

# Calla Catalog

for Pot & Cut



**Ednie Flower Bulbs**  
a division of Fred C. Gloeckner & Co., Inc.



## Payment Information

Dear Customer,

Welcome to our latest version of our Pot and Cut Calla Catalog. Within these pages you will find an assortment of our tried-and-true varieties along with some new to market introductions. After the variety listings we have provided comprehensive growing instructions and week by week growing schedules. We look forward to helping with all of your Calla growing needs.

With kind regards,  
Your Gloeckner-Ednie Team

**Front cover variety:**  
**White Flirt - page11**

### **Special Note**

Due to the unstable exchange rate between the U.S. Dollar and the European Euro please consider prices on our price sheet as a guideline. **Prices are subject to change without notice.**

### **Availability**

The first of our Bulb Crops become available to ship in August. Please place your orders by August 1st for best availability. Please order from our availability list for orders placed after August 1st. All orders are subject to crop availability.

### **Shipping**

We use all modes of transportation; UPS, FEDEX, AIR FREIGHT, TRUCK (Prime Floral, Direct Trucking & others), COMMON CARRIER. Please provide specific shipping instructions. In the absence of specific instructions we will use our own judgment and ship orders the best way. Under adverse weather conditions (below freezing) we may need to ship your order via Express Service to ensure safe arrival of the flower bulbs and to avoid loss of product due to below freezing temperatures thereby allowing you to adhere to production schedules. In cases of extreme weather we will hold your order until the weather is conducive to shipping of flower bulbs.

**CREDIT CARDS:** (credit card charged at time of shipping)



**CHECK OR MONEY ORDER:**

Make checks or money orders payable in US dollars drawn on a US bank to:  
Fred C. Gloeckner & Co., Inc.  
550 Mamaroneck Ave.  
Harrison, NY 10528-1621

**OPEN ACCOUNT:**

Terms Net 30 days. Credit Applications are available online at [www.fredgloeckner.com](http://www.fredgloeckner.com) or by calling 1-800-345-3787.

**WIRE TRANSFER:**

All wire transfers accepted in US dollars. Please reference invoice number. For information needed to complete a wire transfer call 800-345-3787.

## Index Alphabetically

<u>Page</u>	<u>Varieties</u>	<u>Page</u>	<u>Varieties</u>
6	Atlantic City	9	Morning Sun
6	Black Hero	9	Paco
6	Cancun	8	Picasso
7	Cherry Kiss	10	Purple Spirit
7	Dutch Gold	10	Santiago
7	Dutch Pink	10	Siberia
8	French Kiss	11	Sunclub
8	Halifax	11	Vermont
8	Hawk Eye	11	White Flirt
9	capt. Lido		

### Other Information

4 & 5	Field Rep. Information
12 & 13	Pot Cultural Information
14 & 15	Pot Planting & Growing Information
16 - 19	Cut Planting & Growing Information
20 & 21	Cut Callas
22 & 23	Cut Cultural Information

## Index by Color

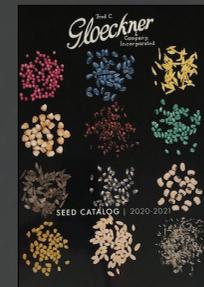
<u>Page</u>	<u>Red Varieties</u>	<u>Page</u>	<u>White Varieties</u>
6	Atlantic City	10	Siberia
8	Hawkeye	11	White Flirt
10	Santiago		
11	Vermont		
			<u>Purple Varieties</u>
		8	Halifax
		9	Paco
7	<u>Yellow Varieties</u>	10	Purple Spirit
	Dutch Gold		
9	capt. Lido		
11	Sunclub		
			<u>Two-Tone Varieties</u>
		8	Picasso
		8	French Kiss
			<u>Black Varieties</u>
		6	Black Hero
			<u>Pink Varieties</u>
7	Cherry Kiss		
7	Dutch Pink		
			<u>Orange Varieties</u>
6	Cancun		
9	Morning Sun		

D  
u  
t  
c  
h  
  
G  
r  
o  
w  
n

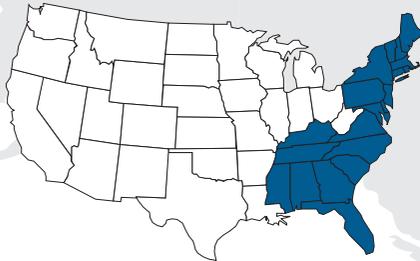
## Gloeckner - Ednie Overview of Catalogs

In addition to this *Calla Catalog* please see our Fall Bulb, Dahlia, Lily, Bare Root Peonies, Grower Supplies, Bare Root Perennial, and Seed Catalogs.

For program information, culture, and pricing, please contact your local field representative (see pages 4-5). You may also contact our Clackamas, OR office at 1-888-655-0907 or our Fredon, NJ office at 1-800-243-3643.



## NORTHEAST/SOUTHEAST



### Walter Bissex

South Huntington, NY 11746  
Cell: 516-982-5925  
Fax: 630-385-7567  
wbissex@fredgloeckner.com  
Territory: CT, NY (Westchester County,  
Metropolitan area/NYC,  
Long Island)

### Robert Muller

Forest Hill, MD 21050  
Cell: 781-975-1869  
rmuller@fredgloeckner.com  
Territory: Eastern PA, Southern NJ, DE, MD

### E. Dick den Breejen

Fredon, NJ 07860  
Cell: 973-903-7253  
MisterD@ednieflowerbulb.com  
Territory: Northeast, Midwest, Southwest,  
West Coast, Canada

### Jeffrey den Breejen

Fredon, NJ 07860  
973-940-2700  
Cell: 973-534-1910  
jeff@ednieflowerbulb.com  
Territory: Southeast, Mid Atlantic

### Sheilah Graham

Wadsworth, OH 44281  
Cell: 330-605-3633  
Sgraham@fredgloeckner.com  
Territory: Western NY, Western PA

### Jeff Nameth

Arden, NC 28704-2608  
Cell: 828-215-6322  
jeffnameth@bellsouth.net  
Territory: VA, NC, FL, SC

### Matthew Dynakowski

Oaklyn, NJ 08107  
Cell: 856-220-3833  
mdynakowski@fredgloeckner.com  
Territory: Northern & Central NJ,  
Southern NY, Western MA

