Growing Healthy Orchids Indoors

Many orchids are rewarding indoor plants. Once a home owner has succumbed and bought his or her first orchid, or received one as a gift, meeting a few cultural requirements will coax the plant to flower again.

Orchids are far tougher and hardier than most people think, and are, by and large, extremely adaptable. There is a long-standing myth that orchids are difficult, if not impossible, to grow, especially without a greenhouse. With at least 20,000 species and some 100,000 artificial hybrids, there are some notoriously fussy orchids. But there are many rugged, popular, easy-to-grow types that adapt to the temperatures and light conditions found on the average home windowsill. Explore the options and assemble a collection that will put forth exotic flowers year-round.

Orchids are different from other houseplants. Unlike ferns, philodendrons, palms and Swedish ivy, orchids do not grow in soil. Potting an orchid in soil is actually one of the best ways to kill it. Most orchids in the wild are not rooted in the ground, but instead attach themselves by thick roots to the sides of trees and on branches. Clinging to the bark, the plants absorb water and nutrients from the air and rain and whatever drips down the tree. They are adapted to surviving when rain is scarce, hoarding water in thick leaves, stems and roots

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Watering
In the house, orchids are grown in pots filled with chips of bark, stones, treefern or some other loosely packed material, which keeps roots well-aerated and permits water to drain quickly. Nothing -- repeat, nothing -- kills an orchid faster than letting it sit in a water-logged pot, since a lack of oxygen will cause the roots to suffocate and rot. Water orchids thoroughly, usually about once a week, then allow them to dry slightly before watering again. Orchids are better equipped to withstand periods of forgetfulness than they are to being overwatered.

Temperature
Another difference between orchids and many houseplants is that in nature most orchids experience a big difference between day and night temperatures. Manipulating the temperature of the home so it will drop at least 10 degrees at night, especially in autumn and winter when many orchids initiate buds, will induce the orchids to set flower buds more readily. Achieve this by lowering the temperature on the thermostat. This little trick can mean the difference between an orchid plant that merely lives, and one that thrives and flowers.

Orchids are usually classified as warm growing, intermediate and cool growing, with regard to their temperature needs. Many tolerate exposure to warmer or cooler temperatures without suffering damage. The temperature groupings refer to the lowest temperature the orchid prefers during

winter nights. Warm-growing orchids, such as phalaenopsis, sulk if temperatures drop much below 60 F. Intermediate growers, such as cattleyas, prefer winter nights around 55° F. Cool-growing orchids, including cymbidiums and odontoglossums, are accustomed to winter nights of 50 F. At the other extreme, most orchids perform poorly when exposed to temperatures above 90° F.

Light
Orchids are also classified into three other groups depending on the intensity of light they require -- high (3,000 foot-candles), medium (2,000 foot-candles) and low (1,000 to 1,500 foot-candles). Most orchids require plenty of light, preferably at least six hours a day. Many orchids can withstand more or less than the amount of recommended light, but providing more light enhances flowering potential. Conversely, inadequate light prevents orchids from flowering, although they will grow.

Leaf color indicates if the amount of light is adequate. The lush, rich, dark green of most houseplants is not desirable in orchid leaves. Dark green leaves are attractive, but signal there is not enough light. A grassy green color (light or medium green with yellowish tones) means the plant is receiving sufficient light to bloom. Gauge light intensity with this simple hand/eye test: Put your hand 6 inches above the leaves and look at the shadows cast. A sharp-edged shadow means high light; a soft-edged shadow indicates medium to low light; no shadow at all means the light is insufficient for an orchid to flower.

Southern- and eastern-facing windows work best for orchids; western windows canbe too hot in the afternoon; and northern ones are usually too dark. Too much direct light causes leaves to sunburn -- the leaves bleach out to white, ultimately dying and turning black -- so it may be necessary to reposition plants as the seasons change. Move plants away from or toward the window to manipulate the amount of light. A sheer curtain will cast light shade. Positioning sheets of Mylar or another reflective material in the growing area will increase usable light, a handy trick for the winter when light levels are often reduced.

Artificial Light
Where windows with adequate light are unavailable, consider cultivating orchids beneath artificial light. Four 4-foot-long fluorescent tubes placed 6 inches apart side by side should do the trick. Two shop-light fixtures with cool-white bulbs will suffice. Special grow lights, sold under various trade names, are considerably more expensive and extend the light spectrum. The grow lights may reap better results, although data on this are conflicting. Place plants 6 to 8 inches below the tubes. Put the lights on a timer set to operate the bulbs for 14 to 16 hours a day. Many orchids, such as phalaenopsis and paphiopedilums, will be content. Orchids requiring more light, such as vandas and cymbidiums, however, need natural sunlight or high-intensity discharge lights to bloom. A fluorescent fixture in a dimly lit window adds extra light to natural sunlight, too, and can mean the difference between flowers and no flowers. Orchids that do not flower often require more light.

Fertilizing
Orchids do not require abundant doses of fertilizer. However, to maintain healthy plants and see blooms on a regular basis, apply a weak solution of 20-10-20 fertilizer once a week. Each month, water with plain water to flush out any accumulated fertilizer salts. Dilute the fertilizer to one-quarter the strength recommended on the package. When in doubt, give less rather than more. Switch to a blossom-booster fertilzer in the autumn, when many orchids are initiating flower buds. Blossom-booster is a fertilizer ratio with higher phosphorus and lower nitrogen, such as a 10-30-20 formula. Many orchids are winter bloomers, which makes them even more special as houseplants. They fill an often otherwise flowerless void in the drabbest of months. Peak of orchid bloom usually occurs between December and April.

Humidity
One of the things orchids greatly appreciate is adequate humidity. Fifty percent or more is necessary, but the atmosphere in most homes, especially those with dry, hot-air heat, is far below that. Raising the humidity around orchids will result in better flowering. Some tricks to increase humidity: operate a humidifier near the plants; place the pots on flat, black pebbles set in a tray in which water is added until it almost covers the stones ("Egg crate," which is the lattice-like plastic

grid sold in hardware stores for suspension ceiling lights, is a good, more steady alternative to the pebbles.); group the orchids together; or cordon off the growing area with clear plastic (but continue to provide ventilation to prevent bacteria from becoming a problem).

The AOS thanks judywhite for this essay.