

POTTED ORCHIDS – POPULAR AND PROFITABLE

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Orchids used to be expensive and were enjoyed mostly by people with high income. Although there are large nurseries, such as Gallup and Stribling, the Rod McLellan Company, Orchids by Hausermann, etc., which specialize in orchids, most orchid nurseries were relatively small and catered mainly to the hobbyists. Since the early 1990s, the production of potted blooming orchids started to rise in the United States. Before 1996, the USDA National Agricultural Statistical Service considered orchids to be a minor crop and did not collect their annual gross value. USDA started tracking the value of potted orchids in 1997. The gross value of potted orchids was \$47 million in 1996. In 2000, this number jumped to more than \$100 million, making orchids the second most valued floral crop in the United States. There was an average annual increase of 23 percent during that period.

Many state-of-the-art greenhouses have been built solely for producing potted orchids. A good number of traditional floral and foliage greenhouse operations from coast to coast have added potted orchids to their product line. During the past four years, Andy Matsui of Matsui Nursery in Salinas, California, converted his entire operation from ground bed cut flowers to producing four million potted orchids annually. Despite the increased competition, the profit margin has been good for orchids. The wholesale price for a phalaenopsis orchid in a 6-inch pot is often between \$8 and \$12, with a retail price from \$15 to \$25 on the mass market.

Most of the potted, blooming orchids produced are the hybrid phalaenopsis orchids (the moth orchids), followed by dendrobium and the oncidium alliance orchids. The production of paphiopedilum (the subtropical slipper orchids) has been on the rise. Despite this drastically increased production of potted orchids, compared to other floral crops, little research has been conducted by U.S. universities during the last three decades. Since 1990, Texas A&M University has been the only land grant university with a research program that is dedicated to developing new information and technology for producing potted orchids.

The color of phalaenopsis flowers covers all colors of the rainbow, except the true blue. The individual flowers of phalaenopsis orchids last 60 to 120 days in the home environment. It is not uncommon to see flowers on a phalaenopsis staying for five to six months. The long-lasting flowers provide a wide marketing window. These orchids tolerate low light and stand dry media. When used indoors, watering every two weeks (weekly preferred) often maintains a blooming phalaenopsis in perfect condition under 50 to 100 footcandles.

Orchid seeds are microscopic and require tissue culture conditions to grow into plantlets. Seedlings require several years to reach blooming. Most phalaenopsis growers in the United States no longer breed or raise orchids from seed.



Instead, they purchase plants of various sizes from specialized orchid propagators. While large, mature plants can be forced to bloom immediately after potting and become salable in three to four months, the cheaper smaller plants may require one year or longer to become marketable. Many of these orchids are imported in a bare-root state from off-shore sources. Taiwan has been the single largest breeder and exporter of phalaenopsis seedling plants, while Holland raises many cloned orchids. Seedling plants are cheaper, but usually less uniform, than the clones.

The industry standard requires producing phalaenopsis in 6-inch pots with six or more flowers. However, phalaenopsis are often sold in 4- or 4.5-inch pots with fewer flowers and lower prices. Ten-inch and larger pots have also been used for producing specimen plants with numerous flowers for special needs.

Phalaenopsis orchids are epiphytic plants with succulent roots. These roots do not tolerate soggy medium for long and will rot under such conditions. The potting medium is usually made up of a selected combination of fir bark, perlite, peat, sphagnum moss, or volcanic rock for good drainage. Pure sphagnum moss has been used successfully for raising phalaenopsis orchids, but I do not recommend it to growers whose products are going to the end consumers. Sphagnum moss retains much water and salts and, when dry, has little weight to anchor plants from falling. A beginning grower should use no more than 20 percent peat to avoid possible root rot due to extended days of soggy medium. A "typical" medium may contain 60 percent to 70 percent medium grade fir bark, 20 percent large grade perlite, and 20 percent or less coarse or chunky peat. Do not mix the large grade bark with milled peat, as the fine peat will soon make its way to the bottom, creating a soggy zone.

Although phalaenopsis is a subtropical plant, it requires three to six weeks of exposure to temperatures ranging from 80 to 60°F to initiate the flowering process (called spiking). Usually a bud at the node of the upper third leaf would start to swell and protrude through the leaf base. It continues to elongate and start to initiate flower primordia before it has reached 2 inches in length. Plants are best kept below 80°F during the period of flower bud initiation as higher temperatures