### Tom Seibert

Marietta, GA 30066  
Cell: 404-416-6713  
tseibert@fredgloeckner.com  
Territory: GA, AL, KY, TN, MS,  
Northern Panhandle FL

### David J. Toohey

Foster, RI 02825  
Cell: 401-226-8876  
Home/Fax: 401-397-2530  
dtoohey@fredgloeckner.com  
Territory: NH, VT, MA, RI, ME

### Jan Van Oosten

Phillipsburg, NJ 08865  
Cell: 973-919-4051  
jan@ednieflowerbulb.com  
Territory: New England, Mid Atlantic

## Cut Flower Specialist

### Dave Dowling

Fredon, NJ 07860  
973-940-2700  
dave@ednieflowerbulb.com  
Territory: USA, Canada

## National Sales Manager

Ricardo Campos  
Encinitas, CA 92024  
Cell: 760-707-7065  
rcampos@fredgloeckner.com

## WEST COAST



### Michael Cardosa

Carlsbad, CA 92011  
760-930-8510  
Cell: 760-688-6881  
Fax: 760-438-1601  
mcardosa@fredgloeckner.com  
Territory: CA, HI

### E. Dick den Breejen

Fredon, NJ 07860  
Cell: 973-903-7253  
MisterD@ednieflowerbulb.com  
Territory: Northeast, Midwest, Southwest,  
West Coast, Canada

### Tom Jobb

Bothell, WA 98012  
Cell: 206-612-3350  
Fax: 425-967-5829  
tjobb@fredgloeckner.com  
Territory: WA, OR, ID, MT,  
Alberta BC

### Tim Quirk

Grover Beach, CA 93433  
Cell: 805-709-6161  
Fax: 805-481-0773  
tquirk@fredgloeckner.com  
Territory: CA, HI

## SOUTHWEST



### Dan Busch

Broomfield, CO 80020  
Cell: 303-725-1779  
Fax: 303-583-8353  
dbusch@fredgloeckner.com  
Territory: CO, WY, AZ, KS, NE, UT,  
Northern NM

### E. Dick den Breejen

Fredon, NJ 07860  
Cell: 973-903-7253  
MisterD@ednieflowerbulb.com  
Territory: Northeast, Midwest, Southwest,  
West Coast, Canada

### Alexis Currie

Kennard, TX 75847  
Cell: 979-257-7004  
acurrie@fredgloeckner.com  
Territory: OK, AR, LA,  
Northern TX

**Richard J. Boesen**

Des Moines, IA 50322  
Cell: 515-306-9975  
Fax: 515-277-1326  
rboesen@fredgloeckner.com  
Territory: IA, KS, MO, IL

**E. Dick den Breejen**

Fredon, NJ 07860  
Cell: 973-903-7253  
MisterD@ednieflowerbulb.com  
Territory: Northeast, Midwest, Southwest,  
West Coast, Canada

**Shayne Johnson**

Lakeville, MN 55044  
Cell: 952-836-6180  
Fax: 952-435-9048  
sjohnson@fredgloeckner.com  
Territory: MN, IA, ND, SD, Western WI

**Sheilah Graham**

Wadsworth, OH 44281  
Cell: 330-605-3633  
sgraham@fredgloeckner.com  
Territory: OH, WV, KY

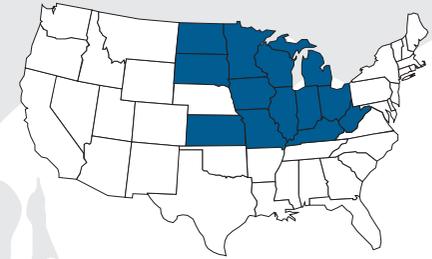
**Matthew Miller**

Neillsville, WI 54456  
Cell: 608-630-0345  
Fax: 800-730-7886  
mmiller@fredgloeckner.com  
Territory: WI, Northern IL, Michigan UP

**Michael J. Porto**

Tipp City, OH 45371  
Cell: 937-479-2089  
Fax: 937-506-8407  
mporto@fredgloeckner.com  
Territory: MI, IN, Northwest OH

**MIDWEST**



**Canada**

**Monica Alvarez**

Harrison, NY 10528  
914-607-5433  
malvarez@fredgloeckner.com

**E. Dick den Breejen**

Fredon, NJ 07860  
Cell: 973-903-7253  
MisterD@ednieflowerbulb.com

**Tom Jobb**

Bothell, WA 98012  
Cell: 206-612-3350  
Fax: 425-967-5829  
tjobb@fredgloeckner.com

**Manager LED Solutions**

**Ricardo Campos**

Encinitas, CA 92024  
760-707-7065  
rcampos@fredgloeckner.com

**INTERNATIONAL  
(Hablamos Español)**



**Mexico, Central & South America**

**Gloeckner Colombia**

Contact: Lix Villarraga  
Cell: +304-4507682  
lvillarraga@fredgloeckner.com

Contact: Gustavo Ochoa

Cell: +3015222671  
gochoa@fredgloeckner.com

**Gloeckner Ecuador**

Contact: Carlos Martinez  
Cell : +999301980  
cmartinez@fredgloeckner.com

**Bersal Group – Uruguay**

Contact: Martin Salaberry  
+598-26235078  
msalaberry@bersalgroup.com

**Germán Tencio Masís – Costa Rica**

+506 888 43469  
German.tencio10@gmail.com

**FloraPlant SV de CV – Mexico**

Contact: Gilberto Gomez Peltier  
+7773620152  
Gilberto@floraplant.com

**Incaforest E.I.R.L. – Peru**

Contact: Maria Quevedo Guillen  
Tel: +51-12712004  
incaparq@hotmail.com

**Floreska Villa Guerrero (Flor de Corte) – Mexico**

Contact: Alberto Puebla  
714 1462166  
floreskavilla@hotmail.com



For the rest of your **INTERNATIONAL** inquires, please contact:

Toll Free in US: 800-345-3787  
Outside the US: 914-698-2300

**Monica Alvarez** Ext. 133  
malvarez@fredgloeckner.com

**Amparo Galarza** Ext. 130  
agalarza@fredgloeckner.com

Z  
a  
n  
t  
e  
d  
e  
s  
c  
h  
i  
a

# Callas for Pot Forcing



## Atlantic City

Height 16-18 in. (40-45cm.)  
Weeks to force 10-11  
Best suited for Small, Medium  
and Large Pots



