



Orange County Orchid Society

Growing orchids successfully

Courtesy of the Cape Orchid Society, South Africa
Compiled by Carmen Rahme

Success in orchid growing is not having all the latest equipment and techniques but is doing the right thing in your conditions with what you have,

Good water is the most important element needed for growing orchids. How do you know if you have good or bad water? There is only one way to check. You have to have your water tested. You need to know the pH and also what minerals and other elements your water contains.

Water problems can be rectified but you cannot do anything about it if you do not know that you have a problem. Plants cannot absorb certain nutrients and elements from the soil if the pH is too high, above seven which is alkaline, or if the pH is too low, below five which is acidity.

A pH measuring seven is neutral but orchids grow better in a slightly acid medium, the ideal being around 5.6. If the pH is too high, above six, add phosphoric acid. If the pH is too low, under five, add potassium bicarbonate. Be sure to use plastic or polythene pipes if you have acid waters as the acid can act as a solvent and release zinc or copper from galvanized and copper pipes, causing toxicity to plants. Watering your orchids with very cold water can lead to cell collapse in delicate new leaves and also cause die back of those all important root tips. On really hot summer days, it is best to water in the early morning or late afternoon as cold water on hot plants is such a shock to the plant that it stops growing for a few hours.

One is always tempted to give orchids a spray of lovely cool water or open the sprinklers when very hot, "to cool them off". If leaves are wet, the stomata on the underside of the leaves will close and photosynthesis will stop. This can cause the leaf to overheat as it cannot cool itself by the normal process of evaporation and thus growth is slowed down.

Often a plant looks bone dry on top and when you tip it out of the pot, the mix is actually still very wet towards the bottom. A good way of testing if the plant is dry, it to put a stick in the pot and then pull it out and feel whether it is wet or dry.

Another method is to have a tester pot, the same size, full of the same mix but without a plant in it, on every bench.

When in doubt whether you should water or not, tip the mix out and you will immediately see if it needs watering. Bear in mind that the pots containing plants will dry out sooner because the plants are using water.

Humidity is vitally important for good orchid growing. Ideally the humidity should not drop lower than 65% but this is not always easy to maintain.

What is the most common problem with fertilizing? Calcium deficiency. How to



you recognize a calcium deficiency? The leaves blacken at the tips and this can spread to the whole leaf. Sometimes there is a yellow band between the black area and the green leaf called a halo. This die back can occur in the new and old leaves but usually happens in younger leaves and mostly in summer.

In Cattleyas (disease affecting leaves of orchids) the whole leaf eventually goes black and then falls off, similar to Tobacco Mosaic Virus (TMV) in Catts, where the leaf goes black and falls off. The difference is that TMV starts with black sunken spots all over the leaf and not only a black band at the tip of the leaf. The leaf tip goes black because, as a result of the calcium deficiency, the turgor pressure in the cell sap is so low that the plant is not able to push nutrients to the tip of the leaf.

The remedy is to use lime, preferably dolomitic lime, as it contains magnesium too. Sprinkle all you orchids with dolomitic lime three or four times a year, starting with about half a teaspoon on small pots and increasing to a tablespoon on large pots.