

# 2017

## Seed Product Information Guide

PanAmericanSeed®  
**KieftSeed**

# NEW VARIETIES FOR 2017

## ANNUALS

### **Alternanthera** Purple Prince

### **Begonia** Megawatt Pink Bronze Leaf Megawatt Red Green Leaf Megawatt Rose Bronze Leaf Megawatt Rose Green Leaf

### **Celosia cristata** Dracula

### **Premium Sun Coleus** Pineapple Surprise

### **Pack Coleus** Wizard® Rose

### **Fuseables®** Calibrachoa Paradise Island Petunia Rise N Shine Viola Sunset Boulevard Viola Sunglow

### **New Guinea Impatiens** Divine Lipstick Divine Orchid

### **African Marigold** Marvel Orange Improved Taishan® Gold Improved

### **French Marigold** Fireball Hot Pak Fire Hot Pak Flame Hot Pak Gold Hot Pak Harmony Hot Pak Orange Hot Pak Spry Hot Pak Yellow Hot Pak Mixture Strawberry Blonde

### **Ornamental Mint** Mini Mint

### **Spreading Pansy** Cool Wave® Blueberry Swirl Improved Cool Wave Morpho Cool Wave Purple Improved

### **Extra Large-Flowered Pansy** Matrix® Denim

### **Large-Flowered Pansy** Promise Marina Improved Promise Moonlight Promise Pure White Improved Spring Matrix Beaconsfield

### **Ruffled Pansy** Frizzle Sizzle Lemonade Frizzle Sizzle Mixture Improved

### **Pentas** Butterfly Orchid

### **Ornamental Pepper** Hot Pops Purple Sedona Sun

### **Spreading Petunia** Easy Wave® Yellow

### **Compact Growing Multiflora Petunia** Lo Rider® Rose

### **Compact Growing Floribunda Petunia** Pretty Flora Rose

### **Multiflora Double Petunia** Duo Salmon

### **Floribunda Double Petunia** Double Madness Salmon

### **Vinca** Titan® Blush Improved Titan Really Red

### **Viola** Sorbet® XP Beaconsfield Improved Sorbet XP Yellow Pink Jump Up Sorbet XP Autumn Select Mixture Sorbet XP Blotch Mixture Sorbet XP Spring Select Mixture

### **Zinnia** Double Zahara Brilliant Mixture Zahara® XL Fire Improved

## REVOLUTION GERBERA

Mega Revolution Orange  
with Light Eye  
Mega Revolution Scarlet Red  
with Light Eye  
Mega Revolution White  
with Light Eye  
Mega Revolution Yellow  
with Dark Eye Improved  
Revolution Bicolor Red Lemon  
Revolution Bicolor Red White  
Revolution Bicolor Rose White  
Revolution Classic Mixture  
Revolution Select Mixture

## CUT FLOWERS

### **Celosia plumosa** Sunday® Gold

### **Dianthus** Sweet Deep Pink Maxine

### **Northern Greenhouse Selectable Matthiola (Stock)** Aida Apricot Improved Mathilda Pink Mathilda White Mathilda Yellow

### **Snapdragon** Cool Orange

## PERENNIALS

### **Coreopsis** SunKiss

### **Gaillardia** Mesa Red

### **Lavandula** Lavance Deep Purple

### **Perovskia** Blue Steel

## VEGETABLES

### **Cucumber** Gherking Martini

### **Tomato** Candyland Red Stellar Sunrise Sauce

**SUBSTRATE  
MOISTURE LEVEL  
TABLE**

	Level 1 Dry	Level 2 Medium Dry	Level 3 Medium	Level 4 Medium Wet	Level 5 Saturated
Substrate color	Very light brown or gray	Light brown	Brown to dark brown	Dark brown	Brown-black, glistening with water
Substrate feel when squeezed in hand	No moisture is detected in substrate	Substrate squeaks when squeezed	A small drop of water can be squeezed from the substrate	Water can be easily squeezed from the substrate	Water runs freely out of the substrate
Substrate structure	Substrate is dusty and freely scatters when blown	Substrate will barely stick together under pressure	Substrate will clump together but cracks apart under its own weight	Substrate easily clumps together and stays as one clump	Substrate has a semi-liquid consistency

**USDA PLANT HARDINESS ZONE  
AND AVERAGE ANNUAL MINIMUM  
TEMPERATURE RANGE**

Zone	Fahrenheit	Celsius
1	Below -50 F	Below -46 C
2	-45 to -40 F	-46 to -40 C
3	-40 to -30 F	-40 to -35 C
4	-30 to -20 F	-35 to -29 C
5	-20 to -10 F	-29 to -23 C
6	-10 to 0 F	-23 to -18 C
7	0 to 10 F	-18 to -12 C
8	10 to 20 F	-12 to -7 C
9	20 to 30 F	-7 to -1 C
10	30 to 40 F	-1 to 5 C
11	above 40 F	above 5 C

**CONTAINER CONVERSION FROM CM TO IN.**

European Container	Equivalent U.S. Container
9 cm 5° - H	3.5 in. Standard
10.5 cm 5° - L	4 in. Azalea
10.5 cm 5° - H	4 in. Standard
11 cm 8° - H	4.25 in. Standard
12 cm 8° - H	4.5 in. Geranium
13 cm 8° - L	5 in. Azalea
13 cm 5° - H	5 in. Standard
14 cm 5° - H	6 in. Trade
15 cm 5° - L	6 in. Azalea
15 cm 5° - H	6 in. Standard
17 cm - L	6.5 in. Azalea
15 to 18 cm - H	Trade Gallon
19 cm - L	8 in. Standard
1-23 cm/5 liter	8 in. /1.5 Gallon
25 cm/7-7.5 liter	10 in. /2 Gallon
30 cm/10 liter	12 in. /2.5 Gallon
25 cm Hanging Basket	10 in. Hanging Basket
30 cm Hanging Basket	12 in. Hanging Basket

**FERTILIZER RATE TABLE**

Fertilizer Rate	PPM Nitrogen	EC (mS/cm)
One	Less than 100 ppm	Less than 0.7 EC
Two	100 to 175 ppm	0.7 to 1.2 EC
Three	175 to 225 ppm	1.2 to 1.5 EC
Four	225 to 300 ppm	1.5 to 2.0 EC
Five	More than 300 ppm	More than 2.0 EC

**KEY TO SYMBOLS:**

- COT - Coated seed
- DTL - De-tailed seed
- MSP - Multi-seed pellet
- PEL - Pelleted seed
- PMPL - Precision Multi-Pellet
- PRM - Primed seed
- SED - Raw seed
- TRT - Treated seed

These tables will help you to decide when you need to light the different Wave Petunia family varieties and choose the right variety for you. For example, if you want to produce Wave petunia during week 6 to week 20 in Kalamazoo, MI (N42.5°), you need to light group 3 varieties for 3 weeks, group 4 varieties for 6 weeks, but you don't need to use Photoperiodic light for group 1 and group 2 varieties.

DAYLENGTH REQUIREMENTS FOR FLOWERING WAVE® PETUNIA VARIETIES

GROUP	MIN. DAYLENGTH REQUIREMENT*	VARIETY
1	10 hours	Easy Wave® Berry Velour, Pink Passion, Burgundy Star, Coral Reef, Neon Rose, Red, Rosy Dawn, Silver, Violet, White, and Yellow; Shock Wave® Coral Crush, Denim, Pink Shade, Red, Yellow
2	10.5 hours	Easy Wave® Blue, Burgundy Velour; Shock Wave® Coconut, Pink Vein, Purple, and Rose
3	11 hours	Easy Wave Pink, Plum Vein, and Red Velour; Wave Blue
4	12 hours	Wave Lavender, Misty Lilac, Pink, Purple Classic, Purple** and Rose; all Tidal Wave® colors

\*Speed of flowering increases at longer daylengths.  
 \*\*Wave Purple Improved requires 11.5 hours daylength or one week less of Photoperiodic lighting compared to Purple Classic

PRODUCTION WEEKS WHEN LIGHTING IS REQUIRED FOR DIFFERENT WAVE PETUNIAS BASED ON LATITUDE

(N: Natural Daylength, L: Photoperiodic Lighting--daylength extension to 14 hours or night interruption from 10PM to 2AM by using HID or incandescent lights)

**Latitude N25°, For cities such as: Miami, FL**

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52		
Group 1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
Group 2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Group 3	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Group 4	L	L	L	L	L	L	L	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

**Latitude N30°, For cities such as: Jacksonville, FL; New Orleans, LA; San Antonio and Houston, TX**

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52			
Group 1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Group 2	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Group 3	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Group 4	L	L	L	L	L	L	L	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

**Latitude N35°, For cities such as: Atlanta, GA; Charlotte, NC; Little Rock, AR; Los Angeles, CA; Oklahoma City, OK**

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52			
Group 1	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
Group 2	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Group 3	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Group 4	L	L	L	L	L	L	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

**Latitude N40°, For cities such as: Baltimore, MD; Cincinnati, OH; Columbus, OH; Denver, CO; Indianapolis, IN; Philadelphia, PA; Salt Lake City, UT**

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52					
Group 1	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
Group 2	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Group 3	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Group 4	L	L	L	L	L	L	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

**Latitude N42.5°, For cities such as: Boston, MA; Buffalo, NY; Chicago, IL; Cleveland, OH; Kalamazoo, MI; Grand Rapids, MI; Toledo, OH**

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52					
Group 1	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Group 2	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Group 3	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Group 4	L	L	L	L	L	L	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

**Latitude N45°, For cities such as: Minneapolis, MN; Montreal, ON; Ottawa, ON; Portland, OR; Traverse City, MI; Toronto, ON**

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52						
Group 1	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
Group 2	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Group 3	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Group 4	L	L	L	L	L	L	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

**Latitude N50°, For cities such as: Seattle, WA; Vancouver, BC; Winnipeg, MB**

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52							
Group 1	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
Group 2	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Group 3	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Group 4	L	L	L	L	L	L	L	L	L	L	L	L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

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## **PERENNIALS**

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## **CUT FLOWERS**

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## **HANDPICKED VEGETABLES & HERBS**

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annuals

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
ABUTILON <b>Bella</b>	RAW	288 or larger	3-5	1	Yes	3	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Space plants adequately to get the best branching and the showiest plants.
AGERATUM <b>High Tide</b>	PEL	406 or larger	4	1	No	3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Do not let the seedlings wilt, as ageratum doesn't like moisture stress.
ALSTROEMERIA <b>Jazze®</b>	RAW	288 or larger	8-9	1	Yes	21-28		(t) 72-75°F (22-24°C)				Follow the GrowerFacts germination recommendations closely.
ALTERNANTHERA <b>Purple Knight</b>	RAW	288 or larger	4	1	Light cover	3-4	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Light	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-71°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
ALTERNANTHERA <b>Purple Prince</b>	RAW	288 or larger	4	1	Light cover	3-4	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Light	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-71°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
ALYSSUM <b>Clear Crystal®</b>	COT, MPL	406 or larger	4	1	Yes	3-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C)	(m) Level 3 (t) 65-75°F (18-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-75°F (18-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-70°F (16-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Sow 1 multi-seed pellet or multiple-sow film-coated seed with 5 to 6 seeds per cell for best performance.  Note that the multi-seed pellet form requires a thick layer of vermiculite and sufficient water to dissolve the pellet at sowing; this is especially true in low humidity environments.  PGRs are not generally required for plug propagation. It is recommended to incorporate a Downy Mildew preventative fungicide program for alyssum plug propagation.
ALYSSUM <b>Easter Bonnet</b>	COT, RAW	406 or larger	4	5-6	Light cover	3-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3 (t) 65-75°F (18-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-75°F (18-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-70°F (16-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Multi-sowing is recommended with 5 to 6 seeds per plug cell. PGRs are not generally required for plug propagation. It is recommended to incorporate a Downy Mildew preventative fungicide program for alyssum plug propagation.
ALYSSUM <b>Snow Crystals</b>	RAW	406 or larger	4	5-6	Light cover	3-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3 (t) 65-75°F (18-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-75°F (18-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-70°F (16-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Multi-sowing is recommended with 5 to 6 seeds per plug cell. PGRs are not generally required for plug propagation. It is recommended to incorporate a Downy Mildew preventative fungicide program for alyssum plug propagation.
ANGELONIA <b>Serena®</b>	PEL	288 or larger	5-6	1	No	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Light	(m) Level 3 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Light is required for germination. Grow on dry side but do not allow plants to wilt.
ANGELONIA <b>Serenita®</b>	PEL	288 or larger	5-6	1	No	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Light	(m) Level 3 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Light is required for germination. Grow on dry side but do not allow plants to wilt.
ASTER <b>Pot 'N Patio</b>	RAW	406 or larger	4-5	1	Yes	3-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C)	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-70°F (16-21°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Flowers just 90 days from sowing during the short days of Winter and early Spring.
BACOPA <b>Blutopia®</b>	MPL	288 or larger	3-4	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Light	(m) Level 3-4 (t) 65-75°F (18-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-75°F (18-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-70°F (16-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Use of PGRs or growing outdoors will give a much more controlled plant. Be sure to water multi-seed pellets thoroughly and give light for best germination.
BACOPA <b>Snowtopia®</b>	MPL	288 or larger	3-4	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Light	(m) Level 3-4 (t) 65-75°F (18-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-75°F (18-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-70°F (16-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Use of PGRs or growing outdoors will give a much more controlled plant. Be sure to water multi-seed pellets thoroughly and give light for best germination.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
BEGONIA <b>BabyWing®</b>	PEL	288 or larger	7-8	1	No	7-10	5.8-6.2 pH 0.5 mmhos/cm	(m) Level 5 (t) 72-77°F (22-25°C) (l) Optional	(m) Level 4-5 (t) 72-75°F (22-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Keep moisture high until the first true leaf develops.
BEGONIA <b>Dragon Wing®</b>	PEL	288 or larger	7-8	1	No	7-10	5.4-6.0 pH 0.5 mmhos/cm	(m) Level 5 (t) 72-77°F (22-25°C) (l) Optional	(m) Level 4-5 (t) 72-75°F (22-24°C) (l) 400-2,000 f.c. (4,300-21,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Keep moisture high until first true leaf develops.
BEGONIA <b>Megawatt</b>	PEL	288 or larger	7-8	1	No	7-10	5.8-6.2 pH 0.5 mmhos/cm	(m) Level 5 (t) 72-77°F (22-25°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 4-5 (t) 72-75°F (22-24°C) (l) 6 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Keep soil moist until the first true leaf develops.
BEGONIA HYBRIDA <b>Gryphon</b>	PEL	288 or larger	8-9	1	No	10-12	5.8-6.2 pH 0.5 mmhos/cm	(m) Level 5 (t) 72-77°F (22-26°C) (l) Light	(m) Level 4-5 (t) 71-76°F (22-24°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	A saturated media and high relative humidity are critical to successful germination.
BRAZILIAN FIREWORKS <b>Maracas</b>	RAW	288 or larger	5-6	1	Yes	4-5	5.5-6.1 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-75°F (18-24°C) (l) Dark	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 66-68°F (19-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Heat-loving crop; crop time is very dependant on temperature.
BROWALLIA <b>Bells</b>	RAW	406 or larger	5	1	Yes	7-15		(t) 75-80°F (24-27°C)				Requires long days to bloom.
CALIBRACHOA <b>Crave Collection</b>	PEL	288 or larger	5-6	1	Optional	5-7	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 5 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 4 (t) 68-72°F (20-22°C) (l) 10-12 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,500-2,750 ppm Drench or flurprimidol 2-3 ppm Spray or paclobutrazol 3-4 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 10-15 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,500-2,750 ppm Spray or flurprimidol 2-3 ppm Spray or paclobutrazol 3-4 ppm Spray	(m) Level 2-4 (t) 55-64°F (13-18°C) (l) 10-20 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,500-2,750 ppm Spray or flurprimidol 2-3 ppm Spray or paclobutrazol 3-4 ppm Spray	Plug Stage and Timing Stage 1 at 75°F (25°C) 5 days Stage 1 at 68°F (20°C) 7 days  Pinch recommended for small pots and low DLI conditions. Pinch, leaving at least 4 nodes.
CALIBRACHOA <b>Kabloom®</b>	PEL	288 or larger	5-6	1	Optional	5-7	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 5 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 4 (t) 68-72°F (20-21°C) (l) 10-12 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,000-2,500 ppm Spray or flurprimidol 2-3 ppm Spray or paclobutrazol 2-3 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 10-15 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,000-2,500 ppm Spray or flurprimidol 2-3 ppm Spray or paclobutrazol 2-3 ppm Spray	(m) Level 2-4 (t) 55-64°F (13-18°C) (l) 10-20 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,000-2,500 ppm Spray or flurprimidol 2-3 ppm Spray or paclobutrazol 2-3 ppm Spray	Plug Stage and Time By Variety Fast-germinating Varieties: Kabloom White Kabloom Deep Pink Kabloom Yellow Stage 1 at 75°F (25°C) for 5 days Stage 1 at 68°F (20°C) for 5-7 days  Slow-germinating Variety: Kabloom Deep Blue Stage 1 at 75°F (25°C) for 7-10 days Stage 1 at 68°F (20°C) for 10+ days  Pinch recommended for small pots and low DLI conditions. Pinch, leaving at least 4 nodes.
CELOSIA <b>Arrabona</b>	COT	288 or larger	3-4	1	Light cover	2-4	5.8-6.2 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Light	(m) Level 4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	To prevent premature flowering, keep growing plugs under day length of 14 hours or longer due to short-day flowering response. Don't allow media to dry out. Celosia makes a taproot and is sensitive to root damage. Transplant on time and do not allow seedlings to get rootbound.
CELOSIA <b>Dracula</b>	COT	288 or larger	3-4	1	Light cover	2-4	5.8-6.2 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light	(m) Level 4 (t) 68-72°F (20-22°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Keep medium constantly moist; do not allow to dry out.
CELOSIA <b>First Flame</b>	COT	288 or larger	3-4	1	Light cover	2-4	5.8-6.2 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Light	(m) Level 4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	To prevent premature flowering, keep growing plugs under day length of 14 hours or longer due to short day flowering response. Don't allow media to dry out. Celosia makes a taproot and is sensitive to root damage. Transplant on time and do not allow seedlings to get rootbound.
CELOSIA <b>Glow</b>	RAW	288 or larger	4-5	1	Yes	2-4	5.8-6.2 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Light	(m) Level 4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Create a unique pot crop by sowing 10-15 seeds into a 4-in. (10-cm) container. This produces an interesting mini-forest of celosia.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
CELOSIA <b>Ice Cream</b>	COT	288 or larger	3-4	1	Light cover	2-4	5.8-6.2 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Light	(m) Level 4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Keep medium constantly moist; do not allow to dry out. To prevent premature flowering, keep growing plugs under day length of 14 hours or longer due to short-day flowering response.
CELOSIA <b>Kosmo</b>	COT	288 or larger	3-4	1	Light cover	2-4	5.5-6.2 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Light	(m) Level 4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Keep medium constantly moist; do not allow to dry out.
COLEUS <b>Black Dragon</b>	RAW	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS <b>Wizard®</b>	RAW	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SHADE <b>Kong Jr.</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SHADE <b>Kong®</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SUN <b>Chocolate Covered Cherry</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SUN <b>Chocolate Mint</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.7 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SUN <b>Chocolate Splash</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.08 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SUN <b>Crimson Gold</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SUN <b>Dark Chocolate</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SUN <b>Lime Delight</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SUN <b>Mighty Mosaic</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.



CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
COLEUS, PREMIUM SUN <b>Pineapple Surprise</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SUN <b>Rose to Lime Magic</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLEUS, PREMIUM SUN <b>Watermelon</b>	PEL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Coleus is very sensitive to high salts, particularly high ammonium. During germination, keep ammonium levels lower than 10 ppm. PGRs are generally not needed; see GrowerFacts for more information.
COLORGRASS® ANEMANTHELE <b>Sirocco</b>	MPL	288 or larger	5-6	1	No	5-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-76°F (18-24°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Color is better under cool and high light conditions. If temperature permits, it is best to produce Sirocco in outdoor conditions.
COLORGRASS® CAREX <b>Amazon Mist</b>	MPL	288 or larger	6-7	1	Yes	7-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-79°F (20-26°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
COLORGRASS® CAREX <b>Bronco</b>	MPL	288 or larger	6-7	1	No	7-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 74-79°F (23-26°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
COLORGRASS® CAREX <b>Phoenix Green</b>	MPL	288 or larger	5-7	1	No	7-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 74-79°F (23-26°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
COLORGRASS® CAREX <b>Red Rooster</b>	MPL	288 or larger	6-7	1	No	7-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 74-79°F (23-26°C) (l) Optional	(m) Level 3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
COLORGRASS® CORYNEPHORUS <b>Spiky Blue</b>	MPL	288 or larger	6-7	1	Light cover	3-6	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-79°F (20-26°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
COLORGRASS® ERAGROSTIS <b>Wind Dancer</b>	MPL	288 or larger	3-4	1	No	2-3	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 64-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 64-66°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Grows well under outdoor nursery conditions if temperature permits. If produced in a greenhouse, grow on the dry side with low feed.
COLORGRASS® FESTUCA <b>Festina</b>	MPL	288 or larger	6-7	1	Yes	3-6	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-72°F (18-22°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
COLORGRASS® ISOLEPIS <b>Live Wire</b>	MPL	288 or larger	5	1	No	6	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Light	(m) Level 3-4 (t) 64-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 64-66°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Sow uncovered at 65°F (18°C) for fastest and most uniform germination; prefers moist soil.
COLORGRASS® JUNCUS <b>Blue Arrows</b>	MPL	288 or larger	6-7	1	No	7-8	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 64-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 64-66°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
COLORGRASS® JUNCUS <b>Blue Dart</b>	MPL	288 or larger	6-7	1	No	7-8	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Light	(m) Level 3-4 (t) 64-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 64-66°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Excellent substitute for Draecena Spike.
COLORGRASS® JUNCUS <b>Javelin</b>	MPL	288 or larger	5-6	1	No	5-6	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Light	(m) Level 3-4 (t) 64-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 64-66°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	To prevent leaf bending, Bonzi 30 ppm spray can be used.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
COLORGRASS® JUNCUS <b>Starhead</b>	MPL	288 or larger	6-7	1	No	7-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-72°F (18-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 64-79°F (18-26°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 64-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 61-64°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
COLORGRASS® KOELERIA <b>Coolio</b>	MPL	288 or larger	6-7	1	No	4-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-74°F (18-23°C) (l) Light	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Requires light to germinate.
COLORGRASS® LUZULA <b>Lucius</b>	MPL	288 or larger	4-7	1	Yes	10-12	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Light	(m) Level 3-4 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 61-64°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Requires light to germinate. Make sure plants don't get too wet.
COLORGRASS® LUZULA <b>Starmaker</b>	MPL	288 or larger	4-7	1	Yes	10-12	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Light	(m) Level 3-4 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 61-64°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Requires light to germinate. Make sure plants don't get too wet.
COLORGRASS® STIPA <b>Pony Tails</b>	MPL	288 or larger	4-5	1	No	4-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-75°F (18-24°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
COSMOS <b>Antiquity</b>	RAW	288 or larger	4-5	1	Yes	3-5	5.7-5.9 pH 0.3-0.5 mmhos/cm	(m) Level 4 (t) 61-65°F (16-18°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 61-65°F (16-18°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 61-65°F (16-18°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 61-65°F (16-18°C) (f) Less than 100 ppm N - Less than 0.7 EC	Can treat the plugs at early Stage 1 with Bonzi at 15 ppm applied as a spray to control early stretch. Day length extension in the plug stage may be used to prevent premature flowering.
COSMOS <b>Sonata</b>	RAW	288 or larger	4-5	1	Yes	3-4	5.7-5.9 pH 0.3-0.5 mmhos/cm	(m) Level 4 (t) 61-65°F (16-18°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 61-65°F (16-18°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 61-65°F (16-18°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 61-65°F (16-18°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Can treat the plugs at early Stage 1 with Bonzi at 15 ppm applied as a spray to control early stretch. Day length extension in the plug stage may be used to prevent premature flowering.
CRASPIDIA GLOBOSA <b>Billy Buttons</b>	RAW	288 or larger	6-7	2-5	Light cover	10-14	5.6-5.9 pH 0.5-0.7 mmhos/cm	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Best grown as annual.
CROSSANDRA <b>Tropic</b>	RAW	406 or larger	6-7	1	Yes	7-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 78-82°F (26-28°C) (l) Optional	(m) Level 3-4 (t) 70-72°F (21-22°C) (l) 1,000-1,500 f.c. (10,800-16,100 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-72°F (21-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 70-72°F (21-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Best in tropical and semi-tropical climates.
CUPHEA IGNEA <b>Dynamite</b>	RAW	288 or larger	5-6	3-4	Light cover	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No PGRs required.
DAHLIA <b>Figaro</b>	RAW	288 or larger	4-5	1	Yes	3-7	5.5-5.8 pH 0.5-0.75 mmhos/cm	(m) Level 3 (t) 68-73°F (20-23°C)	(m) Level 3 (t) 68-73°F (20-23°C)	(m) Level 2-3 (t) 65-70°F (18-21°C)	(m) Level 2-3 (t) 65-70°F (18-21°C)	If germ chamber is used, move trays to greenhouse at first sign of germination.
DESCHAMPSIA <b>Zephyr</b>	MPL	288 or larger	4-5	1	No	4-5	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-71°F (18-22°C) (l) Light	(m) Level 3-4 (t) 64-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 64-66°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
DIANTHUS <b>Dash</b>	PEL	288 or larger	5-6	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 5-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 5 ppm Spray	(m) Level 2-3 (t) 55-60°F (13-16°C) (l) 10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DIANTHUS <b>Dynasty</b>	PEL	288 or larger	5-6	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 5 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 5 ppm Spray	(m) Level 2-3 (t) 55-60°F (13-16°C) (l) 10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DIANTHUS <b>Floral Lace</b>	PEL, RAW	288 or larger	4-6	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 5 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 5 ppm Spray	(m) Level 2-3 (t) 55-60°F (13-16°C) (l) 10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
DIANTHUS <b>Ideal Select</b>	PEL, RAW	288 or larger	4-6	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 5 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 5 ppm Spray	(m) Level 2-3 (t) 55-60°F (13-16°C) (l) 10 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DIANTHUS (INTERSPECIFIC) <b>Jolt</b>	PEL	288 or larger	5-6	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 5-8 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC (p) paclobutrazol 5 ppm Spray	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 5 ppm Spray	(m) Level 2-3 (t) 55-60°F (13-16°C) (l) 10 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DIASCIA <b>Diamonte</b>	RAW	288 or larger	4	4	Light cover	4-6	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 60-66°F (16-19°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Plants can be grown on with much cooler temperatures, but crop time will be longer. Do not use PGRs before radicle emergence, as this can delay or stop germination. See GrowerFacts for PGR details.
DICHONDRA <b>Emerald Falls</b>	MPL	288 or larger	5-6	1	Light cover	4-5	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Grows best in warm and dry conditions. Use light feed. Rinse foliage after feeding to avoid salt burn.
DICHONDRA <b>Silver Falls</b>	RAW	288 or larger	5	1	Light cover	4-5	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Grows best in warm and dry conditions. Use light feed. Rinse foliage after feeding to avoid salt burn.
EUPHORBIA <b>Glamour</b>	RAW	288 or larger	3-4	1-2	Optional	3-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-72°F (18-22°C) (l) Optional	(m) Level 4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray or daminozide 2,500-5,000 ppm Spray	(m) Level 2-3 (t) 65-72°F (18-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid temperatures below 62°F (16°C) as cooler temperatures cause foliage yellowing. Plug sizes 128 or larger should be sown at 2 seeds per cell. Can apply daminozide (B-Nine) 2,500 to 5,000 ppm spray for height control with first application at true leaf stage, followed by a second application 7 days later. Alternatively, an application of paclobutrazol srench at 2.5 ppm or drench at 0.25 to 0.5 ppm at radical emergence has also been effective in controlling hypocotyl stretch. This should be followed by a single daminozide spray of 2,500 to 5,000 ppm in stage 3.
EUPHORBIA <b>Glitz</b>	RAW	288 or larger	4-5	1-2	Optional	3-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-72°F (18-22°C) (l) Optional	(m) Level 4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray or daminozide 2,500 ppm Spray	(m) Level 2-3 (t) 65-72°F (18-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid temperatures below 62°F (16°C) as cooler temperatures cause foliage yellowing. Plug sizes 128 or larger should be sown at 2 seeds per cell. Can apply daminozide (B-Nine) 2,500 to 5,000 ppm spray for height control with first application at true leaf stage, followed by a second application 7 days later. Alternatively, an application of paclobutrazol srench at 2.5 ppm or drench at 0.25 to 0.5 ppm at radical emergence has also been effective in controlling hypocotyl stretch. This should be followed by a single daminozide spray of 2,500 to 5,000 ppm in stage 3.
FUSEABLES® <b>Bacopa</b>	PMPL	288 or larger	4-5	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-73°F (20-23°C) (l) Light	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 59-65°F (15-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
FUSEABLES® <b>Calibrachoa</b>	PMPL	288 or larger	4-5	1	No	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 5 (t) 68-73°F (20-25°C) (l) Optional	(m) Level 4-5 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-4 (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
FUSEABLES® <b>Coleus</b>	PMPL	288 or larger	5-6	1	Light cover	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 71-73°F (22-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 59-64°F (15-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
FUSEABLES® <b>Petunia</b>	PMPL	288 or larger	5-6	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 5 (t) 72-76°F (22-24°C) (l) Light	(m) Level 4-5 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 5,000 ppm Spray	Use the same PGR regime as that for standard or spreading petunia. Note that Pleasantly Blue responds better to a B-Nine spray than it does to a Bonzi spray or drench. So for this specific Fuseables, the use of B-Nine is preferred.
FUSEABLES® <b>Petunia-Bacopa</b>	PMPL	288 or larger	4-5	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 5 (t) 72-76°F (22-24°C) (l) Light	(m) Level 4-5 (t) 68-76°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 2-5 ppm Spray	(m) Level 2-4 (t) 59-64°F (15-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Do not use B-Nine/Alar or Topflor for height control, as they will stunt bacopa.
FUSEABLES® <b>Twisted Arrows</b>	MPL	288 or larger	7-9	1	No	7-8	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
FUSEABLES® <b>Twisted Dart</b>	MPL	288 or larger	7-9	1	No	7-8	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
FUSEABLES® <b>Viola</b>	PMPL	288 or larger	4-5	1	No	3-4	5.4-5.8 pH 0.75 mmhos/cm	(m) Level 5 (t) 65-68°F (18-20°C) (l) Optional	(m) Level 4-5 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-67°F (18-19°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 3-5 ppm Spray	(m) Level 2-4 (t) 53-60°F (12-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
FUSEABLES® <b>Viola-Alyssum</b>	PMPL	288 or larger	3-4	1	No	2-4	5.4-5.8 pH 0.75 mmhos/cm	(m) Level 5 (t) 65-68°F (18-20°C) (l) Optional	(m) Level 4-5 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-67°F (18-19°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 3-5 ppm Spray	(m) Level 2-4 (t) 53-60°F (12-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
GAZANIA <b>New Day®</b>	COT	288 or larger	4-5	1	Yes	3-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	PGRs are generally not required for producing gazania plugs. Avoid excessive salt accumulation/high EC in the plug media during plug production, as this will cause leaf tip or margin burn.
GAZANIA <b>Sunshine</b>	RAW	406 or larger	4-5	1	Yes	3-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	PGRs are generally not required for plug production. Avoid excessive salt accumulation in the plug media during plug production, as this will cause leaf tip or margin burn.
GERANIUM (IVY) <b>Summer Showers</b>	RAW	288 or larger	4-5	1	Yes	3-5	5.8-6.2 pH 0.75-1.0 mmhos/cm	(m) Level 4-5 (t) 70-74°F (21-23°C) (l) Optional	(m) Level 2-4 (t) 68-70°F (20-21°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 10-12 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 12-14 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
GERBERA <b>Revolution</b>	COT	128 or larger	6-7	1	Light cover	4-7	5.5-5.8 pH 0.5-0.7 mmhos/cm	(m) Level 5 (t) 70-74°F (21-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 4 (t) 68-70°F (20-21°C) (l) 6 mol-m <sup>-2</sup> -d <sup>-1</sup> , 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-70°F (20-21°C) (l) 6-8 mol-m <sup>-2</sup> -d <sup>-1</sup> , 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 66-68°F (19-20°C) (l) 6-8 mol-m <sup>-2</sup> -d <sup>-1</sup> , 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Do not pot too deeply when transplanting, as this may result in crown rot. Space plants when the leaves of the plants are touching each other, generally 5 to 6 weeks after transplanting.
GOMPHRENA <b>Fireworks</b>	COT	406 or larger	5-6	1	Yes	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-75°F (20-24°C) (l) Light	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	If needed, young plants respond well to daminozide.
HELENIUM AMARUM <b>Dakota Gold</b>	MPL	288 or larger	3-4	1	Yes	3-5	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-75°F (18-24°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Day length affects plant growing habit and crop time. See GrowerFacts for details.
HELIANTHUS <b>Ballad</b>	TRT	288 or larger	2-3	1	Yes	3-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 1,000-1,250 ppm Spray	(m) Level 2 (t) 64-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-1,250 ppm Spray	(m) Level 2 (t) 61-72°F (16-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Can also be propagated by direct sowing when grown in smaller pots (4-in./10 cm, 4.5-in./11 cm, 5-in./13 cm).
HELIANTHUS <b>Miss Sunshine</b>	TRT	288 or larger	2-3	1	Yes	3-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 1,000-1,250 ppm Spray	(m) Level 3 (t) 64-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 61-72°F (16-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Can also be direct sown when finishing in smaller containers such as 4-in., 4.5-in. & 5-in.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
HELICHRYSUM <b>Silver Mist</b>	MPL	288 or larger	6-7	1	No	6-8	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Do not overwater. Avoid watering plants late in the day, as constant wet foliage may make plants susceptible to Botrytis. Does not require pinching.
HIBISCUS <b>Mahogany Splendor</b>	RAW	288 or larger	2-3	1	Yes	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide/chlormequat chloride tank mix 2,500/300 ppm Spray	(m) Level 3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Light for germination is optional.
HYPOESTES <b>Splash Select</b>	RAW	288 or larger	4-5	1	Yes	2-3	5.5-6.0 pH 0.5-0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional	(m) Level 3-4 (t) 66-68°F (19-20°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 66-68°F (19-20°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 66-68°F (19-20°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Too much light will cause leaves to curl. Grow under low light conditions (400 to 500 f.c./4,000 to 5,000 Lux).
IMPATIENS <b>Dazzler®</b>	COT	512 or larger	4-5	1	No	3-5	6.0-6.2 pH 0.5-0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Do not cover seed.
IMPATIENS <b>Impreza®</b>	RAW	512 or larger	4-5	1	No	3-5	6.0-6.2 pH 0.5-0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Do not cover seed.
IMPATIENS <b>Super Elfin®</b>	RAW	512 or larger	4-5	1	No	3-5	6.0-6.2 pH 0.5-0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Do not cover seed.
IMPATIENS <b>Super Elfin® XP</b>	RAW	512 or larger	4-5	1	No	3-5	6.0-6.2 pH 0.5-0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Do not cover seed.
IMPATIENS (NEW GUINEA) <b>Divine</b>	RAW	288 or larger	5-6	1	No	5-8	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 5 (t) 74-77°F (23-25°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-74°F (21-23°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-74°F (21-23°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-74°F (21-23°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	PGRs are generally not needed. See GrowerFacts for more information.
INCARVILLEA <b>Cheron</b>	RAW	288 or larger	4-6	3-4	Light cover	4-6	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 3-4 (t) 65-68°F (18-20°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-72°F (20-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 68-72°F (20-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Final height does not respond well to PGRs. Avoid using B-Nine/Alar in later application, as it can significantly delay flowering.
IRESINE <b>Purple Lady</b>	RAW	288 or larger	4-5	1	Yes	3-4	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C)	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Reddish foliage indicates plants need more feed. High light, especially with low humidity, results in puckered foliage.
ISOTOMA <b>Gemini</b>	PEL	288 or larger	4-5	2-4	No	5-8	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional	(m) Level 4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-1,500 ppm Spray	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Incorporate a preventative fungicide program to avoid damping-off.
ISOTOMA <b>Tristar</b>	PEL	288 or larger	4-5	2-4	No	5-8	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-1,500 ppm Spray	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Incorporate a preventative fungicide program to avoid damping-off.
JUNCUS <b>Twister</b>	MPL	288 or larger	7-8	1	No	10-13	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-78°F (21-26°C) (l) Optional	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 64-66°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Great for mixed containers. USDA Hardiness Zones 5 to 9.
LEYCESTERIA <b>Jealousy</b>	MPL	288 or larger	7-8	1	Light cover	9-12	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Light	(m) Level 4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Requires light to germinate.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
LINARIA <b>Enchantment</b>	MPL	288 or larger	4-5	1	Yes	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (p) paclobutrazol 2 ppm Spray	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC (p) paclobutrazol 5 ppm Spray	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Stage 1 early PGR application is very important for avoiding leggy/stretchy seedlings.
LISIANTHUS <b>Florida</b>	PEL	406 or larger	8-10	1	No	8-12	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-80°F (22-27°C) (l) Light	(m) Level 2-3 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 1-3 (t) 65-68°F (18-20°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-3 (t) 62-65°F (17-18°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain pH above 6.5. Do not allow plugs to become rootbound. Lisianthus are tender seedlings and are recommended as a plug-purchased item.
LISIANTHUS <b>Forever</b>	PEL	406 or larger	8-10	1	No	8-12	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light	(m) Level 2-3 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 1-3 (t) 65-68°F (18-20°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-3 (t) 62-65°F (17-18°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain pH above 6.5. Do not allow plugs to become rootbound. Lisianthus are tender seedlings and are recommended as a plug-purchased item.
LISIANTHUS <b>Sapphire</b>	PEL	406 or larger	8-10	1	No	8-12	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light	(m) Level 2-3 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 1-3 (t) 65-68°F (18-20°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-3 (t) 62-65°F (17-18°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain pH above 6.5. Do not allow plugs to become rootbound. Lisianthus are tender seedlings and are recommended as a plug-purchased item.
LOBELIA <b>Cambridge</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
LOBELIA <b>Cobalt Blue</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
LOBELIA <b>Crystal Palace</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
LOBELIA <b>Fountain</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
LOBELIA <b>Mrs Clibran</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
LOBELIA <b>Regatta</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 68-74°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 66-72°F (19-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 64-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
LOBELIA <b>Riviera</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 68-74°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 66-72°F (19-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 64-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
LOBELIA <b>Rosamond</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
LOBELIA <b>Sapphire Pendula</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
LOBELIA <b>String Of Pearls</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
LOBELIA <b>White Lady</b>	MPL, RAW	406 or larger	4-5	1	No	4-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
MARIGOLD (AFRICAN) <b>Garland</b>	DTL	288 or larger	3	1	Yes	2-3	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-72°F (20-22°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Higher temperatures inhibit germination, shorten crop time and cause stretching. PGRs not generally required.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
MARIGOLD (AFRICAN) <b>Lady</b>	DTL	288 or larger	3	1	Yes	2-3	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 65-70°F (18-21°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Higher temperatures inhibit germination, shorten crop time and cause stretching. PGRs not generally required.
MARIGOLD (AFRICAN) <b>Marvel</b>	COT, DTL	288 or larger	3	1	Yes	2-3	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 65-70°F (18-21°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Higher temperatures inhibit germination, shorten crop time and cause stretching. PGRs not generally required.
MARIGOLD (AFRICAN) <b>Taishan®</b>	COT, DTL	288 or larger	3	1	Yes	2-3	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 65-70°F (18-21°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Higher temperatures inhibit germination, shorten crop time and cause stretching. PGRs not generally required.
MARIGOLD (AFRICAN) <b>Vanilla</b>	COT, DTL	288 or larger	3	1	Yes	3-4	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-70°F (18-21°C) (l) 3,000 f.c. (32,300 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-70°F (18-21°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Keep soil moisture high until radicle emergence; reduce moisture levels after radicle penetrates the medium. Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Higher temperatures inhibit germination, shorten crop time and cause stretching. PGRs not generally required.
MARIGOLD (FRENCH) <b>Bonanza</b>	COT, DTL	288 or larger	3	1	Yes	2-3	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Boy</b>	COT, DTL, RAW	288 or larger	3	1	Yes	3-4	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Durango®</b>	COT, DTL	288 or larger	3	1	Yes	2-3	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Fireball</b>	COT, DTL	288 or larger	3	1	Yes	2-3	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
MARIGOLD (FRENCH) <b>Gate</b>	DTL, RAW	288 or larger	3	1	Yes	3-4	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Hot Pak</b>	COT, DTL	288 or larger	3	1	Yes	2-3	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Jacket</b>	RAW	288 or larger	3	1	Yes	3-4	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Janie</b>	COT, DTL	288 or larger	3	1	Yes	2-3	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Strawberry Blonde</b>	COT, DTL	288 or larger	3	1	Yes	2-3	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 68-75°F (20-24°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
MATTHIOLA <b>Hot Cakes</b>	RAW	406 or larger	4	1	Yes	3-4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional	(m) Level 3-4 (t) 60-70°F (16-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Seedlings of double-flowering plants can be selected during plug production based on cotyledon leaf color (double: pale green; yellow and singles: darker green). Once cotyledons have fully expanded (approximately 11 to 12 days from sowing), seedlings can be moved into a cold chamber/storage set at 40 to 45°F (4 to 7°C) for a period of approximately 3 to 4 days. Hold them in the chamber for a maximum of 4 days, after which they can be grown at cool temperatures (50 to 60°F/10 to 15°C) in a greenhouse until selection. It is possible to differentiate the seedlings starting after they come out of the cold chamber.
NEMESIA <b>Poetry</b>	PEL	288 or larger	4	4	Yes	4-5	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,500-2,500 ppm Spray	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Seedlings may be more stretchy if germinating under dark conditions. Do not use a growth regulator before radicle emergence, as this can delay or stop germination.
ORNAMENTAL MILLET <b>Jade Princess</b>	RAW	128 or larger	2-3	2-3	Yes	2-3	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-78°F (22-26°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Plugs allowed to become rootbound or stressed by drought or nutrient deficiency will not perform well after transplant. Use PGRs only if necessary to tone plugs. Seed may also be direct sown to the final container, reducing total crop time by 2 weeks. See GrowerFacts for details.
ORNAMENTAL MILLET <b>Jester</b>	RAW	128 or larger	2-3	2-3	Yes	2-3	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-78°F (22-26°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well after transplant. Seed may also be direct sown to the final container, reducing total crop time by 2 weeks. See GrowerFacts for details.
ORNAMENTAL MILLET <b>Purple Baron</b>	RAW	128 or larger	2-3	2-3	Yes	2-3	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-78°F (22-26°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well after transplant. Seed may also be direct sown to the final container, reducing total crop time by 2 weeks. See GrowerFacts for details.
ORNAMENTAL MILLET <b>Purple Majesty</b>	RAW	128 or larger	2-3	2-3	Yes	2-3	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-78°F (22-26°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well after transplant. Seed may also be direct sown to the final container, reducing total crop time by 2 weeks. See GrowerFacts for details.
ORNAMENTAL MINT <b>Mini Mint</b>	MPL	288 or larger	4-5	1	Yes	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Maintain constant media moisture, avoiding excessive wet or dry.
ORNAMENTAL PEPPER <b>Black Pearl</b>	RAW	288 or larger	4-5	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) uniconazole 2.5 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Performs best under high light and warm temperatures. In stage 1, keep ammonia levels lower than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
ORNAMENTAL PEPPER <b>Calico</b>	RAW	288 or larger	4-5	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) uniconazole 2.5 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Performs best under high light and warm temperatures. In stage 1, keep ammonia levels lower than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
ORNAMENTAL PEPPER <b>Chilly Chili</b>	RAW	288 or larger	4-5	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) uniconazole 2.5 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Performs best under high light and warm temperatures. In stage 1, keep ammonia levels lower than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.



CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
ORNAMENTAL PEPPER <b>Hot Pops</b>	RAW	288 or larger	4-5	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
ORNAMENTAL PEPPER <b>Masquerade</b>	RAW	288 or larger	4-5	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) uniconazole 2.5 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Performs best under high light and warm temperatures. In stage 1, keep ammonia levels lower than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
ORNAMENTAL PEPPER <b>Medusa</b>	RAW	288 or larger	4-5	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Performs best under high light and warm temperatures. In stage 1, keep ammonia levels lower than 10 ppm. Medusa is naturally compact and should not need PGRs. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
ORNAMENTAL PEPPER <b>Purple Flash</b>	RAW	288 or larger	4-5	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) uniconazole 2.5 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Performs best under high light and warm temperatures. In stage 1, keep ammonia levels lower than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
ORNAMENTAL PEPPER <b>Red Missile</b>	RAW	288 or larger	4-5	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) uniconazole 2.5 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Performs best under high light and warm temperatures. In stage 1, keep ammonia levels lower than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
ORNAMENTAL PEPPER <b>Sangria</b>	RAW	288 or larger	4-5	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) uniconazole 2.5 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Performs best under high light and warm temperatures. In stage 1, keep ammonia levels lower than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
ORNAMENTAL PEPPER <b>Sedona Sun</b>	RAW	288 or larger	4-5	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Performs best under high light and warm temperatures. In stage 1, keep ammonia levels lower than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied at 2 weeks after sowing for height control.
OSTEOSPERMUM <b>Akila®</b>	RAW	288 or larger	4-5	1	Yes	5-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-3,000 ppm Spray	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Using a larger liner such as a 105 at 1 spc will promote more branching and help reduce total crop time.
PANSY <b>Cool Wave®</b>	PRM	288 or larger	4-5	1	Yes	2-3	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,500-2,500 ppm Spray or daminozide/chlormequat chloride tank mix 1,500/250-2,500/500 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,500-2,500 ppm Spray or daminozide/chlormequat chloride tank mix 1,500/250-2,500/500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4. Cool Wave varieties do not respond uniformly to ancymidol in plug production, so its use is not recommended.  Using 105/128 plugs promotes stronger lateral growth and quicker finish. If using 288, use a younger, actively growing plug that is not rootbound.
PANSY <b>Fizzy</b>	PRM, RAW	288 or larger	5	1	Yes	3-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	(m) Level 2-4 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4.
PANSY <b>Frizzle Sizzle</b>	PRM, RAW	288 or larger	5	1	Yes	3-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	(m) Level 2-4 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
PANSY <b>Halloween II</b>	PRM, RAW	288 or larger	5	1	Yes	3-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	(m) Level 2-4 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4.
PANSY <b>Matrix®</b>	PRM, RAW	288 or larger	5	1	Yes	3-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	(m) Level 2-4 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4.
PANSY <b>Panola®</b>	PRM, RAW	288 or larger	5	1	Yes	3-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	(m) Level 2-4 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4.
PANSY <b>Panola® XP</b>	PRM, RAW	288 or larger	5	1	Yes	3-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	(m) Level 2-4 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4.
PANSY <b>Promise®</b>	PRM, RAW	288 or larger	5	1	Yes	3-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	(m) Level 2-4 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4.
PANSY <b>Spring Matrix</b>	PRM, RAW	288 or larger	5	1	Yes	3-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	(m) Level 2-4 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4.
PENTAS <b>Butterfly</b>	PEL	288 or larger	8-10	1	No	6-9	6.5-6.8 pH 0.08 mmhos/cm	(m) Level 4-5 (t) 75°F (24°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 75°F (24°C) (l) 1,500-2,000 f.c. (16,100-21,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-68°F (18-20°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 3,500-5,000 f.c. (37,700-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Maintain pH at 6.5 to 6.8 for growing on. At pH levels below 6.5, iron toxicity and calcium/magnesium deficiency may develop. See GrowerFacts for PGR information.
PENTAS <b>Glitterati</b>	PEL	288 or larger	8-10	1	No	6-9	6.5-6.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 75°F (24°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 75°F (24°C) (l) 1,500-2,000 f.c. (16,100-21,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-68°F (18-20°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 3,500-5,000 f.c. (37,700-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Maintain pH at 6.5 to 6.8 for growing on. At pH levels below 6.5, iron toxicity and calcium/magnesium deficiency may develop.
PETUNIA <b>Carpet</b>	PEL, RAW	512 or larger	5-6	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Light	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	See GrowerFacts for more information.
PETUNIA <b>Daddy®</b>	PEL, RAW	288 or larger	4-5	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Light	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	See GrowerFacts for more information.
PETUNIA <b>Debonair Collection</b>	PEL	288 or larger	4-6	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 2-3 ppm Drench	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid using B-Nine on Black Cherry as this may impact flower colour. Options include Bonzi or Topflor.
PETUNIA <b>Dreams</b>	PEL, RAW	512 or larger	5-6	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Light	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
PETUNIA <b>Ez Rider®</b>	PEL	288 or larger	5-6	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Genetically compact, needs less to no PGR after transplant.
PETUNIA <b>Lo Rider®</b>	PEL	288 or larger	5-6	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Genetically compact, needs less to no PGR after transplant.
PETUNIA <b>Madness®</b>	PEL, RAW	512 or larger	5-6	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Light	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
PETUNIA <b>Mirage</b>	PEL, RAW	512 or larger	5-6	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
PETUNIA <b>Pretty Flora</b>	PEL	288 or larger	5-6	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 2-3 ppm Drench	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Genetically compact, needs less to no PGR after transplant.
PETUNIA <b>Pretty Grand</b>	PEL	288 or larger	5-6	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Genetically compact, needs less to no PGR after transplant.
PETUNIA <b>Sophistica® Collection</b>	PEL	288 or larger	4-6	1	No	4	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 2-3 ppm Drench	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid using B-Nine on Lime Bicolor and Blackberry as this may impact flower colour. Options include Bonzi or Topflor.
PETUNIA <b>Supercascade</b>	PEL, RAW	512 or larger	5-6	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-76°F (22-24°C) (l) Light	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 2,500-4,000 f.c. (26,900-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	See GrowerFacts for more information.
PETUNIA (DOUBLE) <b>Bonanza</b>	PEL, RAW	288 or larger	4-5	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 75-78°F (24-26°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Germination on some varieties may be improved by a 25 to 50 ppm N application of potassium nitrate after sowing. See Grower Facts for details.
PETUNIA (DOUBLE) <b>Double Cascade</b>	PEL, RAW	288 or larger	4-5	1	No	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Germination on some varieties may be improved by a 25 to 50 ppm N application of potassium nitrate after sowing. See Grower Facts for details.
PETUNIA (DOUBLE) <b>Duo</b>	PEL, RAW	288 or larger	4-5	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Germination on some varieties may be improved by a 25 to 50 ppm N application of potassium nitrate after sowing. See Grower Facts for details.
PETUNIA (DOUBLE) <b>Glorious</b>	PEL, RAW	288 or larger	4-5	1	No	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(t) 68-75°F (20-24°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(t) 65-70°F (18-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(t) 60-62°F (16-17°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Germination on some varieties may be improved by a 25 to 50 ppm N application of potassium nitrate after sowing. See Grower Facts for details.
PETUNIA (DOUBLE) <b>Madness</b>	PEL, RAW	288 or larger	4-5	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 75-78°F (24-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Germination on some varieties may be improved by a 25 to 50 ppm N application of potassium nitrate after sowing. See Grower Facts for details.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
PETUNIA (DOUBLE) <b>Pirouette</b>	PEL, RAW	288 or larger	4-5	1	No	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 60-62°F (16-17°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Germination on some varieties may be improved by a 25 to 50 ppm N application of potassium nitrate after sowing. See Grower Facts for details.
PETUNIA (DOUBLE) <b>Valentine</b>	PEL, RAW	288 or larger	4-5	1	No	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 62-60°F (17-16°C) (l) 450-700 f.c. (4,800-7,500 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Germination on some varieties may be improved by a 25 to 50 ppm N application of potassium nitrate after sowing. See Grower Facts for details.
PETUNIA (SPREADING) <b>Easy Wave®</b>	PEL	288 or larger	4-6	1	No	3-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 6 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 8-12 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 2,500-4,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 8-15 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	
PETUNIA (SPREADING) <b>Shock Wave®</b>	PEL	288 or larger	4-6	1	No	3-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 6 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 8-12 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 2,500-4,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 8-15 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	
PETUNIA (SPREADING) <b>Tidal Wave®</b>	PEL	288 or larger	4-6	1	No	3-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 6 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 8-12 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 2,500-4,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 8-15 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray or paclobutrazol 3-6 ppm Spray	
PETUNIA (SPREADING) <b>Wave®</b>	PEL	288 or larger	5-6	1	No	4-6	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 6 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 8-12 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 2,500-4,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray	(m) Level 2-4 (t) 60-65°F (16-18°C) (l) 8-15 mol·m <sup>-2</sup> ·d <sup>-1</sup> , 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500-5,000 ppm Spray or paclobutrazol 3-6 ppm Spray	
PHLOX <b>21st Century</b>	PRM	406 or larger	4-5	1	Yes	3-5	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Dark	(m) Level 3-4 (t) 65-72°F (18-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-72°F (18-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-72°F (18-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Cover thoroughly with coarse vermiculite. Darkness is required for germination.
PHLOX <b>Ethnie</b>	RAW	406 or larger	4-5	1	Yes	3-5	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Dark	(m) Level 3-4 (t) 65-70°F (18-21°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-72°F (18-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-72°F (18-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
PHLOX <b>Grammy Pink &amp; White</b>	PRM	406 or larger	4-5	1	Yes	3-5	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Dark	(m) Level 3-4 (t) 65-72°F (18-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-72°F (18-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-72°F (18-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Cover thoroughly with coarse vermiculite. Darkness is required for germination.
PHLOX <b>Promise</b>	RAW	406 or larger	4-5	1	Yes	3-5	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Dark	(m) Level 3-4 (t) 65-70°F (18-21°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-72°F (18-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 65-72°F (18-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
PLECTRANTHUS <b>Silver Crest</b>	RAW	288 or larger	5-6	1	No	4-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-72°F (18-22°C) (l) Light	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 600-1,200 ppm Spray	(m) Level 2-3 (t) 65-72°F (18-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Does not need pinching. If needed, a daminozide spray will work to tone the plugs.
PLECTRANTHUS <b>Silver Shield</b>	PEL	288 or larger	5-6	1	No	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-72°F (18-22°C) (l) Light	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-3 (t) 65-72°F (18-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Does not need pinching. One to two foliar sprays of daminozide may be needed to tone plugs. Daminozide applications at a rate of 600 to 1,500 ppm are best for Northern European conditions.
PORTULACA <b>Happy Hour</b>	MPL, RAW	288 or larger	4-5	2-4	No	2-3	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-79°F (22-26°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 71-73°F (22-23°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-73°F (20-23°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 65-67°F (18-19°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Portulaca is sensitive to short days, even during the plug stage. See GrowerFacts for details.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
PORTULACA <b>Happy Trails</b>	MPL, RAW	288 or larger	4-5	2-4	No	2-3	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-79°F (22-26°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 71-73°F (22-23°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-73°F (20-23°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 65-67°F (18-19°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Portulaca is sensitive to short days, even during the plug stage. See GrowerFacts for details.
PRIMULA ACAULIS <b>Primlet®</b>	RAW	288 or larger	6-7	1	Light cover	7-10	5.5-5.8 pH	(m) Level 4-5 (t) 64°F (18°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 64-68°F (18-20°C) (l) 500-1,500 f.c. (5,400-16,100 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
PURSLANE <b>Toucan</b>	RAW	288 or larger	4-5	4	No	3-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	PGRs not needed.
RUELLIA <b>Southern Star</b>	RAW	288 or larger	5-6	1	Yes	5-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
SALVIA <b>Flare</b>	RAW	406 or larger	4-5	1	Yes	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-72°F (20-22°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Salvia is very sensitive to high salt during early plug stages.
SALVIA <b>Lighthouse</b>	RAW	406 or larger	4-5	1	Yes	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-72°F (20-22°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Salvia is very sensitive to high salt during early plug stages.
SALVIA <b>Scarlet King</b>	RAW	406 or larger	4-5	1	Yes	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-72°F (20-22°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Salvia is very sensitive to high salt during early plug stages.
SALVIA <b>Scarlet Queen</b>	RAW	406 or larger	4-6	1	Yes	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-72°F (20-22°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Salvia is very sensitive to high salt during early plug stages.
SALVIA <b>Vista</b>	RAW	406 or larger	4-5	1	Yes	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional	(m) Level 3-4 (t) 72-75°F (22-24°C) (l) 1,500 f.c. (16,100 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-72°F (20-22°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 3,000 f.c. (32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Salvia is very sensitive to high salt during early plug stages.
SCUTELLARIA JAVANICA <b>Veranda</b>	RAW	288 or larger	6	1	No	6-10	5.5-6.1 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Light	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 66-70°F (19-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Heat-loving crop; crop time is very dependent on temperature.
SNAPDRAGON <b>Rocket</b>	RAW	288 or larger	5-6	1	Light cover	4-8	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-75°F (18-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 62-65°F (17-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Bronze, Golden, Pink, Red and Rose Shades will germinate best with light.
SNAPDRAGON <b>Snapshot</b>	RAW	288 or larger	5-6	1	Light cover	4-6	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 450-1,500 f.c. (4,800-16,100 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 62-65°F (17-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 10 ppm Spray	(m) Level 3 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 10 ppm Spray	See GrowerFacts for more information.
SNAPDRAGON <b>Solstice</b>	RAW	288 or larger	5-6	1	Light cover	4-8	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 450-1,500 f.c. (4,800-16,100 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 62-65°F (17-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 10 ppm Spray	(m) Level 3 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 10 ppm Spray	See GrowerFacts for more information.
SPILANTHES OLERACEA <b>Peek-A-Boo</b>	COT	288 or larger	4-5	1	Light cover	4	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-76°F (22-24°C) (l) Light	(m) Level 3-4 (t) 65-72°F (18-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Requires light to germinate.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
STOCK <b>Vintage</b>	RAW	406 or larger	4	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
TALINUM <b>Limon</b>	RAW	288 or larger	5	1	Yes	4-5	5.5-6.1 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 66-70°F (19-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 66-68°F (19-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
TALINUM <b>Verde</b>	RAW	288 or larger	5	1	Yes	6	5.5-6.1 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Optional	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 66-70°F (19-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 66-68°F (19-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
THUNBERGIA <b>Susie</b>	RAW	288 or larger	4-5	1	Light cover	6-12	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Light	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Pre-soak seed overnight for faster germination.
TORENIA <b>Kauai</b>	PEL	288 or larger	5-6	1	No	4-6	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-73°F (20-23°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 65-67°F (18-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
VERBENA <b>Quartz</b>	PRM, RAW	406 or larger	5-6	1	Yes	4-6	5.8-6.2 pH 0.5-0.7 mmhos/cm	(m) Level 3 (t) 72-75°F (22-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 4 (t) 70-72°F (21-22°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid excessive moisture in plug media during germination stage 1.
VERBENA <b>Quartz XP</b>	PRM, RAW	406 or larger	4-5	1	Yes	4-6	5.8-6.2 pH 0.5-0.7 mmhos/cm	(m) Level 3 (t) 72-75°F (22-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 4 (t) 70-72°F (21-22°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid excessive moisture in plug media during germination stage 1.
VINCA <b>Jams 'N Jellies</b>	RAW	288 or larger	5	1	Yes	3-5	5.8-6.0 pH 0.08 mmhos/cm	(m) Level 4 (t) 75-78°F (24-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
VINCA <b>Mediterranean</b>	RAW	288 or larger	5	1	Yes	3-5	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 75-78°F (24-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Bottom heat during production can increase yield potential and decrease crop time.
VINCA <b>Mediterranean XP</b>	RAW	288 or larger	5	1	Yes	3-5	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 75-78°F (24-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Bottom heat during production can increase yield potential and decrease crop time.
VINCA <b>Pacifica XP</b>	RAW	288 or larger	5	1	Yes	3-5	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 75-78°F (24-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Bottom heat during production can increase yield potential and decrease crop time.
VINCA <b>Titan®</b>	RAW	288 or larger	5	1	Yes	3-5	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 75-78°F (24-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Bottom heat during production can increase yield potential and decrease crop time.
VINCA <b>Valiant</b>	RAW	288 or larger	5	1	Yes	3-5	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 75-78°F (24-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 70-72°F (21-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 70-72°F (21-22°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Bottom heat during production can increase yield potential and decrease crop time.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
VIOLA <b>Sorbet®</b>	PRM, RAW	288 or larger	5	1	Yes	3-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	(m) Level 2-4 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4.
VIOLA <b>Sorbet® XP</b>	PRM, RAW	288 or larger	5	1	Yes	3-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-70°F (16-21°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	(m) Level 2-4 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) ancymidol 5-10 ppm Spray or daminozide 1,500-2,500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions in stages 3 and 4.
ZINNIA <b>Double Zahara</b>	COT, RAW	288 or larger	3	1	Yes	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-73°F (20-23°C) (l) Optional	(m) Level 3-4 (t) 68-76°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-76°F (20-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,250-2,500 ppm Spray	(m) Level 3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.
ZINNIA <b>Star</b>	RAW	288 or larger	4-5	1	Yes	2-5	5.8-6.2 pH 0.75 mmhos/cm	(t) 70-73°F (21-23°C)				
ZINNIA <b>State Fair</b>	RAW	288 or larger	4-5	1	Yes	2-5	5.8-6.2 pH 0.75 mmhos/cm	(t) 70-73°F (21-23°C)				
ZINNIA <b>UpTown</b>	COT	288 or larger	3	1	Light cover	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-73°F (20-23°C) (l) Optional	(m) Level 3-4 (t) 70-75°F (21-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-75°F (21-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,250-2,500 ppm Spray	(m) Level 3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.
ZINNIA <b>Zahara®</b>	COT, RAW	288 or larger	3	1	Light cover	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-73°F (20-23°C) (l) Optional	(m) Level 3-4 (t) 70-75°F (21-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-75°F (21-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,250-2,500 ppm Spray	(m) Level 3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.
ZINNIA <b>Zahara® XL</b>	COT, RAW	288 or larger	3	1	Light cover	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-73°F (20-23°C) (l) Optional	(m) Level 3-4 (t) 70-75°F (21-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-75°F (21-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 3,500 ppm Spray	(m) Level 3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	PHOTOPERIOD RESPONSE	FINISHING PROGRAMS	KEY TIPS
ABUTILON <b>Bella</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.5-6.5 pH 1.2-1.5 mmhos/cm	Day neutral	4" Pot, 1 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 5 ppm Spray 5" Pot, 1 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 5 ppm Spray 6" Pot, 2-3 (ppp), 7-10 (weeks), Spring, PGR paclobutrazol 5 ppm Spray 8" Pot, 3-4 (ppp), 7-10 (weeks), Spring, PGR paclobutrazol 5 ppm Spray 10" HB, 4-6 (ppp), 7-10 (weeks), Spring, PGR paclobutrazol 5 ppm Spray 4" Pot, 1 (ppp), 8-10 (weeks), Autumn, PGR paclobutrazol 5 ppm Spray 4 1/2" Pot, 1 (ppp), 8-10 (weeks), Autumn, PGR paclobutrazol 5 ppm Spray 6" Pot, 2-3 (ppp), 9-12 (weeks), Autumn, PGR paclobutrazol 5 ppm Spray 8" Pot, 3-4 (ppp), 9-12 (weeks), Autumn, PGR paclobutrazol 5 ppm Spray 10" HB, 4-6 (ppp), 9-12 (weeks), Autumn, PGR paclobutrazol 5 ppm Spray	Space plants adequately to get the best branching and the showiest plants.
AGERATUM <b>High Tide</b>	406 or larger	(day) 70-80°F (21-27°C) (night) 58-62°F (14-17°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	306 Pack, 1 (ppp), 7-9 (weeks), Late Spring, PGR daminozide 2,500-3,500 ppm Spray 4 1/2" Pot, 1 (ppp), 7-9 (weeks), Late Spring, PGR daminozide 2,500-3,500 ppm Spray 6" Pot, 1-3 (ppp), 7-9 (weeks), Late Spring, PGR daminozide 2,500-3,500 ppm Spray 306 Pack, 1 (ppp), approx. 7 (weeks), Summer, PGR daminozide 2,500-3,500 ppm Spray 4 1/2" Pot, 1 (ppp), approx. 7 (weeks), Summer, PGR daminozide 2,500-3,500 ppm Spray 6" Pot, 1-3 (ppp), approx. 7 (weeks), Summer, PGR daminozide 2,500-3,500 ppm Spray	
ALSTROEMERIA <b>Jazze®</b>	288 or larger	(day) 60-65°F (16-18°C) (night) 52-58°F (11-14°C)	5.5-6.0 pH		6" Pot, 1 (ppp), 12-17 (weeks), Spring 6" Pot, 1 (ppp), 20-23 (weeks), Autumn	Follow the GrowerFacts germination recommendations closely.
ALTERNANTHERA <b>Purple Knight</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 62-65°F (17-18°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Grow plant under daylength longer than 12 hours to maintain vegetative growth.	306 Pack, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 306 Pack, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray 4" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 4" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray 1 Quart, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 1 Quart, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray 6" Pot, 3 (ppp), 8-9 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 6" Pot, 3 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray	Growing under high light conditions will result in deeper purple foliage.
ALTERNANTHERA <b>Purple Prince</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 62-65°F (17-18°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Grow plant under daylength longer than 12 hours to maintain vegetative growth.	306 Pack, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 306 Pack, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray 4" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 4" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray 1 Quart, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 1 Quart, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray 6" Pot, 3 (ppp), 8-9 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 6" Pot, 3 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray	Growing under high light conditions will result in deeper purple foliage.
ALYSSUM <b>Clear Crystal®</b>	406 or larger	(day) 60-75°F (16-24°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	306 Pack, 1 (ppp), 4-6 (weeks), Late Spring 4 1/2" Pot, 1 (ppp), 7 (weeks), Late Spring Hanging Basket, 5-7 (ppp), 7-8 (weeks), Late Spring	Cool-season crop can be grown with little or no heat. Grow outdoors or at cool night temperatures for best colour development.
ALYSSUM <b>Easter Bonnet</b>	406 or larger	(day) 60-75°F (16-24°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	Cell Pack, 1 (ppp), 5 (weeks), Late Spring	
ALYSSUM <b>Snow Crystals</b>	406 or larger	(day) 60-75°F (16-24°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	306 Pack, 1 (ppp), 6-7 (weeks), Late Spring 4 1/2" Pot, 1 (ppp), 6-7 (weeks), Late Spring	
ANGELONIA <b>Serena®</b>	288 or larger	(day) 65-76°F (18-24°C) (night) 65-67°F (18-19°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	306 Pack, 1 (ppp), 8-9 (weeks), Late Spring, PGR daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray 4" Pot, 1 (ppp), 9-10 (weeks), Late Spring, PGR daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray 4 1/2" Pot, 1 (ppp), 9-10 (weeks), Late Spring, PGR daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray 6" Pot, 3 (ppp), 9-10 (weeks), Late Spring, PGR daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray Gallon, 3 (ppp), 9-10 (weeks), Late Spring, PGR daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray	Angelonia grows slowly when the temperature is below 64°F (18°C). Recommended DLI range of 12 to 24 mol·m <sup>-2</sup> ·d <sup>-1</sup> . Do not pinch, as pinching will delay flowering and make the plant habit unattractive.
ANGELONIA <b>Serenita®</b>	288 or larger	(day) 65-76°F (18-24°C) (night) 65-67°F (18-19°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	306 Pack, 1 (ppp), 8-9 (weeks), Late Spring, PGR daminozide/chlormequat chloride tank mix 2,500/500-2,500/750 ppm Spray 4" Pot, 1 (ppp), 9-10 (weeks), Late Spring, PGR daminozide/chlormequat chloride tank mix 2,500/500-2,500/750 ppm Spray 4 1/2" Pot, 1 (ppp), 9-10 (weeks), Late Spring, PGR daminozide/chlormequat chloride tank mix 2,500/500-2,500/750 ppm Spray 6" Pot, 3 (ppp), 9-10 (weeks), Late Spring, PGR daminozide/chlormequat chloride tank mix 2,500/500-2,500/750 ppm Spray Gallon, 3 (ppp), 9-10 (weeks), Late Spring, PGR daminozide/chlormequat chloride tank mix 2,500/500-2,500/750 ppm Spray	Angelonia grows slowly when the temperature is below 64°F (18°C). Serenita requires less PGRs than Serena, as it is more compact and naturally shorter. It may not need any PGRs, especially under cool conditions. If necessary, use a tank mix of B-Nine/Alar (daminozide) 2,500 ppm mixed with Cycocel (chlormequat) 500 to 750 ppm. Recommended DLI range of 12 to 24 mol·m <sup>-2</sup> ·d <sup>-1</sup> . Do not pinch, as pinching delays flowering and makes the plant habit unattractive.



CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	PHOTOPERIOD RESPONSE	FINISHING PROGRAMS	KEY TIPS
ASTER <b>Pot 'N Patio</b>	406 or larger	(day) 65-75°F (18-24°C) (night) 55-65°F (13-18°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Facultative short day	Cell Pack, 1 (ppp), 8 (weeks), Spring 4" Pot, 1 (ppp), 8 (weeks), Spring	Flowers just 90 days from sowing during short days of Winter and early Spring.
BACOPA <b>Blutopia®</b>	288 or larger	(day) 60-75°F (16-24°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	4 1/2" Pot, 1 (ppp), 4-6 (weeks), Spring, PGR daminozide 2,500 ppm Spray 10" HB, 5-6 (ppp), 8-9 (weeks), Spring, PGR daminozide 2,500 ppm Spray	Use of PGRs or growing outdoors will give a much more controlled plant. Be sure to water multi-seed pellets thoroughly and give light for best germination. Avoid both excessive watering and drought. Do not let plants wilt as this will result in flower/bud drop.
BACOPA <b>Snowtopia®</b>	288 or larger	(day) 60-75°F (16-24°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	4 1/2" Pot, 1 (ppp), 4-6 (weeks), Spring, PGR daminozide 2,500 ppm Spray 10" HB, 5-6 (ppp), 8-9 (weeks), Spring, PGR daminozide 2,500 ppm Spray	Use of PGRs or growing outdoors will give a much more controlled plant. Be sure to water multi-seed pellets thoroughly and give light for best germination. Avoid both excessive watering and drought. Do not let plants wilt as this will result in flower/bud drop.
BEGONIA <b>BabyWing®</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	6.0-6.5 pH 1.0-1.2 mmhos/cm		4 1/2" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 1-2 (ppp), 6-8 (weeks), Spring 12" HB, 3-4 (ppp), 6-8 (weeks), Spring	After transplant, if necessary, a very light spray of a tank mix of Cycocel 300 ppm and B-Nine 2,500 ppm can be used. BabyWing is very responsive to Bonzi and Sumagic. Avoid overspray from neighbouring plants.
BEGONIA <b>Dragon Wing®</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.4-6.0 pH 1.0 mmhos/cm	Facultative short day	6" Pot, 1 (ppp), 7-9 (weeks), Late Spring 8" Pot, 3 (ppp), 8-10 (weeks), Late Spring	Dragon Wing will flower faster under short day conditions. Long day could delay Dragon Wing flower up to 2-3 weeks. After transplant, use Bonzi 3 to 5 ppm spray for height control when needed.
BEGONIA <b>Megawatt</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.4-6.0 pH 1.0-1.2 mmhos/cm	Facultative short day	6" Pot, 1 (ppp), 7-9 (weeks), Late Spring 6" Pot, 1 (ppp), 7-10 (weeks), Summer 12" Pot, 3 (ppp), 9-11 (weeks), Summer	All Megawatt varieties flower faster under daylength 12 hours or shorter. Longer daylength could delay flower timing up to 2-3 weeks for Green leaf varieties but only 4-7 days for Bronze Leaf varieties.  If necessary, it is effective to spray Paclobutrazol at 2 to 5 ppm dependent on environmental conditions, plant growing stage, and varieties for Megawatt plant size control. Repeat as needed.  Megawatt Green Leaf varieties have more vigor than Bronze Leaf varieties. They require slightly heavier growth regulator than Bronze Leaf varieties
BEGONIA HYBRIDA <b>Gryphon</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 62-67°F (17-19°C)	5.4-6.0 pH 1.0 mmhos/cm	Short day	4 1/2" Pot, 1 (ppp), 5-6 (weeks), Summer 6" Pot, 2-3 (ppp), 5-6 (weeks), Summer 8" Pot, 3 (ppp), 7-8 (weeks), Summer 12" Pot, 3-4 (ppp), 9-11 (weeks), Summer	To avoid flower as a foliage plant, grow under daylength longer than 11 hours.
BRAZILIAN FIREWORKS <b>Maracas</b>	288 or larger	(day) 72-80°F (22-27°C) (night) 66-68°F (19-20°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	306 Pack, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 3-5 ppm Spray 4" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 3-5 ppm Spray 4 1/2" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 3-5 ppm Spray 6" Pot, 3 (ppp), 7-9 (weeks), Spring, PGR paclobutrazol 3-5 ppm Spray Gallon, 3 (ppp), 7-9 (weeks), Spring, PGR paclobutrazol 3-5 ppm Spray	Heat-loving crop; crop time is very dependant on temperature.
BROWALLIA <b>Bells</b>	406 or larger	(day) 60-65°F (16-18°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 0.5-1.0 mmhos/cm	Day neutral	4" Pot, 1 (ppp), 9-11 (weeks), Spring 10" HB, 1 (ppp), 11-13 (weeks), Spring	
CALIBRACHOA <b>Crave Collection</b>	288 or larger	(day) 64-75°F (18-24°C) (night) 55-64°F (13-18°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	11 hours. DLI of 10-25 moles·m <sup>-2</sup> ·d <sup>-1</sup> .	4 1/2" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR flurprimidol 2-3 ppm Drench 4 1/2" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 1 Quart, 1 (ppp), 7-8 (weeks), Spring, PGR flurprimidol 2-3 ppm Drench 1 Quart, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 10" HB, 3 (ppp), 9-11 (weeks), Spring, PGR flurprimidol 3-4 ppm Drench 10" HB, 3 (ppp), 9-11 (weeks), Spring, PGR paclobutrazol 3-4 ppm Drench 12" HB, 3-5 (ppp), 9-11 (weeks), Spring, PGR flurprimidol 3-4 ppm Drench 12" HB, 3-5 (ppp), 9-11 (weeks), Spring, PGR paclobutrazol 3-4 ppm Drench 8" Pot, 1-3 (ppp), 5-6 (weeks), Summer, PGR flurprimidol 2-3 ppm Drench 8" Pot, 1-3 (ppp), 5-6 (weeks), Summer, PGR paclobutrazol 2-3 ppm Drench 12" HB, 3-5 (ppp), 5-6 (weeks), Summer, PGR flurprimidol 3-4 ppm Drench 12" HB, 3-5 (ppp), 5-6 (weeks), Summer, PGR paclobutrazol 3-4 ppm Drench	Daminozide can cause slight chlorotic stippling.
CALIBRACHOA <b>Kabloom®</b>	288 or larger	(day) 64-75°F (18-24°C) (night) 55-64°F (13-18°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	10 hours for Yellow and White, 11 for Deep Blue, 12 for Deep Pink. DLI of 10-25 moles·m <sup>-2</sup> ·d <sup>-1</sup> .	4 1/2" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR flurprimidol 1-2 ppm Drench 4 1/2" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 1-3 ppm Drench 1 Quart, 1 (ppp), 7-8 (weeks), Spring, PGR flurprimidol 1-2 ppm Drench 1 Quart, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 1-3 ppm Drench 10" HB, 3 (ppp), 9-11 (weeks), Spring, PGR flurprimidol 2-3 ppm Drench 10" HB, 3 (ppp), 9-11 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 12" HB, 3-5 (ppp), 9-11 (weeks), Spring, PGR flurprimidol 2-3 ppm Drench 12" HB, 3-5 (ppp), 9-11 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 8" Pot, 1-3 (ppp), 5-6 (weeks), Summer, PGR flurprimidol 1.5-2 ppm Drench 8" Pot, 1-3 (ppp), 5-6 (weeks), Summer, PGR paclobutrazol 2-3 ppm Drench 12" HB, 3-5 (ppp), 5-6 (weeks), Summer, PGR flurprimidol 2-3 ppm Drench 12" HB, 3-5 (ppp), 5-6 (weeks), Summer, PGR paclobutrazol 2-3 ppm Drench	
CELOSIA <b>Arrabona</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 59-61°F (15-16°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Facultative short day	5" Pot, 1 (ppp), 8-11 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Summer	Arrabona generally does not need PGRs. If necessary, variety is responsive to B-Nine/ Alar (daminozide) spray at 2,000 to 3,000 ppm (2.4 to 3.5 g/l, 85% formulation or 3.1 to 4.7 g/l 64% formulation) depending on weather. Maintain media constantly moist to prevent premature flowering.
CELOSIA <b>Dracula</b>	288 or larger	(day) 65-72°F (18-22°C) (night) 59-65°F (15-18°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Facultative intermediate response	6" Pot, 1 (ppp), 6-9 (weeks), Spring	Flowers fastest between 12 to 14-hour days.

