with Mancozeb is a 66-day pre harvest interval (PHI) on grapes. It cannot be applied within 66 days of harvest. Mancozeb is available under many trade names and formulations. Mancozeb would be my protectant fungicide of choice for controlling black rot in the backyard. It is a very common fungicide used a great deal in commercial fruit and vegetable production and should not be that difficult to find. Some common trade names are Manzate 200, Manzate Prostick, Penncozeb, Dithane M45, Dithane F45, and Dithane Rainshield DF.

**Ziram** is similar in efficacy to Mancozeb. It is highly effective against black rot and provides moderate control of downy mildew and Phomopsis cane and leaf spot.

### **Sterol Inhibiting (SI) Fungicides**

The locally systemic fungicides, Nova (Rally), Elite, and Procure, are highly effective against black rot and will provide some post-infection (curative) activity of the disease if applied at the higher labeled rates within 72 to 96 hours after the initiation of an infection period. Post-infection or curative control must be achieved prior to symptom development on leaves or fruit. Once the symptoms are present, these fungicides will not eradicate or burn out the fungus. Nova (Rally), Elite, and Procure also appear to provide good protectant activity against black rot if applied at the lower labeled rates in a protectant program. These fungicides also have had excellent activity against powdery mildew as well.

Of these materials Nova, also called Rally, is the most commonly used and is very effective for control of black rot. The active ingredient in Nova is myclobutanil. This is the same active ingredient that is in the home owner fungicide product “IMMUNOX FUNGIGIDE”.

### **Some Home Owner Products that Should be Effective for Black Rot Control**

**Mancozeb** is available as BONIDE MANCOZEB FLOWABLE fungicide. It contains 37% Mancozeb and should be very effective for controlling black rot.

Nova (myclobutanil) is available in IMMUNOX FUNGICIDE. It is 1.55 % myclobutanil and should be effective for controlling black rot.

I have not seen other home owner products that I would recommend for black rot control.

Many home owner products contain various types of oils, sulfur, or copper, all of which are not effective for controlling black rot.

**Captan** is also in some home owner products and Fruit tree spray mixes, but is only slightly to moderately effective against black rot and will probably not provide adequate control under heavy disease pressure.

### **When to Apply Fungicides for Black Rot Control**

When combined with good cultural practices a good fungicide spray program is extremely important. Early season control (bud break through bloom) is important to keep the disease from getting established on the leaves and the spreading to the fruit. Fungicide application should begin when new canes are 3 to 5 inches long and should be repeated on a 7 to 10 day interval through 3 to 4 weeks after bloom.

**VERY IMPORTANT NOTE:** The period from immediate pre bloom through 3 to 4 weeks after bloom is the **MOST CRITICAL PERIOD** for controlling fruit infection by black rot. During this period the fruit are formed and are highly susceptible to infection. Around 3-4 weeks after bloom, the fruit become resistant to infection and no further sprays for black rot should be required. In my research vineyards at Wooster, we consistently get near complete black rot control on fruit with three fungicide application starting at very early bloom and two more applications on a 10 day interval.

If sprays are not made (missed) or an improper rate of fungicide is used (too low), especially in the critical period for disease control, you cannot expect to get satisfactory disease control.