

Growing Cattleyas in the Home

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Cattleyas have always been a fascinating orchid to grow. Flowers are usually large, fragrant, and showy. A well grown plant in flower almost always brings exclamations of admiration from visitors and friends. Cattleyas have long been thought of as greenhouse plants only. Until recently, that was usually the case. However, many breeders are now producing hybrids for 'windowsill' culture specifically bred for home growing. Their catalogs are annotated to make the reader aware of these plants. Carter & Holmes is one such nursery who denotes these plants with an *L*. Most of the cattleyas bred for home growing are more compact in growth than the standards with smaller flowers to match but will bloom more than once a year. Most species will only bloom once per year. Let us also not forget that some of the species cattleyas will do quite well in the home also.

So, how do you grow cattleyas in the home? Trial and error may be one of the methods you eventually try, but there is a lot more to it than just trial and error. Here goes; every plant needs certain requirements which can be broken down into potting medium, nutrients, light, humidity, temperature, air movement, watering/fertilizing, water quality, resting periods, and pests.

Potting Medium

Most of the cattleya hybrids and species have medium-sized roots and require a potting medium that is chunky (medium) in size (3/8 to 1/2 inch size pieces), open to allow air to reach the roots, drains relatively fast so as not to become soggy, but still retains moisture which is slowly released to the roots. This is a tall order for any potting medium. The most common medium available is fir bark and less common is coconut husk. Both have good and bad qualities which must be weighed before deciding which medium is the best for your situation.

Coupled with these is coarse Perlite (#3). This provides the spaces between the bark or husk, allows air movement, and spaces for the roots to grow.

Bark is readily available, relatively inexpensive, drains quickly but it usually does not retain much moisture when new, is soft, and breaks down in two years which necessitates repotting. Since most cattleyas take two to three years to get re-established after repotting, a two year schedule keeps your plant from really getting on its roots, so to speak.

Coconut husk is not yet common on the market, more expensive than bark, does not break down very quickly, but retains a lot of moisture which requires a more cautious watering schedule. It is also much less likely to develop snow mold which will out-compete your plant for water and nutrients.



Cattleya Irene Holguin 'Sweetheart'

Nutrients

All plants, including orchids, need to eat just as we do. Their food just happens to be nitrogen (N), phosphorous (P), and potassium (K) with trace elements such as zinc, copper, iron, manganese, molybdenum, and calcium to name some. As we do, they need a balance of nutrients so in looking for a fertilizer choose one that has a (N-P-K) of 20-20-20 or 30-10-30. Also, many fertilizers formulated for orchids will also contain most of the trace elements. One of these, calcium, is very important to the development of sturdy growth especially in Phalaenopsis.

Nitrogen is for vigorous growth, phosphorous stimulates flower production, while potassium is essential for root growth.

Most cattleyas are not heavy feeders so mix your fertilizer solution at ¼ strength from what is recommended on the label. If the label calls for 1 tablespoon per gallon, mix at 2/3 teaspoon per gallon. Feed every time you water.

Light

For cattleyas, bright light is essential for strong growth and flower production. In the home, an east-facing window is good, a south-facing window is better, and a west-facing window is the best. Most cattleyas need light in the 2,500 to 3,500 foot candles range. That is about 36 to 50 percent of full sun striking the earth at noon on a cloudless day in the summer along the central coast. Due to the marine influence along the coast, we receive about 70 percent or 7,000 foot-candles of sunlight whereas in the more inland areas like Templeton, Atascadero and others will receive about 10,000 foot-candles.

For an east-facing exposure, somewhat open lace curtains will suffice. Your plant should be about one foot from the window.

For south-facing, place the plant about one foot from the window. In the summer, no curtains are required. During the fall, winter, and spring seasons sheer curtains will be required.

For west-facing, the plant should be between one and two feet from the window. A west exposure will provide the most light and a more close-weave sheer curtain will be required all year.

For all of these, the curtains only need to be in place when the sun is shining onto the window. Once the sun has moved, the curtains should be opened to provide as much indirect light as possible. **A note of caution, never allow direct sun to shine on your plant. The heat build-up in the leaves will severely burn them and the rest of your plant.**

One way to tell if your plant is receiving too much light is to hold a leaf between your thumb and forefinger. If the leaf feels warm, your plant is receiving too much direct sun and needs to be moved or curtains with a tighter weave need to be used.

Humidity

Ideally, orchids prefer humidity in the 60 to 80 percent range. Humidity in the home is usually in the 40 to 50 percent range during the spring, summer, and fall when windows and doors are open. In the winter with artificial heating, humidity can drop to 20 to 30 percent. There are methods to offset this lack of humidity; one is to lightly mist the plant during the late morning on sunny days, another is to set the pot on top of a saucer of gravel that contains a small amount of water. The water in the saucer of gravel should **never touch the bottom of the pot**. The size of the saucer should be equal to or greater than the leaf spread of the orchid. If the leaves do not extend beyond the rim of the pot, use a saucer at least 2 inches in diameter larger than the pot. This will give enough surface area exposed to the air for evaporation of some of the water thereby adding humidity to the air around the plant.