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CELOSIA <b>First Flame</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 59-61°F (15-16°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Facultative short day	5" Pot, 1 (ppp), 7-10 (weeks), Spring 5" Pot, 1 (ppp), 5-7 (weeks), Summer	First Flame varieties do not need PGRs. If necessary, variety is responsive to B-Nine/Alar (daminozide) spray at 2,000 to 3,000 ppm (2.4 to 3.5 g/l, 85% formulation or 3.1 to 4.7 g/l 64% formulation) depending on weather. Maintain media constantly moist to prevent premature flowering.
CELOSIA <b>Glow</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 55-65°F (13-18°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Facultative short day	Cell Pack, 1 (ppp), 6-7 (weeks), Spring 4" Pot, 1 (ppp), 6-7 (weeks), Spring	Create a unique pot crop by sowing 10-15 seeds into a 4-in. (10-cm) container. This produces an interesting mini-forest of celosia.
CELOSIA <b>Ice Cream</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 59-61°F (15-16°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Facultative short day	306 Pack, 1 (ppp), 6-8 (weeks), Spring 4 1/2" Pot, 1 (ppp), 7-9 (weeks), Spring 306 Pack, 1 (ppp), 5-7 (weeks), Summer 4 1/2" Pot, 1 (ppp), 5-7 (weeks), Summer	Keep medium constantly moist and do not allow to dry out. No PGRs are needed. If needed, Celosia Ice Cream is responsive to B-Nine/Alar (daminozide) spray at 2,000 to 3,000 ppm (2.4 to 3.5 g/l, 85% formulation or 3.1 to 4.7 g/l 64% formulation) depending on weather.
CELOSIA <b>Kosmo</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 1.0-1.5 mmhos/cm	Facultative short day	4 1/2" Pot, 1 (ppp), 6-8 (weeks), Spring 4 1/2" Pot, 1 (ppp), 5-7 (weeks), Summer	Keep medium constantly moist and do not allow to dry out.
COLEUS <b>Black Dragon</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	Cell Pack, 1 (ppp), 5-6 (weeks), Spring	Ethephon can be applied to increase branching and control height.
COLEUS <b>Wizard®</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	Cell Pack, 1 (ppp), 7-9 (weeks), Spring 4" Pot, 1 (ppp), 7-9 (weeks), Spring 5" Pot, 1 (ppp), 7-9 (weeks), Spring	Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SHADE <b>Kong Jr.</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	5" Pot, 1 (ppp), 4-5 (weeks), Spring Gallon, 1 (ppp), 5-6 (weeks), Spring	Do not pinch, as it will result in smaller leaves and delay crop time. Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SHADE <b>Kong®</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	5" Pot, 1 (ppp), 4-5 (weeks), Spring Gallon, 1 (ppp), 5-6 (weeks), Spring	Ethephon can be applied to increase branching and control height. Do not pinch, as it will result in smaller leaves and delay crop time. Note: Kong Salmon Pink might appear dark bronze under some very low light conditions. Later in the season, and in Summer landscape, colour will appear Salmon Pink.
COLEUS, PREMIUM SUN <b>Chocolate Covered Cherry</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	306 Pack, 1 (ppp), 6-8 (weeks), Spring 4" Pot, 1 (ppp), 6-8 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SUN <b>Chocolate Mint</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 6-8 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SUN <b>Chocolate Splash</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 6-8 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SUN <b>Crimson Gold</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 6-8 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SUN <b>Dark Chocolate</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 6-8 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SUN <b>Lime Delight</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 6-8 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SUN <b>Mighty Mosaic</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 6-8 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SUN <b>Pineapple Surprise</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 6-8 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SUN <b>Rose to Lime Magic</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 6-8 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Ethephon can be applied to increase branching and control height.

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COLEUS, PREMIUM SUN <b>Watermelon</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 6-8 (weeks), Spring 5" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Ethephon can be applied to increase branching and control height.
COLORGRASS® ANEMANTHELE <b>Sirocco</b>	288 or larger	(day) 62-74°F (17-23°C) (night) 59-64°F (15-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 6-8 (weeks), Spring 4" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 1-3 (ppp), 6-8 (weeks), Spring Gallon, 1 (ppp), 8-10 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	Colour is better under cool and high light conditions. If temperature permits, it is best to produce Sirocco in outdoor conditions.
COLORGRASS® CAREX <b>Amazon Mist</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 9-10 (weeks), Spring 4" Pot, 1 (ppp), 9-10 (weeks), Spring 6" Pot, 3 (ppp), 10-11 (weeks), Spring Gallon, 3 (ppp), 10-11 (weeks), Spring	
COLORGRASS® CAREX <b>Bronco</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 8-9 (weeks), Spring 4" Pot, 1 (ppp), 8-9 (weeks), Spring 6" Pot, 3 (ppp), 9-10 (weeks), Spring Gallon, 3 (ppp), 9-10 (weeks), Spring	
COLORGRASS® CAREX <b>Phoenix Green</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 6-7 (weeks), Spring 4" Pot, 1 (ppp), 6-7 (weeks), Spring 6" Pot, 3 (ppp), 7-8 (weeks), Spring Gallon, 3 (ppp), 7-8 (weeks), Spring	
COLORGRASS® CAREX <b>Red Rooster</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 8-9 (weeks), Spring 4" Pot, 1 (ppp), 8-9 (weeks), Spring 6" Pot, 3 (ppp), 9-10 (weeks), Spring Gallon, 3 (ppp), 9-10 (weeks), Spring	
COLORGRASS® CORYNEPHORUS <b>Spiky Blue</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 6-7 (weeks), Spring 4" Pot, 1 (ppp), 6-7 (weeks), Spring 6" Pot, 3 (ppp), 7-8 (weeks), Spring Gallon, 3 (ppp), 7-8 (weeks), Spring	
COLORGRASS® ERAGROSTIS <b>Wind Dancer</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 5-6 (weeks), Spring 4" Pot, 1 (ppp), 6-7 (weeks), Spring 6" Pot, 3 (ppp), 6-7 (weeks), Spring Gallon, 3 (ppp), 7-8 (weeks), Spring	Grows well under outdoor nursery conditions if the temperature permits. If produced in a greenhouse, they should be grown on the dry side with low feed.
COLORGRASS® FESTUCA <b>Festina</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 6-7 (weeks), Spring 4" Pot, 1 (ppp), 6-7 (weeks), Spring 6" Pot, 3 (ppp), 7-8 (weeks), Spring Gallon, 3 (ppp), 7-8 (weeks), Spring	
COLORGRASS® ISOLEPIS <b>Live Wire</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 6-7 (weeks), Spring 4" Pot, 1 (ppp), 6-7 (weeks), Spring 6" Pot, 3 (ppp), 6-7 (weeks), Spring Gallon, 3 (ppp), 6-7 (weeks), Spring	Sow uncovered at 65°F (18°C) for fastest and most uniform germination; prefers moist soil.
COLORGRASS® JUNCUS <b>Blue Arrows</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 6-7 (weeks), Spring 4" Pot, 1 (ppp), 6-7 (weeks), Spring 6" Pot, 1-3 (ppp), 7-8 (weeks), Spring Gallon, 1-3 (ppp), 7-8 (weeks), Spring	
COLORGRASS® JUNCUS <b>Blue Dart</b>	288 or larger	(day) 62-74°F (17-23°C) (night) 59-64°F (15-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 6-7 (weeks), Spring 4" Pot, 1 (ppp), 6-7 (weeks), Spring 6" Pot, 1-3 (ppp), 7-8 (weeks), Spring Gallon, 1-3 (ppp), 7-8 (weeks), Spring	Excellent substitute for Draecena Spike.
COLORGRASS® JUNCUS <b>Javelin</b>	288 or larger	(day) 62-74°F (17-23°C) (night) 59-64°F (15-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 5-6 (weeks), Spring 4" Pot, 1 (ppp), 5-6 (weeks), Spring 6" Pot, 1-3 (ppp), 6-7 (weeks), Spring Gallon, 1-3 (ppp), 6-7 (weeks), Spring	To prevent leaf bending, Bonzi 30 ppm spray can be used.
COLORGRASS® JUNCUS <b>Starhead</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 7-8 (weeks), Spring 4" Pot, 1 (ppp), 7-8 (weeks), Spring 6" Pot, 3 (ppp), 8-9 (weeks), Spring Gallon, 3 (ppp), 8-9 (weeks), Spring	
COLORGRASS® KOELERIA <b>Coolio</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm			
COLORGRASS® LUZULA <b>Lucius</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 8-9 (weeks), Spring 4" Pot, 1 (ppp), 8-9 (weeks), Spring 6" Pot, 3 (ppp), 9-10 (weeks), Spring Gallon, 3 (ppp), 9-10 (weeks), Spring	Make sure plants don't get too wet.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	PHOTOPERIOD RESPONSE	FINISHING PROGRAMS	KEY TIPS
COLORGRASS® LUZULA <b>Starmaker</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		<b>306 Pack</b> , 1 (ppp), 8-9 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 8-9 (weeks), Spring <b>6" Pot</b> , 3 (ppp), 9-10 (weeks), Spring <b>Gallon</b> , 3 (ppp), 9-10 (weeks), Spring	Make sure plants don't get too wet.
COLORGRASS® STIPA <b>Pony Tails</b>	288 or larger	(day) 62-74°F (17-23°C) (night) 59-64°F (15-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		<b>306 Pack</b> , 1 (ppp), 6-7 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>6" Pot</b> , 3 (ppp), 6-7 (weeks), Spring <b>Gallon</b> , 3 (ppp), 6-7 (weeks), Spring	
COSMOS <b>Antiquity</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 61-65°F (16-18°C)		Facultative short day	<b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring	
COSMOS <b>Sonata</b>	288 or larger	(day) 70-80°F (21-27°C) (night) 70-75°F (21-24°C)		Facultative short day	<b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>6" Pot</b> , 1 (ppp), 7-8 (weeks), Spring	
CRASPEDIA GLOBOSA <b>Billy Buttons</b>	288 or larger	(day) 57-65°F (14-18°C) (night) 54-57°F (12-14°C)	5.5-6.2 pH 0.5-0.7 mmhos/cm		<b>Field grown</b> , 1 (ppp), 17-18 (weeks), Spring	Best grown as annual.
CROSSANDRA <b>Tropic</b>	406 or larger	(day) 75-80°F (24-27°C) (night) 68-75°F (20-24°C)	5.8-6.5 pH 1.2-1.5 mmhos/cm	Day neutral	<b>4" Pot</b> , 1 (ppp), 10-11 (weeks), Spring <b>6" Pot</b> , 3 (ppp), 10-11 (weeks), Spring	Best in tropical and semi-tropical climates. For cooler (Northern) growing areas, add 3 weeks to crop time or grow for Summer sales.
CUPHEA IGNEA <b>Dynamite</b>	288 or larger	(day) 70-75°F (21-24°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	<b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring	No pinching required. Well-suited to solo and mixed containers. Also works in indoor plant programs.
DAHLIA <b>Figaro</b>	288 or larger	(day) 52-60°F (11-16°C) (night) 52-60°F (11-16°C)	5.8-6.2 pH 0.75-1.0 mmhos/cm	Long day	<b>306 Pack</b> , 1 (ppp), 5-6 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Spring	Very responsive to B-Nine.
DESCHAMPسيا <b>Zephyr</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 64-66°F (18-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		<b>306 Pack</b> , 1 (ppp), 5-7 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>4 1/2" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>6" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>Gallon</b> , 1 (ppp), 6-7 (weeks), Spring	Will perform better if grown in containers. Will dry out very easily.
DIANTHUS <b>Dash</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 60°F (16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>1 Quart</b> , 1 (ppp), 9-10 (weeks), Summer, <b>PGR</b> paclobutrazol 20 ppm Spray <b>Gallon</b> , 1-3 (ppp), 9-10 (weeks), Summer, <b>PGR</b> paclobutrazol 20 ppm Spray <b>1 Quart</b> , 1 (ppp), 11-12 (weeks), Autumn, <b>PGR</b> paclobutrazol 20 ppm Spray <b>Gallon</b> , 1-3 (ppp), 11-12 (weeks), Autumn, <b>PGR</b> paclobutrazol 20 ppm Spray	Dash dianthus has a naturally compact plant habit and good basal branching when compared to other barbatus-type dianthus, making it more suitable for container production. Provide 65 to 75°F (18 to 24°C) day temperatures and 60°F (15°C) night temperatures for the first 2 weeks of greenhouse production to establish the plants. Finish at 60 to 70°F (15 to 21°C) days, with nights in the low 50°Fs (11 to 12°C). Lower temperatures can be tolerated as plants mature.
DIANTHUS <b>Dynasty</b>	288 or larger	(day) 60-72°F (16-22°C) (night) 50-60°F (10-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>306 Pack</b> , 1 (ppp), 8-9 (weeks), Late Spring, <b>PGR</b> paclobutrazol 15-20 ppm Spray <b>1 Quart</b> , 1 (ppp), 8-9 (weeks), Late Spring, <b>PGR</b> paclobutrazol 15-20 ppm Spray <b>6" Pot</b> , 1-3 (ppp), 8-9 (weeks), Late Spring, <b>PGR</b> paclobutrazol 15-20 ppm Spray	
DIANTHUS <b>Floral Lace</b>	288 or larger	(day) 60-72°F (16-22°C) (night) 50-60°F (10-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 4-5 (weeks), Late Spring, <b>PGR</b> paclobutrazol 15-20 ppm Spray <b>4 1/2" Pot</b> , 1 (ppp), 4-5 (weeks), Late Spring, <b>PGR</b> paclobutrazol 15-20 ppm Spray	
DIANTHUS <b>Ideal Select</b>	288 or larger	(day) 60-72°F (16-22°C) (night) 50-60°F (10-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 4-5 (weeks), Late Spring, <b>PGR</b> paclobutrazol 15-20 ppm Spray <b>4 1/2" Pot</b> , 1 (ppp), 4-5 (weeks), Late Spring, <b>PGR</b> paclobutrazol 15-20 ppm Spray <b>6" Pot</b> , 3 (ppp), 4-5 (weeks), Late Spring, <b>PGR</b> paclobutrazol 15-20 ppm Spray	
DIANTHUS (INTERSPECIFIC) <b>Jolt</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 60°F (16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>1 Quart</b> , 1 (ppp), 14-18 (weeks), Spring, <b>PGR</b> paclobutrazol 20 ppm Spray <b>Gallon</b> , 1-3 (ppp), 14-18 (weeks), Spring, <b>PGR</b> paclobutrazol 20 ppm Spray <b>1 Quart</b> , 1 (ppp), 11-13 (weeks), Summer, <b>PGR</b> paclobutrazol 20 ppm Spray <b>Gallon</b> , 1-3 (ppp), 11-13 (weeks), Summer, <b>PGR</b> paclobutrazol 20 ppm Spray	Temperature and light intensity have greater impact on flowering, especially during Winter and early Spring. Jolt will benefit from being grown under high light levels and is a facultative/quantitative long-day plant. It can flower under different day lengths, but will take slightly longer to flower under short days than long days.
DIASCIA <b>Diamonte</b>	288 or larger	(day) 60-66°F (16-19°C) (night) 50-60°F (10-16°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	<b>306 Pack</b> , 1 (ppp), 6-8 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 7-9 (weeks), Spring <b>6" Pot</b> , 3 (ppp), 7-9 (weeks), Spring <b>Gallon</b> , 3 (ppp), 7-9 (weeks), Spring	Plants can be grown on with much cooler temperatures, but crop time will be longer. Do not use PGRs before radicle emergence, as this can delay or stop germination. See GrowerFacts for details.
DICHONDRA <b>Emerald Falls</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 62-65°F (17-18°C)	5.5-6.5 pH 1.2-1.5 mmhos/cm		<b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring, <b>PGR</b> chlormequat chloride 1,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring, <b>PGR</b> daminozide 5,000 ppm Spray <b>6" Pot</b> , 3 (ppp), 7-8 (weeks), Spring, <b>PGR</b> chlormequat chloride 1,000 ppm Spray <b>6" Pot</b> , 3 (ppp), 7-8 (weeks), Spring, <b>PGR</b> daminozide 5,000 ppm Spray <b>12" HB</b> , 3-5 (ppp), 7-9 (weeks), Spring, <b>PGR</b> chlormequat chloride 1,000 ppm Spray <b>12" HB</b> , 3-5 (ppp), 7-9 (weeks), Spring, <b>PGR</b> daminozide 5,000 ppm Spray	Grows best in warm and dry conditions. Use light feed. Rinse foliage after feeding to avoid salt burn.

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DICHONDRA <b>Silver Falls</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 62-65°F (17-18°C)	5.5-6.5 pH 1.2-1.5 mmhos/cm		4" Pot, 1 (ppp), 6-7 (weeks), Spring, PGR chlormequat chloride 1,000 ppm Spray 4" Pot, 1 (ppp), 6-7 (weeks), Spring, PGR daminozide 5,000 ppm Spray 6" Pot, 3 (ppp), 7-8 (weeks), Spring, PGR chlormequat chloride 1,000 ppm Spray 6" Pot, 3 (ppp), 7-8 (weeks), Spring, PGR daminozide 5,000 ppm Spray 12" HB, 3-5 (ppp), 7-9 (weeks), Spring, PGR chlormequat chloride 1,000 ppm Spray 12" HB, 3-5 (ppp), 7-9 (weeks), Spring, PGR daminozide 5,000 ppm Spray	Grows best in warm and dry conditions. Use light feed. Rinse foliage after feeding to avoid salt burn.
EUPHORBIA <b>Glamour</b>	288 or larger	(day) 65-77°F (18-25°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Daylength neutral	306 Pack, 1 (ppp), 3-5 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 306 Pack, 1 (ppp), 3-5 (weeks), Spring, PGR paclobutrazol 1.5-3 ppm Drench 4" Pot, 1 (ppp), 4-6 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 4" Pot, 1 (ppp), 4-6 (weeks), Spring, PGR paclobutrazol 1.5-3 ppm Drench 5" Pot, 1-2 (ppp), 4-6 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 5" Pot, 1-2 (ppp), 4-6 (weeks), Spring, PGR paclobutrazol 1.5-3 ppm Drench 6" Pot, 1-2 (ppp), 4-6 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 6" Pot, 1-2 (ppp), 4-6 (weeks), Spring, PGR paclobutrazol 1.5-3 ppm Drench Gallon, 2 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray Gallon, 2 (ppp), 5-7 (weeks), Spring, PGR paclobutrazol 1.5-3 ppm Drench	Avoid temperatures below 62°F (16°C) as cooler temperatures cause foliage yellowing. Stretched plugs can be planted deep for better habit management. Pinching is not necessary. If starting with a daminozide spray for habit control, it is best to switch to a paclobutrazol spray or low rate drench to finish. Daminozide may delay full flowering, but is helpful early on in developing good branching. Warmer temperatures and higher light will significantly reduce crop times.
EUPHORBIA <b>Glitz</b>	288 or larger	(day) 65-77°F (18-25°C) (night) 65-68°F (18-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Daylength neutral	4" Pot, 1 (ppp), 5-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 4 1/2" Pot, 1 (ppp), 5-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 5" Pot, 1-2 (ppp), 5-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 6" Pot, 2 (ppp), 5-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray Gallon, 2 (ppp), 5-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" HB, 3 (ppp), 6-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray	Do not grow plant at temperature below 62°F (16°C). Stretched plugs can be planted deep for better habit management. Pinching is not necessary. If starting with a daminozide spray for habit control, consider a paclobutrazol spray or low rate drench to finish. Daminozide may delay full flowering, but is helpful early on in developing good branching. Warmer temperatures and higher light will significantly reduce crop times.
FUSEABLES® <b>Bacopa</b>	288 or larger	(day) 59-76°F (15-24°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	6" Pot, 1 (ppp), 6-7 (weeks), Spring, PGR daminozide 1,000-1,500 ppm Spray 8" Pot, 3 (ppp), 6-7 (weeks), Spring, PGR daminozide 1,000-1,500 ppm Spray 10" HB, 4 (ppp), 6-7 (weeks), Spring, PGR daminozide 1,000-1,500 ppm Spray 12" Pot, 4 (ppp), 6-7 (weeks), Spring, PGR daminozide 1,000-1,500 ppm Spray	
FUSEABLES® <b>Calibrachoa</b>	288 or larger	(day) 64-75°F (18-24°C) (night) 55-64°F (13-18°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	Facultative long day	6" Pot, 1 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 8" Pot, 1 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 10" HB, 1-3 (ppp), 8-11 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 12" HB, 3 (ppp), 10-11 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench	See GrowerFacts for detailed PGR program.
FUSEABLES® <b>Coleus</b>	288 or larger	(day) 65-76°F (18-24°C) (night) 59-64°F (15-18°C)	5.5-6.0 pH 0.7-1.2 mmhos/cm	Facultative short day	6" Pot, 1 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 8" Pot, 1 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" Pot, 1-3 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 12" Pot, 4-5 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray	
FUSEABLES® <b>Petunia</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative long day	6" Pot, 1 (ppp), 9-11 (weeks), Spring, PGR daminozide 5,000 ppm Spray 8" Pot, 1-3 (ppp), 9-11 (weeks), Spring, PGR daminozide 5,000 ppm Spray 10" Pot, 1-3 (ppp), 10-12 (weeks), Spring, PGR daminozide 5,000 ppm Spray 10" HB, 1-3 (ppp), 9-11 (weeks), Spring, PGR daminozide 5,000 ppm Spray 12" Pot, 4 (ppp), 10-12 (weeks), Spring, PGR daminozide 5,000 ppm Spray 12" HB, 4 (ppp), 10-12 (weeks), Spring, PGR daminozide 5,000 ppm Spray 6" Pot, 1 (ppp), 7-9 (weeks), Summer, PGR daminozide 5,000 ppm Spray 8" Pot, 1-3 (ppp), 7-9 (weeks), Summer, PGR daminozide 5,000 ppm Spray 10" Pot, 1-3 (ppp), 8-10 (weeks), Summer, PGR daminozide 5,000 ppm Spray 10" HB, 1-3 (ppp), 8-10 (weeks), Summer, PGR daminozide 5,000 ppm Spray 12" Pot, 4 (ppp), 8-10 (weeks), Summer, PGR daminozide 5,000 ppm Spray 12" HB, 4 (ppp), 8-10 (weeks), Summer, PGR daminozide 5,000 ppm Spray	Can use the same PGR regime as that for standard or spreading petunia. Note that Pleasantly Blue responds better to a B-Nine spray than it does to a Bonzi spray or drench, so for this specific Fuseables the use of B-Nine is preferred. See GrowerFacts for additional culture information.
FUSEABLES® <b>Petunia-Bacopa</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		6" Pot, 1 (ppp), 8-11 (weeks), Spring, PGR paclobutrazol 2-4 ppm Drench 8" Pot, 1 (ppp), 8-11 (weeks), Spring, PGR paclobutrazol 2-4 ppm Drench 10" HB, 1-3 (ppp), 10-12 (weeks), Spring, PGR paclobutrazol 2-4 ppm Drench 12" HB, 4 (ppp), 10-12 (weeks), Spring, PGR paclobutrazol 2-4 ppm Drench 6" Pot, 1 (ppp), 7-9 (weeks), Summer, PGR paclobutrazol 2-4 ppm Drench 8" Pot, 1 (ppp), 7-9 (weeks), Summer, PGR paclobutrazol 2-4 ppm Drench 10" HB, 1-3 (ppp), 8-10 (weeks), Summer, PGR paclobutrazol 2-4 ppm Drench 12" HB, 4 (ppp), 8-10 (weeks), Summer, PGR paclobutrazol 2-4 ppm Drench	Do not use B-Nine/Alar or Topflor for height control as they will stunt bacopa.
FUSEABLES® <b>Twisted Arrows</b>	288 or larger	(day) 62-73°F (17-23°C) (night) 59-64°F (15-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 6-7 (weeks), Spring 4" Pot, 1 (ppp), 7-8 (weeks), Spring 6" Pot, 1-3 (ppp), 7-8 (weeks), Spring Gallon, 1-3 (ppp), 7-8 (weeks), Spring	
FUSEABLES® <b>Twisted Dart</b>	288 or larger	(day) 62-73°F (17-23°C) (night) 59-64°F (15-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		306 Pack, 1 (ppp), 6-7 (weeks), Spring 4" Pot, 1 (ppp), 7-8 (weeks), Spring 6" Pot, 1-3 (ppp), 7-8 (weeks), Spring Gallon, 1-3 (ppp), 7-8 (weeks), Spring	
FUSEABLES® <b>Viola</b>	288 or larger	(day) 60-65°F (16-18°C) (night) 50-55°F (10-13°C)	5.6-5.8 pH 1.2-1.5 mmhos/cm	Facultative long day	6" Pot, 1 (ppp), 6-8 (weeks), Early Spring, PGR daminozide 2,500 ppm Spray 10" HB, 3-4 (ppp), 6-8 (weeks), Early Spring, PGR daminozide 2,500 ppm Spray 12" HB, 3-5 (ppp), 6-8 (weeks), Early Spring, PGR daminozide 2,500 ppm Spray 6" Pot, 1 (ppp), 5-7 (weeks), Autumn, PGR ancymidol 5-10 ppm Spray 10" HB, 3-4 (ppp), 5-7 (weeks), Autumn, PGR ancymidol 5-10 ppm Spray 12" HB, 3-5 (ppp), 5-7 (weeks), Autumn, PGR ancymidol 5-10 ppm Spray	

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	PHOTOPERIOD RESPONSE	FINISHING PROGRAMS	KEY TIPS
FUSEABLES® <b>Viola-Alyssum</b>	288 or larger	(day) 60-68°F (16-20°C) (night) 50-60°F (10-16°C)	5.6-5.8 pH 1.2-1.5 mmhos/cm		6" Pot, 1 (ppp), 5-7 (weeks), Spring 8" Pot, 1 (ppp), 5-7 (weeks), Spring 10" Pot, 4 (ppp), 5-7 (weeks), Spring 12" Pot, 4-5 (ppp), 5-7 (weeks), Spring	
GAZANIA <b>New Day®</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	306 Pack, 1 (ppp), 8-9 (weeks), Late Spring, PGR daminozide 3,500 ppm Spray 6" Pot, 3 (ppp), 8-9 (weeks), Late Spring, PGR daminozide 3,500 ppm Spray 306 Pack, 1 (ppp), 7-8 (weeks), Summer, PGR daminozide 3,500 ppm Spray 6" Pot, 3 (ppp), 7-8 (weeks), Summer, PGR daminozide 3,500 ppm Spray	Crop time can be influenced by light levels; i.e., when grown in areas with low light levels or during period of low light intensity, crop time could be approx. 3 weeks longer.
GAZANIA <b>Sunshine</b>	406 or larger	(day) 65-70°F (18-21°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	6" Pot, 3 (ppp), 9-10 (weeks), Early Spring, PGR daminozide 3,500 ppm Spray 6" Pot, 3 (ppp), 8-9 (weeks), Summer, PGR daminozide 3,500 ppm Spray	Crop time can be influenced by light levels; i.e., when grown in areas with low light levels or during period of low light intensity, crop time could be approx. 3 weeks longer.
GERANIUM (IVY) <b>Summer Showers</b>	288 or larger	(day) 70-75°F (21-24°C) (night) 60-65°F (16-18°C)		Day neutral	4" Pot, 1 (ppp), 11-12 (weeks), Spring 10" HB, 3 (ppp), 13-14 (weeks), Spring	
GERBERA <b>Revolution</b>	128 or larger	(day) 66-68°F (19-20°C) (night) 62-66°F (17-19°C)	5.5-6.0 pH 0.5-1.0 mmhos/cm	Facultative short day	5" Pot, 1 (ppp), 9-10 (weeks), Spring, PGR daminozide 1,000-2,500 ppm Spray 5" Pot, 1 (ppp), 7-8 (weeks), Summer, PGR daminozide 1,000-2,500 ppm Spray 5" Pot, 1 (ppp), 9-10 (weeks), Autumn, PGR daminozide 1,000-2,500 ppm Spray 5" Pot, 1 (ppp), 10-11 (weeks), Winter, PGR daminozide 1,000-2,500 ppm Spray	Use 4.5 to 5.5-in. (11 to 14-cm) pots for Standard Revolution. For Mega Revolution, use 6-in. (15 cm) pots or larger. Fill pots 100% with a uniform soil level. When transplanting, do not pot too deep, as this may result in crown rot. Space plants when leaves are touching, generally 5 to 6 weeks after transplanting. To reduce stretching, use B-Nine/Alar (daminozide) at 1,000 to 2,500 ppm 1 to 2 times with a interval of 9 to 10 days.
GOMPHRENA <b>Fireworks</b>	406 or larger	(day) 65-75°F (18-24°C) (night) 63-66°F (17-19°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	5" Pot, 1 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 4-10 ppm Drench Gallon, 2-3 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 4-10 ppm Drench	May be grown cooler (50°F minimum) with additional 2 to 3 weeks crop time. High light, spacing and cooler temperatures will reduce stretching. A paclobutrazol drench at 4 to 10 ppm, 2 to 3 weeks after transplant, is commonly effective in controlling stretch. Paclobutrazol sprays may follow the drench to maintain plant structure.
HELENIUM AMARUM <b>Dakota Gold</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 64-66°F (18-19°C)	5.5-6.5 pH 1.5-2.0 mmhos/cm	Long day	306 Pack, 1 (ppp), 5-7 (weeks), Spring, PGR daminozide 5,000 ppm Spray 4" Pot, 1 (ppp), 5-7 (weeks), Spring, PGR daminozide 5,000 ppm Spray 6" Pot, 1 (ppp), 6-8 (weeks), Spring, PGR daminozide 5,000 ppm Spray	Daylength affects plant growing habit and crop time. See GrowerFacts for details.
HELIANTHUS <b>Ballad</b>	288 or larger	(day) 64-72°F (18-22°C) (night) 61-64°F (16-18°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Can flower under different day lengths, but will flower slightly quicker under short days	5" Pot, 1 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500-5,000 ppm Spray Gallon, 1-3 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500-5,000 ppm Spray 5" Pot, 1 (ppp), 7-8 (weeks), Summer, PGR daminozide 3,500-5,000 ppm Spray Gallon, 1-3 (ppp), 7-8 (weeks), Summer, PGR daminozide 3,500-5,000 ppm Spray	Plants grow shorter under short days. Plants will grow taller under longer days when no PGRs are applied.
HELIANTHUS <b>Miss Sunshine</b>	288 or larger	(day) 64-72°F (18-22°C) (night) 61-64°F (16-18°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Can flower under different day lengths, but will flower slightly quicker under short days	5" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide 1,250-2,500 ppm Spray Gallon, 1-3 (ppp), 7-8 (weeks), Spring, PGR daminozide 1,250-2,500 ppm Spray 5" Pot, 1 (ppp), 6-7 (weeks), Summer, PGR daminozide 1,250-2,500 ppm Spray Gallon, 1-3 (ppp), 6-7 (weeks), Summer, PGR daminozide 1,250-2,500 ppm Spray	Plants grow shorter under short days. Plants will grow taller under longer days when no PGRs are applied.
HELICHRYSUM <b>Silver Mist</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 62-65°F (17-18°C)	5.5-6.5 pH 1.5-2.0 mmhos/cm		306 Pack, 1 (ppp), 8-9 (weeks), Spring 4" Pot, 1 (ppp), 8-9 (weeks), Spring 6" Pot, 3 (ppp), 9-10 (weeks), Spring	Do not overwater and avoid watering plants late in the day, as constant wet foliage may make the plants susceptible to Botrytis. Does not require pinching.
HIBISCUS <b>Mahogany Splendor</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-67°F (17-19°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Flower initiation with daylength 12 hours or shorter	4 1/2" Pot, 1 (ppp), 5-6 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/300 ppm Spray 4 1/2" Pot, 1 (ppp), 5-6 (weeks), Spring, PGR paclobutrazol 5-10 ppm Spray 6" Pot, 1 (ppp), 6-8 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/300 ppm Spray 6" Pot, 1 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 5-10 ppm Spray Gallon, 1 (ppp), 6-8 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/300 ppm Spray Gallon, 1 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 5-10 ppm Spray 8" Pot, 1 (ppp), 6-8 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/300 ppm Spray 8" Pot, 1 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 5-10 ppm Spray	
HYPOESTES <b>Splash Select</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 62-65°F (17-18°C)	5.5-6.0 pH 1.0-1.5 mmhos/cm		Cell Pack, 1 (ppp), 5-6 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 1,000/500 ppm Spray 4 1/2" Pot, 3-4 (ppp), 5-6 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 1,000/500 ppm Spray	Too much light will cause leaves to curl. Grow under low light conditions (400 to 500 f.c./4,000 to 5,000 Lux).
IMPATIENS <b>Dazzler®</b>	512 or larger	(day) 65-75°F (18-24°C) (night) 65-72°F (18-22°C)	6.2-6.5 pH 0.75-1.0 mmhos/cm	Day neutral	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring 6" Pot, 1 (ppp), 6-7 (weeks), Spring 10" HB, 3-5 (ppp), 8-10 (weeks), Spring	
IMPATIENS <b>Impreza®</b>	512 or larger	(day) 65-75°F (18-24°C) (night) 65-72°F (18-22°C)	6.2-6.5 pH 0.75-1.0 mmhos/cm	Day neutral	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring 6" Pot, 1 (ppp), 6-7 (weeks), Spring 10" HB, 3-5 (ppp), 8-10 (weeks), Spring	
IMPATIENS <b>Super Elfin®</b>	512 or larger	(day) 65-75°F (18-24°C) (night) 65-72°F (18-22°C)	6.2-6.5 pH 0.75-1.0 mmhos/cm	Day neutral	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring 6" Pot, 1 (ppp), 6-7 (weeks), Spring 10" HB, 3-5 (ppp), 8-10 (weeks), Spring	

