

May 2007 - Controlling Orchid Pests in the Greenhouse

A monthly growers advice column by Courtney Hackney. Hackneau@comcast.net

The final part of this series addresses pesticide application and products for those with large collections in greenhouses or growers that keep their orchids outside the home. Pesticides all have a prescribed re-entry time on the label, which must be followed after applications. If these products are applied inside the home there is always the possibility of contamination of surfaces where you and your family could contact the pesticide. Always err on the side of caution.

As noted in earlier parts of the series, most pesticides potentially have some negative effect on the plant. There are, however, a number of steps that can be taken to minimize damage to your orchids. First, always use exactly what the instructions recommend. Do not use "about" 1 teaspoon. Use exactly one teaspoon. Use a dropper for quantities less than 1 tablespoon. These can be purchased at the drug store with increments on them. Never use any utensils that might accidentally be used later for medicine or anything that humans would use. Keep it strictly for pesticides and away from children and pets.

Next be sure your orchids are watered thoroughly before applying the pesticide, preferably in the early morning when the greenhouse temperature is low. Orchids should be sprayed early enough so that plants are dry by the time intense solar radiation is heating up the leaf surface and your greenhouse.

When mixing pesticides use pure water, as water that is high in dissolved solids or that has been mixed with fertilizer can alter the relative toxicity of the product. **Always wear gloves and respirator when handling the concentrated form of the pesticide.** Follow this rule no matter how non-toxic a product is supposed to be.

There are two hormonal insect products that have worked well for me over the years, because they are effective against cattleya (Boisduval) scale. This type of product does not kill insects directly, but interrupts their molting cycle. Both are, unfortunately, relatively expensive initially, but worth the cost in the long run. **Enstar** was the first one that worked well for me. Insects must come into contact with Enstar to be effective, which requires that orchids be soaked during the application, especially the undersides of leaves. The only problem I had with this product was that it seemed to lose its potency after the concentrate was opened. Because it

worked so well initially, and my collection is relatively small, it remained on the shelf for over a year before it was all used.

The second hormonal product, **Distance**, has been more effective because it is a systemic, one incorporated into the plant tissues. Some botanical gardens use this as a drench and claim they need only apply it twice a year. That application rate, twice a year, seems to work well when it is used as a spray as well. This product is incredibly effective to the degree that I could not find a single live scale three months after application.

Most products labeled for scale suggest three applications spaced 7-10 days apart for complete scale control. Do not apply Distance more than once every 3 months as there does seem to be a toxic effect, especially in thin leaved orchids, e.g. miltonias and oncidiums.

The only down side for this product is cost, over \$200/ pint. Because it lasts so long and works so well it may be necessary for several growers to join together and share. So far, there does not seem to be a loss of toxicity with storage of the concentrate.

Finally, there is one product widely available and relatively inexpensive. It is **Bayer's Rose and Flower Insect Spray**. There are two proven ingredients, an organic insecticide that kills insects on contact and one that is systemic. It is available at Lowes Garden centers for under \$10 in a premixed form. Concentrates are not usually available. The premixed bottles are ideal for smaller collections or for spot problems. Avoid reapplication within a month of application as there also seems to be cumulative plant toxicity.

Jacksonville Orchid Society member Dr. Courtney Hackney, Retired Emeritus Professor of Biology at the University of North Florida, is a noted author and acknowledged "orchid expert." He published a column of orchid advice that ran for many years, and we are presenting select articles with his permission.

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