## Black Hero

Height 12-14 in. (30-35cm.)  
Weeks to force 10-11  
Best suited for Small, Medium  
and Large Pots



## Cancun

Height 14-16 in. (35-40cm.)  
Weeks to force 10-11  
Best suited for Medium  
and Large Pots



<u>Variety</u>	<u>Tuber Size</u>	<u># Flowers</u>	<u>Variety</u>	<u>Tuber Size</u>	<u># Flowers</u>
----------------	-------------------	------------------	----------------	-------------------	------------------

### Atlantic City

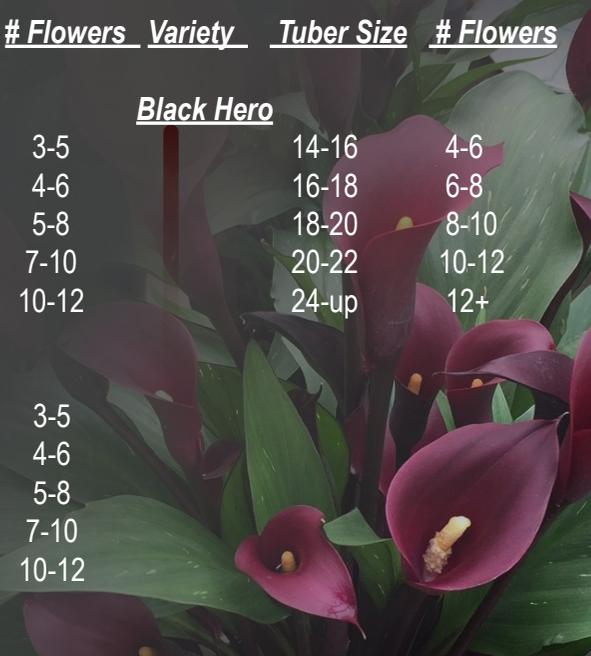
14-16	3-5
16-18	4-6
18-20	5-8
20-22	7-10
24-up	10-12

### Black Hero

14-16	4-6
16-18	6-8
18-20	8-10
20-22	10-12
24-up	12+

### Cancun

14-16	3-5
16-18	4-6
18-22	5-8
20-22	7-10
24-up	10-12



# Callas for Pot Forcing

## Cherry Kiss

Height 14-16 in. (35-40cm.)  
 weeks to force 10-11  
 Best suited for Medium  
 and Large Pots



## Dutch Gold

Height 16-18 in. (40-45cm.)  
 Weeks to force 10-11  
 Best suited for Medium  
 and Large Pots



## Dutch Pink

Height 16-18 in. (40-45cm.)  
 Weeks to force 10-11  
 Best suited for Small, Medium  
 and Large Pots

Variety   Tuber Size   # Flowers   Variety   Tuber Size   # Flowers

### Cherry Kiss

14-16      3-5  
 16-18      4-6  
 18-20      5-8  
 20-22      7-12  
 24-up      12+

### Dutch Gold

14-16      3-5  
 16-18      4-6  
 18-20      5-8  
 20-22      7-12  
 24-up      12+

### Dutch Pink

14-16      3-5  
 16-18      4-6  
 18-22      5-8  
 20-22      7-12  
 24-up      12+



D  
u  
t  
c  
h  
  
G  
r  
o  
w  
n

# Callas for Pot Forcing

## French Kiss

Height 16-18 in. (40-45cm.)  
 Weeks to force 11-12  
 Best suited for Medium  
 and Large Pots



## Halifax

Height 14-16 in. (35-40cm.)  
 Weeks to force 10-11  
 Best suited for Small, Medium  
 and Large Pots



## Hawkeye

Height 12-14in. (30-35cm.)  
 Weeks to force 9-10  
 Best suited for Small  
 and Medium Pots

<u>Variety</u>	<u>Tuber Size</u>	<u># Flowers</u>	<u>Variety</u>	<u>Tuber Size</u>	<u># Flowers</u>
----------------	-------------------	------------------	----------------	-------------------	------------------

### French Kiss

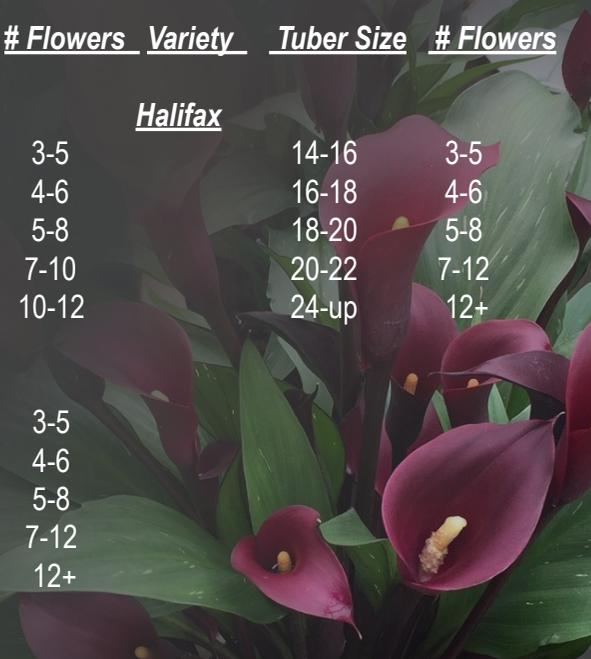
14-16	3-5
16-18	4-6
18-20	5-8
20-22	7-10
24-up	10-12

### Halifax

14-16	3-5
16-18	4-6
18-20	5-8
20-22	7-12
24-up	12+

### Hawkeye

14-16	3-5
16-18	4-6
18-22	5-8
20-22	7-12
24-up	12+



Z  
a  
n  
t  
e  
d  
e  
s  
c  
h  
i  
a

# Callas for Pot Forcing



## capt. Lido

Height 14-16 in. (35-40cm.)  
 weeks to force 9-10  
 Best suited for Small  
 and Medium Pots



## Morning Sun

Height 14-16in. (35-40cm.)  
 Weeks to force 10-11  
 Best suited for Small, Medium  
 and Large Pots



## Paco

Height 12-14 in. (30-35cm.)  
 Weeks to force 9-10  
 Best suited for Small  
 and Medium Pots



<u>Variety</u>	<u>Tuber Size</u>	<u># Flowers</u>	<u>Variety</u>	<u>Tuber Size</u>	<u># Flowers</u>
----------------	-------------------	------------------	----------------	-------------------	------------------