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IMPATIENS <b>Super Elfin® XP</b>	512 or larger	(day) 65-75°F (18-24°C) (night) 65-72°F (18-22°C)	6.2-6.5 pH 0.75-1.0 mmhos/cm	Day neutral	<b>Cell Pack</b> , 1 (ppp), 3-4 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Spring <b>6" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>10" HB</b> , 3-5 (ppp), 8-10 (weeks), Spring	
IMPATIENS (NEW GUINEA) <b>Divine</b>	288 or larger	(day) 68-76°F (20-24°C) (night) 65-68°F (18-20°C)	6.2-6.5 pH 0.75-1.0 mmhos/cm	Day neutral	<b>306 Pack</b> , 1 (ppp), 7-8 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring <b>6" Pot</b> , 1-2 (ppp), 8-9 (weeks), Spring <b>Basket</b> , 3-5 (ppp), 8-9 (weeks), Spring	Feed plants moderately. Overfeeding leads to lush, leafy plants at the expense of flowers. See GrowerFacts for PGR recommendations and complete information.
INCARVILLEA <b>Cheron</b>	288 or larger	(day) 67-70°F (19-21°C) (night) 63-65°F (17-18°C)	5.8-6.3 pH 0.75 mmhos/cm	Day neutral	<b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring	Final plant height does not respond well to PGRs. Avoid using B-Nine/Alar in later application as it could significantly delay flowering. Cheron White crop time is around 10 days faster than Cheron Pink.
IREFINE <b>Purple Lady</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 62-65°F (17-18°C)	5.5-6.5 pH 1.2-1.5 mmhos/cm		<b>306 Pack</b> , 1 (ppp), 5-6 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Spring <b>10" HB</b> , 3 (ppp), 6-7 (weeks), Spring <b>12" HB</b> , 4-5 (ppp), 6-7 (weeks), Spring	Reddish foliage indicates plants need more feed. High light, especially with low humidity, results in puckered foliage.
ISOTOMA <b>Gemini</b>	288 or larger	(day) 60-66°F (16-19°C) (night) 54-57°F (12-14°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>306 Pack</b> , 1 (ppp), 9-10 (weeks), Spring, <b>PGR</b> daminozide 2,500-3,500 ppm Spray <b>4 1/2" Pot</b> , 1 (ppp), 9-12 (weeks), Spring, <b>PGR</b> daminozide 2,500-3,500 ppm Spray <b>Gallon</b> , 1-3 (ppp), 12-14 (weeks), Spring, <b>PGR</b> daminozide 2,500-3,500 ppm Spray	Prefers to grow in cooler conditions. Warmer temperatures above 70°F (21°C) could delay or inhibit flowering.
ISOTOMA <b>Tristar</b>	288 or larger	(day) 61-65°F (16-18°C) (night) 57-61°F (14-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>306 Pack</b> , 1 (ppp), 9-10 (weeks), Spring, <b>PGR</b> daminozide 2,500-3,500 ppm Spray <b>4 1/2" Pot</b> , 1 (ppp), 9-12 (weeks), Spring, <b>PGR</b> daminozide 2,500-3,500 ppm Spray <b>Gallon</b> , 1-3 (ppp), 12-14 (weeks), Spring, <b>PGR</b> daminozide 2,500-3,500 ppm Spray	Prefers to grow in cooler conditions. Warmer temperatures above 70°F (21°C) could delay or inhibit flowering.
JUNCUS <b>Twister</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 59-64°F (15-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm		<b>306 Pack</b> , 1 (ppp), 6-7 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring <b>6" Pot</b> , 3 (ppp), 7-8 (weeks), Spring <b>Gallon</b> , 3 (ppp), 7-8 (weeks), Spring	Do not bury plugs too deeply when transplanting.
LEYCESTERIA <b>Jealousy</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-67°F (18-19°C)	5.6-6.2 pH 1.2-1.5 mmhos/cm		<b>306 Pack</b> , 1 (ppp), 6-7 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>4 1/2" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>6" Pot</b> , 3 (ppp), 7-8 (weeks), Spring <b>Gallon</b> , 3 (ppp), 7-8 (weeks), Spring	
LINARIA <b>Enchantment</b>	288 or larger	(day) 55-65°F (13-18°C) (night) 50-60°F (10-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	<b>306 Pack</b> , 1 (ppp), 6-7 (weeks), Spring, <b>PGR</b> paclobutrazol 10 ppm Spray <b>4 1/2" Pot</b> , 1-3 (ppp), 6-7 (weeks), Spring, <b>PGR</b> paclobutrazol 10 ppm Spray	Cool-season crop will benefit from being grown cooler. Bonzi 10 ppm spray 1 week after transplant will help control stretch. If needed, follow-up spray of Bonzi 20 ppm will help further control growth.
LISIANTHUS <b>Florida</b>	406 or larger	(day) 68-75°F (20-24°C) (night) 60-65°F (16-18°C)	6.5-7.2 pH 0.75 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 14-16 (weeks), Spring <b>6" Pot</b> , 1 (ppp), 14-16 (weeks), Spring	Maintain pH above 6.5. Do not allow plugs to become rootbound. Lisianthus are tender seedlings and are recommended as a plug-purchased item.
LISIANTHUS <b>Forever</b>	406 or larger	(day) 68-75°F (20-24°C) (night) 60-65°F (16-18°C)	6.5-7.2 pH 0.75 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 13-14 (weeks), Spring	Maintain pH above 6.5. Do not allow plugs to become rootbound. Lisianthus are tender seedlings and are recommended as a plug-purchased item.
LISIANTHUS <b>Sapphire</b>	406 or larger	(day) 68-75°F (20-24°C) (night) 55-60°F (13-16°C)	6.5-7.2 pH 0.75 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 12-14 (weeks), Spring	Maintain pH above 6.5. Do not allow plugs to become rootbound. Lisianthus are tender seedlings and are recommended as a plug-purchased item.
LOBELIA <b>Cambridge</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 8-9 (weeks), Spring	Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.
LOBELIA <b>Cobalt Blue</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 8-9 (weeks), Spring	Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.
LOBELIA <b>Crystal Palace</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 8-9 (weeks), Spring	Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.
LOBELIA <b>Fountain</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>10" HB</b> , 5-7 (ppp), 10-12 (weeks), Spring	Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.
LOBELIA <b>Mrs Clibran</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 8-9 (weeks), Spring	Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.
LOBELIA <b>Regatta</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>10" HB</b> , 5-7 (ppp), 8-10 (weeks), Spring, <b>PGR</b> daminozide 3,000-5,000 ppm Spray	Lobelias flower more freely when day length is longer than 12 hours. Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.

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LOBELIA <b>Riviera</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	Cell Pack, 1 (ppp), 5-6 (weeks), Spring, PGR daminozide 3,000-5,000 ppm Spray	Lobelias flower more freely when day length is longer than 12 hours. Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.
LOBELIA <b>Rosamond</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	Cell Pack, 1 (ppp), 8-9 (weeks), Spring	Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.
LOBELIA <b>Sapphire Pendula</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 60-62°F (16-17°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	10" HB, 5-7 (ppp), 10-12 (weeks), Spring	Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.
LOBELIA <b>String Of Pearls</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	Cell Pack, 1 (ppp), 8-9 (weeks), Spring	Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.
LOBELIA <b>White Lady</b>	406 or larger	(day) 66-72°F (19-22°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	Cell Pack, 1 (ppp), 8-9 (weeks), Spring	Lighting plants when days are shorter than 12 hours speeds flowering. Light shading helps to produce a better crop when plants are growing under hot weather and long days in late Spring.
MARIGOLD (AFRICAN) <b>Garland</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.2-1.5 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 7-8 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. PGRs are not required when grown under short days. See GrowerFacts for long-day recommendations.
MARIGOLD (AFRICAN) <b>Lady</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH	Facultative short day	4" Pot, 1 (ppp), 8-9 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (AFRICAN) <b>Marvel</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.2-1.5 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 7-8 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. PGRs are not required when grown under short days. See GrowerFacts for long-day recommendations.
MARIGOLD (AFRICAN) <b>Taishan®</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.2-1.5 mmhos/cm	Facultative short day	306 Pack, 1 (ppp), 4-6 (weeks), Spring 4" Pot, 1 (ppp), 4-6 (weeks), Spring 4 1/2" Pot, 1 (ppp), 4-6 (weeks), Spring 306 Pack, 1 (ppp), 6-7 (weeks), Summer 4" Pot, 1 (ppp), 6-7 (weeks), Summer 4 1/2" Pot, 1 (ppp), 6-7 (weeks), Summer	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. PGRs are not required when grown under short days. See GrowerFacts for long-day recommendations.
MARIGOLD (AFRICAN) <b>Vanilla</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.8 pH 1.0-1.5 mmhos/cm	Facultative short day	4" Pot, 1 (ppp), 7-8 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Bonanza</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.0-1.5 mmhos/cm	Facultative short day	Cell Pack, 1 (ppp), 3-4 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Boy</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.0-1.5 mmhos/cm	Facultative short day	Cell Pack, 1 (ppp), 4 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Durango®</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.0-1.5 mmhos/cm	Facultative short day	Cell Pack, 1 (ppp), 4 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Fireball</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.0-1.5 mmhos/cm	Facultative short day	306 Pack, 1 (ppp), 3-4 (weeks), Spring 1 Quart, 1 (ppp), 4-5 (weeks), Spring 10" Pot, 5-6 (ppp), 4-6 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Quarts and multi-planted containers with several flowers open provide maximum contrast as blooms mature from red to orange to bronze.
MARIGOLD (FRENCH) <b>Gate</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.0-1.5 mmhos/cm	Facultative short day	Cell Pack, 1 (ppp), 4-5 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Hot Pak</b>	288 or larger	(day) 68-85°F (20-29°C) (night) 64-70°F (18-21°C)	6.2-6.5 pH 1.0-1.5 mmhos/cm	Day neutral	Cell Pack, 1 (ppp), 3-4 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Hot Pak is bred to grow and flower under higher temperatures and humidity than other French Marigolds; thus, a wider range of finishing conditions is possible.
MARIGOLD (FRENCH) <b>Jacket</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.0-1.5 mmhos/cm	Facultative short day	Cell Pack, 1 (ppp), 4-5 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Janie</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.0-1.5 mmhos/cm	Facultative short day	Cell Pack, 1 (ppp), 3-4 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity.
MARIGOLD (FRENCH) <b>Strawberry Blonde</b>	288 or larger	(day) 65-68°F (18-20°C) (night) 60-62°F (16-17°C)	6.2-6.5 pH 1.0-1.5 mmhos/cm	Facultative short day	306 Pack, 1 (ppp), 3-4 (weeks), Spring 1 Quart, 1 (ppp), 4-5 (weeks), Spring 10" Pot, 5-6 (ppp), 4-6 (weeks), Spring	Maintain soil pH of 6.2 to 6.4 to avoid iron toxicity. Quarts and multi-planted containers with several blooms open provide maximum contrast as blooms mature from rose to orange to straw colour.
MATTHIOLA <b>Hot Cakes</b>	406 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	4" Pot, 1 (ppp), 5-7 (weeks), Spring 6" Pot, 3 (ppp), 5-7 (weeks), Spring	Best produced under cooler temperatures for uniformity/quality of flowering and plant habit. In general, PGRs not required, but can apply Daminozide (B-Nine) 2,500 to 3,500 ppm foliar spray about 2 weeks after transplant. Note: If unselected plugs are used, expect to see both single and double flowering plants in the crop.  Fertilization Tips: One week after transplant, begin a constant feed program with 150 ppm N. Maintain EC of 1.5 and pH of 5.8 to 6.2 from transplant to finish. Leach crop with clear water occasionally to prevent any salt accumulation. Note: The constant feed program is better than a weekly feed program, as it will help prevent lower leaf chlorosis as the crop comes into flower.  Also, incorporate a fungicide preventative program to control Downy Mildew.



CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	PHOTOPERIOD RESPONSE	FINISHING PROGRAMS	KEY TIPS
NEMESIA <b>Poetry</b>	288 or larger	(day) 62-68°F (17-20°C) (night) 55-62°F (13-17°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	306 Pack, 1 (ppp), 5-7 (weeks), Spring 4" Pot, 1 (ppp), 6-8 (weeks), Spring 4 1/2" Pot, 1 (ppp), 6-8 (weeks), Spring 6" Pot, 3 (ppp), 6-8 (weeks), Spring Gallon, 3 (ppp), 6-8 (weeks), Spring	If necessary, use 2-3 applications of daminozide 2,500-5,000 ppm Spray.
ORNAMENTAL MILLET <b>Jade Princess</b>	128 or larger	(day) 68-85°F (20-29°C) (night) 64-66°F (18-19°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm		4" Pot, 1 (ppp), 4-5 (weeks), Spring 4 1/2" Pot, 1 (ppp), 4-5 (weeks), Spring Gallon, 1-2 (ppp), 12-14 (weeks), Spring Gallon, 3 (ppp), 9-10 (weeks), Autumn	Do not grow below 60°F (16°C). Low temperatures can cause foliage color to become chlorotic or cause necrosis and flower spike bending. High light results in better basal tillering and stronger stems. Small pot crop times are based on 68°F (20°C) daily average temperature and saleable foliage plants without flower spikes.
ORNAMENTAL MILLET <b>Jester</b>	128 or larger	(day) 68-85°F (20-29°C) (night) 64-66°F (18-19°C)	5.5-6.5 pH 1.5-2.0 mmhos/cm		Gallon, 3 (ppp), 11-13 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench Gallon, 3 (ppp), 9-10 (weeks), Autumn	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well. If direct sown to final container, apply a paclobutrazol drench of 6 to 8 ppm 4 weeks after sowing. See GrowerFacts for specific details on PGRs and for finishing this crop for landscape or mixed container uses.
ORNAMENTAL MILLET <b>Purple Baron</b>	128 or larger	(day) 68-85°F (20-29°C) (night) 64-66°F (18-19°C)	5.5-6.5 pH 1.5-2.0 mmhos/cm		Gallon, 3 (ppp), 11-13 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench Gallon, 3 (ppp), 9-10 (weeks), Autumn	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well. If direct sown to final container, apply a paclobutrazol drench of 6 to 8 ppm 4 weeks after sowing. See GrowerFacts for specific details on PGRs and for finishing this crop for landscape or mixed container uses.
ORNAMENTAL MILLET <b>Purple Majesty</b>	128 or larger	(day) 68-85°F (20-29°C) (night) 64-66°F (18-19°C)	5.5-6.5 pH 1.5-2.0 mmhos/cm		Gallon, 3 (ppp), 11-13 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench Gallon, 3 (ppp), 9-10 (weeks), Autumn	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well. If direct sown to final container, apply a paclobutrazol drench of 6 to 8 ppm 4 weeks after sowing. See GrowerFacts for specific details on PGRs and for finishing this crop for landscape or mixed container uses.
ORNAMENTAL MINT <b>Mini Mint</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 60-64°F (16-18°C)	5.8-6.2 pH 0.75-1.0 mmhos/cm	Day neutral	306 Pack, 1 (ppp), 4-6 (weeks), Spring 4" Pot, 1 (ppp), 5-7 (weeks), Spring 6" Pot, 1-3 (ppp), 6-8 (weeks), Spring	Consistently maintain media moisture, avoiding excessive wet or dry. Plants grow faster under warmer temperatures. However, under low light conditions, they may stretch if temperature is warmer than 68°F (20°C).
ORNAMENTAL PEPPER <b>Black Pearl</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	4 1/2" Pot, 1 (ppp), 5-6 (weeks), Summer 6" Pot, 1-3 (ppp), 5-6 (weeks), Summer Gallon, 1-3 (ppp), 6-7 (weeks), Summer 4 1/2" Pot, 1 (ppp), 5-6 (weeks), Autumn 6" Pot, 1-3 (ppp), 5-6 (weeks), Autumn Gallon, 1-3 (ppp), 6-7 (weeks), Autumn	As Black Pearl is used especially for its foliage, crop times reflect finish for foliage, not fruit. Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.
ORNAMENTAL PEPPER <b>Calico</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	4 1/2" Pot, 1 (ppp), 5-6 (weeks), Summer 6" Pot, 1-3 (ppp), 5-6 (weeks), Summer Gallon, 1-3 (ppp), 6-7 (weeks), Summer 4 1/2" Pot, 1 (ppp), 5-6 (weeks), Autumn 6" Pot, 1-3 (ppp), 5-6 (weeks), Autumn Gallon, 1-3 (ppp), 6-7 (weeks), Autumn	As Calico is used especially for its foliage, crop times reflect finish for foliage, not fruit. Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.
ORNAMENTAL PEPPER <b>Chilly Chili</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	4 1/2" Pot, 1 (ppp), 7-13 (weeks), Summer 6" Pot, 1-3 (ppp), 7-13 (weeks), Summer Gallon, 1-3 (ppp), 7-13 (weeks), Summer 4 1/2" Pot, 1 (ppp), 7-13 (weeks), Autumn 6" Pot, 1-3 (ppp), 7-13 (weeks), Autumn Gallon, 1-3 (ppp), 7-13 (weeks), Autumn	Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.
ORNAMENTAL PEPPER <b>Hot Pops</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	4" Pot, 1 (ppp), 7-13 (weeks), Summer 4 1/2" Pot, 1 (ppp), 7-13 (weeks), Summer 6" Pot, 1-3 (ppp), 7-13 (weeks), Summer 4" Pot, 1 (ppp), 7-13 (weeks), Autumn 4 1/2" Pot, 1 (ppp), 7-13 (weeks), Autumn 6" Pot, 1-3 (ppp), 7-13 (weeks), Autumn	Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.
ORNAMENTAL PEPPER <b>Masquerade</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	6" Pot, 1-3 (ppp), 7-12 (weeks), Summer Gallon, 3 (ppp), 7-12 (weeks), Summer 6" Pot, 1-3 (ppp), 7-12 (weeks), Autumn Gallon, 3 (ppp), 7-12 (weeks), Autumn	Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.
ORNAMENTAL PEPPER <b>Medusa</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	4" Pot, 1 (ppp), 7-13 (weeks), Summer 4 1/2" Pot, 1 (ppp), 7-13 (weeks), Summer 6" Pot, 1-3 (ppp), 7-13 (weeks), Summer 4" Pot, 1 (ppp), 7-13 (weeks), Autumn 4 1/2" Pot, 1 (ppp), 7-13 (weeks), Autumn 6" Pot, 1-3 (ppp), 7-13 (weeks), Autumn	Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.
ORNAMENTAL PEPPER <b>Purple Flash</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	4 1/2" Pot, 1 (ppp), 5-6 (weeks), Summer 6" Pot, 1-3 (ppp), 5-6 (weeks), Summer Gallon, 1-3 (ppp), 6-7 (weeks), Summer 4 1/2" Pot, 1 (ppp), 5-6 (weeks), Autumn 6" Pot, 1-3 (ppp), 5-6 (weeks), Autumn Gallon, 1-3 (ppp), 6-7 (weeks), Autumn	As Purple Flash is used especially for its foliage, crop times reflect finish for foliage, not fruit. Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.

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ORNAMENTAL PEPPER <b>Red Missile</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	<b>4 1/2" Pot</b> , 1 (ppp), 7-10 (weeks), Summer <b>6" Pot</b> , 1 (ppp), 7-11 (weeks), Summer <b>Gallon</b> , 3 (ppp), 7-11 (weeks), Summer <b>4 1/2" Pot</b> , 1 (ppp), 7-10 (weeks), Autumn <b>6" Pot</b> , 1 (ppp), 7-11 (weeks), Autumn <b>Gallon</b> , 3 (ppp), 7-11 (weeks), Autumn	Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.
ORNAMENTAL PEPPER <b>Sangria</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	<b>6" Pot</b> , 1-3 (ppp), 7-13 (weeks), Summer <b>Gallon</b> , 1-3 (ppp), 7-13 (weeks), Summer <b>6" Pot</b> , 1-3 (ppp), 7-13 (weeks), Autumn <b>Gallon</b> , 1-3 (ppp), 7-13 (weeks), Autumn	Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.
ORNAMENTAL PEPPER <b>Sedona Sun</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	<b>6" Pot</b> , 1-3 (ppp), 7-13 (weeks), Summer <b>Gallon</b> , 1-3 (ppp), 7-13 (weeks), Summer <b>6" Pot</b> , 1-3 (ppp), 7-13 (weeks), Autumn <b>Gallon</b> , 1-3 (ppp), 7-13 (weeks), Autumn	Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.
OSTEOSPERMUM <b>Akila®</b>	288 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral. Supplemental lighting will reduce days to flower.	<b>306 Pack</b> , 1 (ppp), 10-12 (weeks), Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray <b>4" Pot</b> , 1 (ppp), 10-12 (weeks), Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray <b>Gallon</b> , 1-3 (ppp), 12-14 (weeks), Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray <b>306 Pack</b> , 1 (ppp), 7-9 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray <b>4" Pot</b> , 1 (ppp), 7-9 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray <b>Gallon</b> , 1-3 (ppp), 9-11 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray	Plants grown under high light and cool conditions may not require PGRs. If needed, apply daminozide/chlormequat chloride 2,500/500 ppm tank mix 2 weeks after transplant. Alternatively, flurprimidol at 10 to 15 ppm spray applied once after transplant will give adequate control. Avoid insecticides that contain the active ingredient methiocarb, as this will affect flower colour.
PANSY <b>Cool Wave®</b>	288 or larger	(day) 62-70°F (17-21°C) (night) 55-60°F (13-16°C)	5.5-5.8 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>6" Pot</b> , 1-3 (ppp), 6-7 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250 ppm Spray <b>10" HB</b> , 4 (ppp), 9-10 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250 ppm Spray <b>6" Pot</b> , 1-3 (ppp), 5-6 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 5,000/500 ppm Spray <b>10" HB</b> , 4 (ppp), 7-8 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 5,000/500 ppm Spray	In heat of Autumn production, a paclobutrazol drench of 0.1 to 0.125 can be used once foliage is covering soil. Consult GrowerFacts for more detailed information on scheduling for Autumn and Spring programs and variety-specific PGR information.
PANSY <b>Fizzy</b>	288 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>6" Pot</b> , 3 (ppp), 6-8 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray <b>10" Pot</b> , 7-9 (ppp), 6-8 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray <b>6" Pot</b> , 3 (ppp), 4-6 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray <b>10" Pot</b> , 7-9 (ppp), 4-6 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions. If growing frost-free (northern overwinter culture from Autumn transplant) plan for crop times of 16 to 18 weeks from transplant to finish. For maximum ruffled edge, schedule for late Autumn, Winter and Spring programs. Heat reduces the ruffled edge and colour contrast.
PANSY <b>Frizzle Sizzle</b>	288 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>6" Pot</b> , 3 (ppp), 6-8 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray <b>10" Pot</b> , 7-9 (ppp), 6-8 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray <b>6" Pot</b> , 3 (ppp), 4-6 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray <b>10" Pot</b> , 7-9 (ppp), 4-6 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions. If growing frost-free (northern overwinter culture from Autumn transplant) plan for crop times of 16 to 18 weeks from transplant to finish. For maximum ruffled edge, schedule for late Autumn, Winter and Spring programs. Heat reduces the ruffled edge and colour contrast.
PANSY <b>Halloween II</b>	288 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 5-6 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray <b>Cell Pack</b> , 1 (ppp), 3-4 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/2,500-5,000/500 ppm Spray <b>Cell Pack</b> , 1 (ppp), 3-4 (weeks), Autumn, <b>PGR</b> paclobutrazol 0.1-0.125 ppm Drench <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/2,500-5,000/500 ppm Spray <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Autumn, <b>PGR</b> paclobutrazol 0.1-0.125 ppm Drench	Adjust PGR rates and frequency of application depending on local conditions. If growing frost-free (northern overwinter culture from Autumn transplant) plan for crop times of 16 to 18 weeks from transplant to finish.
PANSY <b>Matrix®</b>	288 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 4-5 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray <b>Cell Pack</b> , 1 (ppp), 4-5 (weeks), Autumn, <b>PGR</b> paclobutrazol 0.125 ppm Drench <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Autumn, <b>PGR</b> paclobutrazol 0.125 ppm Drench <b>10" Pot</b> , 7-9 (ppp), 4-5 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions.

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PANSY <b>Panola®</b>	288 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 5-6 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray <b>Cell Pack</b> , 1 (ppp), 3-4 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray <b>Cell Pack</b> , 1 (ppp), 3-4 (weeks), Autumn, <b>PGR</b> paclobutrazol 0.1-0.125 ppm Drench <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Autumn, <b>PGR</b> paclobutrazol 0.1-0.125 ppm Drench	Adjust PGR rates and frequency of application depending on local conditions. If growing frost-free (northern overwinter culture from Autumn transplant) plan for crop times of 16 to 18 weeks from transplant to finish.
PANSY <b>Panola® XP</b>	288 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 5-6 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray <b>Cell Pack</b> , 1 (ppp), 3-4 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/500-5,000/500 ppm Spray <b>Cell Pack</b> , 1 (ppp), 3-4 (weeks), Autumn, <b>PGR</b> paclobutrazol 0.1-0.125 ppm Drench <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Autumn, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/500-5,000/500 ppm Spray <b>4" Pot</b> , 1 (ppp), 3-4 (weeks), Autumn, <b>PGR</b> paclobutrazol 0.1-0.125 ppm Drench	Adjust PGR rates and frequency of application depending on local conditions. If growing frost-free (northern overwinter culture from Autumn transplant) plan for crop times of 16 to 18 weeks from transplant to finish.
PANSY <b>Promise®</b>	288 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 6-7 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/500 ppm Spray <b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/500 ppm Spray <b>10" Pot</b> , 7-9 (ppp), 6-7 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions. If growing frost-free (northern overwinter culture from Autumn transplant) plan for crop times of 17 to 18 weeks from transplant to finish.
PANSY <b>Spring Matrix</b>	288 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 6-7 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/500 ppm Spray <b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/500 ppm Spray <b>10" Pot</b> , 7-9 (ppp), 6-7 (weeks), Early Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 1,500/500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions. If growing frost-free (northern overwinter culture from Autumn transplant) plan for crop times of 17 to 18 weeks from transplant to finish.
PENTAS <b>Butterfly</b>	288 or larger	(day) 72-80°F (22-27°C) (night) 65-68°F (18-20°C)	6.5-6.8 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 8-10 (weeks), Spring <b>Gallon</b> , 2-3 (ppp), 8-10 (weeks), Spring	Under high light, long days and warm temperatures (Summer production), Butterfly can be produced in 12 to 13 weeks from seed. See GrowerFacts for PGR information.
PENTAS <b>Glitterati</b>	288 or larger	(day) 72-80°F (22-27°C) (night) 65-68°F (18-20°C)	6.5-6.8 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 7-8 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring <b>6" Pot</b> , 2 (ppp), 7-8 (weeks), Spring <b>Gallon</b> , 2 (ppp), 7-8 (weeks), Spring	See GrowerFacts for PGR information.
PETUNIA <b>Carpet</b>	512 or larger	(day) 62-65°F (17-18°C) (night) 55-65°F (13-18°C)	5.5-6.3 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 4-5 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray	
PETUNIA <b>Daddy®</b>	288 or larger	(day) 62-65°F (17-18°C) (night) 55-65°F (13-18°C)	5.5-6.3 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 5-6 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray	
PETUNIA <b>Debonair Collection</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	All varieties can flower successfully at 10-hour daylengths	<b>4" Pot</b> , 1 (ppp), 5-7 (weeks), Spring, <b>PGR</b> paclobutrazol 2-3 ppm Drench <b>6" Pot</b> , 1-3 (ppp), 5-8 (weeks), Spring, <b>PGR</b> paclobutrazol 2-3 ppm Drench <b>10" Pot</b> , 3-4 (ppp), 10-13 (weeks), Spring, <b>PGR</b> paclobutrazol 2-3 ppm Drench <b>4" Pot</b> , 1 (ppp), 3-5 (weeks), Summer, <b>PGR</b> paclobutrazol 2-3 ppm Drench <b>6" Pot</b> , 1-3 (ppp), 3-5 (weeks), Summer, <b>PGR</b> paclobutrazol 2-3 ppm Drench <b>10" Pot</b> , 3-4 (ppp), 8-11 (weeks), Summer, <b>PGR</b> paclobutrazol 2-3 ppm Drench	Avoid using B-Nine on Black Cherry as this may impact flower colour. Options include Bonzi or Topflor.
PETUNIA <b>Dreams</b>	512 or larger	(day) 62-65°F (17-18°C) (night) 55-65°F (13-18°C)	5.8-6.3 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 5-6 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray	
PETUNIA <b>Ez Rider®</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Similar to Dreams petunia, all Ez Rider varieties can flower successfully at 10-hour daylengths	<b>4" Pot</b> , 1 (ppp), 9-11 (weeks), Spring, <b>PGR</b> daminozide 2,500 ppm Spray <b>10" Pot</b> , 3-4 (ppp), 10-13 (weeks), Spring, <b>PGR</b> daminozide 2,500 ppm Spray <b>4" Pot</b> , 1 (ppp), 8-10 (weeks), Summer, <b>PGR</b> daminozide 2,500 ppm Spray <b>10" Pot</b> , 3-4 (ppp), 8-11 (weeks), Summer, <b>PGR</b> daminozide 2,500 ppm Spray	Genetically compact and needs less to no PGRs after transplant.
PETUNIA <b>Lo Rider®</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Similar to Dreams petunia, all Lo Rider varieties can flower successfully at 10-hour daylengths	<b>4" Pot</b> , 1 (ppp), 9-11 (weeks), Spring, <b>PGR</b> daminozide 2,500 ppm Spray <b>10" Pot</b> , 3-4 (ppp), 10-13 (weeks), Spring, <b>PGR</b> daminozide 2,500 ppm Spray <b>4" Pot</b> , 1 (ppp), 8-10 (weeks), Summer, <b>PGR</b> daminozide 2,500 ppm Spray <b>10" Pot</b> , 3-4 (ppp), 8-11 (weeks), Summer, <b>PGR</b> daminozide 2,500 ppm Spray	Genetically compact and needs less to no PGRs after transplant.
PETUNIA <b>Madness®</b>	512 or larger	(day) 62-65°F (17-18°C) (night) 55-65°F (13-18°C)	5.8-6.3 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 5-6 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray	
PETUNIA <b>Mirage</b>	512 or larger	(day) 62-65°F (17-18°C) (night) 55-65°F (13-18°C)	5.8-6.3 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 5-6 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray	

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	PHOTOPERIOD RESPONSE	FINISHING PROGRAMS	KEY TIPS
PETUNIA <b>Pretty Flora</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Can flower successfully at 10-hour daylengths with slightly delayed flower time	<b>4" Pot</b> , 1 (ppp), 9-11 (weeks), Spring, <b>PGR</b> daminozide 2,500 ppm Spray <b>4" Pot</b> , 1 (ppp), 8-10 (weeks), Summer, <b>PGR</b> daminozide 2,500 ppm Spray <b>10" Pot</b> , 3-4 (ppp), 8-11 (weeks), Summer, <b>PGR</b> daminozide 2,500 ppm Spray <b>10" Pot</b> , 3-4 (ppp), 10-13 (weeks), Summer, <b>PGR</b> daminozide 2,500 ppm Spray	Genetically compact and needs less to no PGRs after transplant.
PETUNIA <b>Pretty Grand</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Similar to Dreams petunia, all Pretty Grand varieties can flower successfully at 10-hour daylengths	<b>4" Pot</b> , 1 (ppp), 9-11 (weeks), Spring, <b>PGR</b> daminozide 2,500 ppm Spray <b>10" Pot</b> , 3-4 (ppp), 10-13 (weeks), Spring, <b>PGR</b> daminozide 2,500 ppm Spray <b>4" Pot</b> , 1 (ppp), 8-10 (weeks), Summer, <b>PGR</b> daminozide 2,500 ppm Spray <b>10" Pot</b> , 3-4 (ppp), 8-11 (weeks), Summer, <b>PGR</b> daminozide 2,500 ppm Spray	Genetically compact and needs less to no PGRs after transplant.
PETUNIA <b>Sophistica® Collection</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Can flower successfully at 10-hour daylengths. Crop time is 3 to 6 days faster under longer days.	<b>4" Pot</b> , 1 (ppp), 10-12 (weeks), Spring, <b>PGR</b> paclobutrazol 2-3 ppm Drench <b>6" Pot</b> , 1-3 (ppp), 10-12 (weeks), Spring, <b>PGR</b> paclobutrazol 2-3 ppm Drench <b>10" Pot</b> , 3-4 (ppp), 10-13 (weeks), Spring, <b>PGR</b> paclobutrazol 2-3 ppm Drench <b>4" Pot</b> , 1 (ppp), 8-10 (weeks), Summer, <b>PGR</b> paclobutrazol 2-3 ppm Drench <b>6" Pot</b> , 1-3 (ppp), 8-10 (weeks), Summer, <b>PGR</b> paclobutrazol 2-3 ppm Drench <b>10" Pot</b> , 3-4 (ppp), 8-11 (weeks), Summer, <b>PGR</b> paclobutrazol 2-3 ppm Drench	Avoid using B-Nine on Lime Bicolor and Blackberry as this may impact flower colour. Options include Bonzi or Topflor.
PETUNIA <b>Supercascade</b>	512 or larger	(day) 62-65°F (17-18°C) (night) 55-65°F (13-18°C)	5.8-6.3 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 5-6 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray	
PETUNIA (DOUBLE) <b>Bonanza</b>	288 or larger	(day) 65-72°F (18-22°C) (night) 60-62°F (16-17°C)	5.8-6.3 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>5" Pot</b> , 1 (ppp), 5-6 (weeks), Spring <b>Gallon</b> , 2-3 (ppp), 7-8 (weeks), Spring <b>Hanging Basket</b> , 3 (ppp), 7-8 (weeks), Spring	Maintain light levels as high as possible (4,000 to 7,000 f.c.). Sensitive to overwatering; allow media to dry slightly before watering. See GrowerFacts for PGR information.
PETUNIA (DOUBLE) <b>Double Cascade</b>	288 or larger	(day) 65-72°F (18-22°C) (night) 60-62°F (16-17°C)	5.8-6.3 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>5" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>Gallon</b> , 2-3 (ppp), 8-9 (weeks), Spring <b>Hanging Basket</b> , 3 (ppp), 8-9 (weeks), Spring	Maintain light levels as high as possible (4,000 to 7,000 f.c.). Sensitive to overwatering; allow media to dry slightly before watering. See GrowerFacts for PGR information.
PETUNIA (DOUBLE) <b>Duo</b>	288 or larger	(day) 65-72°F (18-22°C) (night) 60-62°F (16-17°C)	5.5-6.3 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Spring <b>5" Pot</b> , 1 (ppp), 5-6 (weeks), Spring <b>Gallon</b> , 2-3 (ppp), 7-8 (weeks), Spring <b>Hanging Basket</b> , 3 (ppp), 7-8 (weeks), Spring	Maintain light levels as high as possible (4,000 to 7,000 f.c.). Sensitive to overwatering; allow media to dry slightly before watering. See GrowerFacts for PGR information.
PETUNIA (DOUBLE) <b>Glorious</b>	288 or larger	(day) 65-72°F (18-22°C) (night) 60-62°F (16-17°C)	5.5-6.3 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>5" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>Hanging Basket</b> , 3 (ppp), 8-9 (weeks), Spring	Maintain light levels as high as possible (4,000 to 7,000 f.c.). Sensitive to overwatering; allow media to dry slightly before watering. See GrowerFacts for PGR information.
PETUNIA (DOUBLE) <b>Madness</b>	288 or larger	(day) 65-72°F (18-22°C) (night) 60-62°F (16-17°C)	5.5-6.3 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Spring <b>5" Pot</b> , 1 (ppp), 5-6 (weeks), Spring <b>Gallon</b> , 2-3 (ppp), 7-8 (weeks), Spring <b>Hanging Basket</b> , 3 (ppp), 7-8 (weeks), Spring	Maintain light levels as high as possible (4,000 to 7,000 f.c.). Sensitive to overwatering; allow media to dry slightly before watering. See GrowerFacts for PGR information.
PETUNIA (DOUBLE) <b>Pirouette</b>	288 or larger	(day) 65-72°F (18-22°C) (night) 60-62°F (16-17°C)	5.5-6.3 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>5" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>Hanging Basket</b> , 3 (ppp), 8-9 (weeks), Spring	Maintain light levels as high as possible (4,000 to 7,000 f.c.). Sensitive to overwatering; allow media to dry slightly before watering. See GrowerFacts for PGR information.
PETUNIA (DOUBLE) <b>Valentine</b>	288 or larger	(day) 65-72°F (18-22°C) (night) 60-62°F (16-17°C)	5.5-6.3 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>5" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>Hanging Basket</b> , 3 (ppp), 8-9 (weeks), Spring	Maintain light levels as high as possible (4,000 to 7,000 f.c.). Sensitive to overwatering; allow media to dry slightly before watering. See GrowerFacts for PGR information.
PETUNIA (SPREADING) <b>Easy Wave®</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day plants. See GrowerFacts for details by variety.	<b>306 Pack</b> , 1 (ppp), 6-7 (weeks), Spring, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>6" Pot</b> , 1 (ppp), 7-8 (weeks), Spring, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>10" HB</b> , 3-4 (ppp), 8-9 (weeks), Spring, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>306 Pack</b> , 1 (ppp), 4-5 (weeks), Summer, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Summer, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>6" Pot</b> , 1 (ppp), 5-6 (weeks), Summer, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>10" HB</b> , 3-4 (ppp), 6-7 (weeks), Summer, <b>PGR</b> paclobutrazol 3-5 ppm Drench	Daminozide spray of 3,500 to 5,000 ppm 7 to 10 days after transplant promotes branching and controls early stretch. Can be grown as low as 50°F (10°C). Crop timing is related to average temperature when grown under proper daylength. Plants will take longer to flower when grown in cooler conditions. Recommended DLI range of 12 to 20 mol·m <sup>-2</sup> ·d <sup>-1</sup> .
PETUNIA (SPREADING) <b>Shock Wave®</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day plants. See GrowerFacts for details by variety.	<b>306 Pack</b> , 1 (ppp), 5-6 (weeks), Spring, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Spring, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>6" Pot</b> , 1 (ppp), 5-6 (weeks), Spring, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>10" HB</b> , 3-4 (ppp), 6-8 (weeks), Spring, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>306 Pack</b> , 1 (ppp), 4-5 (weeks), Summer, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Summer, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>6" Pot</b> , 1 (ppp), 4-5 (weeks), Summer, <b>PGR</b> paclobutrazol 3-5 ppm Drench <b>10" HB</b> , 3-4 (ppp), 5-6 (weeks), Summer, <b>PGR</b> paclobutrazol 3-5 ppm Drench	Daminozide spray of 2,500 to 5,000 ppm 7 to 10 days after transplant promotes branching and controls early stretch. Can be grown as low as 50°F (10°C). Crop timing is related to average temperature when grown under proper daylength. Plants will take longer to flower when grown in cooler conditions. Recommended DLI range of 12 to 20 mol·m <sup>-2</sup> ·d <sup>-1</sup> .
PETUNIA (SPREADING) <b>Tidal Wave®</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day plants. See GrowerFacts for details by variety.	<b>6" Pot</b> , 1-3 (ppp), 6-8 (weeks), Spring, <b>PGR</b> paclobutrazol 5-8 ppm Drench <b>Gallon</b> , 1-3 (ppp), 6-8 (weeks), Spring, <b>PGR</b> paclobutrazol 5-8 ppm Drench <b>6" Pot</b> , 1-3 (ppp), 4-7 (weeks), Summer, <b>PGR</b> paclobutrazol 5-8 ppm Drench <b>Gallon</b> , 1-3 (ppp), 4-7 (weeks), Summer, <b>PGR</b> paclobutrazol 5-8 ppm Drench	Daminozide spray of 3,500 to 5,000 ppm 7 to 10 days after transplant promotes branching and controls early stretch. Can be grown as low as 50°F (10°C). Crop timing is related to average temperature when grown under proper daylength. Plants will take longer to flower when grown in cooler conditions. Recommended DLI range of 12 to 20 mol·m <sup>-2</sup> ·d <sup>-1</sup> .
PETUNIA (SPREADING) <b>Wave®</b>	288 or larger	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day plants. See GrowerFacts for details by variety.	<b>6" Pot</b> , 1 (ppp), 7-9 (weeks), Spring, <b>PGR</b> paclobutrazol 5-8 ppm Drench <b>10" HB</b> , 3-4 (ppp), 8-10 (weeks), Spring, <b>PGR</b> paclobutrazol 5-8 ppm Drench <b>6" Pot</b> , 1 (ppp), 5-7 (weeks), Summer, <b>PGR</b> paclobutrazol 5-8 ppm Drench <b>10" HB</b> , 3-4 (ppp), 6-8 (weeks), Summer, <b>PGR</b> paclobutrazol 5-8 ppm Drench	Daminozide spray of 3,500 to 5,000 ppm 7 to 10 days after transplant promotes branching and controls early stretch. Can be grown as low as 50°F (10°C). Crop timing is related to average temperature when grown under proper daylength. Plants will take longer to flower when grown in cooler conditions. Recommended DLI range of 12 to 20 mol·m <sup>-2</sup> ·d <sup>-1</sup> .

