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CATTLEYA Orchids

Cattleyas are some of the most commonly grown orchid plants, and their culture is often used as the basis for comparison with other types of orchids. This cultural information is a general guide to "standard" *Cattleya* culture. Like most cultivated orchids, cattleyas are epiphytic. Because they are epiphytic, most orchids have developed water storage organs, called pseudobulbs, and have large, fleshy roots covered with a spongy, water retentive velamen. They are accustomed to being dry at the roots between waterings, and therefore should be potted in very porous, free draining media.

Light is one of the most important factors in growing and blooming cattleyas, whether in a greenhouse setting or in the home. Bright light to some sun must be available, but no direct sun in the middle of the day. This means an east, shaded south (as with a sheer curtain), or west window in the home, and 30-50% of full sun in a greenhouse (3000 - 5000 foot-candles). Leaves should be a medium green color.

Temperatures - recommended temperatures are 55^o - 60^o F at night and 70^o-85^o F during the day. Seedlings should have night temperatures 5^o to 10^o higher. A 10^o-20^o degree differential between day and night is recommended, especially for mature plants. Higher day temperatures can be tolerated (up to 95^o) if humidity, air circulation and shading are increased.

Water should be provided in two ways: in the pot by watering and in the air as humidity. Watering in the pot is dictated by many criteria - size and type of pot, temperature, light, etc. Mature cattleyas need to dry out thoroughly before being watered again. Seedlings need slightly more constant moisture. A freshly sharpened pencil inserted in the potting medium can be an indicator of moisture. If in doubt, it's best to wait a day or two until watering. Plants in active growth need more water than plants that are resting. Water below 50^o may injure plants, as will softened water.

Humidity - Cattleyas need 50 - 60% relative humidity. This can be provided in the home by placing the plants on trays of gravel, partially filled with water so that the plants stand above the water. Misting the plants in the morning only is helpful in dry climates. Air should always be moving around the plants to prevent fungal or bacterial diseases, especially if high humidity and/or cool temperatures exist. In the greenhouse the humidity can be increased by wetting the floor. Evaporative cooling increases humidity while cooling the air.

Fertilizer must be given to cattleyas on a regular schedule. In fir bark, a high nitrogen (30-30-10 or similar) formulation is used. High phosphorus or bloom booster (10-30-20) formulation may be used occasionally (every 4 to 6 applications) to make sturdy growth and promote healthy blooming. When in active growth, plants need fertilizer every two weeks, and when not growing, once a month. Fertilizer can also be applied with every watering at 1/4 recommended dilution. Thorough flushing with clear water every month is recommended to prevent buildup of fertilizer salts.

Potting is necessary when the rhizome of the plants protrudes over the edge of the pot or the potting medium starts to break down and drain poorly; usually after 2 to 3 years. It is best to repot just before new roots sprout from the rhizome; after flowering; or in the springtime. Cattleyas are usually potted in medium grade potting material, with seedlings in fine grade. Until a plant has six mature pseudobulbs, it generally should be put into a larger pot and not divided. If dividing a plant, 3 - 5 bulbs per division are required. Select a pot that will allow for 2 to 3 years of growth before crowding the pot. Place a small cone of potting material in the bottom of the pot, cut off any rotten roots and spread the firm, live roots over the cone. Fill the pot with potting medium, working it into the roots. Pack firmly; stake if necessary. Keep the plant humid, shaded and dry at the roots for a while to promote new root growth.