### capt. Lido

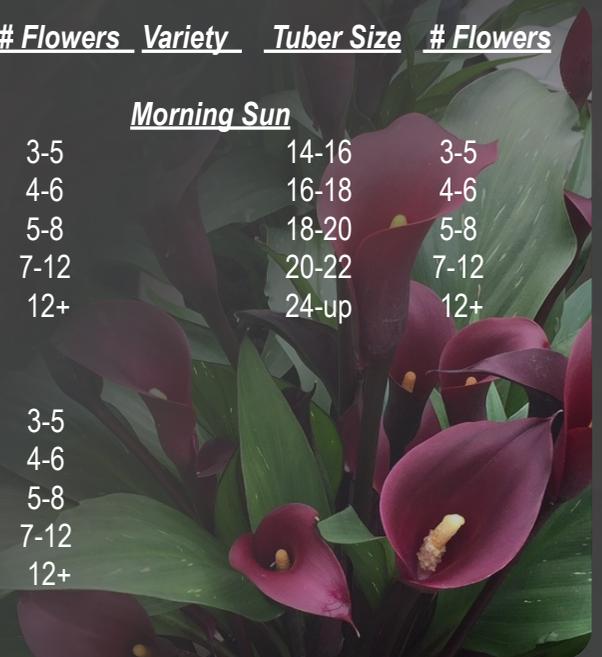
14-16	3-5
16-18	4-6
18-20	5-8
20-22	7-12
24-up	12+

### Morning Sun

14-16	3-5
16-18	4-6
18-20	5-8
20-22	7-12
24-up	12+

### Paco

14-16	3-5
16-18	4-6
18-22	5-8
20-22	7-12
24-up	12+

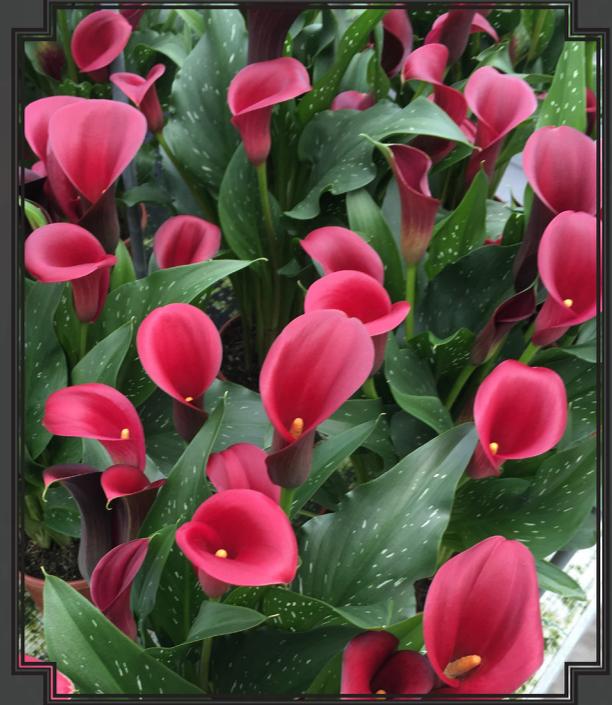


D  
u  
t  
c  
h  
  
G  
r  
o  
w  
n

# Callas for Pot Forcing

## Purple Spirit

Height 14-16 in. (35-40cm.)  
 Weeks to force 10-11  
 Best suited for Small, Medium  
 and Large Pots



## Santiago

Height 14-16 in. (35-40cm.)  
 Weeks to force 10-11  
 Best suited for Small, Medium  
 and Large Pots



## Siberia

Height 14-16 in. (35-40cm.)  
 Weeks to force 10-11  
 Best suited for Small, Medium  
 and Large Pots



<u>Variety</u>	<u>Tuber Size</u>	<u># Flowers</u>	<u>Variety</u>	<u>Tuber Size</u>	<u># Flowers</u>
----------------	-------------------	------------------	----------------	-------------------	------------------

### Purple Spirit

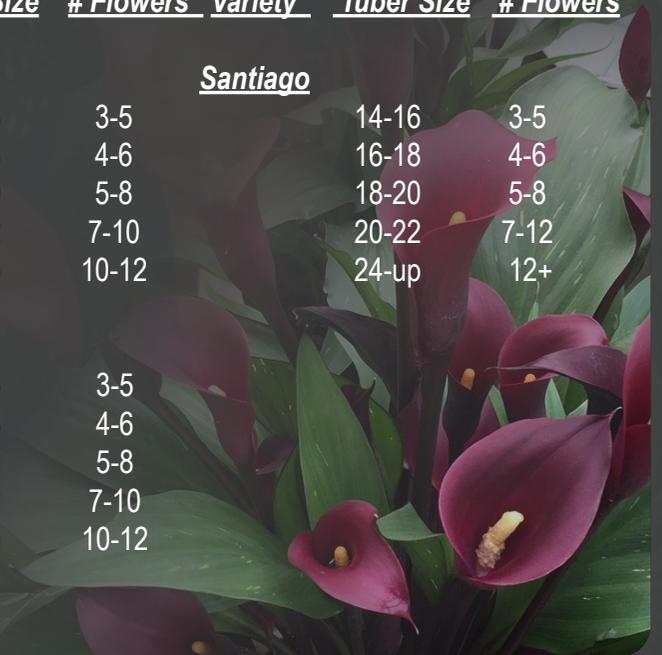
14-16	3-5
16-18	4-6
18-20	5-8
20-22	7-10
24-up	10-12