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	PHOTOPERIOD RESPONSE	FINISHING PROGRAMS	KEY TIPS
PHLOX <b>21st Century</b>	406 or larger	(day) 60-70°F (16-21°C) (night) 50-62°F (10-17°C)	5.5-6.2 pH 1.0-1.5 mmhos/cm	Day neutral	<b>306 Pack</b> , 1 (ppp), 6 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 6 (weeks), Spring <b>Gallon</b> , 3 (ppp), 7-8 (weeks), Spring	If necessary, paclobutrazol 7.5-20 ppm Spray can be applied. Application rate & frequency of applications depends upon growth rate. Daminozide 2,500 ppm Spray is also effective.
PHLOX <b>Ethnie</b>	406 or larger	(day) 60-68°F (16-20°C) (night) 55-62°F (13-17°C)	5.5-6.2 pH 1.0-1.5 mmhos/cm	Day neutral	<b>Cell Pack</b> , 1 (ppp), 5-6 (weeks), Spring <b>3.5" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring	If necessary, paclobutrazol 7.5-20 ppm Spray can be applied. Application rate & frequency of applications depends upon growth rate. Daminozide 2,500 ppm Spray is also effective.
PHLOX <b>Grammy Pink &amp; White</b>	406 or larger	(day) 60-70°F (16-21°C) (night) 50-62°F (10-17°C)	5.5-6.2 pH 1.0-1.5 mmhos/cm	Day neutral	<b>306 Pack</b> , 1 (ppp), 6 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 6 (weeks), Spring <b>Gallon</b> , 3 (ppp), 7-8 (weeks), Spring	Genetically dwarf variety normally does not require PGR. If required, paclobutrazol 7.5-10.0 ppm Spray can be applied. Daminozide 2,500 ppm Spray is also effective.
PHLOX <b>Promise</b>	406 or larger	(day) 60-68°F (16-20°C) (night) 55-62°F (13-17°C)	5.5-6.2 pH 1.0-1.5 mmhos/cm	Day neutral	<b>Cell Pack</b> , 1 (ppp), 6-7 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 7-8 (weeks), Spring	If necessary, paclobutrazol 7.5-20 ppm Spray can be applied. Application rate & frequency of applications depends upon growth rate. Daminozide 2,500 ppm Spray is also effective.
PLECTRANTHUS <b>Silver Crest</b>	288 or larger	(day) 64-80°F (18-27°C) (night) 61-68°F (16-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Short day	<b>4" Pot</b> , 1 (ppp), 4-6 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>10" HB</b> , 3 (ppp), 6-7 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray	Does not require a pinch. Due to directional stem arching, it is advisable to position plugs with growing shoot facing outward, toward the outside of the container. Repeat PGR application if needed. Higher concentrations of PGR used for small pot and/or low light production.
PLECTRANTHUS <b>Silver Shield</b>	288 or larger	(day) 64-80°F (18-27°C) (night) 61-68°F (16-20°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Short day	<b>4" Pot</b> , 1 (ppp), 8-9 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>Gallon</b> , 1-2 (ppp), 9-10 (weeks), Spring, <b>PGR</b> daminozide 2,500-5,000 ppm Spray	Does not require a pinch. Repeat PGR application if needed. Higher concentration of PGR is used for small pot and/or low light production.
PORTULACA <b>Happy Hour</b>	288 or larger	(day) 68-76°F (20-24°C) (night) 65-67°F (18-19°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	If transplanting plugs when daylength is shorter 10 hours, 30 minutes, provide long day conditions.	<b>Cell Pack</b> , 36 (ppp), 5 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Spring	PGRs generally not needed. See GrowerFacts for additional information.
PORTULACA <b>Happy Trails</b>	288 or larger	(day) 68-76°F (20-24°C) (night) 65-67°F (18-19°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	If transplanting plugs when daylength is shorter than 10 hours, provide long day conditions.	<b>Cell Pack</b> , 36 (ppp), 5 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Spring	PGRs generally not needed. See GrowerFacts for additional information.
PRIMULA ACAULIS <b>Primlet®</b>	288 or larger	(day) 60-65°F (16-18°C) (night) 55-60°F (13-16°C)	5.5-6.2 pH 1.0-1.2 mmhos/cm	Facultative long day	<b>4" Pot</b> , 1 (ppp), 15-17 (weeks), Autumn	Drop temperature after week 5 (when plant has 10 established leaves) to 45 to 48°F (7 to 9°C) day and 35 to 45°F (2° to 7°C) night for bud initiation. After week 11, go back up to growing temperatures for flower development and forcing. Plants can be held at 40 to 45°F (5 to 7°C) for later forcing. Growing-on time in weeks depends on how large a plant is required. A large plant requires a longer time at 60 to 65°F (16 to 18°C) nights. From bud visibility to first opening of flower is approximately 4 to 5 weeks, depending on temperature.
PURSLANE <b>Toucan</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	6.0-6.5 pH 1.5-2.0 mmhos/cm	Day neutral	<b>Cell Pack</b> , 1 (ppp), 10 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 10 (weeks), Spring <b>4 1/2" Pot</b> , 1 (ppp), 10 (weeks), Spring <b>6" Pot</b> , 1-2 (ppp), 10 (weeks), Spring <b>Gallon</b> , 3 (ppp), 10 (weeks), Spring <b>Cell Pack</b> , 1 (ppp), 8 (weeks), Summer <b>4" Pot</b> , 1 (ppp), 8 (weeks), Summer <b>6" Pot</b> , 1-2 (ppp), 8 (weeks), Summer <b>Gallon</b> , 3 (ppp), 8 (weeks), Summer	PGRs generally not needed; see GrowerFacts for additional information.
RUELLIA <b>Southern Star</b>	288 or larger	(day) 68-75°F (20-24°C) (night) 65-68°F (18-20°C)	6.0-6.5 pH 1.5-2.0 mmhos/cm	Facultative short day	<b>Cell Pack</b> , 1 (ppp), 10 (weeks), Late Spring <b>4" Pot</b> , 1 (ppp), 10 (weeks), Late Spring <b>6" Pot</b> , 3 (ppp), 10 (weeks), Late Spring <b>Gallon</b> , 3 (ppp), 10 (weeks), Late Spring <b>6" Pot</b> , 3 (ppp), 8 (weeks), Summer <b>Gallon</b> , 3 (ppp), 8 (weeks), Summer	PGRs generally not needed.
SALVIA <b>Flare</b>	406 or larger	(day) 68-74°F (20-23°C) (night) 64-68°F (18-20°C)	5.5-5.8 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 4-5 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Spring	Salvia is very sensitive to high salt during early plug stages.
SALVIA <b>Lighthouse</b>	406 or larger	(day) 68-74°F (20-23°C) (night) 64-68°F (18-20°C)	5.5-5.8 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 4-5 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Spring	Salvia is very sensitive to high salt during early plug stages.
SALVIA <b>Scarlet King</b>	406 or larger	(day) 68-74°F (20-23°C) (night) 64-68°F (18-20°C)	5.5-5.8 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 4-5 (weeks), Spring	Salvia is very sensitive to high salt during early plug stages.
SALVIA <b>Scarlet Queen</b>	406 or larger	(day) 68-74°F (20-23°C) (night) 64-68°F (18-20°C)	5.5-5.8 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 4-5 (weeks), Spring	Salvia is very sensitive to high salt during early plug stages.
SALVIA <b>Vista</b>	406 or larger	(day) 68-74°F (20-23°C) (night) 64-68°F (18-20°C)	5.5-5.8 pH 1.2-1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 4-5 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Spring	Salvia is very sensitive to high salt during early plug stages.
SCUTELLARIA JAVANICA <b>Veranda</b>	288 or larger	(day) 72-78°F (22-26°C) (night) 66-68°F (19-20°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	<b>306 Pack</b> , 1 (ppp), 7-10 (weeks), Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/1,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 8-11 (weeks), Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/1,000 ppm Spray <b>Gallon</b> , 3 (ppp), 9-12 (weeks), Spring, <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/1,000 ppm Spray <b>Hanging Basket</b> , 3-5 (ppp), 9-12 (weeks), Spring	Heat-loving crop; crop time is very dependent on temperature.
SNAPDRAGON <b>Rocket</b>	288 or larger	(day) 65-80°F (18-27°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	<b>Field grown</b> , 3 (ppp), 13-16 (weeks), Spring	See also Cut Flower section for more details.

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SNAPDRAGON <b>Snapshot</b>	288 or larger	(day) 55-70°F (13-21°C) (night) 45-55°F (7-13°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	Cell Pack, 1 (ppp), 6 (weeks), Early Spring 4" Pot, 1 (ppp), 6 (weeks), Early Spring	See GrowerFacts for more information.
SNAPDRAGON <b>Solstice</b>	288 or larger	(day) 55-70°F (13-21°C) (night) 45-55°F (7-13°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	Cell Pack, 1 (ppp), 4-6 (weeks), Early Spring 4" Pot, 1 (ppp), 4-6 (weeks), Early Spring Gallon, 3 (ppp), 4-6 (weeks), Early Spring Cell Pack, 1 (ppp), 9-10 (weeks), Autumn 4" Pot, 1 (ppp), 9-10 (weeks), Autumn Gallon, 3 (ppp), 9-10 (weeks), Autumn	See GrowerFacts for more information.
SPILANTHES OLERACEA <b>Peek-A-Boo</b>	288 or larger	(day) 65-75°F (18-24°C) (night) 62-65°F (17-18°C)	5.5-6.5 pH 1.5-2.0 mmhos/cm	Day neutral	4" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-30 ppm Spray 4 1/2" Pot, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-30 ppm Spray 6" Pot, 3 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-30 ppm Spray Gallon, 3 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-30 ppm Spray	
STOCK <b>Vintage</b>	406 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	Cell Pack, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide 2,500 ppm Spray 4 1/2" Pot, 1 (ppp), 8-9 (weeks), Spring, PGR daminozide 2,500 ppm Spray	Fertilization Tips: One week after transplant, begin a constant feed program with 150 ppm N. Maintain EC of 1.5 and pH of 5.8 to 6.2 from transplant to finish. Leach crop with clear water occasionally to prevent salt accumulation. Note: Constant feed program is better than weekly, as it will help prevent any lower leaf chlorosis as crop comes into flower. Also, incorporate a fungicide preventative program to control Downy Mildew.
TALINUM <b>Limon</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 62-66°F (17-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	306 Pack, 1 (ppp), 4-5 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring 4 1/2" Pot, 1 (ppp), 4-5 (weeks), Spring 6" Pot, 3 (ppp), 4-5 (weeks), Spring	For flowers, add 2 weeks to Finish Crop Time.
TALINUM <b>Verde</b>	288 or larger	(day) 66-74°F (19-23°C) (night) 62-66°F (17-19°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Day neutral	306 Pack, 1 (ppp), 4-5 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 4" Pot, 1 (ppp), 4-5 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 4 1/2" Pot, 1 (ppp), 4-5 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 6" Pot, 3 (ppp), 4-5 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray	For flowers, add 2 weeks to Finish Crop Time.
THUNBERGIA <b>Susie</b>	288 or larger	(day) 62-68°F (17-20°C) (night) 60-62°F (16-17°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	4" Pot, 1 (ppp), 4-5 (weeks), Spring Gallon, 1 (ppp), 8-10 (weeks), Spring	
TORENIA <b>Kauai</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-64°F (17-18°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Day neutral	Cell Pack, 1 (ppp), 5-6 (weeks), Spring, PGR chlormequat chloride 500-700 ppm Spray 4" Pot, 1 (ppp), 6-7 (weeks), Spring, PGR chlormequat chloride 500-750 ppm Spray	No pinch needed. See GrowerFacts for more information.
VERBENA <b>Quartz</b>	406 or larger	(day) 65-70°F (18-21°C) (night) 60°F (16°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	Cell Pack, 1 (ppp), 6-8 (weeks), Spring Cell Pack, 1 (ppp), 5-7 (weeks), Summer	
VERBENA <b>Quartz XP</b>	406 or larger	(day) 65-70°F (18-21°C) (night) 60°F (16°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	Cell Pack, 1 (ppp), 6-8 (weeks), Spring Cell Pack, 1 (ppp), 5-7 (weeks), Summer	
VINCA <b>Jams 'N Jellies</b>	288 or larger	(day) 75°F (24°C) (night) 65-68°F (18-20°C)	5.5-6.0 pH 1.5-2.0 mmhos/cm	Day neutral	Cell Pack, 1 (ppp), 5-6 (weeks), Spring 4" Pot, 1 (ppp), 6-7 (weeks), Spring	See GrowerFacts for more information.
VINCA <b>Mediterranean</b>	288 or larger	(day) 75°F (24°C) (night) 65-68°F (18-20°C)	5.5-6.0 pH 1.5-2.0 mmhos/cm	Day neutral	4 1/2" Pot, 1 (ppp), 8-9 (weeks), Spring 10" HB, 7 (ppp), 12-14 (weeks), Spring 12" HB, 9 (ppp), 12-14 (weeks), Spring 4 1/2" Pot, 1 (ppp), 5-6 (weeks), Summer 10" HB, 7 (ppp), 8-10 (weeks), Summer 12" HB, 9 (ppp), 8-10 (weeks), Summer	See Grower Facts for more information
VINCA <b>Mediterranean XP</b>	288 or larger	(day) 75°F (24°C) (night) 65-68°F (18-20°C)	5.5-6.0 pH 1.5-2.0 mmhos/cm	Day neutral	4" Pot, 1 (ppp), 8-9 (weeks), Spring 10" HB, 7 (ppp), 12-14 (weeks), Spring 12" HB, 9 (ppp), 12-14 (weeks), Spring 4" Pot, 1 (ppp), 5-6 (weeks), Summer 10" HB, 7 (ppp), 8-10 (weeks), Summer 12" HB, 9 (ppp), 8-10 (weeks), Summer	See GrowerFacts for more information.
VINCA <b>Pacifica XP</b>	288 or larger	(day) 75°F (24°C) (night) 65-68°F (18-20°C)	5.5-6.0 pH 1.5-2.0 mmhos/cm	Day neutral	Cell Pack, 1 (ppp), 5-6 (weeks), Spring 4" Pot, 1 (ppp), 6-7 (weeks), Spring	See GrowerFacts for more information.
VINCA <b>Titan®</b>	288 or larger	(day) 75°F (24°C) (night) 65-68°F (18-20°C)	5.5-6.0 pH 1.5-2.0 mmhos/cm	Day neutral	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring	See GrowerFacts for more information.
VINCA <b>Valiant</b>	288 or larger	(day) 75°F (24°C) (night) 65-68°F (18-20°C)	5.5-6.0 pH 1.5-2.0 mmhos/cm	Day neutral	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring	See GrowerFacts for more information.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	PHOTOPERIOD RESPONSE	FINISHING PROGRAMS	KEY TIPS
VIOLA <b>Sorbet®</b>	288 or larger	(day) 60°F (16°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 5-7 (weeks), Early Spring, <b>PGR</b> daminozide 1,500-2,500 ppm Spray <b>4" Pot</b> , 1 (ppp), 5-7 (weeks), Early Spring, <b>PGR</b> daminozide 1,500-2,500 ppm Spray <b>6" Pot</b> , 3 (ppp), 5-7 (weeks), Early Spring, <b>PGR</b> daminozide 1,500-2,500 ppm Spray <b>Cell Pack</b> , 1 (ppp), 3 (weeks), Autumn, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Autumn, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>6" Pot</b> , 3 (ppp), 3-4 (weeks), Autumn, <b>PGR</b> daminozide 2,500-5,000 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions.
VIOLA <b>Sorbet® XP</b>	288 or larger	(day) 60°F (16°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5 mmhos/cm	Facultative long day	<b>Cell Pack</b> , 1 (ppp), 5-7 (weeks), Early Spring, <b>PGR</b> daminozide 1,500-2,500 ppm Spray <b>4" Pot</b> , 1 (ppp), 5-7 (weeks), Early Spring, <b>PGR</b> daminozide 1,500-2,500 ppm Spray <b>6" Pot</b> , 3 (ppp), 5-7 (weeks), Early Spring, <b>PGR</b> daminozide 1,500-2,500 ppm Spray <b>Cell Pack</b> , 1 (ppp), 3 (weeks), Autumn, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 4-5 (weeks), Autumn, <b>PGR</b> daminozide 2,500-5,000 ppm Spray <b>6" Pot</b> , 3 (ppp), 3-4 (weeks), Autumn, <b>PGR</b> daminozide 2,500-5,000 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions.
ZINNIA <b>Double Zahara</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 59-64°F (15-18°C)	5.5-6.0 pH 1.2-1.5 mmhos/cm	Facultative short day	<b>4" Pot</b> , 1 (ppp), 8-9 (weeks), Spring, <b>PGR</b> daminozide 3,500-5,000 ppm Spray <b>Gallon</b> , 3 (ppp), 8-9 (weeks), Spring, <b>PGR</b> daminozide 3,500-5,000 ppm Spray <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Summer, <b>PGR</b> daminozide 3,500-5,000 ppm Spray <b>Gallon</b> , 3 (ppp), 5-6 (weeks), Summer, <b>PGR</b> daminozide 3,500-5,000 ppm Spray	Flowers will be more double, with more intense colour, when grown under high light levels.
ZINNIA <b>Star</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 65-70°F (18-21°C)	5.5-6.0 pH 1.2-1.5 mmhos/cm	Day neutral	<b>Cell Pack</b> , 1 (ppp), 5-6 (weeks), Spring <b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring	
ZINNIA <b>State Fair</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 65-70°F (18-21°C)	5.5-6.0 pH 1.2-1.5 mmhos/cm	Facultative short day	<b>4" Pot</b> , 1 (ppp), 6-7 (weeks), Spring <b>6" Pot</b> , 1 (ppp), 7-8 (weeks), Spring	
ZINNIA <b>UpTown</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative short day	<b>4" Pot</b> , 1 (ppp), 8-9 (weeks), Spring, <b>PGR</b> daminozide 3,500 ppm Spray <b>Gallon</b> , 3 (ppp), 8-9 (weeks), Spring, <b>PGR</b> daminozide 3,500 ppm Spray <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Summer, <b>PGR</b> daminozide 3,500 ppm Spray <b>Gallon</b> , 3 (ppp), 5-6 (weeks), Summer, <b>PGR</b> daminozide 3,500 ppm Spray	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.
ZINNIA <b>Zahara®</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative short day	<b>4" Pot</b> , 1 (ppp), 8-9 (weeks), Spring, <b>PGR</b> daminozide 3,500 ppm Spray <b>Gallon</b> , 3 (ppp), 8-9 (weeks), Spring, <b>PGR</b> daminozide 3,500 ppm Spray <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Summer, <b>PGR</b> daminozide 3,500 ppm Spray <b>Gallon</b> , 3 (ppp), 5-6 (weeks), Summer, <b>PGR</b> daminozide 3,500 ppm Spray	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.
ZINNIA <b>Zahara® XL</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative short day	<b>4" Pot</b> , 1 (ppp), 8-9 (weeks), Spring, <b>PGR</b> daminozide 3,500 ppm Spray <b>Gallon</b> , 3 (ppp), 8-9 (weeks), Spring, <b>PGR</b> daminozide 3,500 ppm Spray <b>4" Pot</b> , 1 (ppp), 5-6 (weeks), Summer, <b>PGR</b> daminozide 3,500 ppm Spray <b>Gallon</b> , 3 (ppp), 5-6 (weeks), Summer, <b>PGR</b> daminozide 3,500 ppm Spray	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.

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FINISHING GUIDE P. 132

# perennials



CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	VERNALIZATION REQUIRED	KEY TIPS
ACANTHUS <i>mollis</i>	RAW	288 or larger	8-10	1	Yes	14-21	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 1 (t) 65-68°F (18-20°C) (l) Dark	(m) Level 2 (t) 60-65°F (16-18°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-65°F (16-18°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 700-1,000 ppm Spray	(m) Level 4 (t) 55-60°F (13-16°C) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 700-1,000 ppm Spray	Yes	Pre-soak seed in water for 24 hours 65-68°F (18-20°C).
AGASTACHE <i>astromontana</i> <b>Pink Pop</b>	RAW	288 or larger	6-7	4	No	5-7	5.8-6.2 pH 0.75 mmhos/cm	(t) 65-68°F (18-20°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(t) 60-65°F (16-18°C) (f) Less than 100 ppm N - Less than 0.7 EC	(t) 60-65°F (16-18°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 500-600 ppm Spray	(t) 55-62°F (13-17°C) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 500-700 ppm Spray	No	
ALCHEMILLA <i>erythropoda</i> <b>Alma</b>		288 or larger	8-10	4	Optional	8-10	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Yes - duration of 10 weeks; max 40°F (4°C)	Spray damp-off fungicide.
AQUILEGIA <i>vulgaris</i> <b>Clementine</b>	PRM	288 or larger	7-8	2-3	Light cover	7-12	5.8-6.4 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Yes - duration of 10-12 weeks; juvenility min. 10-12 true leaves	
AQUILEGIA <i>vulgaris</i> <b>Winky</b>	RAW	288 or larger	7-8	2-3	Light cover	7-12	5.8-6.4 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Yes - duration of 8-10 weeks; juvenility min. 10-12 true leaves	
AQUILEGIA <i>vulgaris</i> <b>Winky Double</b>	RAW	288 or larger	7-8	2-3	Light cover	7-12	5.8-6.4 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Yes - duration of 8-10 weeks; juvenility min. 10-12 true leaves	
AQUILEGIA <i>x hybrida</i> <b>Songbird</b>	RAW	288 or larger	6-8	1	Yes	10-14	5.8-6.4 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Yes - but vernalization temperature can go as high as 55°F (13°C) at night and 60°F (15°C) at day; duration of 4 weeks at 41°F (5°C) or 6 weeks at 55°F (13°C); start cool treatment after 12-15 leaf stage	
AQUILEGIA <i>x hybrida</i> <b>Swan</b>	RAW	288 or larger	6-9	1	Yes	10-14	5.8-6.4 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Yes - but vernalization temperature can go as high as 55°F (13°C) at night and 60°F (15°C) at day; duration of 4 weeks at 41°F (5°C) or 6 weeks at 55°F (13°C); start cool treatment after 12-15 leaf stage	
ARABIS <i>blepharophylla</i> <b>Spring Charm</b>	RAW	288 or larger	6-8	4	No	3-6	5.5-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 2,500 f.c. (26,900 Lux)	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500 f.c. (26,900 Lux)	(m) Level 2 (t) 60-65°F (16-18°C) (l) 5,000 f.c. (53,800 Lux)	Yes - duration of 8-10 weeks	
ARABIS <i>caucasica</i> <b>Lotti</b>	COT	288 or larger	5-6	3-4	No	4-7	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Yes - approximately 8-10 weeks with temperature at 35-40°F (2-5°C)	
ARMERIA <i>pseudarmeria</i> <b>Ballerina</b>	RAW	288 or larger	6-8	2-4	No	3-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 60-65°F (16-18°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux)	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 2,500 f.c. (26,900 Lux)	(m) Level 2 (t) 55-60°F (13-16°C) (l) 5,000 f.c. (53,800 Lux)	No	
BELLIS <i>perennis</i> <b>Bellissima</b>	PEL	512 or larger	5	1-2	Yes	3-5	5.5-6.2 pH 0.5-0.75 mmhos/cm	(m) Level 4 (t) 65-72°F (18-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	
CAMPANULA <i>carpatica</i> <b>Rapido</b>	PEL	288 or larger	7-10	4	No	7-9	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 65-72°F (18-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Avoid high EC in early plug stage: max. 0.5 in stages 1 and 2. Grow at less than 13 hours to keep vegetative. Spray damp-off fungicide.

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COREOPSIS <i>grandiflora</i> <b>Early Sunrise</b>	RAW	288 or larger	5-7	2-4	Light cover	5-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-2 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	2 to 4 seeds for 288/4 to 8 seeds for 84. Plug PGRs: For Spring production, no PGRs needed. For Summer production under long day conditions, can use B-Nine/Alar (1,500 to 2,500 ppm spray). Short day bulk not needed for Autumn sales.
COREOPSIS <i>grandiflora</i> <b>Rising Sun</b>	RAW	288 or larger	5-7	1-2	Light cover	5-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-2 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 225 to 300 ppm N - 1.5 to 2.0 EC	No	1 to 2 seeds for 288/2 to 4 seeds for 84. Plug PGRs: For Spring production, no PGRs needed. For Summer production under long day conditions, can use B-Nine/Alar (1,500 to 2,500 ppm spray). Short day bulk not needed for Autumn sales.
COREOPSIS <i>grandiflora</i> <b>Sun Up</b>	RAW	288 or larger	5-7	1-2	Light cover	5-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	(m) Level 1-2 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	1 to 2 seeds for 288/2 to 4 seeds for 84. Plug PGRs: For Spring production, no PGRs needed. For Summer production under long day conditions, can use B-Nine/Alar (1,500 to 2,500 ppm spray). Short day bulk not needed for Autumn sales.
COREOPSIS <i>grandiflora</i> <b>Sunfire</b>	RAW	288 or larger	5-7	1-2	Light cover	5-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-2 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	1 to 2 seeds for 288/2 to 4 seeds for 288. Plug PGRs: For Spring production, no PGRs needed. For Summer production under long day conditions, can use B-Nine/Alar (1,500 to 2,500 ppm spray). Short day bulk not needed for Autumn sales.
COREOPSIS <i>grandiflora</i> <b>SunKiss</b>	PRM	288 or larger	5-7	1	Light cover	5-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 1-2 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	1 seed for 288/2 to 4 seeds for 84. Plug PGRs: For Spring production, no PGRs needed. For Summer production under long day conditions, can use B-Nine/Alar (1,500 to 2,500 ppm spray). Short day bulk not needed for Autumn sales.
DELPHINIUM <i>elatum</i> <b>Guardian</b>	RAW	288 or larger	6-7	1	Yes	7-8	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-70°F (18-21°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Best germinated in germ chamber with 95-97% RH in stage 1. Max. EC in propagation: 1.0.
DELPHINIUM <i>grandiflorum</i> <b>Diamonds Blue</b>	RAW	288 or larger	6-7	1	Yes	5-7	5.8-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Avoid low light conditions.
DELPHINIUM <i>x belladonna</i> <b>Blue Donna</b>	RAW	288 or larger	6-8	1	Yes	7-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide.

