St. Augustine Orchid Society
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Try New Things – 2019 Tricks

by Sue Bottom, sbottom15@gmail.com

True orchid addicts are always searching for some new trick or snake oil that will make their orchids grow better and bloom more profusely. We talk and listen to other growers and often try out their ideas in our growing area. Some new things this year.

1. The Wonder Waterer is available for $30 at Shop at Waldo. Get the brass shut off valve too for easy watering.

Wonder Waterer. Christmas came in August this year when Keith Davis sent me a care package. He send a *C. harrisoniana* 'Streeter's Choice' (that was awarded as *C. loddigesii*), a water nozzle for cleaning orchids, a special pen for orchid tags and a Wonder Waterer, a really nice water wand. If you use a water wand, you know they often have considerable wobble where the wand connects to the hose. Not the Wonder Waterer. It also has a laser-cut faceplate with a multitude of small holes for a great spray pattern that aerates the water on its trip to your plants. You can remove the faceplate for easy cleaning. Just drop it in some Lime-Away overnight if it plugs from hard water deposits. There is an in-line filter in the handle. Keith added a brass ¼ turn valve for ease of use. It is so nice, I bought another one for the shadehouse!

Nitrozime. Daryl Venables of Tezula Plants introduced us to Nitrozime, made by Hydrodynamics International. This is a marine algae extract derived from *Ascophyllum nodosum* seaweed that is reported to be eight times more concentrated than typical seaweed extracts. You can use it as a monthly supplement to your fertilization program, or apply a more concentrated spray on roots and rhizomes during the repotting process to stimulate root growth. I have modified my repotting routine to include a spray of Nitrozime or the more concentrated Dip 'n Gro hormonal product to encourage root growth and minimize transplant shock.

2. Nitrozime contains growth- stimulating compounds. These new roots formed about a month after spraying.

Pool Chlorine. During one of our repotting clinics at Ace after Hurricane Dorian, Janet Skinner was spraying all the benches using a pump up sprayer and something that smelled like bleach. It was pool chlorine, which contains 10.5% sodium hypochlorite vs. the 5.25%

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found in bleach. She was nuking the benches because she had founds some rots after the storm. I got out the pump up sprayer, some old gardening clothes with bleach stains and went through 6 gallons of chlorine, disinfecting walls and floors and empty benches. Places that had resisted prior pool algaecide, bleach and Zerotol sprays were suddenly algae free and I suspect latent virus and fungal and bacterial spores were likewise zapped. It is a powerful chemical, you need plenty of fresh air when you are spraying it and absolutely you cannot contact plant tissue with this concentrated chemical. But, for annual disinfection on greenhouse surfaces, liquid chlorine is great in your arsenal.

3. Sometimes you can recognize the symptoms of virus in a plant, but sometimes it is too difficult to part with a beautiful flower unless you can confirm that it is virused.

Virus Testing. Cymbidium and Cattleya growers are often concerned with virus infecting their prized orchids. You can send samples off to a laboratory like Critter Creek for testing, but of course you'll have to wait a week or two for the results. You get virtually instantaneous results using the test strips from Agdia ($6 to $12 per test strip, depending on whether you order 5 or 25 strips), or the Taiwanese company Rega Biotech ($2.50 to $4.00 per strip depending on order size with a 50 strip minimum). The test involves cutting a small sample of tissue from the plant, mashing it in a buffer solution and inserting the test strip to wait for the results to appear.

Interestingly, very little is written about exactly where to obtain the sample. Some like to sample an almost spent flower, some sample the roots, and others the leaves; but, which leaves? I have always sampled the older symptomatic leaves under the assumption that these had the most time for the virus to replicate inside. The Good Doctor Hackney says he always tests a leaf from the youngest mature growth because that is where the virus will be most concentrated. Per Randall and Ogle:

> *When the virus reaches the vascular tissue, it is distributed rapidly through the plant via the phloem and becomes systemic. Viruses generally move first to the roots and top leaves before infecting the remaining leaves from the top of the plants downwards.*

The phloem, which transports sugars and carbohydrates throughout the plant and fuels the growth of newly developing tissue, also carries the viral particles concentrating them in the new growths, while it is possible for the virus present in the older parts to become dormant. Anecdotal evidence supported this assumption. I had given Courtney a division of a Laelia he admired and he wrote to tell me it tested positive for ORSV, though my sampling of an older leaf showed it to be nonvirused. However, a retest on a newer leaf confirmed

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Courtney's results. Ancient Energy Orchids wrote an interesting article about virus testing an orchid collection for virus; it is food for thought.

Always be receptive to new ideas and new ways of doing things. That does not mean you change your whole regimen after hearing a suggestion, but if something sounds interesting, give it a whirl. Read, observe and listen, never stop learning!

Citations and Additional Reading

Randles J, Ogle H. 1997. Viruses and viroids as agents of plant disease. In: Brown JF, Ogle HJ, eds. Plant pathogens and plant diseases . Australia: Rockvale Publications, 104–126.