### Santiago

14-16	3-5
16-18	4-6
18-20	5-8
20-22	7-12
24-up	12+

### Siberia

14-16	3-5
16-18	4-6
18-22	5-8
20-22	7-10
24-up	10-12



Z  
a  
n  
t  
e  
d  
e  
s  
c  
h  
i  
a

# Callas for Pot Forcing

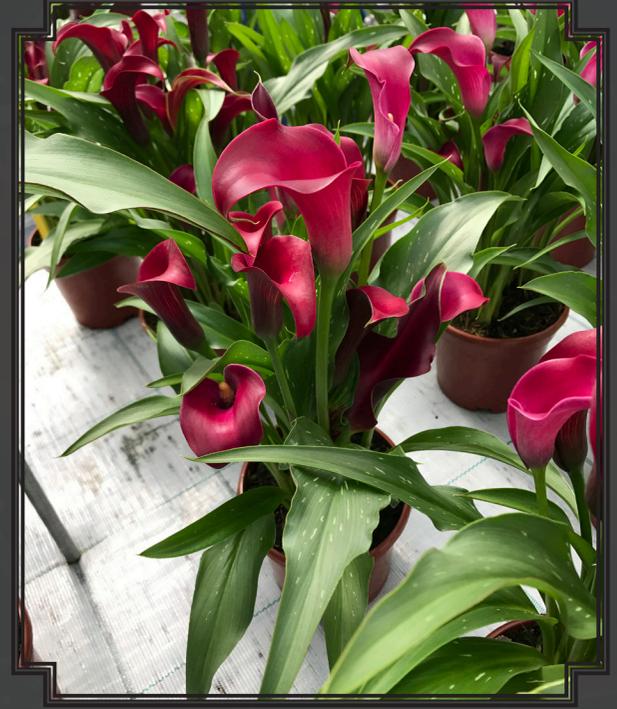
## Sunclub

Height 12-14 in. (30-35cm.)  
 Weeks to force 9-10  
 Best suited for Small  
 and Medium Pots



## Vermont

Height 16-18 in. (40-45cm.)  
 Weeks to force 10-11  
 Best suited for Small, Medium  
 and Large Pots



## White Flirt

Height 14-16 in. (35-40cm.)  
 Weeks to force 10-11  
 Best suited for Small, Medium  
 and Large Pots



<u>Variety</u>	<u>Tuber Size</u>	<u># Flowers</u>	<u>Variety</u>	<u>Tuber Size</u>	<u># Flowers</u>
----------------	-------------------	------------------	----------------	-------------------	------------------

### Sunclub

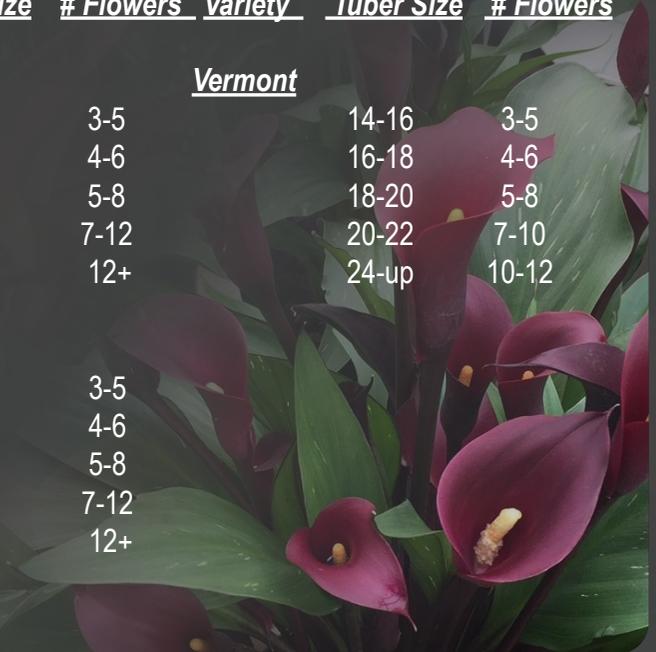
14-16	3-5
16-18	4-6
18-20	5-8
20-22	7-12
24-up	12+

### Vermont

14-16	3-5
16-18	4-6
18-20	5-8
20-22	7-10
24-up	10-12

### White Flirt

14-16	3-5
16-18	4-6
18-22	5-8
20-22	7-12
24-up	12+



Dutch Grown



# Cultural Information for Dutch *Callas* for Pot Plant Production



*Our Calla tubers are grown from fresh, young planting stock (tissue culture) which produces healthier plants with the following benefits:*

- Faster rooting and production
- Stronger stems
- Larger or more flowers
- Minimal waste

All tubers have been treated with Gibberellic Acid prior to shipping for enhanced flowering.

All tubers have received various temperatures to shorten the forcing time. Tubers are available year-round. New crop will be available after the middle of February.

## Growing Media

Media should be sterile, well-drained and have a pH of 5.5 to 6.0. Soil-less mixes that are used should be checked for pH. This is especially important if chemical height regulators are used and also to establish a fertilizer program.

Several mixes can be recommended. However, each mix should be tested in your greenhouse environment, since each greenhouse has different elements such as pH etc.

## Pots & Containers

The size of the container depends largely on the size of the bulb and the number of bulbs per pot. A standard pot or container is preferred because of its height.

Bulbs should be planted in the center of the pot and covered with 2 inches (5 centimeters) of soil.

This is very important because of the roots which form on top of the bulb and then move down.

Since roots of Calla tubers are (very) sensitive, it is strongly recommended to select the correct pot. One should look for:

- A lip on the bottom, so air can move between pot and bench or floor
- The number of drainage holes.
- The color of the pot, winter versus summer



## Soil Drenches

Rootshield WP may be applied as a drench immediately after planting with 4 oz. per 100 gallons of water.

This drench may be repeated after 4 weeks at half strength with 2 oz. per 100 gallons of water.





# Cultural Information for Dutch *Callas* for Pot Plant Production



## Forcing & Temperatures

Callas can be grown year-round. It is important to understand that plants react differently in darker winter months than in warm, bright summer months. New crops (starting February 15th) will take longer than tubers which have been stored for a longer period. For an approximate guide to forcing temperatures, see the week-by-week guide on the next pages.

Most important are the first weeks of forcing the tubers. The fastest start occurs when planted tubers are held in a warm and moist environment. This should be followed by a drier period until leaves have fully unfurled. Cooler forcing with lower humidity keeps plants shorter, see section height control.

## Height Control

Since the size of the pot determines the desired height, a good strategy is needed, after the initial sprouting of the crop. If PGRs are needed (Paclobutrazol - Bonzi), they need to be applied: not too early and not too late. See schedule on next pages. Watering too soon after the application will negate the results.

Warmer temperatures and higher humidity and not enough ventilation will cause taller plants, so a stronger dosage of PGR's is needed. All the same time, cooler temperatures (after the tubers have fully sprouted) sprouted) will result in shorter plants, so less PGR's are needed. Plants which are placed outside with a lot of air movement, may need no PGR at all.

