

Plant Pathology Infobytes

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Bordeaux Fungicide Mixture - How to Make Your Own Supply

It's too early to use dormant season fungicide applications at this point in the season, but homeowners may want to give some thought to the type of spray they may want to use in late fall or during the winter to knock down plant disease pest populations.

One of the overlooked dormant season fungicide spray materials is Bordeaux Mixture. This product is effective not only for fungal diseases but is also active for certain bacterial diseases such as fire blight of pear and apple.

Homeowners may either purchase Bordeaux Mixture as a "ready to use" formulation at the local garden supply store, or they may choose to make their own supply. Just how difficult is it to make Bordeaux Mixture? The process is relatively simple if you follow the "recipe," outlined in the following steps.

The mixture can be prepared by combining hydrated lime or any type of finely ground lime with powdered copper sulfate (sometimes referred to as "bluestone"). Both materials should be available at farm and garden supply stores. However, some checking about may be required to locate the copper sulfate.

While Bordeaux Mixture can be prepared in several strengths, the recommended for dormant season application is a 4-4-50 formulation. The numbers refer to the ratio of copper sulfate and lime in 50 gallons of water. For example, 4 pounds each of these materials would be combined in 50 gallons of water. Since this amount of spray material is considerably more than needed by most gardeners, the recipe can be whittled down for preparation of smaller amounts of spray mixture.

For example, to prepare a gallon amount of a 4-4-50 Bordeaux Mixture spray, measure out 6 ½ teaspoons of copper sulfate and 3 tablespoons of hydrated lime. The lime should be mixed with a pint of water to make a "milk of lime" suspension. The copper sulfate should also be dissolved in a pint of water. The latter process may take several minutes.

Before mixing the lime and copper components of the mixture, one additional step (but an important one) must be carried out. Each container of these materials should be strained through a cheesecloth filter. If cheesecloth isn't available, use cloth of a similar loose weave. The filtering is necessary to remove small pieces of lime or copper sulfate that won't dissolve; otherwise, you'll find these tiny pieces in the end of your garden sprayer tip, clogging up the works!

To make the filter, simply place the cheesecloth loosely over the top of another container and fix securely in place with a string or rubber band.

The filtered copper sulfate solution is added to a one-gallon container, followed by addition of the filtered lime solution. Enough water (about 3 quarts) is then added to the container to bring the total volume up to one-gallon.

You now have one gallon of Bordeaux Mixture ready for use. For two gallons, simply double the proportion of materials and prepare as before.

For best results, use your Bordeaux Mixture the same day of preparation and keep the sprayer agitated. Insecticides should not be added with the Bordeaux Mixture without first checking the insecticide label for possible compatibility problems.

What are some dormant season uses for Bordeaux Mixture? For peaches, use the material as a dormant spray for peach leaf curl, on apples and pears to help with control of fire blight, on grapes for black rot control, and on roses for black spot and other fungus disease control. A single dormant season application of Bordeaux Mixture won't provide total control of these and other diseases the next season, but used along with other in-season control procedures, the task becomes a lot easier.

If you have questions about Bordeaux Mixture preparation, feel free to give us a call or stop by for a visit at your county Extension office.

Infobytes newsletter was written by the late Dr. Frank Killebrew, Extension Specialist.

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