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DIANTHUS <i>barbatus interspecific</i> <b>Bouquet</b>	PEL	288 or larger	4-6	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 5-8 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 8-10 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 4-6 ppm Spray	(m) Level 2-3 (t) 55-60°F (13-16°C) (l) 10 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	
DIANTHUS <i>deltoides</i> <b>Arctic Fire</b>	RAW	288 or larger	6-8	4	Light cover	5-7	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 6-8 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 6-8 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 6-8 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide.
DIGITALIS <i>purpurea</i> <b>Dalmatian</b>	PEL	288 or larger	5-6	1	No	5-6	5.8-6.2 pH 0.7-1.0 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,000 ppm Spray or paclobutrazol 5 ppm Spray or uniconazole 3 ppm Spray	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray or paclobutrazol 5 ppm Spray or uniconazole 3 ppm Spray	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray or paclobutrazol 5 ppm Spray or uniconazole 3 ppm Spray	No	Spray damp-off fungicide.
ECHINACEA <i>purpurea</i> <b>PowWow®</b>	RAW	288 or larger	5-6	1	Yes	4-14	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 71-73°F (22-23°C) (l) 5-8 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 10 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 65-67°F (18-19°C) (l) 10-15 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No - but beneficial	PGRs generally not needed.
ECHINACEA <i>x hybrida</i> <b>Cheyenne Spirit</b>	RAW	288 or larger	5-6	1	Yes	4-14	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 71-76°F (22-24°C) (l) Optional	(m) Level 3-4 (t) 71-73°F (22-23°C) (l) 5-8 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 10 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 65-67°F (18-19°C) (l) 10-15 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No - but beneficial	PGRs generally not needed.
ERIGERON <i>karvinskianus</i> <b>Stallone</b>	RAW	288 or larger	7-9	4	No	7-10	5.8-6.5 pH 0.75 mmhos/cm	(t) 68-72°F (20-22°C)				No	Spray damp-off fungicide.
GAILLARDIA <i>x grandiflora</i> <b>Mesa</b>	RAW	288 or larger	5-6	1	Yes	4-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 68-73°F (20-23°C) (l) Optional	(m) Level 3-4 (t) 68-73°F (20-23°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-67°F (18-19°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-4 (t) 59-64°F (15-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	No - but beneficial	
GAULTHERIA <i>procumbens</i> <b>Very Berry</b>	RAW	288 or larger	10-12	8	No	7-10	4.3-5.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 1,500-2,000 f.c. (16,100-21,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 1,500-2,000 f.c. (16,100-21,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 1,500-2,000 f.c. (16,100-21,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	No	Low EC 0.4-0.5. Keep uniformly moist, not wet. Spray damp-off fungicide. Avoid drying out.
GAURA <i>lindheimeri</i> <b>Sparkle White</b>	RAW	288 or larger	5-6	1	Yes	5-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 66-70°F (19-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 65-67°F (18-19°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 59-64°F (15-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	
GYPSOPHILA <i>cerastioides</i> <b>Pixie Splash</b>	PRM	288 or larger	5-6	4	No	3-4	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 60-65°F (16-18°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 6-8 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 6-8 mol-m <sup>-2</sup> -d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 6-8 mol-m <sup>-2</sup> -d <sup>-1</sup>	Yes - duration of 8 weeks; max 40°F (4°C)	Spray damp-off fungicide.
HEUCHERA <i>hybrid</i> <b>Melting Fire</b>	PEL	288 or larger	9-11	6-8	No	10-14	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 65-68°F (18-20°C) (l) 2,500-3,500 f.c. (26,900-37,700 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Yes - sold mostly annually grown; vernalization not needed	Spray damp-off fungicide. This variety is slower to germinate, in 2-3 flushes. Single sow possible, but grading needed and transplant in larger plug. Melting Fire is alternative for TC varieties, i.e., Crimson Curly.
HEUCHERA <i>micrantha</i> <b>Palace Purple</b>	PEL	288 or larger	6-8	4	No	7-10	5.8-6.2 pH 0.75 mmhos/cm	(t) 68-72°F (20-22°C)				Yes - sold mostly annually grown; vernalization not needed	Spray damp-off fungicide.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	VERNALIZATION REQUIRED	KEY TIPS
HIBISCUS <i>moscheutos</i> <b>Luna</b>	RAW	288 or larger	3-4	1	Yes	3-5	5.5-6.3 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-75°F (20-24°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 68-71°F (20-22°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 68-71°F (20-22°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) chlormequat chloride 300 ppm Spray	(m) Level 2 (t) 68-71°F (20-22°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) chlormequat chloride 300 ppm Spray	No - damage to plugs when below 41°F (5°C)	Cover seed with plug media. Grow plants under daily average temperature above 68°F (20°C) and keep media moist to wet. Use PGRs in warmer conditions from true leaf stage onwards: tank mix of Cycocel (chlormequat chloride) 300 ppm and B-Nine (daminozide) 2,500 ppm.
IBERIS <i>sempervirens</i> <b>Whiteout</b>	RAW	288 or larger	7-8	3-4	Yes	4-7	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 61-65°F (16-18°C) (l) Optional	(m) Level 3 (t) 61-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux)	(m) Level 2 (t) 61-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux)	(m) Level 2 (t) 61-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux)	Yes - minimum 8 to 10 weeks. Plants should be bulked for about 8 to 10 weeks before being receptive to cold treatment.	No pinching needed.
LAVANDULA <i>angustifolia</i> <b>Ellagance</b>	PRM	288 or larger	6-8	4	Yes	4-5	5.8-6.5 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-2,000 ppm Spray	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-2,000 ppm Spray	No	Spray damp-off fungicide. Provide good ventilation and active respiration in plug production. Grow on the dry side, with watering in early morning, to allow plugs to dry up during the day. If too low respiration, Lavandula will show "black spots" on cotyledons that could disappear with improved ventilation/respiration.
LAVANDULA <i>angustifolia</i> <b>Hidcote Blue Strain</b>	PRM	288 or larger	6-8	4	Yes	4-5	5.8-6.5 pH 0.7-1.2 mmhos/cm	(t) 65-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-2,000 ppm Spray	(t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-2,000 ppm Spray	No	Spray damp-off fungicide. Provide good ventilation and active respiration in plug production. Grow on the dry side, with watering in early morning, to allow plugs to dry up during the day. If too low respiration, Lavandula will show "black spots" on cotyledons that could disappear with improved ventilation/respiration.
LAVANDULA <i>angustifolia</i> <b>Lavance</b>	PRM	288 or larger	6-8	4	Yes	4-5	5.8-6.5 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-2,000 ppm Spray	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-2,000 ppm Spray	No	Spray damp-off fungicide. Provide good ventilation and active respiration in plug production. Grow on the dry side, with watering in early morning, to allow plugs to dry up during the day. If too low respiration, Lavandula will show "black spots" on cotyledons that could disappear with improved ventilation/respiration.
LAVANDULA <i>angustifolia</i> <b>Mini Blue</b>	PRM	288 or larger	6-8	4	Yes	4-5	5.8-6.5 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux)	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (p) daminozide 1,000-2,000 ppm Spray	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (p) daminozide 1,000-2,000 ppm Spray	No	Spray damp-off fungicide. Provide good ventilation and active respiration in plug production. Grow on the dry side, with watering in early morning, to allow plugs to dry up during the day. If too low respiration, Lavandula will show "black spots" on cotyledons that could disappear with improved ventilation/respiration.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	VERNALIZATION REQUIRED	KEY TIPS
LAVANDULA <i>multifida</i> <b>Spanish Eyes</b>	RAW	288 or larger	5-6	2-4	Light cover	4-5	5.8-6.2 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux)	(t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (p) daminozide 1,500-2,500 ppm Spray	(t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (p) daminozide 1,500-2,500 ppm Spray	No	Spray preventive fungicide against damping off. Grow in an active growing climate.
LAVANDULA <i>stoechas</i> <b>Bandera Purple</b>	RAW	288 or larger	7-8	1	Yes	3-5	5.5-6.2 pH 1.0-1.2 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Keep active growing environment. Spray damp-off fungicide. Genetically compact, should need no PGRs in plug production. If needed, use B-Nine (daminozide) spray 2,500 ppm. High pH (> 6.8) causes chlorosis.
LOBELIA <i>valida</i> <b>Delft Blue</b>	PEL	288 or larger	8-10	4	No	7-10	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray preventive fungicide against damping off.
LOBELIA <i>x speciosa</i> <b>Starship</b>	PEL	288 or larger	8-10	1	Light cover	6-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-72°F (18-22°C) (l) Light	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,500-2,500 ppm Spray	(t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,500-2,500 ppm Spray	No	Needs light for germination, but avoid drying out (light vermiculite cover advised). Grow plugs at 10 hours or less for at least the first 8 weeks from sowing to keep vegetative. Keep media uniformly moist. Avoid too dry or too wet. Starship Deep Rose has 7 to 10 days longer plug lead time, due to slower start.
LOBELIA <i>x speciosa</i> <b>Vulcan Red</b>	PEL	288 or larger	7-10	1	Light cover	8-10	5.8-6.6 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-72°F (18-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Needs light for germination, but avoid drying out (light vermiculite cover advised). Grow at less than 10 hours for at least the first 8 weeks from sowing to keep vegetative.
MONARDA <i>hybrida</i> <b>Bergamo</b>	RAW	288 or larger	6-7	4	Light cover	7-10	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,500-2,000 ppm Spray	(t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,500-2,000 ppm Spray	No	
MYOSOTIS <i>sylvatica</i> <b>Mon Amie Blue</b>	RAW	288 or larger	4-5	1	No	3-5	5.6-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 3,000-4,000 f.c. (32,300-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Maintain low pH to avoid chlorosis.
NEPETA <i>nervosa</i> <b>Blue Moon</b>	RAW	288 or larger	5-6	4	Yes	4-5	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-2,000 ppm Spray	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (p) daminozide 1,500-2,000 ppm Spray	No	Spray damp-off fungicide.
NEPETA <i>nervosa</i> <b>Pink Cat</b>	RAW	288 or larger	5-6	4	Yes	4-5	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-2,000 ppm Spray	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,500-2,000 ppm Spray	No	Spray damp-off fungicide.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	VERNALIZATION REQUIRED	KEY TIPS
PAPAVER <i>miryabeanum</i> <b>Moondance</b>	RAW	288 or larger	6-8	2-3	No	4-6	5.6-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 60-65°F (16-18°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 3,000-4,000 f.c. (32,300-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide.
PAPAVER <i>nudicaule</i> <b>Champagne Bubbles</b>	PRM	288 or larger	4-5	1	Light cover	7-12	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide. Avoid high pH (>6.1) that causes chlorosis from iron deficiency.
PENSTEMON <i>heterophyllus</i> <b>Electric Blue</b>	RAW	288 or larger	4-5	1	No	8-10	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-74°F (18-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 3,000-4,000 f.c. (32,300-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No - but beneficial; cooled plants flower more uniformly and faster than non-cooled plants; duration of 10 weeks at 41°F (5°C)	Needs active growing climate.
PENSTEMON <i>x mexicali</i> <b>Carillo</b>	RAW	288 or larger	6-8	3-4	No	3-6	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide. Carillo Red will show reversible chlorosis if grown too cold (lower than 50°F ADT).
PEROVSKIA <i>atriplicifolia</i> <b>Blue Steel</b>	RAW	288 or larger	4-8	1	Yes	2-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 65-72°F (18-22°C) (l) Optional (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 4 (t) 65-72°F (18-22°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 3 (t) 60-68°F (16-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,500 ppm Spray	(m) Level 2 (t) 55-65°F (13-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,500 ppm Spray	No	2 to 3 seeds per cell for larger plugs (128 and up): see GrowerFacts. For plug size 180 and larger, pinch plugs at 3 to 4 node pairs. 288 plugs are difficult to pinch, so pinch at 2 to 3 weeks after transplant. Plug lead time varies with season and plug size: see GrowerFacts. Spray fungicide against damping off, directly after sowing.
PEROVSKIA <i>atriplicifolia</i> <b>Taiga</b>	PRM	288 or larger	7-9	3-4	No	5-7	6.0-6.5 pH 0.75 mmhos/cm	(t) 68-72°F (20-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 4 (t) 65-68°F (18-20°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 3 (t) 60-65°F (16-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2 (t) 55-65°F (13-18°C) (l) 6-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	No	Spray damp-off fungicide.
PRIMULA <i>capitata ssp. mooreana</i> <b>Noverna Deep Blue</b>	RAW	288 or larger	8-10	4	No	8-10	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 60-65°F (16-18°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(t) 60-65°F (16-18°C) (l) 3,000-4,000 f.c. (32,300-43,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	
RUDBECKIA <i>fulgida var. sullivantii</i> <b>Goldsturm</b>	PRM	288 or larger	6-8	2	Yes	5-7	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No - but vernalized plugs will decrease production lead time	
RUDBECKIA <i>hirta</i> <b>Irish Eyes</b>	RAW	288 or larger	6-7	2-3	Light cover	4-7	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	
RUDBECKIA <i>hirta</i> <b>Moreno</b>	RAW	288 or larger	6-7	2-3	Light cover	4-7	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	VERNALIZATION REQUIRED	KEY TIPS
SALVIA <i>lyrata</i> <b>Purple Volcano</b>	RAW	288 or larger	6-8	3-4	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide. Grow relatively dry after Stage 1.
SALVIA <i>nemorosa (superba)</i> <b>New Dimension</b>	COT	288 or larger	5-6	4	Light cover	3-4	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide.
SALVIA <i>patens</i> <b>Patio</b>	RAW	288 or larger	5-6	1	No	4-7	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-2,000 ppm Spray	(m) Level 1-2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,500-2,000 ppm Spray	No	
SALVIA <i>roemeriana</i> <b>Hot Trumpets</b>	RAW	288 or larger	6-8	3-4	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-2,000 ppm Spray	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,500-2,000 ppm Spray	No	Spray damp-off fungicide. Grow relatively dry after stage 1.
SAXIFRAGA <i>x arendsii</i> <b>Purple Robe</b>	RAW	288 or larger	8-10	4-6	Light cover	8-10	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Yes - 12 weeks at 41°F (5°C)	Spray damp-off fungicide.
SAXIFRAGA <i>x arendsii</i> <b>Rocco Red</b>	PEL	288 or larger	9-10	2	Light cover	7-11	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 65-68°F (18-20°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Yes - duration of 12 weeks at 41°F (5°C)	Spray damp-off fungicide.
SCABIOSA <i>columbaria</i> <b>Blue Note</b>	RAW	288 or larger	6-8	2-3	Yes	8-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide. Grow in active climate.
SCABIOSA <i>japonica var. alpina</i> <b>Pink Diamonds</b>	RAW	288 or larger	6-8	2-3	Yes	8-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide. Grow in active climate.
SILENE <i>alpestris</i> <b>Starry Dreams</b>	RAW	288 or larger	5-6	3-4	No	5-7	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Avoid growing wet.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	VERNALIZATION REQUIRED	KEY TIPS
STACHYS <i>byzantina</i>	RAW	288 or larger	6-7	3-4	Yes	3-6	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux)	No	A cooling period of 2 weeks at 5° could influence germination positively.
VERBASCUM <i>x hybrida</i> <b>Southern Charm</b>	RAW	288 or larger	4-5	1	Yes	3-7	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 200-2,500 f.c. (2,200-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	
VERBENA <i>bonariensis</i> <b>Buenos Aires</b>	PRM	288 or larger	6-7	4	Yes	7-10	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide. Grow relatively dry after stage 1.
VERBENA <i>rigida</i> <b>Santos</b>	PRM	288 or larger	6-7	4	Yes	7-10	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Spray damp-off fungicide.
VERONICA <i>spicata</i> <b>Blue Bouquet</b>	PEL	288 or larger	5-6	1	Yes	6-9	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 65-75°F (18-24°C) (l) Dark (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	



CLASS/SERIES	HARDINESS ZONE	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	PHOTOPERIOD RESPONSE	VERNALIZATION REQUIRED	FINISHING PROGRAMS FOR ANNUAL AND OVERWINTER PRODUCTION	KEY TIPS
ACANTHUS <i>mollis</i>	6-10	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 0.5-0.75 mmhos/cm		Yes	Annual, 1 Quart, 1-2 (ppp), 8-10 (weeks), Summer Overwinter, Gallon, 1-2 (ppp), 30-34 (weeks), Late Spring PGR daminozide 700-1,000 ppm Spray	Sold green. Landscape market.
AGASTACHE <i>astromontana</i> <b>Pink Pop</b>	7-10	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 1.0-1.3 mmhos/cm	Long day beneficial	No	Annual, Gallon, 1-3 (ppp), 7-10 (weeks), Early Spring Annual, 1 Quart, 1 (ppp), 7-10 (weeks), Late Spring Annual, 1 Quart, 1 (ppp), 6-9 (weeks), Summer Annual, Gallon, 1-3 (ppp), 6-9 (weeks), Summer	Growing at day temp below 65°F (18°C) will significantly delay crop time. Monitor for Botrytis, powdery mildew and Sclerotinia.
ALCHEMILLA <i>erythropoda</i> <b>Alma</b>	3-8	288 or larger	(day) 61-64°F (16-18°C) (night) 50-55°F (10-13°C)	5.8-6.2 pH 1.0-1.3 mmhos/cm		Yes - duration of 10 weeks; max 40°F (4°C)	Overwinter, 1 Quart, 2-4 (ppp), 30-34 (weeks), Spring	Low feed in winter. Restart after visible growth. Prevent Mg and Fe deficiency. Monitor for aphids.
AQUILEGIA <i>vulgaris</i> <b>Clementine</b>	3-8	288 or larger	(day) 65-68°F (18-20°C) (night) 50-54°F (10-12°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Day neutral	Yes - duration of 10-12 weeks; juvenility min. 10-12 true leaves	Overwinter, Gallon, 1-3 (ppp), 32-40 (weeks), Spring PGR daminozide 1,500-2,500 ppm Spray Overwinter, 2 Gallon, 4-6 (ppp), 32-40 (weeks), Spring PGR daminozide 1,500-2,500 ppm Spray	Keep RH opt 65%. Monitor for powdery mildew, Sclerotinia, aphids, leaf miner, sciara and spider mites. Outside crops can be forced indoors at 54 to 59°F (12 to 15°C).
AQUILEGIA <i>vulgaris</i> <b>Winky</b>	3-8	288 or larger	(day) 60-72°F (16-22°C) (night) 50-59°F (10-15°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Day neutral	Yes - duration of 8-10 weeks; juvenility min. 10-12 true leaves	Overwinter, 1 Quart, 1-2 (ppp), 32-40 (weeks), Spring PGR daminozide 1,250-2,500 ppm Spray Overwinter, Gallon, 2-4 (ppp), 32-40 (weeks), Spring PGR daminozide 1,250-2,500 ppm Spray	Keep RH opt 65%. Monitor for powdery mildew, Sclerotinia, aphids, leafminer, sciara and spider mites. Outside crops can be forced indoors at 54 to 59°F (12 to 15°C).
AQUILEGIA <i>vulgaris</i> <b>Winky Double</b>	3-8	288 or larger	(day) 60-72°F (16-22°C) (night) 50-59°F (10-15°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Day neutral	Yes - duration of 8-10 weeks; juvenility min. 10-12 true leaves	Overwinter, 1 Quart, 1-2 (ppp), 32-40 (weeks), Spring PGR daminozide 1,250-2,500 ppm Spray Overwinter, Gallon, 2-4 (ppp), 32-40 (weeks), Spring PGR daminozide 1,250-2,500 ppm Spray	Keep RH opt 65%. Monitor for powdery mildew, Sclerotinia, aphids, leafminer, sciara and spider mites. Outside crops can be forced indoors at 54 to 59°F (12 to 15°C).
AQUILEGIA <i>x hybrida</i> <b>Songbird</b>	3-9	288 or larger	(day) 60-68°F (16-20°C) (night) 55-64°F (13-18°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Long day without vernalization; day neutral after vernalization	Yes - but vernalization temperature can go as high as 55°F (13°C) at night and 60°F (15°C) at day; duration of 4 weeks at 41°F (5°C) or 6 weeks at 55°F (13°C); start cool treatment after 12-15 leaf stage	Annual, 6" Pot, 1 (ppp), 22-28 (weeks), Spring PGR daminozide/ancymidol tank mix 2,500/10 ppm Spray Overwinter, 6" Pot, 1 (ppp), 32-38 (weeks), Autumn PGR daminozide/ancymidol tank mix 2,500/10 ppm Spray	Requires night temperatures below 55°F (13°C) to initiate flower buds.
AQUILEGIA <i>x hybrida</i> <b>Swan</b>	3-9	288 or larger	(day) 60-68°F (16-20°C) (night) 55-64°F (13-18°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Long day without vernalization; day neutral after vernalization	Yes - but vernalization temperature can go as high as 55°F (13°C) at night and 60°F (15°C) at day; duration of 4 weeks at 41°F (5°C) or 6 weeks at 55°F (13°C); start cool treatment after 12-15 leaf stage	Annual, 6" Pot, 1 (ppp), 22-28 (weeks), Spring PGR daminozide/ancymidol tank mix 2,500/10 ppm Spray Overwinter, 6" Pot, 1 (ppp), 32-38 (weeks), Autumn PGR daminozide/ancymidol tank mix 2,500/10 ppm Spray	Requires night temperatures below 55°F (13°C) to initiate flower buds.
ARABIS <i>blepharophylla</i> <b>Spring Charm</b>	4-7	288 or larger	(day) 60-65°F (16-18°C) (night) 50-54°F (10-12°C)	5.5-6.5 pH 1.0-1.3 mmhos/cm		Yes - duration of 8-10 weeks	Overwinter, 3.5" Pot, 1 (ppp), 28-34 (weeks), Early Spring Overwinter, 5" Pot, 1 (ppp), 28-34 (weeks), Early Spring	Well-drained soil. Dislikes winter wet. Moderate fertilization. Monitor for Botrytis, Pythium, downy mildew, Rhizoctonia and aphids.
ARABIS <i>caucasica</i> <b>Lotti</b>	4-7	288 or larger	(day) 50-65°F (10-18°C) (night) 46-50°F (8-10°C)	5.8-6.5 pH 1.0-1.5 mmhos/cm	Day neutral	Yes - approximately 8-10 weeks with temperature at 35-40°F (2-5°C)	Overwinter, 3.5" Pot, 1 (ppp), 18-24 (weeks), Early Spring Overwinter, 4 1/2" Pot, 1 (ppp), 18-24 (weeks), Early Spring	Best grown frost-free indoors to avoid frost damage to leaves. Prevent low to moderate feed. Grow in low RH, as cool as possible. Monitor for Botrytis, Pythium, Rhizoctonia and aphids.
ARMERIA <i>pseudarmeria</i> <b>Ballerina</b>	7-9	288 or larger	(day) 60-65°F (16-18°C) (night) 50-58°F (10-14°C)	5.6-6.2 pH 1.2-1.4 mmhos/cm	Day neutral	No	Annual, 4" Pot, 1 (ppp), 12-15 (weeks), Spring PGR paclobutrazol 5 ppm Spray Annual, Gallon, 3-5 (ppp), 12-15 (weeks), Spring PGR paclobutrazol 5 ppm Spray Annual, 5" Pot, 1 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 5 ppm Spray Annual, Gallon, 3-5 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 5 ppm Spray Overwinter, 5" Pot, 1 (ppp), 26-34 (weeks), Spring PGR paclobutrazol 5 ppm Spray Overwinter, Gallon, 3-5 (ppp), 26-34 (weeks), Spring PGR paclobutrazol 5 ppm Spray	Prevent Mg and Fe deficiency. Monitor for red spider mites and aphids. Good centerpiece in combos. Avoid growing wet in plug and finished stages.
BELLIS <i>perennis</i> <b>Bellissima</b>	4-7	512 or larger	(day) 60-65°F (16-18°C) (night) 40-45°F (4-7°C)	5.6-6.2 pH 1.0-1.2 mmhos/cm	Day neutral	No	Overwinter, 3.5" Pot, 1 (ppp), 16-24 (weeks), Early Spring PGR daminozide 1,000-2,000 ppm Spray Overwinter, 5" Pot, 1 (ppp), 16-24 (weeks), Early Spring PGR daminozide 1,000-2,000 ppm Spray	Use a medium covering of coarse-grade vermiculite to improve seedling uniformity. Grow as cool as possible but avoid freezing temperatures. For forcing the crop when grown at these temperatures, grow at 55-58°F (10-12°C) for 4 weeks before sale. PGR for EU is Tilt (propiconazole) at 200-300 ppm. Monitor for rust and aphids.

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CAMPANULA <i>carpatica</i> <b>Rapido</b>	3-9	288 or larger	(day) 60-65°F (16-18°C) (night) 50-57°F (10-14°C)	5.6-6.2 pH 1.0-1.3 mmhos/cm	Long day required (14 hours. or 4-hr NI) until buds visible	No	<b>Annual, 4" Pot</b> , 1 (ppp), 12-14 (weeks), Late Spring PGR chlormequat chloride 750 ppm Spray <b>Annual, 4" Pot</b> , 1 (ppp), 12-14 (weeks), Late Spring PGR daminozide 2,000-2,500 ppm Spray <b>Annual, Gallon</b> , 3-5 (ppp), 12-14 (weeks), Late Spring PGR chlormequat chloride 750 ppm Spray <b>Annual, Gallon</b> , 3-5 (ppp), 12-14 (weeks), Late Spring PGR daminozide 2,000-2,500 ppm Spray <b>Annual, 4" Pot</b> , 1 (ppp), 9-12 (weeks), Summer PGR chlormequat chloride 750 ppm Spray <b>Annual, 4" Pot</b> , 1 (ppp), 9-12 (weeks), Summer PGR daminozide 2,000-2,500 ppm Spray <b>Annual, Gallon</b> , 3-5 (ppp), 9-12 (weeks), Summer PGR chlormequat chloride 750 ppm Spray <b>Annual, Gallon</b> , 3-5 (ppp), 9-12 (weeks), Summer PGR daminozide 2,000-2,500 ppm Spray	Moist, well-drained medium. Too-cool growing delays both plug and finished plant. Long-day Summer decreases plant bulk. Use more plugs per container compared to Spring.
COREOPSIS <i>grandiflora</i> <b>Early Sunrise</b>	4-9	288 or larger	(day) 60-70°F (16-21°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Long day required min. 14 hours	No	<b>Annual, 1 Quart</b> , 1 (ppp), 11-13 (weeks), Autumn PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 12-13 (weeks), Autumn PGR daminozide 5,000 ppm Spray	Monitor for white flies, thrips, aphids and powdery mildew. Apply PGR when buds visible.
COREOPSIS <i>grandiflora</i> <b>Rising Sun</b>	4-9	288 or larger	(day) 60-70°F (16-21°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Long day required min. 13 hours	No	<b>Annual, 1 Quart</b> , 1 (ppp), 11-13 (weeks), Spring PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 12-14 (weeks), Spring PGR daminozide 5,000 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 9-11 (weeks), Summer PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 10-11 (weeks), Summer PGR daminozide 5,000 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 10-12 (weeks), Autumn PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 11-12 (weeks), Autumn PGR daminozide 5,000 ppm Spray	Monitor for white flies, thrips, aphids and powdery mildew. Apply PGR when buds visible.
COREOPSIS <i>grandiflora</i> <b>Sun Up</b>	4-9	288 or larger	(day) 60-70°F (16-21°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Long day required min. 12.5 hours	No	<b>Annual, 1 Quart</b> , 1 (ppp), 10-12 (weeks), Spring PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 11-13 (weeks), Spring PGR daminozide 5,000 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 9-10 (weeks), Summer PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 10-11 (weeks), Summer PGR daminozide 5,000 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 10-11 (weeks), Autumn PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 11-12 (weeks), Autumn PGR daminozide 5,000 ppm Spray	Monitor for white flies, thrips, aphids and powdery mildew. Apply PGR when buds visible.
COREOPSIS <i>grandiflora</i> <b>Sunfire</b>	4-9	288 or larger	(day) 60-70°F (16-21°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Long day required min. 13 hours	No	<b>Annual, 1 Quart</b> , 1 (ppp), 12-13 (weeks), Spring PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 13-14 (weeks), Spring PGR daminozide 5,000 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 9-11 (weeks), Summer PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 10-11 (weeks), Summer PGR daminozide 5,000 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 10-12 (weeks), Autumn PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 11-12 (weeks), Autumn PGR daminozide 5,000 ppm Spray	Monitor for white flies, thrips, aphids and powdery mildew. Apply PGR when buds visible.
COREOPSIS <i>grandiflora</i> <b>SunKiss</b>		288 or larger	(day) 60-70°F (16-21°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Long day required min. 13 hours	No	<b>Annual, 1 Quart</b> , 1 (ppp), 10-12 (weeks), Autumn PGR daminozide 5,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 11-12 (weeks), Autumn PGR daminozide 5,000 ppm Spray	Monitor for white flies, thrips, aphids and powdery mildew. Apply PGR when buds visible.
DELPHINIUM <i>elatum</i> <b>Guardian</b>	4-7	288 or larger	(day) 65-70°F (18-21°C) (night) 60°F (16°C)	5.8-6.2 pH 1.4-1.5 mmhos/cm	Day neutral	No	<b>Annual, 6" Pot</b> , 1 (ppp), 12-16 (weeks), Spring PGR paclobutrazol 20 ppm Spray <b>Annual, Gallon</b> , 1 (ppp), 12-16 (weeks), Spring PGR paclobutrazol 20 ppm Spray <b>Annual, 6" Pot</b> , 1 (ppp), 11-13 (weeks), Summer PGR paclobutrazol 20 ppm Spray <b>Annual, Gallon</b> , 1 (ppp), 11-13 (weeks), Summer PGR paclobutrazol 20 ppm Spray	PGRs: 2 Bonzi sprays, first approx. 3 wks after transplant and second approx. 2 weeks later. Possible third necessary, subject to conditions. Delphinium especially sensitive to powdery mildew; spray preventively if necessary. Ship and sell latest at flower spike one third open to decrease risk of petal shattering. See Cut Flower section for more details on cut flower production.

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DELPHINIUM <i>grandiflorum</i> <b>Diamonds Blue</b>	4-9	288 or larger	(day) 65-70°F (18-21°C) (night) 55-63°F (13-17°C)	5.6-6.2 pH 1.3-1.6 mmhos/cm	Day neutral	No	Annual, Gallon, 1-3 (ppp), 12-14 (weeks), Spring PGR paclobutrazol 20 ppm Spray Annual, 2 Gallon, 3 (ppp), 12-14 (weeks), Spring PGR paclobutrazol 20 ppm Spray Annual, Gallon, 1-3 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 20 ppm Spray Annual, 2 Gallon, 3 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 20 ppm Spray	Avoid planting plugs too deep. Maintain good fertilization, especially at flower initiation. Monitor for aphids, Botrytis, powdery mildew.
DELPHINIUM <i>x belladonna</i> <b>Blue Donna</b>	5-9	288 or larger	(day) 65-70°F (18-21°C) (night) 57-60°F (14-16°C)	5.8-6.2 pH 1.3-1.6 mmhos/cm	Day neutral	No	Annual, 6" Pot, 1-3 (ppp), 11-13 (weeks), Spring PGR paclobutrazol 20 ppm Spray Annual, Gallon, 1-3 (ppp), 11-13 (weeks), Spring PGR paclobutrazol 20 ppm Spray Annual, 6" Pot, 1-3 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 20 ppm Spray Annual, Gallon, 1-3 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 20 ppm Spray	See Cut Flower section for Cut Flower production. Cutflower both field and greenhouse. Monitor for powdery mildew.
DIANTHUS <i>barbatus interspecific</i> <b>Bouquet</b>	4-9	288 or larger	(day) 60-72°F (16-22°C) (night) 50-60°F (10-16°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	Long day beneficial	No	Annual, Gallon, 1-3 (ppp), 8-9 (weeks), Spring PGR paclobutrazol 15-20 ppm Spray	Responsive to PGRs. PGRs needed to produce as a bedding plant. See GrowerFacts for recommendations and Cut Flower section for more details.
DIANTHUS <i>deltoides</i> <b>Arctic Fire</b>	4-7	288 or larger	(day) 60-65°F (16-18°C) (night) 50-54°F (10-12°C)	5.8-6.5 pH 1.0-1.2 mmhos/cm	Long day beneficial	No	Annual, 5" Pot, 1 (ppp), 12-15 (weeks), Spring PGR chlormequat chloride 750-1,000 ppm Spray Annual, 5" Pot, 1 (ppp), 10-12 (weeks), Summer PGR chlormequat chloride 750-1,000 ppm Spray	Low fertilization. Prevent Mg and Fe deficiency. Monitor for rust, Fusarium wilt, aphids and slugs.
DIGITALIS <i>purpurea</i> <b>Dalmatian</b>	5-9	288 or larger	(day) 60-68°F (16-20°C) (night) 50-65°F (10-18°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Long day beneficial	No	Annual, Gallon, 1 (ppp), 12-15 (weeks), Spring PGR daminozide 2,000-2,500 ppm Spray Annual, Gallon, 1 (ppp), 12-15 (weeks), Spring PGR paclobutrazol 5-10 ppm Spray Annual, Gallon, 1 (ppp), 12-15 (weeks), Spring PGR uniconazole 5 ppm Spray Annual, 2 Gallon, 3-4 (ppp), 12-15 (weeks), Spring PGR daminozide 2,500-3,000 ppm Spray Annual, 2 Gallon, 3-4 (ppp), 12-15 (weeks), Spring PGR paclobutrazol 5-10 ppm Spray Annual, 2 Gallon, 3-4 (ppp), 12-15 (weeks), Spring PGR uniconazole 5 ppm Spray Annual, Gallon, 1 (ppp), 10-12 (weeks), Summer PGR daminozide 2,500-3,000 ppm Spray Annual, Gallon, 1 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 5-10 ppm Spray Annual, Gallon, 1 (ppp), 10-12 (weeks), Summer PGR uniconazole 5 ppm Spray Annual, 2 Gallon, 3-4 (ppp), 10-12 (weeks), Summer PGR daminozide 2,500-3,000 ppm Spray Annual, 2 Gallon, 3-4 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 5-10 ppm Spray Annual, 2 Gallon, 3-4 (ppp), 10-12 (weeks), Summer PGR uniconazole 5 ppm Spray	Digitalis can be grown under high light, provided there is enough moisture. Monitor media EC when generative and maintain levels. Avoid drying out.
ECHINACEA <i>purpurea</i> <b>PowWow®</b>	4-10	288 or larger	(day) 65-75°F (18-24°C) (night) 60-65°F (16-18°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Short day-long day plant. Best = short day conditions until 7-mature leaf stage, then long days.	No - but beneficial	Annual, 1 Quart, 1 (ppp), 13-17 (weeks), Late Spring Annual, Gallon, 1-3 (ppp), 13-17 (weeks), Late Spring Overwinter, Gallon, 1 (ppp), 30-40 (weeks), Late Spring	Keep soil media dry during overwinter period. Bark media is recommended for best drainage. Plants from overwinter production will flower slightly earlier, have better branching and shorter flower stems. See GrowerFacts for Summer/Autumn or early Spring forcing.
ECHINACEA <i>x hybrida</i> <b>Cheyenne Spirit</b>	4-10	288 or larger	(day) 65-75°F (18-24°C) (night) 60-65°F (16-18°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Short day-long day plant. Best = short day conditions until 7-mature leaf stage, then long days.	No - but beneficial	Annual, 1 Quart, 1 (ppp), 13-17 (weeks), Late Spring Annual, Gallon, 1-3 (ppp), 13-17 (weeks), Late Spring Overwinter, Gallon, 1 (ppp), 30-40 (weeks), Late Spring	Keep soil media dry during overwinter period. Bark media is recommended for best drainage. Plants from overwinter production will flower slightly earlier, have better branching and shorter flower stems. See GrowerFacts for Summer/Autumn or early Spring forcing.
ERIGERON <i>karvinskianus</i> <b>Stallone</b>	6-9	288 or larger	(day) 60-65°F (16-18°C) (night) 54-60°F (12-16°C)	5.8-6.5 pH 1.1-1.3 mmhos/cm	Long day required min. 13 hours	No	Annual, 5" Pot, 1 (ppp), 10-14 (weeks), Late Spring PGR chlormequat chloride 1,000-1,200 ppm Spray Overwinter, 5" Pot, 1 (ppp), 32-36 (weeks), Spring PGR chlormequat chloride 1,000-1,200 ppm Spray	Grow relatively dry. Needs low RH and high light for compact growth. Prevent MG and Fe deficiency. Monitor for powdery mildew and slugs. Nice for perennial combo and edging.
GAILLARDIA <i>x grandiflora</i> <b>Mesa</b>	5-10	288 or larger	(day) 60-70°F (16-21°C) (night) 50-60°F (10-16°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Facultative long day	No - but beneficial	Annual, 1 Quart, 1 (ppp), 11-13 (weeks), Late Spring Annual, 5" Pot, 1 (ppp), 11-13 (weeks), Late Spring Annual, Gallon, 1 (ppp), 11-13 (weeks), Late Spring Overwinter, Gallon, 1 (ppp), 30-38 (weeks), Spring	PGRs generally not necessary, if grown cooler. If necessary, daminozide 2,500 to 5,000 ppm spray.

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GAULTHERIA <i>procumbens</i> <b>Very Berry</b>	6-9	288 or larger	(day) 65-68°F (18-20°C) (night) 59-60°F (15-16°C)	4.3-4.8 pH 0.6-0.8 mmhos/cm	Quantitative long day	No	<b>Annual, 3.5" Pot</b> , 1 (ppp), 30-38 (weeks), Autumn <b>Overwinter, 5" Pot</b> , 1 (ppp), 42-46 (weeks), Summer	Sensitive roots; damage seen late due to leathery leaves. As annual crop, start growing indoors until early to mid-May. Option to use honey bees pollination for optimal berry production. Avoid drying out and growing too wet. Keep target pH and EC. Use pH and EC controlled water, preferably rain water or from reverse Osmosis.
GAURA <i>lindheimeri</i> <b>Sparkle White</b>	5b-9	288 or larger	(day) 59-70°F (15-21°C) (night) 50-64°F (10-18°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Quantitative long day plant with critical day length of 13 hours	No	<b>Annual, 4 1/2" Pot</b> , 1 (ppp), 7-8 (weeks), Spring <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 7-8 (weeks), Spring <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray <b>Annual, 6" Pot</b> , 1 (ppp), 8-9 (weeks), Spring <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 8-9 (weeks), Spring <b>PGR</b> daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray	Well-drained soil. Dislikes wet winter soils. Monitor for aphids. Cold growing at 55°F; add 4 to 5 weeks crop time. See GrowerFacts for more details on overwintered production.
GYPSOPHILA <i>cerastioides</i> <b>Pixie Splash</b>	4-7	288 or larger	(day) 60-65°F (16-18°C) (night) 50-58°F (10-14°C)	5.8-6.5 pH 1.0-1.2 mmhos/cm	Day neutral	Yes - duration of 8 weeks; max 40°F (4°C)	<b>Overwinter, 4" Pot</b> , 1 (ppp), 26-40 (weeks), Spring	Well-drained soil. Dislikes Winter wet. Moderate fertilization. Monitor for Botrytis, aphids, spider mites and whitefly. Nice for perennial combo and edging. Foliage turns purple with cold, partly reversible.
HEUCHERA <i>hybrid</i> <b>Melting Fire</b>	5-8	288 or larger	(day) 60-68°F (16-20°C) (night) 58-60°F (14-16°C)	5.8-6.2 pH 1.2-1.4 mmhos/cm	N/A	Yes - sold mostly annually grown; vernalization not needed	<b>Annual, 4" Pot</b> , 1 (ppp), 12-16 (weeks), Late Spring <b>Annual, Gallon</b> , 3-4 (ppp), 12-16 (weeks), Late Spring <b>Annual, Gallon</b> , 3-4 (ppp), 12-16 (weeks), Autumn <b>Overwinter, 5" Pot</b> , 1 (ppp), 28-36 (weeks), Spring	Do not plant plugs too deep. Plug surface same as medium surface. Avoid wet and overly dry. Needs well-drained medium. Monitor for Pythium, Botrytis, powdery mildew, aphids, leaf nematodes and leaf eelworms.
HEUCHERA <i>micrantha</i> <b>Palace Purple</b>	4-7	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 1.2-1.4 mmhos/cm	N/A	Yes - sold mostly annually grown; vernalization not needed	<b>Annual, 5" Pot</b> , 1 (ppp), 10-12 (weeks), Late Spring <b>Annual, Gallon</b> , 3-4 (ppp), 12-14 (weeks), Late Spring <b>Annual, Gallon</b> , 3-4 (ppp), 12-14 (weeks), Autumn	Do not plant plugs too deep. Keep plug level same as medium level. Grow relatively dry. Needs well-drained medium. Monitor for Pythium, Botrytis, powdery mildew, aphids, leaf nematodes and leaf eelworms.
HIBISCUS <i>moscheutos</i> <b>Luna</b>	5-9	288 or larger	(day) 70-85°F (21-29°C) (night) 65-70°F (18-21°C)	6.0-6.5 pH 1.5-2.0 mmhos/cm	Long day min. 12 hours; optimum 14 hours or longer	No - damage to plugs when below 41°F (5°C)	<b>Annual, 1 Quart</b> , 1 (ppp), 10-13 (weeks), Summer <b>PGR</b> daminozide/chlormequat chloride tank mix 750-2,500 ppm Spray <b>Annual, Gallon</b> , 1 (ppp), 10-13 (weeks), Summer <b>PGR</b> daminozide/chlormequat chloride tank mix 750-2,500 ppm Spray	Does not need pinching. Maintain media in high moisture. Growing plant too dry will result in flower bud abortion. Monitor for thrips, aphids and spider mites. Growth stops and lower leaves turn yellow when grown below 68°F (20°C). In Southern climates stronger PGR may be needed; option is Bonzi 0.5 ppm drench.
IBERIS <i>sempervirens</i> <b>Whiteout</b>	3-8	288 or larger	(day) 60-72°F (16-22°C) (night) 41-50°F (5-10°C)	5.5-6.2 pH 1.2-1.4 mmhos/cm	Day neutral	Yes - minimum 8 to 10 weeks. Plants should be bulked for about 8 to 10 weeks before being receptive to cold treatment.	<b>Overwinter, 1 Quart</b> , 1 (ppp), 26-36 (weeks), Early Spring	No pinch needed. Allow enough bulk time; grow in active climate. Monitor for downy and powdery mildew; spray preventively.
LAVANDULA <i>angustifolia</i> <b>Ellagance</b>	5-8	288 or larger	(day) 60-72°F (16-22°C) (night) 54-60°F (12-16°C)	5.8-6.5 pH 1.1-1.4 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 9-12 (weeks), Late Spring <b>PGR</b> daminozide 2,000-3,000 ppm Spray <b>Annual, Gallon</b> , 3-5 (ppp), 9-12 (weeks), Late Spring <b>PGR</b> daminozide 2,000-3,000 ppm Spray <b>Overwinter, 1 Quart</b> , 1 (ppp), 28-36 (weeks), Spring <b>PGR</b> daminozide 2,000-3,000 ppm Spray	Avoid planting plugs deep. Keep plug surface same as medium surface. Grow low RH and high light. Let top soil dry in between waterings, but do not allow medium to dry as high EC could cause root damage. Monitor for Botrytis, root rot, leafspot, aphids and mites. For shipping, keep soil moist and plant dry. Scheduling is different between colours: Purple and Pink are the same and the fastest (as indicated lead time); Sky adds 1 week; Ice adds 3 weeks and Snow adds 4 to 5 weeks. See Scheduling Tool for regional lead times. For overwintering production, cut back just below top foliage; do this mid-Autumn, approx. 4 wks before dormant period or in Spring just before regrowth.
LAVANDULA <i>angustifolia</i> <b>Hidcote Blue Strain</b>	5-8	288 or larger	(day) 60-72°F (16-22°C) (night) 54-60°F (12-16°C)	5.8-6.5 pH 1.1-1.4 mmhos/cm	Long day required	No	<b>Annual, 5" Pot</b> , 1 (ppp), 10-12 (weeks), Summer <b>PGR</b> daminozide 2,000-3,000 ppm Spray <b>Annual, Gallon</b> , 3-5 (ppp), 10-12 (weeks), Summer <b>PGR</b> daminozide 2,000-3,000 ppm Spray <b>Overwinter, 5" Pot</b> , 1 (ppp), 32-36 (weeks), Spring <b>PGR</b> daminozide 2,000-3,000 ppm Spray	Avoid planting plug too deep. Keep plug surface same as medium surface. Grow low RH and high light. Let top soil dry in between waterings, but do not allow medium to dry as high EC could cause root damage. Monitor for Botrytis, root rot, leafspot, aphids and mites. For shipping, keep soil moist and plant dry. Lavance is best for Summer production, has best bulk. Do not plan early season. Growth is delayed in cool conditions. Use Ellagance for cool season. See Scheduling tool. For overwintered production, cut back just below top foliage; do this mid-Autumn, approx. 4 wks before dormant period or in Spring just before regrowth.
LAVANDULA <i>angustifolia</i> <b>Lavance</b>	5-8	288 or larger	(day) 60-72°F (16-22°C) (night) 60-65°F (16-18°C)	5.8-6.5 pH 1.1-1.4 mmhos/cm	Long day required	No	<b>Annual, 5" Pot</b> , 1 (ppp), 10-12 (weeks), Summer <b>PGR</b> daminozide 2,000-3,000 ppm Spray <b>Annual, Gallon</b> , 3-5 (ppp), 10-12 (weeks), Summer <b>PGR</b> daminozide 2,000-3,000 ppm Spray <b>Overwinter, 5" Pot</b> , 1 (ppp), 32-36 (weeks), Spring <b>PGR</b> daminozide 2,000-3,000 ppm Spray	Avoid planting plug too deep. Keep plug surface same as medium surface. Grow low RH and high light. Let top soil dry in between waterings, but do not allow medium to dry as high EC could cause root damage. Monitor for Botrytis, root rot, leafspot, aphids and mites. For shipping, keep soil moist and plant dry. Lavance is best for Summer production, has best bulk. Do not plan early season. Growth is delayed in cool conditions. Use Ellagance for cool season. See Scheduling tool. For overwintered production, cut back just below top foliage; do this mid-Autumn, approx. 4 wks before dormant period or in Spring just before regrowth.

