

Summer in South Florida

by Andy Easton, reprinted with permission

These are a few things, in no particular order, that you might wish to consider that could help your plants through what is often a very difficult growing season in South Florida.

It's hot and the plants are growing like crazy so we need to fertilize more, right? Wrong! The two periods of most rapid growth in our area are Spring and Fall. When the days and nights get uncomfortably hot for us, they are too hot for many of our orchids too. The respiration rate will exceed the photosynthate storage rate for much of the 24 hour period and consequently, just like when we go on a diet and exercise more to lose weight, our plants will actually struggle to hold their own or may even go backwards. In the months of July, August and September, it is prudent to actually feed at a lower concentration and also to make sure you are feeding a formulation that is at least even concentrations of Nitrogen and Potassium and preferably with a Potassium level around 25% higher than Nitrogen. Don't skip feeds however as the higher temperatures mean that fertilizer is quickly metabolized by media microflora. Now if you just grow Vandaceous types these comments are less applicable but anything in the Cattleya Alliance will benefit from the above regime.

Be sure too that you water and fertilize in the early or late hours, I personally prefer morning but the orchid leaf stomata are open at either time. It is not necessary to get into a debate about foliar feeding here but I am sure the elevated bacterial leaf presence in warmer months greatly assists in plant nutrition by converting fertilizer into gaseous ammonia which is then readily taken up through the leaf stomata. Research has shown that Phalaenopsis stomata are open at night but be careful watering them in the evening as crown rot will be a problem. People say to me that if Phalaenopsis can survive in their natural environment where it rains every day in Summer and often in the evening, why can't they behave the same in cultivation? There are two main reasons why we run into problems with cultivated plants. Firstly. The plant orientation is all wrong. Phalaenopsis in nature develop so that the leaves drain water away from the crown. We place them in pots and all the water essentially runs backwards and accumulates in the crown, just where we don't want it at nighttime. Secondly rainwater is a different "cat" to well or city water with added fertilizer and it is much less likely to support pathogen growth.

Plant disease researchers have found that elevated levels of certain nutritional elements like Magnesium will contribute to a plant's ability to resist fungal and bacterial infection. Epsom Salts (Magnesium Sulfate) is a cheap and effective source of this critical plant nutritional element. Once a month in Summer, instead of watering and feeding, water and feed Epsom Salts. It doesn't mix well with fertilizers so should be used on its own and even if you don't have the capacity to liquid feed it, you can even apply it as a topdressing without any risk of injury to your plants. Feed at the rate of a level teaspoon per gallon or top-dress at the rate of a level teaspoon per six inch pot.

There are oils and oils. Some people have done major damage to their plants by using the wrong oil at the wrong time of day or year! But, the paraffinic oils like Ultra-Fine which can be purchased for around \$11.00 a quart at Home Depot are wonderful for home growers. I spray all my plants in the greenhouse at home with Ultra-Fine every month, year round. You have no toxicity issues to worry about so you can spray in your swimsuit

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if you wish and these paraffinic oils will really keep mites, scale, thrips and mealy bug on the back foot. If your water is high in Calcium, they will also help keep your plant leaves shiny. I tend to spray in the early hours because it is more pleasant for me but even if the sun is higher in the sky, only the thinnest leaves and most sensitive plants would be likely to be affected, if at all. Caution: with any spray it is always better in terms of efficacy and for systemic uptake, to spray when the stomata are open, i.e. in the cooler hours.

Although summer is not the most pleasant time to be in your greenhouse, make some time each week to do a slow walkthrough. For people who hand water this is not a problem but if you have overhead watering capacity, don't just water and run!

Things can go bad very quickly in the summer months and a small spot of bacterial infection can become a sorry mess in hours rather than days. Spacing plants and a good fan for night air movement is critical to the prevention of most fungal and bacterial problems. Never let your plant roots come within 18 inches of the soil. The ubiquitous Fusarium wilt fungus is just waiting to attack your prize orchid and it is essentially, incurable. Just a splash of water which hits the soil under your bench and then bounces up onto a healthy Vanda root can spell disaster. Whenever I see people placing plants on the ground for easy watering, I just shudder. It is one of the most dangerous and unhygienic practices for your orchid plants.

Good growing! Make it through summer and be ready for the pleasures of the Florida Fall with a group of robust and healthy orchids.

Note: Andy has been a professional orchid grower and hybridizer since 1973. He is the former owner of Geyserland Orchids in New Zealand and the former Director of Education for the American Orchid Society. Currently, Andy is the proprietor of New Horizon Orchids that breeds orchids for The Netherlands and other world markets. This article from May 2009 is available on the [South Florida Orchid Society website](#).