

**Basic Keys to Growing Orchids**  
**By Scot Mitamura Rev. 10/15/2018**

There is no shortage on information on how to grow orchids. In fact there is so much information that most people are really confused. Every book or lecturer will tell you the techniques that work for them, but you soon find that no two successful orchid growers grow their plants the same way. Why; it is because they have different growing conditions from you. Because of the many variables in orchid growing, we often get caught up concentrating on tasks that are not essential in growing orchids well. Understanding the simple basics will keep you on track in growing beautiful orchids.

For an orchid to grow well the three most important things it needs are light, water, and air. I'm not saying that they don't need other things like media, fertilizer, insecticides, pots, and other things. What I am saying is that without providing the proper light, water, and air, all these other things become insignificant. You can build the best high tech greenhouse, apply the newest fertilizers, use the most expensive media, the nicest pots, douse them with chemicals, but without the proper light, water and air, your orchid will still not grow well.

But before growing anything, you should first familiarize yourself with the type of orchid it is and where it is from. If the orchid is a hybrid, then what are the species in its background? Try to grow orchids that would be suitable for your area. Example it would make no sense to grow a high elevation or cool growing orchid at sea level. Even if you succeed in keeping it alive, you will never get it to flower to its full potential. Conversely, if you have a little elevation and live in a mountain rainforest type situation with a lot of cloud cover, a lowland xerophytic type orchid would be also difficult to grow. Stick with growing orchids that will do well in your area. Also, it is better to have a small collection of well grown orchids, than to have a large collection of poorly grown orchids. You end up becoming a slave to your orchids and the hobby is no longer enjoyable.

**Lighting** – Orchids need a good source of sunlight to grow. In simple terms, through photosynthesis, the sun's energy is converted into plant energy. The longer day length the orchid receives the more energy it has to grow. The orchid can grow four times faster, stronger, and healthier if it gets 8 hours of sunlight in an area that offers unobstructed sunlight (from buildings or trees) vs. 2 hours of sunlight from under the eave of your home.

So now let's talk about light intensity. It has been said many times before "give your orchids the maximum amount of light without burning". Most orchids are understory plants growing on or in amongst other plants. For greenhouses, it would be generally 50 to 70% shade. So in the shading of your orchids, if you are in the mountains with a lot of natural cloud cover or high in elevation where it is cool, you can give your orchids a lot more light than if you were at sea level, with little cloud cover. The type of orchid you are growing also determines the amount of sunlight. The orchid's morphology (plant structure) will give you a clue to its needs. Skinny, upright, and thick leaves generally require more light than thin, broad, horizontal leaves. If you don't have a greenhouse and you are growing them under the eave of your home or under trees, your orchids will do best on the east, south, and west facing sides. If you are growing an orchid that likes a cooler, shadier, wetter environment, you may then want to choose the northern facing side. Also, understand that the sun travels overhead, east to west in the summer, but travels on a southerly plane in the winter months. All of this holds true even within a greenhouse. Your goal is to always give your orchids the maximum amount of sunlight in the proper intensity. Remember no amount of fertilizer or plant hormones will overcome an improper amount of sunlight. The main source of energy for the orchid is the sun.

**Water** – On Oahu we are very fortunate to have a great tap water source (unlike the Big Island or some places on the mainland) that is near neutral in pH and has a fair amount of calcium. For orchids that are epiphytes (a plant growing on another plant), they like to dry between watering. These orchids typically have thicker roots surrounded by white velamen. The more times you can alternate wet and dry, the better. If you are in a rainy area, your challenge will be to keep your orchids dry. If they stay wet for too long, you may lose them to fungal infections. If in a dry area, your challenge will be to give them enough moisture. So, how often do you water? The correct answer is "as needed". As it all depends on the type of orchid you are growing, your location, day length (winter vs. summer), humidity levels, wind conditions, type of media, type of pot (clay vs. plastic), pot bound vs. over potted, fresh media vs. old media, media volume, is the orchid actively growing or is it dormant. If this is too complicated, then consider growing the orchid mounted, or hanging with little or no media in a net pot. If this is too dry then sleeve the net pot in a plastic or clay pot. This double potting or sleeving technique will provide more moisture and help in growing cooler growing orchids. The outer pot will absorb the heat, keeping the roots

