Potting Ornamental Ginger

With flowering potted plants increasing in popularity, ornamental ginger offers all the right qualities to achieve market success: it has bright, long-lasting flowers and it's fairly easy to grow.

By Jeff Kuehny

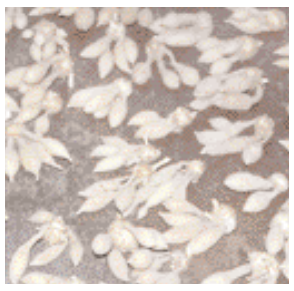
Clockwise from top: Curcuma gracillima, Curcuma alismatifolia, *and* Curcuma cordata. *Below, right: The tuberous rhizomes characteristic of genus Curcuma and Globba. All photos courtesy of Jeff Kuehny.*

Ornamental ginger, primarily from the Zingiberaceae family, is a diverse and versatile group of plants that are gaining increased recognition in the flowering pot plant, landscaping and cut flower markets. The various sizes, flower colors and postproduction longevity (up to 4 weeks or longer) of these tropical and subtropical plants are adding a needed diversity to the greenhouse industry. Characteristics that make potted ornamental ginger attractive to the floriculture industry are ease of production, unique foliage, numerous flowering stems per pot, long-lasting colorful bracts, a 90 to 100 day production cycle and few disease or insect problems. Besides potted plant use, they can be marketed for use in year round interior landscapes and as either perennials or summer annuals in exterior landscapes, depending on the climate. The most common genera used for these purposes include: Curcuma, Globba and Kaempferia.

Most ginger are herbaceous perennials with aromatic, short, thickened or long, thin rhizomes. Some of these ginger rhizomes, such as those in the genus Curcuma and Globba, have tuberous storage vessels, attached by a modified underground stem, that have been termed "t-roots" or "milk sacs." A majority of these gingers are grown in Thailand, where rhizomes are harvested from December to April and shipped for forcing. Gingers can also be purchased in plug trays from tissue culture companies. However, if a finished plant is desired in a 60 day time period, the Kaempferia spp. is the only ginger recommended for growing from a tissue cultured plug.

Table 1. Ginger species recommended for pot production.

Species	Average Height	Inflorescence/Foliage T
Cornukaempferia aurantiflora	1 foot	Leaves w/ silver feathered margins to dark maroon centers, small orange flowers
Curcuma alismatifolia	2 feet	Tulip shaped flowers, ~ 3 - 4″, pink or white
Curcuma cordata	2 - 3 feet	Cone shaped flowers, ~ 4 - 5″, pink
Curcuma roscoeana	2 - 3 feet	Cone shaped flowers, ~ 4 - 5″, bright orange
Curcuma spp.	1 foot	Tulip shaped flowers, ~ 1 - 2″, pink, pink w/green tips
Curcuma spp. 'Emperor'		Grown for variagated foliage and smaller tulip-shaped white flowers
Curcuma thorellii 'Chaing Mai Snow'	1 foot	Tulip shaped flowers, ~ 2 - 3″, pure white
Globba spp.	2 feet	Arching pendulate flower stalks with white, pink, dark purple or yellow bracts
Kaempferia spp.		Grown primarily for foliage
K. gangla	lay flat	Foliage plain green with some varigation, small white flowers
K. gilbertii '3-D'	6 inches	Foliage with white margin, deep green stripes in center of leaves, small white flowers
K. sp. 'Grande'	2 - 3 foot	Foliage rounded and large with pattern upper and maroon underside
K. pulchra		



Gingers grown for flowering pot plants (see Table 1) will flower more quickly and uniformly if grown from rhizomes. If tissue cultured plants are purchased, a fuller plant can be grown by allowing plants to go dormant in the fall. This is accomplished by withholding water as the days grow shorter and temperatures become cooler. Many growers then remove the dead foliage and force the ginger rhizomes in the same container the next spring, some time after February.

CULTIVATION INFORMATION

Once ginger rhizomes are received, they should be unpacked and inspected for damage or disease, as one would any other bulbous crop. Rhizomes should be planted immediately after shipment; however, if they must be stored for a short period, they should be kept in a cool, dry dark location. The longer the rhizomes are stored, the less time it takes for emergence.

As with most bulbous crops, the media should have excellent drainage and water holding capacity. We prefer a media that has a 3/6 peat, 2/6 pine bark, 1/6 perlite with a starter fertilizer incorporated. The soil of the native habitat of these gingers has a neutral to basic pH so dolomitic limestone should be added to the medium to provide a pH of 7 to 7.5.

A "standard" container or deeper pot will provide for the best drainage and also provide room for placing the tuberous roots attached to the rhizome toward the bottom of the pot, while covering the top of the rhizome with approximately one inch of media.

Breaking the tuberous roots from the rhizome

Top and middle: Commonly called "Dancing Ladies," species of the Globba genus produce flowers at the end of emerging shoots. Bottom: Curcuma roscoeana *will produce 2–4 flowers during the growing season.*

may decrease flowering and delay time to emergence. Thus, care should be taken to keep the entire tuberous root intact.

A two-year-old rhizome planted in a 6-inch pot will produce a marketable finished plant. Some companies do grade the rhizomes. The grading system is usually based on the number of tuberous roots per rhizome.

After the initial irrigation, plants should be given a preventative fungicide treatment.

Greenhouse temperatures should be kept at 85 to 90° F until emergence of shoots. This will help provide for a more uniform emergence. After emergence, greenhouse temperatures should be lowered to less than 85° F. Some gingers are boron accumulators, which may lead to marginal necrosis. Therefore, plants should be fertilized with a water-soluble fertilizer low in boron or without boron, such as a tropical foliage fertilizer.

POTTED GINGER SPECIES

For production of brightly colored bracts and deep green leaves, the "Surprise Ginger" including *Curcuma alismatifolia, Curcuma cordata, Curcuma roscoeana* and *Curcuma thorellii* should be grown in full sun. If these species are grown under shaded conditions, the flower stems and petioles tend to elongate and topple. The bracts of the inflorescence tend to fade and postproduction longevity is shortened. *Curcuma alismatifolia* and *C. thorellii* will produce a flower approximately 60 days after emergence and every 30 days thereafter during the summer months. *Curcuma cordata* and *C. roscoeana* will produce two to four large flowers during the growing season.

Most all Globba species and *Curcuma gracillima* grow best and flower under 30 percent shade. Globba species, commonly called "Dancing Ladies," produce flowers at the end of emerging shoots and will continue to do so during the growing season. Gingers of the genus Globba have reflexed bracts that are white to purple with a slender, curved, yellow corolla. *Curcuma gracillima* produce a single inflorescence emerging from the rhizome, and it may be several months before another emerges.

The Kaempferia species are grown primarily for their beautiful foliage (Table 1). Most Kaempferia have a silver feather pattern in the middle of the upper side of the leaf, radiating outwards with various shades of green. While others, such as *Kaempferia gilbertii* '3D', have a white margin on a deep green leaf. *Cornukaempferia aurantiflora* has a silver feather pattern on the outer edge of the leaf with a deep maroon underside. Most of the Kaempferia species produce small white, pink or orange flowers and bloom sporadically throughout the growing season. These gingers grow best under 30 percent shade or greater.

As both day length (less than 12 hours) and temperatures decrease, flowering will cease and the plants will go dormant. As mentioned earlier, these plants can be stored dry during the winter and forced again sometime after February.

Dr. Kuehny at Lousiana State University and Dr. Criley at the University of Hawaii are conducting studies to provide production protocols for enhancing the production of many of the gingers described in this article.

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