## Water & Fertilizer

Watering Callas can be divided into 2 sections (see schedule):

- From planting to the leaves unfurled
- From unfurling leaves until shipping

After initially watering the pots (with Root Shield), do not water until sprouts have fully developed. If plants are placed in a moist area (covered carts) there is enough moisture and no additional water is need. After uncovering pots and until leaves have unfurled well, water sparingly. Before watering, check roots first; a dry crust on top is OK. Do not water on cloudy days unless really needed. When leaves have fully unfurled (see schedule) plants will need more water too.

## Fertilizer

To grow quality plants, a complete feeding program should be followed. Check if plants are receiving proper nutrients by doing soil and leaf tests. Callas do not like a lot of Nitrogen. Too much Nitrogen will cause leafy plants resulting in reduced flower count.

- Callas like an E.C. of 2.0 to 2.5
- Calcium Magnesium will darken the foliage
- When first flower becomes visible, change to Potassium

## Storage

Because the longevity of Calla flowers, plants need not be stored cold. However, storing the finished product cool will extend the life of the plant. Ideal storage temperature (if needed) is 40°F. (5°C.). Cool greenhouse is much preferred.

D  
u  
t  
c  
h  
G  
r  
o  
w  
n

## From Planting to Growing

Cutting and Preparing Tubers



Planting Tubers in April



## Introducing New and Upcoming Varieties



New For Pot Production:

### **Dutch Cream**

Height 12-14 in. (30-35 cm.)

Weeks to force 8-9

Best suited for Small and Medium Pots

For bulb size versus flowers see Black Hero on page 6

*These two varieties will be available  
in 2021*



New For Cut Production:

### **Emani**

Height 16-18 in. (40-45 cm.)

Weeks to force 9-10

For numbers per crate or sq yard  
see chart on page 22

From Flowering to Shipping

D  
u  
t  
c  
h  
  
G  
r  
o  
w  
n



Flowering Fields Inspected



Flowering Fields



Callas Harvested



Tubers Washed



Tubers Treated and Stored



Heat Treatment



Callas Shipped by Air



Callas Shipped by Container

# Growing Instructions

For Growing Years  
**2020** and **2021**



## Ednie Flower Bulbs

Calla growing  
can be divided into 2 different phases:

- From Planting until unfurling of leaves Phase 1 = DRIER PERIOD
- From Unfurling to full Flowering Phase 2 = WETTER PERIOD

## Temperatures

Weeks Since Start	Year 2020	Year 2021
-------------------	-----------	-----------

NIGHT	DAY
-------	-----

### PHASE 1 - KEEP DRY

**PLANT CALLA TUBERS UPON ARRIVAL.**  
We strongly recommend dipping the tubers in Rootshield (4oz/100 gallons water) prior to planting.  
If tubers are not be dipped, drench pots with Rootshield (same rate).  
Tubers should be covered with 1 inch of media (no more and no less). Stay away from Perlite if possible.  
Place pots in (warmer) holding area or in greenhouse either on racks or on floor covered with cloth (optional) until sprouts have emerged.

After initial watering **DO NOT WATER** until **SPROUTS APPEAR**. If pots appear dry, check moisture at root level. Keeping the media on the drier side stimulates root growth and prevents diseases such as Erwinia.



72° F.  
~~  
22° C.

61 - 63° F.  
~~  
16 - 17° C.

59 - 61° F.  
~~  
15 - 16° C.

0

February 10  
week 20-07

February 8  
week 21-06

1

February 17  
week 20-08

February 15  
week 21-07

2

February 24  
week 20-09

February 22  
week 21-08

Growing Instructions  
for Flowering Weeks: 16-17

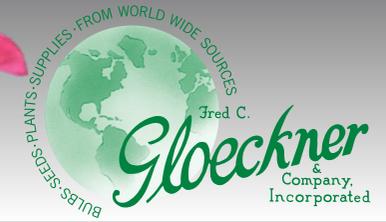
# Growing Instructions

Zantedeschia  
Dutch Grown Callas

For Growing Years  
2020 and 2021



Ednie Flower Bulbs



2020 2021

Night Temp Day Temp

2  
0  
2  
0  
2  
0  
2  
1

3  
4  
5

**March 2**  
week 20-10

**March 1**  
week 21-09

**FIRST SPROUTS** start to **EMERGE** from soil. Plants that have emerged should be placed in full sunlight on benches or growing floor.

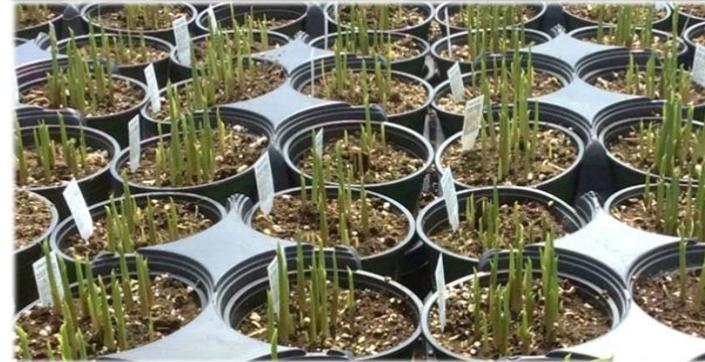


65 - 68° F.  
~ ~ ~  
18 - 20° C. 61 - 63° F.  
~ ~ ~  
16 - 17° C.

**March 9**  
week 20-11

**March 8**  
week 21-10

**COMPLETE EMERGENCE** of CROP. If still no emergence, maintain warmer temperatures. Plants that have emerged should be placed in full sunlight and fertilized immediately with 2 EC 15-4-15. DOT NOT apply any growth regulator until side roots appear.



63 - 65° F.  
~ ~ ~  
17 - 18° C. 59 - 61° F.  
~ ~ ~  
15 - 16° C.

**March 16**  
week 20-12

**March 15**  
week 21-11

**MAIN** and **SIDE ROOTS** have formed. Sprouts are approximately 4 inches tall. One application of (stronger) Growth Regulator can be applied. The amount of PGR varies per variety. Check with your sales rep which rates to use for each variety. The PGR drench may be combined with an additional Root Shield drench, at half rate (2 oz/100 gallons water).



59 - 63° F.  
~ ~ ~  
15 - 17° C. 57 - 61° F.  
~ ~ ~  
14 - 16° C.

