

Propagator's Cornucopia: Products, Problems, and Observations[©]

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This presentation deals with several topics that are the results of observations in the field, production, and landscape situations. It is my intent to share with you these various topics and that this information may be of use to you in your own particular situation.

FUNGICIDE ROTATION FOR BLACKSPOT CONTROL

This past year, 2001, was one of unusual weather here in the Chicago metropolitan area. The summer weather was very conducive to a number of fungal and bacterial diseases. As a general practice I have for many years rotated use of several different types of fungus-control products to deter a resistance build up in either a growing or garden situation. I realize this is not a new tactic, but I wanted to share with you what products and results I had this past year. Prior to the onset of blackspot, *Diplocarpon rosae*, I began a program to control potential disease outbreaks in several large (50 to over 100 plants) rose garden collections.

The initial product used was Eagle fungicide[®] WSP. The active ingredient is Myclobutanil, 40% concentration. A half a teaspoon per gallon of product was applied at 10- to 14-day intervals. After 3 weeks, another product was introduced, Junction[®]. A dry flowable which is labeled for both turf and ornamental use. The rate of application is similar to the above mentioned product. This product is a "cocktail" of ingredients, manganese, zinc, and ethylenebischthiocarbamate, totaling 15%. Also included in this formula is copper hydroxide, 46%. On its own, micronized copper is a decent elemental product either used as a dust or liquid spray. I found these two products performed adequately, in most cases, blackspot was not detected on the majority, if not on any of the garden roses.

Along with these products or used instead of them was Wilt Pruf[®], an isoterpene compound, which is labeled for antitranspirant use. The Wilt Pruf was applied at about a 4% concentration, 10 tbsp per gal of water. The advantage in using the last product is that it has a nonspecific action in regards to any fungus. It just develops a coat over the leaf surface, this should help avoid any problems with resistance. It also offers an alternative for use in retail or residential work where an aversion to chemicals can involve liability problems. Indeed, when compared inside-by-side trials, qualitatively, the Wilt Pruf worked as well as the mainstream chemicals. It did, however, have to be reapplied over new growth, after pruning or repeated heavy rains.

INSECT TRAPPING AND INSECTICIDE REDUCTION IN PLANT COLLECTIONS (GARDENS)

Certainly, we have all had our share of bug attacks. This past spring and summer were no exception. Leafhoppers, beetles, bores, whitefly, and many others plagued both amateur and professional alike. I have incorporated insect monitoring and collection traps along with chemical and alternative product use to try to reduce

insect presence and damage in a number of situations. Along with some success, there were some set backs.

With the imminent demise of Dursban[®] on the horizon, another well known and often used insecticide is going to leave a void, and make horticulturists look for another line of defense against the mutilegged hordes. To this end I began to use pepper spray liquid this year. It is labeled for repellency, I have not seen it kill any insects, although if sprayed into the wind, workers will be immediately reminded to wear safety goggles. I found that pepper spray will repel insects such as whitefly, leafhoppers, and mosquitoes. Yellow sticky traps also work well on these insects. It doesn't seem to have any effect on beetles. Indeed, in regards to Japanese beetles, I have gone exclusively to using a Trece[®] JB trap, and have given up spraving roses for Japanese beetles. The pepper spray has good results when first sprayed over and under plants, causing clouds of flying insects to depart a garden. However, they will not all leave the plant at once, and in many cases, it could be days before you stop seeing insects around selected plants. Feeding may continue on leaves, and even egg laying may continue. Another factor in this control method is to be sure that garden beds or nursery rows or containers are free of weeds. Obviously, this removes another hiding site for adults, this of course is true in the case of whitefly and other insect infestations. I would give pepper spray a "C" for a grade in insect control.

As far as a deer-browsing control product goes, this is a 50 : 50 outcome, at least for me here around the Chicago area. When I used the pepper spray at the higher concentration, 7 to 9 oz per gal, feeding was slowed, but in some cases not stopped. Another factor with deer, is the surrounding area, subdivision or woods, and the other plant materials, that may provide alternative food sources. This in turn takes the pressure off your site. In several cases, I have seen *Alchemilla*, *Hemerocallis*, *Echinacea*, *Liatris*, *Corylus*, *Hamamelis*, *Fothergilla*, and others with browsing damage, although not heavily, after spraying, at the recommended rates and interval.

KALOPANAX, POTENTIAL DISEASE PROBLEMS?

I have noticed with *Kalopanax septemlobus* (syn. *K. pictus*) over the last several years that two trees on my property, multistemmed, and another on a client's ground, single trunk, have been exhibiting what appears to be symptoms of *Verticillium*. The trees leaf out in the spring, and then anywhere from 5 to 8 weeks later one or more branches, and in one case an entire trunk on a multistemmed specimen, die back, to either a branch junction, or back to the main trunk. Charles Tubesing of the Holden Arboretum, has related to me some cultural difficulties with *Kalopanax* in various areas in Ohio. I have suspected soil conditions in this, and my conversation with Charles Tubesing lead me to believe I have a similar situation here. If any other members in the Eastern Region or another region, have had similar experiences, I would like to hear from you. This a tree with landscape specimen potential. However there is not much in horticultural literature on this plant. I have treated for *Verticillium*, and have had mixed results. I hope the information I have presented here will be beneficial to you and your horticultural endeavors.