

PERENNIAL SOLUTIONS



By Paul Pilon

Zantedeschia 'Night Cap'

More and more growers are adding calla lilies into their production plans as improved genetics and strong consumer interest have increased demand

Zantedeschia 'Night Cap' is a recent introduction to the Callifornia Calla line from Golden State Bulb Growers. 'Night Cap' is the first Callifornia Calla with dark-purple to nearly black flower coloration.

'Night Cap' has an upright habit with non-maculated foliage, and is very floriferous. The waxy, long-lasting flowers are somewhat pointed and measure 1½ to 2¼ inches in diameter and age to a deep wine red in late maturity. With its upright habit, full appearance and flower number, 'Night Cap' is well suited for production in mid-sized containers.

Calla lilies are most commonly grown and marketed as potted plants or cut flowers, but they can be sold as perennials in USDA Hardiness zones 8 to 11. With its simple, yet elegant flowers, unique bloom coloration, flower power and stage presence at retail locations, 'Night Cap' would make a great addition to any pot plant program.

Propagation

'Night Cap' is an F1 hybrid propagated by seed. All Callifornia Callas including 'Night Cap' are patented and any propagation without a license is strictly prohibited. It is not economical or practical for growers to propagate calla lilies from seed, grow the tubers to maturity, and then produce a finished crop. Growers obtain high-quality tubers through reputable plant broker/distributors to pot into their final containers.

Production

It is beneficial for growers to unpack the dormant tubers upon arrival and place them in well-ventilated trays. If the tubers are not going to be planted for several weeks, it is best to keep them at 50° F with relative humidity at 80 percent; otherwise, hold them at 65° F for a couple of days to allow any wounds that may have occurred during shipping to heal.

It is necessary to treat the tubers with gibberellic acid and fungicide prior to planting. This treatment greatly enhances flowering and protects the tubers from plant pathogens and bacteria in the early stages of production. Golden State Bulb Growers offers 'preconditioned tubers' for growers seeking tubers already treated with gibberellins and disinfectants. 'Non-preconditioned tubers' are also available and must be treated with gibberellic acid and/or fungicides/bactericides



'Night Cap' is the first Callifornia Calla with dark-purple to nearly black flower color. (Photo: Golden State Bulb Growers)

prior to planting. If you wish to treat your own tubers, spray them to obtain thorough coverage with a solution containing 100-ppm GA4+7 with benzyladenine (Fascination or Fresco) plus three tablespoons per gallon copper hydroxide (Champ Formula 2 Flowable).

'Night Cap' can be produced in a variety of container sizes and the number of tubers to plant per pot depends largely on the size of the container being produced and the type of customer they are being marketed to. Generally, one tuber is planted in 4-inch to 1-quart containers, one to two tubers for

6-inch to 1-gallon pots, and two or more tubers are planted in larger-sized containers.

Calla lilies perform best when they are planted into a coarse, well-drained growing mix. It is very important the media drains well and has good air porosity; mixes with a large percentage of fine

particle sizes should be avoided. Plant the tubers with the rounded side down and the sprouts (eyes) up. After planting, there should be 1½ to 2 inches of growing mix over the top of the tubers. Since the roots grow from the top of the tuber, care should be taken to plant at the proper depth. Tubers planted

too shallow may not emerge properly, appear 'one sided', and are more subject to moisture and salt stress.

Calla lilies require moderate levels of plant nutrients. The pH should be maintained between 6.0 and 6.5. It is recommended to fertilize them regularly with 100- to 150-ppm nitrogen from a balanced water-soluble fertilizer that contains calcium and micronutrients. Avoid using fertilizers containing large percentages of ammonium as this nutrient source often reduces plant quality. Maintain EC levels of 1.5 to 2.0. Avoid ECs above 2.5. To prevent the salt levels from accumulating, it is recommended to leech the containers every third to fifth irrigation using clear water beginning with the leaf unfurling stage and especially during the last six weeks of production. Two to three applications of iron chelate during production will help to darken the foliage.

In general, calla lilies should be kept relatively moist during production. It is important to avoid both moisture extremes; they do not tolerate overly dry or excessively wet growing conditions. Many growers apply a broad-spectrum fungicide drench at the first irrigation after the initial watering to help protect the roots. Water sparingly, but keep the containers moist until the sprouts appear. RootShield (*Trichoderma harzianum*, strain T-22) has proven effective when it is incorporated into the growing mix before potting or drenched at the first irrigation.

To obtain the best plant quality characteristics, calla lilies should be grown at high light levels (4,000 to 6,000 foot-candles). High light levels produce shorter plants and increases the number of flowers developed.