Growing Instructions  
for Flowering Weeks: 16 and 17

# Growing Instructions

Zantedeschia  
Dutch Grown Callas

For Growing Years  
**2020 and 2021**



Callas Culture can be divided into 2 sections:  
can be divided into 2 different phases:

- From Planting until unfurling of leaves Phase 1 = DRIER PERIOD
- From Unfurling to full Flowering Phase 2 = WETTER PERIOD

## PHASE 2 - PLANTS NEED WATER

**CHECK PLANTS**, as they will need more space. Check roots closely, to see if any "glassy" roots are visible. In that case, pots should be drenched with a fungicide in order to prevent other diseases. Since leaves started to unfurl, the plants need a lot more water.

**ADEQUATE LIGHTING** is extremely important, as number of flowers and overall finished height depend on this. Plants will stay shorter by keeping the humidity low.

**FIRST FLOWERS** are showing!  
If no flowers are visible, raise both night and day temperatures.  
First flower may be removed if desired.  
A strong flush of flowers will follow in another 10 days.



## Temperatures

NIGHT DAY

59 - 63° F. 57 - 61° F.  
~ ~ ~ ~ ~  
15 - 17° C. 14 - 16° C.

59 - 63° F. 57 - 61° F.  
~ ~ ~ ~ ~  
15 - 17° C. 14 - 16° C.

61 - 63° F. 59 - 61° F.  
~ ~ ~ ~ ~  
16 - 17° C. 15 - 16° C.

Weeks Since Start	Year 2020	Year 2021
-------------------	-----------	-----------

6

March 23 week 20-13	March 22 week 21-12
------------------------	------------------------

7

March 30 week 20-14	March 29 week 21-13
------------------------	------------------------

8

April 6 week 20-15	April 5 week 21-14
-----------------------	-----------------------

8

April 6 week 20-15	April 5 week 21-14
-----------------------	-----------------------

Growing Instructions

for Flowering Weeks: 16 and 17

# Growing Instructions

Zantedeschia

Dutch Grown Callas

For Growing Years  
**2020 and 2021**



Ednie Flower Bulbs

Weeks Since Start	Year 2020	Year 2021
-------------------	-----------	-----------

Temperatures

NIGHT DAY

2  
0  
2  
0  
  
a  
n  
d  
  
2  
0  
2  
1

9

<b>April 13</b> week 20-16	<b>April 12</b> week 21-15
-------------------------------	-------------------------------

**FEED** with 2 EC fertilizer, which must include **POTASSIUM**. Do NOT let crop dry out, as plants need more water.



59 - 63° F. ~~ 15 - 17° C.	57 - 61° F. ~~ 14 - 16° C.
----------------------------------	----------------------------------

10

<b>April 20</b> week 20-17	<b>April 19</b> week 21-16
-------------------------------	-------------------------------

**CROP FINISHED.** To prevent yellowing of plant in storage or retail place, a PGR is strongly recommended. Spray entire plant with 25-50 ppm PGR (such as Fascination or Fresco) 12 hours prior to cold storage. **DO NOT STORE BELOW 40° F. (5° C.).**



59 - 63° F. ~~ 15 - 17° C.	57 - 61° F. ~~ 14 - 16° C.
----------------------------------	----------------------------------

11



40° F. ~~ 5° C.	40° F. ~~ 5° C.
-----------------------	-----------------------

# Callas for Cut Forcing

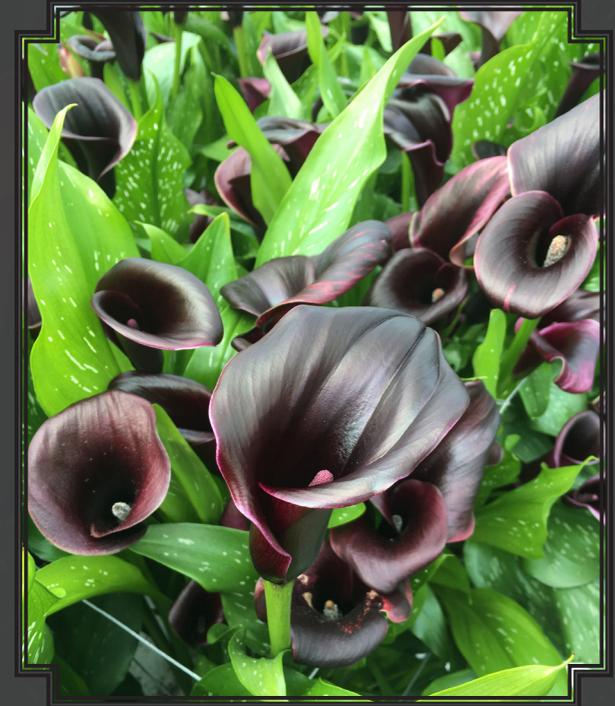
## Gold Medal

Height 20-22 in. (50-55cm.)  
#weeks to force: 10-11



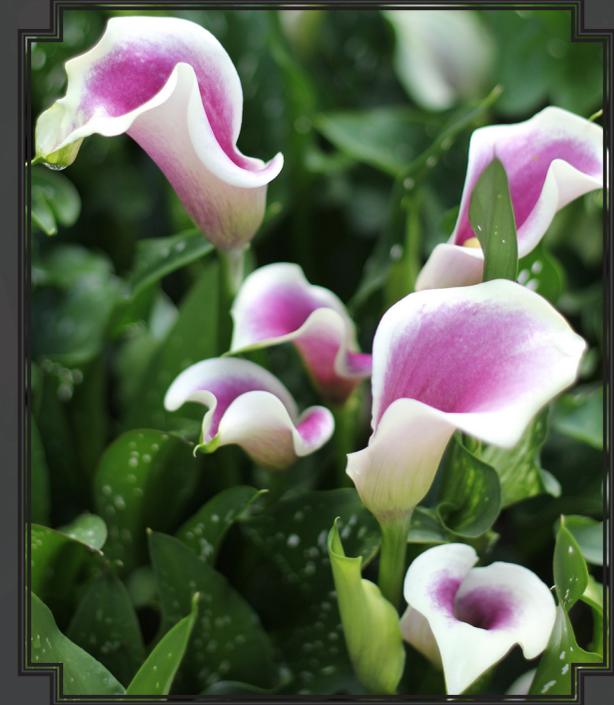
## La Paz

Height 18-20 in. (45-50cm.)  
#weeks to force: 10-11



## Picasso

Height 18-20 in. (45-50cm.)  
#weeks to force: 9-10



## capt. Odeon

Height 18-20 in. (45-50cm.)  
#weeks to force: 10-11



Z  
a  
n  
t  
e  
d  
e  
s  
c  
h  
i  
a

# Callas for Cut Forcing



*capt. Promise*

Height 20-22 in. (50-55cm.)  
#weeks to force: 10-11



*capt. Samba*

Height 20-22 in. (50-55cm.)  
#weeks to force: 10-11



*Easy to Grow  
Assortment*



*capt. Ventura*

Height 20-22 in. (50-55cm.)  
#weeks to force: 10-11



## Cut Flower Calla Collection

Includes 5 tubers of each variety on pages 21 and 22.  
35 tubers in total.