Temperature

For most cattleyas, hybrids and species, if you are comfortable so are they. A low of 55 to 60 degrees Fahrenheit at night with a high of 75 to 85 degrees Fahrenheit during the day will please most cattleyas. In winter, if you do not heat your home, a low of 50 degrees will not hurt them. They will just go deeper into dormancy.

Air Movement

Air movement in the home is as important as it is in a greenhouse. It provides a constant supply of carbon dioxide necessary in the plant's food manufacturing process. With that said, orchids do not like direct drafts or fans blowing directly on them either. They prefer the air to be gently stirred. This air movement also evaporates some of the water from the saucer of gravel which adds humidity to the air around the plant.

Watering/Fertilizing

This item is the most important for success in growing cattleyas or any other orchid or plant. Watering too often will result in root rot; the plant will look dehydrated and will die. Watering too infrequently will dry out the roots which will die; the plant will look dehydrated and will die. Novice and experienced grower alike are continually challenged in trying to optimize their watering schedule.

Ideally, your watering schedule should coincide with the moment when the potting medium is almost dry. Note that I said almost; determining that moment can be very challenging. Many variables influence how quickly the potting medium will dry out. Some of the variables are; is the plant growing or resting, sunny or cloudy days, relative humidity in the growing area, air movement, type of potting medium used, age of potting medium, size of plant in relation to size of pot, type of pot, temperatures in the growing area, how thoroughly you soak the potting medium when you do water and the list goes on.



Laeliocattleya Nippon 'Livinza'

This watering discussion includes the use of fertilizer as noted above. In the event the potting medium is **really** dry, soak the pot in plain water for 5 minutes or so to allow the potting medium and roots to absorb some water prior to fertilizing.

Also, about every 6th watering/fertilizing flush the pot thoroughly with just plain tap water. This helps to remove salts build-up from hardness in the water.

Water Quality

Never use water that is from any water softener; it will kill your orchid due to the salts from either the potassium chloride or sodium chloride used in the softener. On the central coast,

most of our water is hard. Total dissolved solids (TDS) are usually in the 400 to 600 parts per million (ppm) range. When the water evaporates or is taken up by the plant, these solids are left behind and coat everything the water touched including the roots. Once coated with these solids, the roots will die.

Some growers and hobbyists have changed to reverse osmosis (RO) for their water supply. This process removes about 97 percent of the TDS's in the water. Being so pure, I add back in about 10 percent of plain tap water since there are some of those trace elements mentioned above in the tap water which are necessary to plant health. Even when using RO water, I still thoroughly flush the pots about every 6th watering with plain tap water.

If you do not have an RO system and only a few plants, distilled water from the market is a good alternative. Rain water is also nature's choice; if you collect rain water, do so only after the first one-half inch of rain has fallen. This will eliminate collecting water with hydrocarbon pollution which is also not good for orchids. Fortunately, living on the central coast has given us the blessing of little to no smog.

Resting Period

Almost all Cattleyas have a resting period in which nothing appears to be happening, especially with the species. The complex hybrids of today with their multiple flowerings per year have very short resting periods. These resting periods must be taken into consideration in your watering/fertilizing schedule. It is at these times that the plant uses considerably less water and, therefore, watering must be reduced or the potting medium will become soggy and the roots will rot.

Resting periods come in many varieties for cattleyas. Growths for cattleyas are for new leaves and pseudobulbs, roots, and flowers. Rest periods can vary from one to six months. Resting periods may include:

- Making a new growth and roots, rest, and then initiate flowering followed by another rest before repeating the cycle.
- Making a new growth, rest, make roots, rest, and then initiate flowering followed by making another new growth and repeating the cycle.
- Making a new growth, rest, and then make roots and initiate flowering followed by another rest before repeating the cycle.
- Making a new growth with roots immediately followed by flowering followed by a long rest before repeating the cycle.

What is important is to note the growth and flowering cycles of your cattleyas or other orchids and adjust your watering accordingly.

Pests

Even in the home, pests will find their way in and locate your plants. In the home, the most common pests you will have to deal with are scale, mealy bugs, and aphids. Checking your plants on a routine basis will catch any infestation early and make control much easier.

Scale and mealy bugs can be controlled with isopropyl alcohol and a Q-tip. Dip the Q-tip into the alcohol and dab onto the insect. This process should be repeated about every seven days for three treatments to get all the immature insects and hatching eggs.

Aphids can be easily controlled with Neem Oil concentrate made by Green Light. This product should be available at your local nursery. Old Town Nursery in Nipomo carries this product. I have used it for scale, mealy bugs, and aphid pest control on my plants and found it to be very effective. To effectively control the pests, follow the directions carefully and repeat application every seven days for three applications.

Happy Cattleya Growing!