cooler. Keep orchids that dry at similar intervals together for easier watering. When you do water, water heavily, allowing you to wet the whole root ball and flush out salts that can accumulate in the media. Terrestrial orchids (ones that grow in the ground), have thinner roots and like to be kept evenly moist. Your challenge is to have a media that will stay moist, but loose enough (have enough air space) to keep the roots from rotting. So normally a seedling grade bark, with more peat moss to retain moisture, and perlite to add aeration. Remember all kinds of media and pot combinations work, but they need to be working together to give you the proper moisture balance for each type of orchid. No amount of fungicides will keep your plants from rotting if they are kept too wet.

**Air** – Orchids require good air circulation. Poor air circulation will cause the orchids to dry slowly making them susceptible to fungal and bacterial infections. It can also cause the orchid to overheat, causing you to grow them in greater shade reducing photosynthesis and softening their foliage making them more susceptible to pests such as scales, mealy bugs, and spider mites. So hanging your orchids is a great idea. If they are on benches, space your orchids apart, keep your benches 18” or more above the ground, and avoid putting other plants below them, reducing the air flow. Remember if you want to reduce your dependence on insecticides, miticides, and fungicides, have good air circulation around your orchids.

**Orchid Sign Language and Being Observant** – It is important to understand that all orchids grow in different cycles and their culture will be determined by the cycle they are in.

**Growing Cycle** – Is when new growths are emerging. You want to keep these orchids well watered and fertilized. This will maximize the size of the growth which in turn results in more food storage, which in turn will result in better flowering.

**Dormancy** – Is when the orchid is sleeping. Keep these orchids on the dry side, and it does not need to be fed. **Flowering** – Is a taxing time for orchids, so keep these plants well hydrated, but keep water off the flowers, will make the flowers last longer and reduce spotting (Botrytis or flower blight). You can still fertilize during flowering.

**Rooting Cycle** – The best time (although not the only time) to repot is when new roots are flushing at the bottom of the latest growth. Remove all old media and dead roots and allow these new roots to grow into the fresh media. If done properly the orchid will not set back and should flower on the next growth. Some orchids send out roots just prior to flowering and

others after flowering. It is wise to repot an orchid when there is active root growth, even if it has flower bud developing.

**Sanitation** – Keep your growing areas clean. Dropping dead or diseased leaves, flowers, and weeds on the ground, will continuously re-infect your orchid collection. A simple solution would be to collect these items and discard them away from your orchids. This will help you minimize your need for pesticides. Use a torch to flame your pruners. This will kill all pathogens, especially viruses that can be spread by your pruners. If you reuse your pots, soak them in a 10% household bleach solution and scrub all white roots completely off.

**Fertilizing** – Anything, water soluble, timed released, organics, they all work. Currently I'm using Nutricote 180 day release 13-13-13 (Island Supreme) and top dressing with dolomite lime.

**Media** – I'm having good success with Radiata Pine Bark. For my cattleyas and Dendrobiums - 6 parts medium grade bark, 3 parts coarse perlite, and 1 part Pro Mix BX Peat Moss. For my Hono Honos and terrestrials – 2 parts seedling grade Radiata, 2 parts Pro Mix, and 1 part coarse perlite. These ratios are for my growing conditions, and you should only use it as guideline.

**Pots** – I'm using some plastic and some clay. It depends on if I want the plant to dry faster or slower. My preference is the Anderson 4", 5", 6" standard size plastic pots. Due to their depth, I am able to vary the media depth and the pots are very durable and are easy to hang.

**Pesticides** – Minimal use on my orchids. My favorite is Ultrafine or Surespray Horticultural Oil for almost everything, and rubbing alcohol for spot spraying. For longer lasting control for pests, Bayer 3 n 1 is a good choice for most home owners with a few orchids. It will cover all the bases, as it is an insecticide, miticide, and fungicide all in one. For slugs and snails, Deadline MP or any other commercial bait would give you adequate control.

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