Cut flower Callas can be succession planted every four weeks. Plants will start to bloom 7-8 weeks after planting, and continue for about four weeks. Each bulb produces an average of 5-8 blooms.

Collection varieties are subject to availability. If a variety is not available we will substitute bulbs of equal or greater value, but always the same color and cultural habit as specified within this collection.

D  
u  
t  
c  
h  
  
G  
r  
o  
w  
n



# Cultural Information for Dutch

## Callas

### for Cut Flower Production



Z  
a  
n  
t  
e  
d  
e  
s  
c  
h  
i  
a

Our Calla tubers are grown from fresh, young planting stock (*tissue culture*) which produces healthier plants with the following benefits:

- Faster rooting and production
- Stronger stems
- Larger or more flowers
- Minimal waste
- All tubers are dipped in Gibberellic acid prior to shipping for enhanced flowering.
- All tubers have received various temperatures to shorten the forcing time.
- Tubers are available year-round. New crop is available after February 15th.

### Growing Callas

Callas for cut production can be grown in several ways:

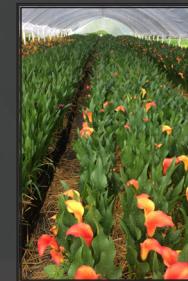
- In ground beds in greenhouses
- In ground beds outside, after threat of frost is past
- In plastic bulb crates or containers; inside and outside. They can be started inside and if outside temperatures are not too low, the crates with sprouted tubers can be placed outside
- In Gerbera system (see illustration)



Ground Beds



Containers



Bulb Crates



Gerbera/Trough System

### Plant Density

It is essential that plants receive enough light to form flowers because tubers produce heavy stalks with (sometimes) many leaves. If tubers are planted too close, flower production will be decreased. See below for recommended spacing per bulb.

Tuber Size	Tubers per Crate	Tubers per sq yard
------------	------------------	--------------------

14 - 16 cm.	7 - 8	18
16 - 18 cm.	6 - 7	16
18 - 20 cm.	5 - 6	14
20 - 22 cm.	4 - 5	12
22 - 24 cm.	3 - 4	10



### Planting

Bulbs should be covered with 2" (5 cm) of soil. This is very important because of the roots which are formed on top of the bulb and then move down. If planted in crates or containers, there should be at least 2" (5cm) or (preferably) more below the tuber because Callas produce many strong roots. It is very important to maintain healthy roots, Grower should always check roots to prevent diseases.



# Cultural Information for Dutch *Callas* for Cut Flower Production

Callas can be grown year-round. It is important to understand that plants react differently in darker winter months than in warm, bright, summer months. New crops (starting February 15th) will take longer than later plantings.

## Calla tubers grown in Containers

if possible, place planted tubers in a warm and moist environment (72° F. or 22° C.) until all sprouts have developed. Once all sprouts are emerged, containers can be placed outside as long as the temperature does not dip below 45° F. or 7° C. Protect from possible unexpected, late frost by covering plants. Mist foliage with water.

## Calla tubers grown in Outside Beds

It is recommended to wait until the soil temperature is at least 50° F. or 10° C. Make sure the soil is moist but not wet, see Growing Media on page 12 in this catalog.

## Diseases

**There are two main diseases that can affect Callas:**

- **PYTHIUM** visible by glassy roots caused by too wet environment: can be treated with with fungicides such as Agrimycin or Ridimil Gold.
- **ERWINIA** is the most common disease in Callas. It is a secondary disease and almost always occurs when the plant is under stress such as poor drainage. See Pythium. Best recommendation is to carefully remove the diseased (collapsed) plant. It is a bacterial disease and can spread to it's neighbor or by careless handling of the diseased plants. Clean hands, tools etc. with a disinfectant if necessary.

- When tubers arrive, open the boxes or crates so the bulbs get fresh air and let the bulbs sit for a few days (out of the sun) at 45 to 65° F. (8 to 18° C.).
- Do not store in closed coolers, always leave the door open a little.
- If possible, start the planted tubers (in crates or containers) in warmer temperatures, see the recommendations for potted Callas on page 14 of this catalog.
- Watering should be kept to a minimum until the leaves unfurl.
- Soil should be sterile and well-drained with a pH between 6.0 and 6.5
- Do not place crates or containers on benches as the soil may get too warm.
- In warmer areas, it is helpful to cover the soil with either straw or any other material to keep the soil as cool as possible.
- For fertilizer, see page 13 in this catalog.
- After the leaves have completely unfurled, the plants need a lot more water to fully develop and produce optimum number of flowers.
- Light is very important to achieve as many flowers as possible. However, for stem length, some shading may be needed especially in the warmer months.
- Do not cut flowers, but instead pull the stems to avoid damaging the tuber.
- Some leaves can be pulled to use for fillers in bouquets.
- Because of the longevity of the flowers, harvesting does not need to be done daily.
- Freshen water in the pails with Calla flowers often, but do not fill the pail. Just a few inches of water is best. Cut the stems with a sharp knife at a 45° angle.
- Repeat later when the water is refreshed in the pail.
- To prevent slimy stems, add a little disinfectant (such as peroxide) to the water.

D  
u  
t  
c  
h  
  
G  
r  
o  
w  
n



Auto Sizing & Sorting Machine



Ready for Shipping



Bundling



**Fredon Bulb Facility**

37 Fredon Marksboro Road

Fredon, NJ 07860

1-800-243-3643

Phone: (973) 940-2700

Fax: (973) 940-2839

Email: [support@ednieflowerbulb.com](mailto:support@ednieflowerbulb.com)

**Clackamas Bulb Facility**

12400 SE Highway 212

Clackamas, OR 97015

1-888-655-0907

Phone: (503) 655-0908

Fax: (503) 655-0979

Email: [clackamasbulbs@fredgloeckner.com](mailto:clackamasbulbs@fredgloeckner.com)