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LAVANDULA <i>angustifolia</i> <b>Mini Blue</b>	5-8	288 or larger	(day) 60-72°F (16-22°C) (night) 60-65°F (16-18°C)	5.8-6.5 pH 1.1-1.4 mmhos/cm	Long day required	No	<b>Annual, 5" Pot</b> , 1 (ppp), 10-12 (weeks), Summer <b>PGR</b> daminozide 2,000-3,000 ppm Spray <b>Annual, Gallon</b> , 3-5 (ppp), 10-12 (weeks), Summer <b>PGR</b> daminozide 2,000-3,000 ppm Spray <b>Overwinter, 5" Pot</b> , 1 (ppp), 32-36 (weeks), Spring <b>PGR</b> daminozide 2,000-3,000 ppm Spray	Avoid planting plug too deep. Keep plug surface same as medium surface. Grow low RH and high light. Let top soil dry in between waterings, but do not allow medium to dry as high EC could cause root damage. Monitor for Botrytis, root rot, leafspot, aphids and mites. For shipping, keep soil moist and plant dry. Lavance is best for Summer production, has best bulk. Do not plan early season. Growth is delayed in cool conditions. Use Ellagance for cool season. See Scheduling tool. For overwintered production, cut back just below top foliage; do this mid-Autumn, approx. 4 wks before dormant period or in Spring just before regrowth.
LAVANDULA <i>multifida</i> <b>Spanish Eyes</b>	7-10	288 or larger	(day) 65-70°F (18-21°C) (night) 57-59°F (14-15°C)	5.8-6.2 pH 1.1-1.3 mmhos/cm	Long day	No	<b>Annual, 1 Quart</b> , 1 (ppp), 12-14 (weeks), Summer <b>PGR</b> daminozide 2,000-3,000 ppm Spray <b>Annual, 2 Gallon</b> , 3-5 (ppp), 12-15 (weeks), Summer <b>PGR</b> daminozide 2,000-3,000 ppm Spray	Grow relatively dry and provide active climate. Vigorous Lavandula needs more PGRs than L. angustifolia and L. stoechas and is a long-flowering annual.
LAVANDULA <i>stoechas</i> <b>Bandera Purple</b>	7-10	288 or larger	(day) 65-68°F (18-20°C) (night) 55-64°F (13-18°C)	5.5-6.0 pH 1.0-1.2 mmhos/cm	Quantitative long day	No	<b>Annual, 1 Quart</b> , 1 (ppp), 12-14 (weeks), Spring <b>Annual, Gallon</b> , 1-3 (ppp), 12-14 (weeks), Spring <b>Overwinter, 1 Quart</b> , 1 (ppp), 24-32 (weeks), Early Spring	Don't plant too deep since Bandera has low and deep branching and Botrytis could more easily affect plants. Need cool production to reach sufficient flag size, see Scheduling tool. High pH (above 6.8) can cause leaf chlorosis.
LOBELIA <i>valida</i> <b>Delft Blue</b>	7-9	288 or larger	(day) 66-70°F (19-21°C) (night) 62-66°F (17-19°C)	5.8-6.5 pH 1.0-1.2 mmhos/cm	Long day beneficial	No	<b>Annual, 5" Pot</b> , 1 (ppp), 11-14 (weeks), Summer <b>Annual, Gallon</b> , 3 (ppp), 11-14 (weeks), Summer	Grow relatively dry. Well-drained soil. Dislikes Winter wet. Moderate fertilization.
LOBELIA <i>x speciosa</i> <b>Starship</b>	6-10	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.8-6.6 pH 1.1-1.3 mmhos/cm	Long day plants. Scarlet flowers faster at 13 hours or longer. Deep Rose requires 13 hours or longer for flowering.	No	<b>Annual, 1 Quart</b> , 1 (ppp), 13-17 (weeks), Summer <b>PGR</b> paclobutrazol 30 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 13-17 (weeks), Summer <b>PGR</b> uniconazole 5 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 13-17 (weeks), Summer <b>PGR</b> paclobutrazol 30 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 13-17 (weeks), Summer <b>PGR</b> uniconazole 5 ppm Spray	Avoid drought stress. Grow evenly moist but not wet. Monitor for snails, slugs, root and crown rots, Pythium, Phytophthora (if too wet). Control thrips, as Lobelia is very susceptible to INSV damage.
LOBELIA <i>x speciosa</i> <b>Vulcan Red</b>	6-10	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.8-6.6 pH 1.1-1.3 mmhos/cm	Long day required (min. 14 hours)	No	<b>Annual, 1 Quart</b> , 1 (ppp), 14-19 (weeks), Summer <b>PGR</b> paclobutrazol 30 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 14-19 (weeks), Summer <b>PGR</b> uniconazole 5 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 14-19 (weeks), Summer <b>PGR</b> paclobutrazol 30 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 14-19 (weeks), Summer <b>PGR</b> uniconazole 5 ppm Spray	Avoid drought stress. Grow evenly moist but not wet. Monitor for snails, slugs, root and crown rots, Pythium, Phytophthora (if too wet). Control thrips, as Lobelia is very susceptible to INSV damage.
MONARDA <i>hybrida</i> <b>Bergamo</b>	6-8	288 or larger	(day) 60-65°F (16-18°C) (night) 60°F (16°C)	5.8-6.5 pH 1.2-1.4 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 11-14 (weeks), Summer <b>PGR</b> daminozide 2,500 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 11-14 (weeks), Summer <b>PGR</b> daminozide 2,500 ppm Spray	Well-drained soil. Grow relatively dry. Monitor for aphids, Botrytis and powdery mildew.
MYOSOTIS <i>sylvatica</i> <b>Mon Amie Blue</b>	6-8	288 or larger	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.6-5.8 pH 1.3-1.5 mmhos/cm	Day neutral	No	<b>Annual, 4" Pot</b> , 1 (ppp), 7-9 (weeks), Spring <b>PGR</b> daminozide/chlormequat chloride tank mix 3,500-750 ppm Spray <b>Overwinter, 4" Pot</b> , 1 (ppp), 16-22 (weeks), Early Spring <b>PGR</b> daminozide/chlormequat chloride tank mix 3,500-750 ppm Spray	Maintain low pH. Mysotis suffer from chlorosis at high pH. Grow like Primula acaulis. See Grower Facts for details on how to mitigate chlorosis caused by high pH.
NEPETA <i>nervosa</i> <b>Blue Moon</b>	4-7	288 or larger	(day) 60-65°F (16-18°C) (night) 54-60°F (12-16°C)	5.8-6.5 pH 1.2-1.4 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 8-12 (weeks), Late Spring <b>PGR</b> daminozide 2,500 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 8-12 (weeks), Late Spring <b>PGR</b> daminozide 2,500 ppm Spray	Grow relatively dry. Prevent Mg and Fe deficiencies. Monitor for Botrytis, downy mildew and aphids.
NEPETA <i>nervosa</i> <b>Pink Cat</b>	4-7	288 or larger	(day) 60-65°F (16-18°C) (night) 54-60°F (12-16°C)	5.8-6.5 pH 1.2-1.4 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 8-12 (weeks), Late Spring <b>PGR</b> daminozide 2,500 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 8-12 (weeks), Late Spring <b>PGR</b> daminozide 2,500 ppm Spray	Grow relatively dry. Prevent Mg and Fe deficiencies. Monitor for Botrytis, downy mildew and aphids.
PAPAVER <i>mijabeaunum</i> <b>Moondance</b>	4-7	288 or larger	(day) 65-72°F (18-22°C) (night) 55-59°F (13-15°C)	5.6-6.2 pH 1.1-1.3 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 10-12 (weeks), Late Spring <b>Annual, Gallon</b> , 3-5 (ppp), 10-12 (weeks), Late Spring	Well-drained soil. Moderate fertilization. High light and airy. Monitor for Botrytis, downy mildew and aphids.
PAPAVER <i>nudicaule</i> <b>Champagne Bubbles</b>	4-8	288 or larger	(day) 50-55°F (10-13°C) (night) 40-45°F (4-7°C)	5.5-6.0 pH 1.2-1.4 mmhos/cm	Day neutral	No	<b>Annual, 4" Pot</b> , 1 (ppp), 5-10 (weeks), Late Spring <b>Annual, Gallon</b> , 2-3 (ppp), 6-11 (weeks), Late Spring	Suffers from Chlorosis at high pH (above 6.1), due to iron deficiency. Moderate fertilization, well-drained soil.
PENSTEMON <i>heterophyllus</i> <b>Electric Blue</b>	6-8	288 or larger	(day) 66-70°F (19-21°C) (night) 62-66°F (17-19°C)	5.8-6.5 pH 1.0-1.5 mmhos/cm	Day neutral, but needs high light intensity for complete, rapid and uniform flowering	No - but beneficial; cooled plants flower more uniformly and faster than non-cooled plants; duration of 10 weeks at 41°F (5°C)	<b>Annual, 1 Quart</b> , 1 (ppp), 12-14 (weeks), Late Spring <b>Annual, Gallon</b> , 2-3 (ppp), 12-14 (weeks), Late Spring <b>Annual, 1 Quart</b> , 1 (ppp), 11-13 (weeks), Summer <b>Annual, Gallon</b> , 2-3 (ppp), 11-13 (weeks), Summer	Bulking prior to vernalization ensures pot-fill and improves flowering uniformity. Monitor for white flies.

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PENSTEMON <i>x mexicali</i> <b>Carillo</b>	5-7	288 or larger	(day) 65-72°F (18-22°C) (night) 55-59°F (13-15°C)	5.8-6.5 pH 1.1-1.4 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 12-14 (weeks), Late Spring <b>PGR</b> daminozide 1,500-2,500 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 12-14 (weeks), Late Spring <b>PGR</b> daminozide 1,500-2,500 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 12-14 (weeks), Summer <b>PGR</b> daminozide 1,500-2,500 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 12-14 (weeks), Summer <b>PGR</b> daminozide 1,500-2,500 ppm Spray	Needs high light. Low RH. Grow relatively dry. Prevent Mg and Fe deficiency. Monitor for leafspot, powdery mildew, slugs, snails and leaf eelworm. Carillo Red is more sensitive to cold, showing yellow leaf tips, will reverse with higher temp.
PEROVSKIA <i>atriplicifolia</i> <b>Blue Steel</b>	4-7	288 or larger	(day) 60-68°F (16-20°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.2-1.4 mmhos/cm	Daylength neutral - light accumulator (higher light levels increase development and finish)	No	<b>Annual, 1 Quart</b> , 1 (ppp), 11-13 (weeks), Spring <b>PGR</b> daminozide 2,500-3,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 12-14 (weeks), Spring <b>PGR</b> daminozide 2,500-3,000 ppm Spray <b>Annual, 2 Gallon</b> , 3-5 (ppp), 13-15 (weeks), Spring <b>PGR</b> daminozide 2,500-3,000 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 9-10 (weeks), Summer <b>PGR</b> daminozide 2,500-3,000 ppm Spray <b>Annual, Gallon</b> , 1-3 (ppp), 10-11 (weeks), Summer <b>PGR</b> daminozide 2,500-3,000 ppm Spray <b>Annual, 2 Gallon</b> , 3-5 (ppp), 12-13 (weeks), Summer <b>PGR</b> daminozide 2,500-3,000 ppm Spray	Needs active growing climate with highest possible light levels. Optimum larger than 15 Mol per m2 per day. Can grow in lower light levels but increases crop time (see lead time per season). Do not start crop too early in cold nights and lower light levels, will cause delay. Best grown outside. Finish lead times for NW Europe: add 2 to 3 wks to indicated lead times. Allow media to dry in between waterings. Avoid growing wet. Monitor EC in pot during active growth to avoid leaf yellowing (chlorosis). Gallon is main size; recommend 3 ppp, potted in triangle, for superior finished quality (compared to veg. 1 plant per pot). If plugs are not pinched, pinch 2 to 3 wks after transplant, above 4 to 5 leaf node pairs.
PEROVSKIA <i>atriplicifolia</i> <b>Taiga</b>	4-7	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 1.1-1.4 mmhos/cm	Long day required	No	<b>Annual, 2 Gallon</b> , 3-5 (ppp), 15-17 (weeks), Summer <b>PGR</b> daminozide 2,000-2,500 ppm Spray	Grow relatively dry. Well-drained. Prevent Mg and Fe deficiencies. Monitor for aphids, mites, whitefly.
PRIMULA <i>capitata ssp. mooreana</i> <b>Noverna Deep Blue</b>	4-7	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.5-6.0 pH 1.1-1.3 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 12-14 (weeks), Late Spring	Use well-drained medium. Prevent Mg and Fe deficiency. Monitor for Botrytis, Pythium, Rhizoctonia and aphids.
RUDBECKIA <i>fulgida var. sullivantii</i> <b>Goldsturm</b>	3-9	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.8-6.5 pH 1.2-1.5 mmhos/cm	Long day required	No - but vernalized plugs will decrease production lead time	<b>Annual, 1 Quart</b> , 1 (ppp), 16-23 (weeks), Summer <b>PGR</b> paclobutrazol 20-30 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 16-23 (weeks), Summer <b>PGR</b> uniconazole 5-10 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 16-24 (weeks), Summer <b>PGR</b> paclobutrazol 20-30 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 16-24 (weeks), Summer <b>PGR</b> uniconazole 5-10 ppm Spray	High feeder. Use long day or night interruption to finish early pottings or use vernalized plugs. Prevent Mg and Fe deficiency. Monitor for Botrytis and downy mildew. High light and good ventilation beneficial.
RUDBECKIA <i>hirta</i> <b>Irish Eyes</b>	7-9	288 or larger	(day) 65-68°F (18-20°C) (night) 59-60°F (15-16°C)	5.8-6.5 pH 1.2-1.5 mmhos/cm	Long day required 14 hours	No	<b>Annual, 1 Quart</b> , 1 (ppp), 12-14 (weeks), Summer <b>PGR</b> daminozide 2,500-4,000 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 12-14 (weeks), Summer <b>PGR</b> daminozide 2,500-4,000 ppm Spray	Grow relatively dry. Monitor for powdery mildew.
RUDBECKIA <i>hirta</i> <b>Moreno</b>	7-9	288 or larger	(day) 65-68°F (18-20°C) (night) 59-60°F (15-16°C)	5.8-6.5 pH 1.2-1.5 mmhos/cm	Long day required 14 hours	No	<b>Annual, 1 Quart</b> , 1 (ppp), 11-13 (weeks), Summer <b>PGR</b> daminozide 2,500-4,000 ppm Spray <b>Annual, Gallon</b> , 2-3 (ppp), 11-13 (weeks), Summer <b>PGR</b> daminozide 2,500-4,000 ppm Spray	Grow relatively dry. Monitor for powdery mildew.
SALVIA <i>lyrata</i> <b>Purple Volcano</b>	6-8	288 or larger	(day) 60-65°F (16-18°C) (night) 54-60°F (12-16°C)	5.8-6.2 pH 1.1-1.3 mmhos/cm	Day neutral	No	<b>Annual, 1 Quart</b> , 1 (ppp), 8-10 (weeks), Late Spring <b>Annual, Gallon</b> , 3-4 (ppp), 8-10 (weeks), Late Spring	Use well-drained medium. Prevent Mg and Fe deficiency. Monitor for Botrytis, downy mildew, aphids and spider mites.
SALVIA <i>nemorosa (superba)</i> <b>New Dimension</b>	4-8	288 or larger	(day) 60-72°F (16-22°C) (night) 50-59°F (10-15°C)	5.5-6.2 pH 0.9-1.3 mmhos/cm	Long day required	No	<b>Annual, 1 Quart</b> , 1 (ppp), 8-11 (weeks), Late Spring <b>PGR</b> daminozide 1,500-2,000 ppm Spray <b>Annual, Gallon</b> , 3-4 (ppp), 8-11 (weeks), Late Spring <b>PGR</b> daminozide 1,500-2,000 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 7-9 (weeks), Summer <b>PGR</b> daminozide 1,500-2,000 ppm Spray <b>Annual, Gallon</b> , 3-4 (ppp), 7-9 (weeks), Summer <b>PGR</b> daminozide 1,500-2,000 ppm Spray	Grow relatively dry. Avoid leaf yellow with high pH (Fe) and/or low N when generative. Spray weekly Bittersalt MGSO4 1g/liter. Monitor for spider mites, Rhizoctonia, leafspot and root rot. Wet after transplant with preventive spray. Blue is 1 week later to finish.
SALVIA <i>patens</i> <b>Patio</b>	8-10	288 or larger	(day) 60-65°F (16-18°C) (night) 57-60°F (14-16°C)	5.8-6.5 pH 1.0-1.2 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 7-11 (weeks), Late Spring <b>PGR</b> daminozide 1,500-2,000 ppm Spray <b>Annual, Gallon</b> , 3-4 (ppp), 7-11 (weeks), Late Spring <b>PGR</b> daminozide 1,500-2,000 ppm Spray	Grow relatively dry. Use well-drained medium. Prevent Mg and Fe deficiency. Monitor for Botrytis, downy mildew, aphids and spider mites. High light and good ventilation beneficial.
SALVIA <i>roemeriana</i> <b>Hot Trumpets</b>	7-10	288 or larger	(day) 65-68°F (18-20°C) (night) 54-60°F (12-16°C)	5.8-6.2 pH 1.2-1.4 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 8-12 (weeks), Late Spring <b>PGR</b> daminozide 1,500-2,000 ppm Spray <b>Annual, Gallon</b> , 3-4 (ppp), 8-12 (weeks), Late Spring <b>PGR</b> daminozide 1,500-2,000 ppm Spray	Grow relatively dry. Use well-drained medium. Prevent Mg and Fe deficiency. Monitor for Botrytis, downy mildew, aphids and spider mites. High light and good ventilation beneficial.
SAXIFRAGA <i>x arendsii</i> <b>Purple Robe</b>	4-7	288 or larger	(day) 50-54°F (10-12°C) (night) 45-50°F (7-10°C)	5.8-6.2 pH 1.0-1.2 mmhos/cm	Day neutral	Yes - 12 weeks at 41°F (5°C)	<b>Overwinter, 1 Quart</b> , 1 (ppp), 30-36 (weeks), Early Spring	Very well-drained medium. Prevent Mg and Fe deficiency. Monitor for Botrytis and spider mites.

CLASS/SERIES	HARDINESS ZONE	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	PHOTOPERIOD RESPONSE	VERNALIZATION REQUIRED	FINISHING PROGRAMS FOR ANNUAL AND OVERWINTER PRODUCTION	KEY TIPS
SAXIFRAGA <i>x arendsii</i> <b>Rocco Red</b>	4-7	288 or larger	(day) 60-65°F (16-18°C) (night) 40-50°F (4-10°C)	5.8-6.2 pH 1.0-1.2 mmhos/cm	Day neutral	Yes - duration of 12 weeks at 41°F (5°C)	<b>Overwinter, 1 Quart</b> , 1 (ppp), 28-36 (weeks), Early Spring	Very well-drained medium. Prevent Mg and Fe deficiency. Grown best slightly dry to average moisture. Water thoroughly and allow to dry moderately. Monitor for Botrytis and spider mites.
SCABIOSA <i>colombaria</i> <b>Blue Note</b>	5-9	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 0.9-1.3 mmhos/cm	Day neutral	No	<b>Annual, 1 Quart</b> , 1 (ppp), 12-14 (weeks), Late Spring <b>Annual, Gallon</b> , 3-4 (ppp), 12-14 (weeks), Late Spring <b>Overwinter, 1 Quart</b> , 1 (ppp), 26-34 (weeks), Spring	Needs high light, low RH. Grow relatively dry. Prevent Mg and Fe deficiency. Monitor for Botrytis, downy mildew, root rot, aphids and mites. Early Spring forcing 6 weeks 62-65, no long days.
SCABIOSA <i>japonica var. alpina</i> <b>Pink Diamonds</b>	5-9	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 0.9-1.3 mmhos/cm	Day neutral	No	<b>Annual, 1 Quart</b> , 1 (ppp), 12-14 (weeks), Late Spring <b>Annual, Gallon</b> , 3-4 (ppp), 12-14 (weeks), Late Spring <b>Overwinter, 1 Quart</b> , 1 (ppp), 26-34 (weeks), Spring	Needs high light, low RH. Grow relatively dry. Prevent Mg and Fe deficiency. Monitor for Botrytis, downy mildew, root rot, aphids and mites. Early Spring forcing 6 weeks 62-65, no long days.
SILENE <i>alpestris</i> <b>Starry Dreams</b>	5-8	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.8-6.5 pH 1.0-1.2 mmhos/cm	Long day required	No	<b>Annual, 1 Quart</b> , 1 (ppp), 10-14 (weeks), Late Spring <b>PGR daminozide</b> 2,000-2,500 ppm Spray <b>Annual, Gallon</b> , 3-4 (ppp), 10-14 (weeks), Late Spring <b>PGR daminozide</b> 2,000-2,500 ppm Spray	Low to moderate fertilization. Grow uniformly moist. Prevent Mg and Fe deficiency. Monitor for aphids, spider mites, slugs and snails.
STACHYS <i>byzantina</i>	5-7	288 or larger	(day) 60-65°F (16-18°C) (night) 54-60°F (12-16°C)	5.8-6.5 pH 1.0-1.2 mmhos/cm		No	<b>Annual, 1 Quart</b> , 1 (ppp), 7-9 (weeks), Late Spring	Sold for foliage. Do not over-age to finish. Pinch to keep more compact. Not really suitable for forcing.
VERBASCUM <i>x hybrida</i> <b>Southern Charm</b>	5-8	288 or larger	(day) 64-67°F (18-19°C) (night) 62-65°F (17-18°C)	5.8-6.5 pH 1.1-1.3 mmhos/cm	Day neutral	No	<b>Annual, Gallon</b> , 1 (ppp), 12-14 (weeks), Summer	Flowering more uniform under high light conditions.
VERBENA <i>bonariensis</i> <b>Buenos Aires</b>	7-11	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.5-6.2 pH 1.3-1.5 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 11-13 (weeks), Late Spring	Mostly sold green. Grow dry and light. Relatively high fertilization. Avoid high N. Prevent Mg and Fe deficiency. Monitor for powdery mildew, aphids and thrips.
VERBENA <i>rigida</i> <b>Santos</b>	7-11	288 or larger	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.5-6.2 pH 1.3-1.5 mmhos/cm	Long day beneficial	No	<b>Annual, 1 Quart</b> , 1 (ppp), 11-14 (weeks), Late Spring <b>PGR daminozide</b> 2,000-2,500 ppm Spray <b>Annual, 1 Quart</b> , 1 (ppp), 11-14 (weeks), Late Spring <b>PGR daminozide/chlormequat chloride tank mix</b> 2,000-2,500 ppm Spray <b>Annual, Gallon</b> , 3-4 (ppp), 11-14 (weeks), Late Spring <b>PGR daminozide</b> 2,000-2,500 ppm Spray <b>Annual, Gallon</b> , 3-4 (ppp), 11-14 (weeks), Late Spring <b>PGR daminozide/chlormequat chloride tank mix</b> 2,000-750 ppm Spray <b>Annual, Gallon</b> , 3-4 (ppp), 10-13 (weeks), Summer <b>PGR daminozide</b> 2,000-2,500 ppm Spray <b>Annual, Gallon</b> , 3-4 (ppp), 10-13 (weeks), Summer <b>PGR daminozide/chlormequat chloride tank mix</b> 2,000-750 ppm Spray	Grow dry and light. Relatively high fertilization. Avoid high N. Prevent Mg and Fe deficiency. Monitor for powdery mildew, aphids and thrips.
VERONICA <i>spicata</i> <b>Blue Bouquet</b>	5-8	288 or larger	(day) 65°F (18°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.3-1.5 mmhos/cm	Day neutral	No	<b>Annual, Gallon</b> , 1 (ppp), 14-18 (weeks), Summer	

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## **PERENNIALS**

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## **HANDPICKED VEGETABLES & HERBS**

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**cut flowers**



CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
AGERATUM <b>Everest Blue</b>	PEL	406 or larger	4-5	1	No	3-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C)	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
ANEMONE <b>Mona Lisa®</b>	RAW	406 or larger	8	1	Yes	10-14	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Because anemone is slow-growing, maintain appropriate conditions such as moisture, temperature, fertilization and insect disease control to produce a healthy plug.
ASTER <b>Meteor</b>	RAW	288 or larger	4-5	1	Yes	4-8	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-72°F (21-22°C)	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
CAMPANULA <b>Campana</b>	PEL	288 or larger	7-8	1	No	4-5	5.8-6.5 pH 0.8 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 370-2,500 f.c. (4,000-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 370-2,500 f.c. (4,000-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 370-5,000 f.c. (4,000-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Qualitative long-day plant. To ensure sufficient vegetative growth and stem length, provide 6 weeks of short-day conditions (<11 hours) from approximately 2 weeks after sowing. When producing for Winter flowering, provide long days (> 14 hours) at 6 weeks after transplanting. Mum lighting from 10 p.m. to 2 a.m. can be used. Maintain a medium moisture level. To reach sufficient stem length, campanula medium needs adequate moisture and fertilization. Dry growing conditions will cause early flowering and reduced stem length. However, over-watering will cause weaker stems and root systems, which will cause plants to fall over.
CELOSIA <b>Bombay®</b>	COT	288 or larger	2-3	1	Light cover	3-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Quantitative short-day plant. Flowers will initiate under short days. The optimum daylength for Bombay to reach the appropriate stem length lies between 12 to 13 hours. Celosia makes a taproot and is sensitive to root damage, which will result in early bud formation, deformed flowers and less uniformity. Therefore, plant before the plugs get rootbound. Maintain a constantly moist media, especially for the first 2 weeks after transplanting, to prevent premature flowering.
CELOSIA <b>Celway®</b>	COT	288 or larger	2-3	1	Light cover	3-4	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Quantitative short-day plant. Flowers will initiate under short days. The optimum daylength for Celway to reach the appropriate stem length lies between 12 to 13 hours. Celosia makes a taproot and is sensitive to root damage, which will result in early bud formation, deformed flowers and less uniformity. Therefore, plant before the plugs get rootbound. Maintain a constantly moist media, especially for the first 2 weeks after transplanting, to prevent premature flowering.
CELOSIA <b>Sunday®</b>	COT	288 or larger	2-3	1	Light cover	3-4	5.8-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(t) 68-72°F (20-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Quantitative short-day plant. Flowers will initiate under short days. The optimum daylength for Sunday to reach the appropriate stem length lies between 12 to 13 hours. Celosia makes a taproot and is sensitive to root damage, which will result in early bud formation, deformed flowers and less uniformity. Therefore, plant before the plugs get rootbound. Maintain a constantly moist media, especially for the first 2 weeks after transplanting, to prevent premature flowering.
DELPHINIUM <b>Blue Donna</b>	RAW	288 or larger	6-8	1	Yes	7-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 6-8 mol-m <sup>2</sup> -d <sup>-1</sup> , 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 6-8 mol-m <sup>2</sup> -d <sup>-1</sup> , 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
DELPHINIUM <b>Guardian</b>	RAW	288 or larger	5-6	1	Yes	5-6	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 65-68°F (18-20°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2 (t) 60-65°F (16-18°C) (l) 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Autumn: greenhouse 13 weeks, field 16 weeks. Spring: greenhouse 11 weeks, field 13 weeks. Treat cut stems with an ethylene-inhibiting agent. In temperate areas such as coastal California, plugs are generally transplanted into the field August through October, and February to early May. Autumn transplants will flower the following Spring (February onward); Spring transplants flower late Spring.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
DIANTHUS <b>Amazon</b>	PEL	288 or larger	4-5	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 5-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 4-6 ppm Spray	(m) Level 3 (t) 65-60°F (18-16°C) (l) 10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	A small percentage (3-5%) of early off-types can be observed 4-5 weeks from sowing. They should be removed/roughed out during the plug stage to avoid early flowering off-types after transplanting.
DIANTHUS <b>Bouquet</b>	PEL	288 or larger	5-6	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 5-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 4-6 ppm Spray	(m) Level 3 (t) 55-60°F (13-16°C) (l) 10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DIANTHUS <b>Sweet</b>	PEL	288 or larger	5-6	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Optional	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 5-8 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 8-10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) paclobutrazol 4-6 ppm Spray	(m) Level 3 (t) 55-60°F (13-16°C) (l) 10 mol·m <sup>-2</sup> ·d <sup>-1</sup> (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
GOMPHRENA <b>QIS</b>	RAW	288 or larger	5-6	1	Yes	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C)	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
HELIANTHUS <b>Jua</b>	TRT	Direct sow	2-2.5	1	Yes	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-75°F (20-24°C)	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Can also be direct sown in the field and will take about 3 to 5 days to germinate.
HELIANTHUS <b>Prado</b>	RAW	Direct sow	2-3	1	Yes	3-5	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-75°F (20-24°C)	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Can also be direct sown in the field and will take about 3 to 7 days to germinate.
LIMONIUM <b>QIS</b>	RAW	288 or larger	4-5	1	Yes	3-8	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Plants flower more rapidly and uniformly if subjected to a cold treatment of 50-55°F (10-13°C) for 3-5 weeks following germination.
LISIANTHUS <b>ABC</b>	PEL	406 or larger	8-10	1	Light cover	8-12	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC	Avoid high media temperature (>72°F/22°C) beginning stage 2, as it can induce rosetting in the seedling, which will cause stunting after the plugs are transplanted. Also, it is very important to establish a preventative disease & insect control practice for lisianthus production.
LISIANTHUS <b>Flare</b>	PEL	406 or larger	8-10	1	Light cover	8-12	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC	Avoid high media temperature (>72°F/22°C) beginning stage 2, as it can induce rosetting in the seedling, which will cause stunting after the plugs are transplanted. Also, it is very important to establish a preventative disease & insect control practice for lisianthus production.
LISIANTHUS <b>Laguna</b>	PEL	406 or larger	8-10	1	Light cover	8-12	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3-4 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC	Avoid high media temperature (>72°F/22°C) beginning stage 2, as it can induce rosetting in the seedling, which will cause stunting after the plugs are transplanted. Also, it is very important to establish a preventative disease & insect control practice for lisianthus production.
MATRICARIA <b>Vegmo</b>	PEL	288 or larger	4-5	1	No	3-5	5.6-5.9 pH 0.5 mmhos/cm	(m) Level 5 (t) 64-68°F (18-20°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 64-68°F (18-20°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 64-68°F (18-20°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	16 hours of lighting is required for flowering; supplemental lighting may be solid or cyclic. Matricaria are not sensitive to ethylene.
MATTHIOLA <b>Aida</b>	RAW	288 or larger	5-6	1	Yes	2-4	5.6-5.9 pH 0.5 mmhos/cm	(m) Level 4 (t) 59-64°F (15-18°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-2 (t) 59-64°F (15-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 4 to 7 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
MATTHIOLA <b>Carmen</b>	RAW	288 or larger	5-6	1	Yes	2-4	5.6-5.9 pH 0.5 mmhos/cm	(m) Level 4 (t) 59-64°F (15-18°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-2 (t) 59-64°F (15-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 4 to 7 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.
MATTHIOLA <b>Column Stock</b>	RAW	Direct sow	N/A		Yes	14-21	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	In field grown-type stocks, typically the seed is directly sown into the field, so its important to maintain the optimal field conditions, especially the moisture conditions, for the seed to germinate and establish.
MATTHIOLA <b>Figaro</b>	RAW	288 or larger	5-6	1	Yes	2-4	5.6-5.9 pH 0.5 mmhos/cm	(m) Level 4 (t) 59-64°F (15-18°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-2 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 4 to 7 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.
MATTHIOLA <b>Katz</b>	RAW	512 or larger	4	1	Yes	3-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Incorporate a preventative fungicide program for downy mildew control.
MATTHIOLA <b>Mathilda</b>	RAW	288 or larger	5-6	1	Yes	2-4	5.6-5.9 pH 0.5 mmhos/cm	(m) Level 4 (t) 59-64°F (15-18°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-2 (t) 59-64°F (15-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 4 to 7 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.
MATTHIOLA <b>Opera</b>	RAW	288 or larger	5-6	1	Yes	2-4	5.6-5.9 pH 0.5 mmhos/cm	(m) Level 4 (t) 59-64°F (15-18°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 59-64°F (15-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 1-2 (t) 59-64°F (15-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 4 to 7 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.
SNAPDRAGON <b>Apollo</b>	RAW	406 or larger	4-5	1	Light cover	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid high media pH (>6.5) as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
SNAPDRAGON <b>Axiom</b>	RAW	406 or larger	4-5	1	Light cover	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Appleblossom and Dark Orange germinate best with light. Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
SNAPDRAGON <b>Cool</b>	RAW	406 or larger	4-5	1	Light cover	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
SNAPDRAGON <b>Early Potomac®</b>	RAW	406 or larger	4-5	1	Light cover	4-6	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
SNAPDRAGON <b>Maryland</b>	RAW	406 or larger	4-5	1	Light cover	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
SNAPDRAGON <b>Monaco</b>	RAW	406 or larger	4-5	1	Light cover	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
SNAPDRAGON <b>Paxia</b>	RAW	406 or larger	4-5	1	Light cover	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
SNAPDRAGON <b>Potomac®</b>	RAW	406 or larger	4-5	1	Light cover	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
SNAPDRAGON <b>Purple Twist</b>	RAW	406 or larger	4-5	1	Light cover	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C)	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
SNAPDRAGON <b>Red Delilah</b>	RAW	406 or larger	4-5	1	Light cover	4-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
SNAPDRAGON <b>Rocket</b>	RAW	406 or larger	5-6	1	Light cover	4-8	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-68°F (18-20°C)	(m) Level 3-4 (l) 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (l) 5,000 f.c. (53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Bronze, Golden, Pink, Red and Rose Shades will germinate best with light. Avoid high media pH (> 6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by Boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
SNAPDRAGON <b>Trumpet</b>	RAW	406 or larger	4-5	1	Light cover	4-6	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-70°F (18-21°C) (l) Optional	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 60-65°F (16-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 60°F (16°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for downy mildew control.
TRACHELIUM <b>Lake</b>	PEL	288 or larger	7-9	1	No	5-7	6.0 pH 0.5-0.9 mmhos/cm	(m) Level 4 (t) 62-70°F (17-21°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 62-70°F (17-21°C) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-70°F (17-21°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Trachelium is very sensitive to high salts, particularly high ammonium, during germination. Trachelium needs 16-hour daylengths for faster flowering. Should be transplanted Autumn to early Winter for flowering in mid-Winter to early Spring.

