



St. Augustine Orchid Society

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It Ain't the Heat, It's the Humidity

by Sue Bottom, sbottom15@gmail.com

Why is it that we have to relearn the same lessons year after year? Every spring brings warmer weather, longer days and more intense sunlight, all of which trigger our orchids to wake up and start growing. We increase watering and fertilization to match the increased growth rate. But what we seem to forget every year is that in the early spring, humidity levels can be so low that pots dry very quickly and it is difficult to keep the plants hydrated. Plants have to be watered every day or two and they still seem dry an hour later.



Humidity is a key consideration in your watering habits. When day-time humidity is low, you have to water frequently to keep your plants hydrated.

Some people resort to double watering, watering first and then fertilizing an hour or two later. Some even water a third time with rainwater to flush the salts away. If you find you can't keep your plants hydrated, you might consider nighttime watering when the humidity is low. Courtney has long been an advocate of nighttime watering; in his June 2012 Tips column, he wrote:

Watering at night or late afternoon is strongly discouraged in most "how to" books. However, this is what happens in Nature and is practiced by many commercial growers, especially in the tropics. It also works for me here in Florida if I can meet the following criteria. The daily humidity is relatively low, my greenhouse is open with great air movement, and night temperature is above 60 F. I water late afternoon and plants are still wet in the morning when I water again



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with a dilute dose of fertilizer. As soon as I began the practice this spring my orchids immediately perked up. Once humidity gets high again, usually in May or early June, the rate of drying declines and I begin the normal early morning soaking practice. When humidity is high and air movement low do not water at night.

You may think there is a disconnect between the general advice to water orchids early in the morning so foliage is dry by nightfall and the fact that orchids grow naturally in areas where nighttime rain is common. Courtney explains the dichotomy in his July 2010 Tips column:

If you ever visit the tropics where many cultivated orchids originated, it is surprising to read the prohibition to never water at night. In their natural habitat, orchids are soaked at night by rain or dew. Rarely, will you ever find an orchid with rot in nature. In the wild, orchids grow very slowly and are very limited by nutrients. Their leaves are thick and hard; even immature plants.

Bacteria require nutrients to grow and the presence of water laden with nutrients in and on leaves is an invitation for bacterial and fungal invasions that cause rots. Orchids can grow quickly if pushed with lots of fertilizer. However, cell walls are thin and soft on these orchids making it easy for fungi and bacteria invasion. Cells also are loaded with excess nutrients providing fuel to any invader.

Growing under lower nutrient conditions does cause slightly slower growth and causes orchids to put more energy into root growth. This produces a better rooted orchid, less susceptible to disease, even if you water at night.

Note to self: In the early spring and fall when day-time humidity levels drop to less than say 50%, water freely because the pots will rapidly dry out. Add a day or three between waterings when day-time humidity levels are above 75% or so. It's not the heat that drives your plants' water demand, it's the humidity.