'Night Cap' is a medium to tall variety and usually requires some growth regulation to obtain the highest quality plants. They can be drenched with 8- to 12-ppm paclobutrazol (Bonzi, Paczol or Piccolo) when the majority of the sprouts have reached 2 to 3 inches tall. The exact rates to set will vary depending on the light levels and percentage of bark used in the growing mix. Be sure the containers are uniformly moist prior to making PGR drench applications. If additional height control is needed, another drench application can be applied; however, too much paclobutrazol will reduce the number of flowers produced and increase the time to flower. Also, it is recommended to avoid applying PGR drenches after 40 days following

Save the Date!
2011 SHORT COURSE
The Business of Color
 July 9-12, 2011 • Columbus, Ohio

ofa
 The Association of Horticulture Professionals

Horticulture's Premier Convention & Marketplace.
 Get solutions to keep your business in the black and out of the red.

SHORT COURSE

The Business of Color Growers

Education
 Idea Exchanges
 Workshops
 Seminars
 Tours
 Garden Center Live!
 Merchandising Showcase

Networking
 Share Ideas & Solutions
 Meet Friends & Colleagues
 Build Relationships

Trade Show
 One-Stop Shopping
 Meet Suppliers
 See New Products & New Varieties

www.ofa.org
 614-487-1117

See what the **OFA Short Course** is all about.

SNAP IT!

emergence; applying too much plant growth regulators can reduce the number of flowers produced and increase the production time.

Insects and Diseases

Aphids, fungus gnats, shore flies, thrips and whiteflies are can often be observed on or around calla lily crops. Of these pests, fungus gnats and shore flies are the most problematic since they can spread bacteria and plant pathogens.

There are several diseases that affect the successful production of calla lilies. The most problematic diseases (Erwinia, Pythium, Phytophthora and Rhizoctonia) attack the roots and/or tubers. Successful and disease-free production can be achieved by practicing sound cultural practices and focusing on preventative disease control. The best strategy for controlling these pathogens is to apply a four-part tank mix drench (mefenoxam, fosetyl-aluminum, azoxystrobin and streptomycin sulfate at 3, 18 and 24 days after potting).

Temperature and Scheduling

The main factor influencing the proper timing of calla lilies is temperature. Warm temperatures combined with high light levels and long days accelerate plant growth and development. To optimize plant growth, maintain temperatures at 75° F days and 65° F nights or constant 68° F during emergence (up to the time when the majority of the shoots are 1 to 3 inches tall). After emergence (approximately 21 days after planting) maintain 70 to 75° F day and 55 to 60° F night temperatures. At approximately 50 days after planting, once the flower buds are beginning to push and first color is showing, maintain 65° F days and 50 to 55° F nights to help produce stouter and more intensely colored blooms.

At these temperatures, 'Night Cap' will reach peak flowering in 10 to 11 weeks. Calla lilies grown during the coolest and darkest times of the year will require an additional two to three weeks of production time for the plants to bloom; during these times of the year plan on growing them cooler, providing as much light as possible, and using additional growth regulators.



With its upright habit, full appearance and flower number, 'Night Cap' is well suited for production in mid-sized containers.

Deeply Full-Filling...



2 Quart and 2.5 Quart Round & Square Containers

True-to-Measure™ sizing from Summit assures compliant container sizes for any program. And, now, two popular sizes – 2 quart and 2.5 quart – are available in Square and Round Shapes!

The square pots, additions to Summit's popular Nu-Pot line, have smooth sides for labeling, are available in Duo™ and feature side and bottom drainage.

Light-weight, thin-walled JanorPot™ rounds are designed to be the best for your plants. An ideal rooting environment; dual-level drainage for optimal water and aeration exchange.

2 Quart and 2.5 Quart Square and Round


...Be Ready For Anything!

 **Summit Plastic Company**®

JanorPot®

**Ph: 800.814.3496 • www.summitplastic.com
sales@summitplastic.com**

Availability

Calla lily 'Night Cap' and other Callifornia callas are brought to the market by Golden State Bulb Growers (www.goldenstatebulbgrowers.com). Tubers are available from numerous plant broker/distributors across the county. 

Paul Pilon is a horticultural consultant, owner of Perennial Solutions Consulting (www.perennial-solutions.com), and author of Perennial Solutions: A Grower's Guide to Perennial Production. Contact him at 616.366.8588 or paul@perennial-solutions.com.



Photo: Golden State Bulb Growers

Innovative Breeders, Imaginative Varieties

Come see our new 2011 introductions:



Don't miss this stop on your Spring Trial Visit to California. Come and see all the New Introductions for 2011 at our trial location by Speedling San Juan Bautista.



www.greenex.com | info@greenex.com



FLOW TRAYS

ROOTRAINERS®

Propagation trays with results

Southeast US info: Dick Barrett, Ph.D. 813-642-9986
Northeast info: John Sutherland 330-858-5980



Toll-Free 1-888-453-5961

www.beaverplastics.com

Write in 780