CLASS/SERIES	WEEKS FROM PLUG TO FINISH	RECOMMENDED PLUG SIZE	PLANTING DENSITY	GROWING ON TEMPERATURE (DAYS/NIGHTS)	STEM LENGTH	KEY TIPS
AGERATUM <b>Everest Blue</b>	Spring: 15 weeks Summer: 12 weeks	406 or larger	Autumn: 2 plants/ft <sup>2</sup> (22 plants/m <sup>2</sup> ) Summer: 3 plants/ft <sup>2</sup> (32 plants/m <sup>2</sup> )	Before flower development: (day) 65-75°F (18-24°C) (night) 55-60°F (13-16°C)	24-32 in. (61-81cm)	Greenhouse cut flower. Low temperatures (46-54°F/ 8-12°C) promote optimum stem length. After harvest, the cut stems should remain in water for at least one night before transport or sale. The flowers will open better if handled this way.
ANEMONE <b>Mona Lisa®</b>	Spring: 12-14 weeks	406 or larger	Spring: 2-4 plants/ft <sup>2</sup> (22-43 plants/m <sup>2</sup> )	Before flower development: (day) 60-65°F (16-18°C) (night) 55°F (13°C)	18 in. (46cm)	Low temperatures (46-54°F/8-12°C) will promote optimum stem length, but the crop time will be longer.
ASTER <b>Meteor</b>	Spring: 13-16 weeks	288 or larger	Spring: 7 plants/ft <sup>2</sup> (75 plants/m <sup>2</sup> )	Before flower development: (day) 60-75°F (16-24°C) (night) 50-60°F (10-16°C)	30-40 in. (76-102cm)	Crop timing is affected by the ratio of long days (LD) to short days (SD). Under SD conditions, increasing LD treatments will increase stem length and shorten time to harvest. LD consists of 16 hours of light. Cyclic lighting of 7.5 minutes per half-hour.
CAMPANULA <b>Campana</b>	10-14 weeks	288 or larger	21-27 plants/ft <sup>2</sup> (226-291 plants/m <sup>2</sup> )	(day) 60-70°F (16-21°C) (night) 54-59°F (12-15°C)	30-34 in. (76-86cm)	Qualitative long-day plant. To ensure sufficient vegetative growth and stem length, provide 6 weeks of short-day conditions (<11 hours) from approximately 2 weeks after sowing. When producing for Winter flowering, provide long days (> 14 hours) at 6 weeks after transplanting. Mum lighting from 10 p.m. to 2 a.m. can be used. Maintain a medium moisture level. To reach sufficient stem length, campanula medium needs adequate moisture and fertilization. Dry growing conditions will cause early flowering and reduced stem length. However, over-watering will cause weaker stems and root systems, which will cause plants to fall over.
CELOSIA <b>Bombay®</b>	10-14 weeks	288 or larger	6-8 plants/ft <sup>2</sup> (65-86 plants/m <sup>2</sup> )	(day) 61-60°F (16°C) (night) 59°F (15°C) Before flower development: (day) 65-75°F (18-24°C) (night) 63-65°F (17-18°C)	28-40 in. (71-102cm)	Quantitative short-day plant. Flowers will initiate under short days. The optimum daylength for Bombay to reach the appropriate stem length lies between 12 to 13 hours. Celosia makes a taproot and is sensitive to root damage, which will result in early bud formation, deformed flowers and less uniformity. Therefore, plant before the plugs get rootbound. Maintain a constantly moist media, especially for the first 2 weeks after transplanting, to prevent premature flowering.
CELOSIA <b>Celway®</b>	12-16 weeks	288 or larger	6-8 plants/ft <sup>2</sup> (65-86 plants/m <sup>2</sup> )	(day) 65-75°F (18-24°C) (night) 63-65°F (17-18°C)	40-48 in. (102-122cm)	Quantitative short-day plant. Flowers will initiate under short days. The optimum daylength for Celway to reach the appropriate stem length lies between 12 to 13 hours. Celosia makes a taproot and is sensitive to root damage, which will result in early bud formation, deformed flowers and less uniformity. Therefore, plant before the plugs get rootbound. Maintain a constantly moist media, especially for the first 2 weeks after transplanting, to prevent premature flowering.
CELOSIA <b>Sunday®</b>	12-16 weeks	288 or larger	6-8 plants/ft <sup>2</sup> (65-86 plants/m <sup>2</sup> )	(day) 60-61°F (16°C) (night) 59°F (15°C) Before flower development: (day) 65-75°F (18-24°C) (night) 63-65°F (17-18°C)	28-40 in. (71-102cm)	Quantitative short-day plant. Flowers will initiate under short days. The optimum daylength for Sunday to reach the appropriate stem length lies between 12 to 13 hours. Celosia makes a taproot and is sensitive to root damage, which will result in early bud formation, deformed flowers and less uniformity. Therefore, plant before the plugs get rootbound. Maintain a constantly moist media, especially for the first 2 weeks after transplanting, to prevent premature flowering.
DELPHINIUM <b>Blue Donna</b>	Autumn: 12-15 weeks Spring: 12-15 weeks Summer: 11-13 weeks	288 or larger		Autumn: (day) 63-68°F (17-20°C) (night) 53-58°F (12-14°C) Spring: (day) 65-68°F (18-20°C) (night) 53-58°F (12-14°C) Summer: (day) 65-68°F (18-20°C) (night) 53-58°F (12-14°C)	20-35 in. (51-89cm)	Density/m2 annual prod GHS 12-16 and density field 16-18; density/m2 perennials prod Field: 9. Do not pinch. Fertilize frequently with well-balanced fertilizer. Avoid ratio N:K larger than 2. Irrigation: overhead only first 4-6 weeks, then use drip. Needs medium to high irrigation, but keep plants dry and low RH. Prefers high light conditions. Cut stems 6 in. above ground to prevent root rot. Harvest when 25 to 30% of flowers are open. For annual cycle: from early (Jan/Feb) transplant; first harvest after 12 to 15 weeks; then next 1 or 2 each 5 to 6 weeks later. Second and third harvests give best quality stems.
DELPHINIUM <b>Guardian</b>	Autumn: 13-16 weeks Spring: 11-13 weeks Summer: 11-13 weeks	288 or larger	Autumn: 4 plants/ft <sup>2</sup> (43 plants/m <sup>2</sup> ) Spring: 4 plants/ft <sup>2</sup> (43 plants/m <sup>2</sup> ) Summer: 4 plants/ft <sup>2</sup> (43 plants/m <sup>2</sup> )	Autumn: (day) 68-71°F (20-22°C) (night) 60-65°F (16-18°C) Spring: (day) 68-71°F (20-22°C) (night) 60-65°F (16-18°C) Summer: (day) 68-71°F (20-22°C) (night) 60-65°F (16-18°C)	30-39 in. (76-99cm)	Autumn: greenhouse 13 weeks, field 16 weeks. Spring: greenhouse 11 weeks, field 13 weeks. Treat cut stems with an ethylene-inhibiting agent. In temperate areas such as coastal California, plugs are generally transplanted into the field August through October, and February to early May. Autumn transplants will flower the following Spring (February onward); Spring transplants flower late Spring.
DIANTHUS <b>Amazon</b>	Spring: 12-18 weeks Summer: 11-14 weeks	288 or larger	Pinched: 1.5 plants/ft <sup>2</sup> (16 plants/m <sup>2</sup> ) Spring: 3-4 plants/ft <sup>2</sup> (32-43 plants/m <sup>2</sup> )	Before flower development: (day) 60-72°F (16-22°C) (night) 50-60°F (10-16°C)	20-36 in. (51-91cm)	A small percentage (3-5%) of early off-types can be observed 4 to 5 weeks from sowing and should be removed. Can tolerate night temperatures as low as 45°F (7°C). Plants are frost-tolerant, although frost will damage the flowers.
DIANTHUS <b>Bouquet</b>	Spring: 8-9 weeks Winter: 15-18 weeks	288 or larger	Spring: 3-4 plants/ft <sup>2</sup> (32-43 plants/m <sup>2</sup> )	Before flower development: (day) 60-72°F (16-22°C) (night) 50-60°F (10-16°C)	18-30 in. (46-76cm)	Can be transplanted year-round in coastal California or similar climates, where from mid-August to February, transplants will develop the best stem length. Greenhouse-grown plants generally produce taller stems than field-grown plants. Harvest stems with at least 3 open flowers.
DIANTHUS <b>Sweet</b>	Autumn: 10 weeks Spring: 11-15 weeks	288 or larger	Spring: 4-6 plants/ft <sup>2</sup> (43-65 plants/m <sup>2</sup> )	Before flower development: (day) 60-72°F (16-22°C) (night) 50-60°F (10-16°C)	18-36 in. (46-91cm)	No vernalization required for flower induction. Taller growth achievable from early Autumn-transplanted, greenhouse-grown plants.
GOMPHRENA <b>QIS</b>	Spring: 10-12 weeks	288 or larger	Spring: 1.5 plants/ft <sup>2</sup> (16 plants/m <sup>2</sup> )	Before flower development: (day) 65-75°F (18-24°C) (night) 63-66°F (17-19°C)	24-26 in. (61-66cm)	To increase productivity, the first blooms of the plants can be removed so that the secondaries will develop strongly.
HELIANTHUS <b>Jua</b>	Summer: 8-11 weeks	Direct sow	Autumn: 4-5 plants/ft <sup>2</sup> (43-54 plants/m <sup>2</sup> ) Spring: 4-5 plants/ft <sup>2</sup> (43-54 plants/m <sup>2</sup> ) Summer: 4-5 plants/ft <sup>2</sup> (43-54 plants/m <sup>2</sup> )	Before flower development: (day) 65-85°F (18-29°C) (night) 50-65°F (10-18°C)	36-60 in. (91-152cm)	Suitable for short and long-day conditions. Bred for best quality flowers under long-day conditions.

CLASS/SERIES	WEEKS FROM PLUG TO FINISH	RECOMMENDED PLUG SIZE	PLANTING DENSITY	GROWING ON TEMPERATURE (DAYS/NIGHTS)	STEM LENGTH	KEY TIPS
HELIANTHUS <b>Prado</b>	Summer: 10-12 weeks	Direct sow	Spring: 0.75 plants/ft <sup>2</sup> (8 plants/m <sup>2</sup> ) Summer: 0.75 plants/ft <sup>2</sup> (8 plants/m <sup>2</sup> )	Before flower development: (day) 65-85°F (18-29°C) (night) 50-65°F (10-18°C)	48-66 in. (122-168cm)	Recommended for direct sow, with approximately 10 to 12 weeks to harvest from sow. At high elevations (5,000 ft+/1,500 m+) and high light levels, Prado Red may produce almost-black ray petals. Very low humidity or very high light levels can reduce stem length. Approximately 7 to 10 flower stems per plant may be harvested when the main stem is pinched at the fifth set of true leaves.
LIMONIUM <b>QIS</b>	Spring: 18-22 weeks	288 or larger	Spring: 1-2 plants/ft <sup>2</sup> (11-22 plants/m <sup>2</sup> )	Before flower development: (day) 55-60°F (13-16°C) (night) 50-55°F (10-13°C)	30-35 in. (76-89cm)	Popular series for both fresh and preserved cut flower production. Stiff stems do not require netting. They will flower slightly quicker if the plugs are subjected to vernalization before transplanting.
LISIANTHUS <b>ABC</b>	Autumn: 12-14 weeks Spring: 12-14 weeks Summer: 10-12 weeks Winter: 14-18 weeks	406 or larger	Summer: 8 plants/ft <sup>2</sup> (86 plants/m <sup>2</sup> ) Winter: 6 plants/ft <sup>2</sup> (65 plants/m <sup>2</sup> )	Before flower development: (day) 68-75°F (20-24°C) (night) 60-65°F (16-18°C)	29-45 in. (74-114cm)	Full-sun plantings of cut flower lisianthus produce shorter stems than greenhouse-grown lisianthus. Crop time is dependent on time of year, temperature, use of supplemental lighting and greenhouse conditions, in coordination with the Seasonality number being used. As a general guide, the time from transplant to harvest for the ABC series will be 16 weeks for Seasonality Number 1 varieties grown under short days, to 13 weeks for Seasonality Number 4 varieties grown under long days. The Laguna series is approximately 10 days earlier than the ABCs per Seasonality number. In far northern latitudes where daylength has great variation across the year, the use of HID lighting is common. These regions may experience an even greater degree of variation for crop times.
LISIANTHUS <b>Flare</b>	Autumn: 12-14 weeks Spring: 12-14 weeks Summer: 10-12 weeks Winter: 14-18 weeks	406 or larger	Summer: 8 plants/ft <sup>2</sup> (86 plants/m <sup>2</sup> ) Winter: 6 plants/ft <sup>2</sup> (65 plants/m <sup>2</sup> )	Before flower development: (day) 68-75°F (20-24°C) (night) 60-65°F (16-18°C)	29-45 in. (74-114cm)	Full-sun plantings of cut flower lisianthus produce shorter stems than greenhouse-grown lisianthus. Flare is a series of F1 spray-type double flowering lisianthus. They have a top-flowering habit, producing more flowers on top of each stem within a short flowering window, giving a bouquet effect. Flare series is Speed Group 2 (Mid/medium speed) for flowering speed. Crop time is dependent on time of year, temperature, day length and light intensity, and also on supplemental lighting and greenhouse conditions. During Winter when daylength is shorter than 12 hours, supplemental light (incandescent or HID) can be used. Long-day (greater than 14 hours) or night interruption from 10 p.m. to 2 a.m. will accelerate flowering. HID light is preferred as it increases flower quality and decreases crop time.
LISIANTHUS <b>Laguna</b>	Spring: 12-14 weeks Summer: 10-12 weeks Winter: 14-18 weeks	406 or larger	Summer: 8 plants/ft <sup>2</sup> (86 plants/m <sup>2</sup> ) Winter: 6 plants/ft <sup>2</sup> (65 plants/m <sup>2</sup> )	Before flower development: (day) 68-75°F (20-24°C) (night) 60-65°F (16-18°C)	29-45 in. (74-114cm)	Full-sun plantings of cut flower lisianthus produce shorter stems than greenhouse-grown lisianthus. Crop time is dependent on time of year, temperature, use of supplemental lighting and greenhouse conditions, in coordination with the Seasonality number being used. As a general guide, the time from transplant to harvest for the ABC series will be 16 weeks for Seasonality Number 1 varieties grown under short days, to 13 weeks for Seasonality Number 4 varieties grown under long days. The Laguna series is approximately 10 days earlier than the ABCs per Seasonality number. In far northern latitudes where daylength has great variation across the year, the use of HID lighting is common. These regions may experience an even greater degree of variation for crop times.
MATRICARIA <b>Vegmo</b>	Autumn: 10-14 weeks Spring: 10-14 weeks Summer: 7-10 weeks Winter: 14-16 weeks	288 or larger	Summer: 8 plants/ft <sup>2</sup> (86 plants/m <sup>2</sup> ) Winter: 7 plants/ft <sup>2</sup> (75 plants/m <sup>2</sup> )	Summer: (day) 72-74°F (22-23°C) (night) 72-74°F (22-23°C) Winter: (day) 55-58°F (13-14°C) (night) 55-58°F (13-14°C)	28-36 in. (71-91cm)	16 hours of lighting is required for flowering. Supplemental lighting may be solid or cyclic. Matricaria are not sensitive to ethylene.
MATTHIOLA <b>Aida</b>	Autumn: 4-7 weeks Spring: 8-9 weeks Summer: 3-5 weeks Winter: 11-12 weeks	288 or larger	6 plants/ft <sup>2</sup> (65 plants/m <sup>2</sup> )	(day) 50-62°F (10-17°C) (night) 50-62°F (10-17°C)	30-34 in. (76-86cm)	Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 3 to 5 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.
MATTHIOLA <b>Carmen</b>	Autumn: 4-7 weeks Spring: 8-9 weeks Summer: 3-5 weeks Winter: 11-12 weeks	288 or larger	6 plants/ft <sup>2</sup> (65 plants/m <sup>2</sup> )	(day) 50-62°F (10-17°C) (night) 50-62°F (10-17°C)	30-34 in. (76-86cm)	Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 3 to 5 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.
MATTHIOLA <b>Column Stock</b>	Spring: 20-22 weeks	Direct sow		Before flower development: (day) 55-65°F (13-18°C) (night) 55-60°F (13-16°C)	24-30 in. (61-76cm)	Column stocks are non-selectable for doubleness. Supply one layer of support netting. Direct sow seed at 2.2 lbs./acre (1 kg/4,000 m <sup>2</sup> ). Optimum stem length will be achieved during cool growing periods. High heat can stunt plants or prevent flower spikes from developing.
MATTHIOLA <b>Figaro</b>	Autumn: 4-7 weeks Spring: 8-9 weeks Summer: 3-5 weeks Winter: 11-12 weeks	288 or larger	6 plants/ft <sup>2</sup> (65 plants/m <sup>2</sup> )	(day) 50-62°F (10-17°C) (night) 50-62°F (10-17°C)	30-34 in. (76-86cm)	Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 3 to 5 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.
MATTHIOLA <b>Katz</b>	Autumn: 7-11 weeks Spring: 8-13 weeks	512 or larger	Autumn: 12 plants/ft <sup>2</sup> (129 plants/m <sup>2</sup> ) Spring: 12 plants/ft <sup>2</sup> (129 plants/m <sup>2</sup> )	Before flower development: (day) 60-75°F (16-24°C) (night) 45-55°F (7-13°C)	32 in. (81cm)	Crop time is dependent on daylength and light intensity. As a general guide with daylength of 13 hours or more, the crop time will be 8 weeks from planting. Shorter days will slow the crop time, depending on the temperature, up to 13 weeks from planting. Best performance when grown in tunnels.
MATTHIOLA <b>Mathilda</b>	Autumn: 4-7 weeks Spring: 8-9 weeks Summer: 3-5 weeks Winter: 11-12 weeks	288 or larger	6 plants/ft <sup>2</sup> (65 plants/m <sup>2</sup> )	Spring: (day) 50-62°F (10-17°C) (night) 50-62°F (10-17°C)	30-34 in. (76-86cm)	Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 3 to 5 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.

CLASS/SERIES	WEEKS FROM PLUG TO FINISH	RECOMMENDED PLUG SIZE	PLANTING DENSITY	GROWING ON TEMPERATURE (DAYS/NIGHTS)	STEM LENGTH	KEY TIPS
MATTHIOLA <b>Opera</b>	<b>Autumn:</b> 4-7 weeks <b>Spring:</b> 8-9 weeks <b>Summer:</b> 3-5 weeks <b>Winter:</b> 11-12 weeks	288 or larger	6 plants/ft <sup>2</sup> (65 plants/m <sup>2</sup> )	(day) 50-62°F (10-17°C) (night) 50-62°F (10-17°C)	30-34 in. (76-86cm)	Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 3 to 5 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.
SNAPDRAGON <b>Apollo</b>	<b>Spring:</b> 8-18 weeks	406 or larger	<b>Spring:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 60-75°F (16-24°C) (night) 52-57°F (11-14°C)	39-60 in. (99-152cm)	Group 2,3: Open-faced series is ideal for Autumn and Spring harvests.
SNAPDRAGON <b>Axiom</b>	<b>Summer:</b> 8-18 weeks	406 or larger	<b>Summer:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 70-85°F (21-29°C) (night) 60°F (16°C)	39-60 in. (99-152cm)	Group 3,4: Ideal for production during periods of high light, long days and warm temperatures. Can be grown year-round with supplemental high-intensity lighting.
SNAPDRAGON <b>Cool</b>	<b>Winter:</b> 8-18 weeks	406 or larger	<b>Winter:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 55-70°F (13-21°C) (night) 45-55°F (7-13°C)	39-60 in. (99-152cm)	Group 1 to early Group 2: Highly uniform series for germination, plug growth, spike architecture and flowering time.
SNAPDRAGON <b>Early Potomac®</b>	<b>Summer:</b> 8-18 weeks	406 or larger	<b>Summer:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 70-85°F (21-29°C) (night) 55-60°F (13-16°C)	39-60 in. (99-152cm)	Group 3,4: Ideal for production during periods of high light, long days and warm temperatures. Can be grown year-round with supplemental high-intensity lighting.
SNAPDRAGON <b>Maryland</b>	<b>Autumn:</b> 8-18 weeks <b>Spring:</b> 8-18 weeks	406 or larger	<b>Autumn:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> ) <b>Spring:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 55-70°F (13-21°C) (night) 45-55°F (7-13°C)	39-60 in. (99-152cm)	Group 1,2 series.
SNAPDRAGON <b>Monaco</b>	<b>Autumn:</b> 8-18 weeks <b>Spring:</b> 8-18 weeks	406 or larger	<b>Autumn:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> ) <b>Spring:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 60-75°F (16-24°C) (night) 52-57°F (11-14°C)	39-60 in. (99-152cm)	Group 2,3: Well-suited to difficult transition periods, such as Group 3,4 (Summer) to Group 1,2 (Autumn/Winter). Tolerates warm Autumn conditions. Perfect for Winter production in warmer climates. Performs well all year in moderate temperatures.
SNAPDRAGON <b>Paxia</b>	<b>Spring:</b> 8-18 weeks	406 or larger	<b>Spring:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 60-75°F (16-24°C) (night) 52-57°F (11-14°C)	39-60 in. (99-152cm)	Group 2,3: Well-suited to difficult transition periods, such as Group 3,4 (Summer) to Group 1,2 (Autumn/Winter). Tolerates warm Autumn conditions. Perfect for Winter production in warmer climates. Performs well all year in moderate temperatures.
SNAPDRAGON <b>Potomac®</b>	<b>Summer:</b> 8-18 weeks	406 or larger	<b>Summer:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Summer:</b> (day) 70-85°F (21-29°C) (night) 60°F (16°C)	39-60 in. (99-152cm)	Group 3,4: Ideal for production during periods of high light, long days and warm temperatures. Can be grown year-round with supplemental high-intensity lighting.
SNAPDRAGON <b>Purple Twist</b>	<b>Spring:</b> 8-18 weeks	406 or larger	<b>Spring:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 55-70°F (13-21°C) (night) 50-55°F (10-13°C)	39-60 in. (99-152cm)	Unique purple and white striped colour pattern varies depending on growing environment. When grown in warmer greenhouse conditions, white stripes are more dense and prominent, but when grown under cool outside/tunnel conditions, purple is more dense and prominent. This unique novelty stand-alone Group 2 variety can be produced under short days in moderate light conditions with night temperatures of 50 to 55°F (10 to 13°C) during production. It can be scheduled and grown along with the Maryland series.
SNAPDRAGON <b>Red Delilah</b>	<b>Spring:</b> 8-18 weeks <b>Winter:</b> 8-18 weeks	406 or larger	<b>Spring:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> ) <b>Winter:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 55-70°F (13-21°C) (night) 50-55°F (10-13°C)	39-60 in. (99-152cm)	Unique novelty stand-alone Group 2 variety features a flower spike with red and white tube flowers. Can be produced under short days in moderate light conditions with night temperatures of 50-55°F (10-13°C) during production. It can be scheduled and grown along with the Maryland series.
SNAPDRAGON <b>Rocket</b>	<b>Spring:</b> 13-16 weeks	406 or larger	<b>Spring:</b> 3-4 plants/ft <sup>2</sup> (32-43 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 65-80°F (18-27°C) (night) 55-60°F (13-16°C)	30-36 in. (76-91cm)	Versatile snapdragon can be used as both a landscape series and as a field-grown cut flower. Makes an excellent quality Group 3,4 Spring and Summer-flowering landscape snapdragon.
SNAPDRAGON <b>Trumpet</b>	<b>Spring:</b> 8-18 weeks	406 or larger	<b>Spring:</b> 6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	<b>Before flower development:</b> (day) 60-75°F (16-24°C) (night) 45-55°F (7-13°C)	39-60 in. (99-152cm)	
TRACHELIUM <b>Lake</b>	<b>Autumn:</b> 12-16 weeks <b>Autumn:</b> 16-18 weeks <b>Spring:</b> 12-16 weeks <b>Summer:</b> 10-12 weeks	288 or larger	6-8 plants/ft <sup>2</sup> (65-86 plants/m <sup>2</sup> )	<b>Autumn:</b> (day) 55°F (13°C) (night) 52°F (11°C) <b>Spring:</b> (day) 65°F (18°C) (night) 60°F (16°C) <b>Summer:</b> (day) 78°F (26°C) (night) 60-68°F (16-20°C) <b>Winter:</b> (day) 55°F (13°C) (night) 52°F (11°C)	30-42 in. (76-107cm)	Trachelium needs 16-hour daylengths for faster flowering. Should be transplanted Autumn to early Winter for flowering in mid-Winter to early Spring.



## **ANNUALS**

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## **PERENNIALS**

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FINISHING GUIDE P. 92



## **CUT FLOWERS**

PROPAGATION GUIDE P. 108  
FINISHING GUIDE P. 116



# handPicked

VEGETABLES & HERBS

PanAmerican Seed<sup>®</sup>



CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
CUCUMBER <b>Gherking F1</b>	RAW	Direct sow	2-3	1-2	Yes	2-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Best performance when directly sown into final container.
CUCUMBER <b>Martini F1</b>	RAW	Direct sow	2-3	1-2	Yes	2-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Best performance when directly sown into final container.
CUCUMBER <b>Patio Snacker F1</b>	RAW	Direct sow	2-3	1-2	Yes	2-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Best performance when directly sown into final container.
EGGPLANT <b>Patio Baby F1</b>	RAW	288 or larger	4-5	1	Light cover	5-8	5.5-5.8 pH 0.5-0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 70-75°F (21-24°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	
HERB (BASIL) <b>Dolce Fresca</b>	RAW	406 or larger	4-5	1-3	Yes	2-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Can be directly sown into final container.
HERB (BASIL) <b>Purple Ruffles</b>	RAW	406 or larger	4-5	1-3	Yes	2-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Can be directly sown into final container.
HERB (BASIL) <b>Sweet Dani Lemon</b>	RAW	406 or larger	4-5	1-3	Yes	2-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Can be directly sown into final container.
HERB (DILL) <b>Fernleaf</b>	RAW	288 or larger	4-5	1-3	No	4-7	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 500-1,000 f.c. (5,400-10,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 1,000-1,500 f.c. (10,800-16,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 1,500-2,000 f.c. (16,100-21,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Can be directly sown into final container.
PEPPER <b>Cajun Belle</b>	RAW	288 or larger	5-6	1	Light cover	5-7	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-78°F (21-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 62-67°F (17-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Pepper is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium levels to less than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied 2 weeks after sowing for height control. Repeat two weeks later if needed.
PEPPER <b>Cute Stuff Red F1</b>	RAW	288 or larger	5-6	1	Light cover	5-7	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-78°F (21-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 62-67°F (17-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Pepper is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium levels to less than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied 2 weeks after sowing for height control. Repeat two weeks later if needed.
PEPPER <b>La Bomba F1</b>	RAW	288 or larger	5-6	1	Light cover	5-7	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-78°F (21-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 62-67°F (17-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Pepper is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium levels to less than 10 ppm. If necessary, uniconazole (Sumagic) at rate of 2.5 ppm can be applied 2 weeks after sowing for height control. Repeat two weeks later if needed.
PEPPER <b>Sweet Heat F1</b>	RAW	288 or larger	5-6	1	Light cover	5-7	5.5-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-78°F (21-26°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-4 (t) 62-67°F (17-19°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Pepper is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium levels to less than 10 ppm.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
SIMPLYHERBS <b>Basil</b>	MPL	288 or larger	3-4	1	Yes	2-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Can be directly sown into final container.
SIMPLYHERBS <b>Curled Parsley</b>	MPL	288 or larger	4-5	1	Yes	5-8	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 68-70°F (20-21°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Can be directly sown into final container.
SIMPLYHERBS <b>Dill</b>	MPL	288 or larger	3-4	1	Yes	5-8	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 500-1,000 f.c. (5,400-10,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 1,000-1,500 f.c. (10,800-16,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 1,500-2,000 f.c. (16,100-21,500 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Can be directly sown into final container.
SIMPLYHERBS <b>Flat Parsley</b>	MPL	288 or larger	4-5	1	Yes	5-8	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 68-70°F (20-21°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Can be directly sown into final container.
SIMPLYHERBS <b>Oregano</b>	MPL	288 or larger	4-5	1	Yes	5-8	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-70°F (20-21°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 62-65°F (17-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Can be directly sown into final container.
SIMPLYHERBS <b>Rosemary</b>	MPL	288 or larger	4-5	1	Yes	5-8	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-72°F (20-22°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 500-1,000 f.c. (5,400-10,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 1,000-1,500 f.c. (10,800-16,100 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 1,500-2,500 f.c. (16,100-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Can be directly sown into final container.
SIMPLYHERBS <b>Sage</b>	MPL	288 or larger	3-4	1	Yes	5-8	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-70°F (20-21°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Can be directly sown into final container.
SIMPLYHERBS <b>Thyme</b>	MPL	288 or larger	4-5	1	Yes	5-8	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-70°F (20-21°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Can be directly sown into final container.
SIMPLYHERBS <b>Try Basil</b>	MPL	288 or larger	3-4	1	Yes	2-4	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 62-65°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Can be directly sown into final container.
SIMPLYSALAD® <b>Alfresco Mix</b>	MPL	128 or larger	2-3	1	Light cover	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-73°F (18-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-64°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Total crop time can be reduced by 1 week by directly sowing into the final container.
SIMPLYSALAD® <b>City Garden Mix</b>	MPL	128 or larger	2-3	1	Light cover	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-73°F (18-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-64°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Total crop time can be reduced by 1 week by directly sowing into the final container.
SIMPLYSALAD® <b>Global Gourmet Mix</b>	MPL	128 or larger	2-3	1	Light cover	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-73°F (18-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-64°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Total crop time can be reduced by 1 week by directly sowing into the final container.
SIMPLYSALAD® <b>Kale Storm Mixture</b>	PMPL	128 or larger	2-3	1	Light cover	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-73°F (18-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-64°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Total crop time can be reduced by 1 week by directly sowing into the final container. SimplySalad Kale Storm will develop darker colours in cool temperatures.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
SIMPLYSALAD® <b>Summer Picnic</b>	MPL	128 or larger	2-3	1	Light cover	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-73°F (18-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-64°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Total crop time can be reduced by 1 week by directly sowing into the final container.
SIMPLYSALAD® <b>Wonder Wok</b>	MPL	128 or larger	2-3	1	Light cover	2-3	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 65-73°F (18-23°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (t) 62-64°F (17-18°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Total crop time can be reduced by 1 week by directly sowing into the final container.
SQUASH <b>Honeynut</b>	RAW	Direct sow	2-3	1-2	Yes	2-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Best performance when directly sown into final container. Use DIF whenever possible, especially the first 2 hours after sunrise, to control plant height. Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen.
STRAWBERRY <b>Fresca</b>	RAW	288 or larger	4-5	1-2	Light cover	7-14	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 3 (t) 68-70°F (20-21°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 60-62°F (16-17°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Strawberry is sensitive to high salts, especially during germination. Strawberry is also susceptible to mildew. Use DIF whenever possible, especially the first 2 hours after sunrise, to control plant height.
TOMATO <b>Candyland</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Chocolate Sprinkles F1</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Heirloom Marriage</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Homeslice F1</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Little Napoli F1</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Micro-Tom</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.

CLASS/SERIES	SEED FORM	RECOMMENDED PLUG SIZE	PLUG CROP WEEKS	SEEDS/ CELL	COVER SEED	DAYS TO GERMINATE	INITIAL MEDIA PH/EC	STAGE 1	STAGE 2	STAGE 3	STAGE 4	KEY TIPS
TOMATO <b>Orange Zinger F1</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Stellar F1</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Sugar Rush F1</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Sunrise Sauce F1</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Tidy Treats F1</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Topsy Tom F1</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-68°F (18-20°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
TOMATO <b>Tumbler F1</b>	RAW	288 or larger	4-5	1	Light cover	2-3	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 68-72°F (20-22°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-72°F (18-22°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Tomato is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium level to less than 10 ppm. Plug height can be controlled by water and fertilizer management. Keep medium moisture level on dry-wet cycle and use fertilizer with low phosphorous and nitrate-form nitrogen.
ZUCCHINI <b>Easy Pick F1</b>	RAW	Direct sow	2-4	1-2	Yes	2-4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 70-75°F (21-24°C) (l) Optional (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-4 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	Best performance when directly sown into final container. Use DIF whenever possible, especially the first 2 hours after sunrise, to control plant height. Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	FINISHING PROGRAMS	KEY TIPS
CUCUMBER <b>Gherking F1</b>	Direct sow	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 1.0 mmhos/cm	Cell Pack, 1-2 (ppp), 2-3 (weeks), Spring 4" Pot, 1-2 (ppp), 2-3 (weeks), Spring Field grown, 1-2 (ppp), 4-6 (weeks), Spring	Direct-sow into final container. Performs best when grown in-ground. Vining plants can be trained up a trellis to save garden space. Approximately 50-55 days from direct sowing to harvest.
CUCUMBER <b>Martini F1</b>	Direct sow	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 1.0 mmhos/cm	Cell Pack, 1-2 (ppp), 2-3 (weeks), Spring 4" Pot, 1-2 (ppp), 2-3 (weeks), Spring Field grown, 1-2 (ppp), 4-6 (weeks), Spring	Direct-sow into final container. Performs best when grown in-ground. Vining plants can be trained up a trellis to save garden space. Approximately 55-60 days from direct sowing to harvest.
CUCUMBER <b>Patio Snacker F1</b>	Direct sow	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 1.0 mmhos/cm	Cell Pack, 1-2 (ppp), 2-3 (weeks), Spring 4" Pot, 1-2 (ppp), 2-3 (weeks), Spring Field grown, 1-2 (ppp), 4-6 (weeks), Spring	Direct-sow into final container. Performs well in-ground and in containers. Vining plants can be trained up a trellis to save garden space. Approximately 35-40 days from direct sowing to harvest.
EGGPLANT <b>Patio Baby F1</b>	288 or larger	(day) 60-70°F (16-21°C) (night) 55-60°F (13-16°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 4-5 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring 6" Pot, 1 (ppp), 5-7 (weeks), Spring	Performs well in-ground and in containers. Approximately 45 days from transplant to ripe fruit.
HERB (BASIL) <b>Dolce Fresca</b>	406 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 3-4 (weeks), Spring 6" Pot, 1-3 (ppp), 4-5 (weeks), Spring	Seed can be directly sown into finish containers up to 4 in. (10 cm).
HERB (BASIL) <b>Purple Ruffles</b>	406 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 3-4 (weeks), Spring 6" Pot, 1-3 (ppp), 4-5 (weeks), Spring	Seed can be directly sown into finish containers up to 4 in. (10 cm).
HERB (BASIL) <b>Sweet Dani Lemon</b>	406 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 3-4 (weeks), Spring 6" Pot, 1-3 (ppp), 4-5 (weeks), Spring	Seed can be directly sown into finish containers up to 4 in. (10 cm).
HERB (DILL) <b>Fernleaf</b>	288 or larger	(day) 60-65°F (16-18°C) (night) 55-60°F (13-16°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 3-4 (weeks), Spring 6" Pot, 1-3 (ppp), 4-5 (weeks), Spring	Seed can be directly sown into finish containers up to 4 in. (10 cm).
PEPPER <b>Cajun Belle</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 4-6 (weeks), Spring 4" Pot, 1 (ppp), 4-6 (weeks), Spring 6" Pot, 1 (ppp), 5-7 (weeks), Spring	Pepper is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium levels to less than 10 ppm. Plant in full sun after all danger of frost has passed. Approximately 45-50 days from transplant to green fruit, 60-65 days from transplant to full ripe harvest.
PEPPER <b>Cute Stuff Red F1</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 4-6 (weeks), Spring 4" Pot, 1 (ppp), 4-6 (weeks), Spring 6" Pot, 1 (ppp), 5-7 (weeks), Spring	Pepper is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium levels to less than 10 ppm. Plant in full sun after all danger of frost has passed. Approximately 45-50 days from transplant to green fruit, 55-60 days from transplant to full ripe harvest.
PEPPER <b>La Bomba F1</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 4-6 (weeks), Spring 4" Pot, 1 (ppp), 4-6 (weeks), Spring 6" Pot, 1 (ppp), 5-7 (weeks), Spring	Pepper is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium levels to less than 10 ppm. Plant in full sun after all danger of frost has passed. Approximately 55-60 days from transplant to green fruit harvest.
PEPPER <b>Sweet Heat F1</b>	288 or larger	(day) 68-80°F (20-27°C) (night) 65-70°F (18-21°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 4-6 (weeks), Spring 4" Pot, 1 (ppp), 4-6 (weeks), Spring 6" Pot, 1 (ppp), 5-7 (weeks), Spring	Pepper is very sensitive to high salts, particularly high ammonium, during germination. Keep ammonium levels to less than 10 ppm. Plant in full sun after all danger of frost has passed. Performs very well in containers. Approximately 45-50 days from transplant to green fruit, 55-60 days from transplant to full ripe harvest.
SIMPLYHERBS <b>Basil</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 3-4 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <b>Curled Parsley</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 4-5 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <b>Dill</b>	288 or larger	(day) 60-65°F (16-18°C) (night) 55-60°F (13-16°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 3-4 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <b>Flat Parsley</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 4-5 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <b>Oregano</b>	288 or larger	(day) 60-65°F (16-18°C) (night) 50-55°F (10-13°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <b>Rosemary</b>	288 or larger	(day) 60-65°F (16-18°C) (night) 55-60°F (13-16°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 4-5 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <b>Sage</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 3-4 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <b>Thyme</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 55-60°F (13-16°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 4-5 (weeks), Spring 4" Pot, 1 (ppp), 4-5 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <b>Try Basil</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4" Pot, 1 (ppp), 3-4 (weeks), Spring	Can be directly sown into final container.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	FINISHING PROGRAMS	KEY TIPS
SIMPLYSALAD® <b>Alfresco Mix</b>	128 or larger	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4" Pot, 1 (ppp), 2-4 (weeks), Spring 8" Pot, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot, 5-6 (ppp), 4-6 (weeks), Spring	Can be directly sown into final container. To achieve faster production with good foliage colour, SimplySalad can be grown at moderate to warm temperatures (55 to 70°F/13 to 21°C), and then finished at 45 to 55°F (7 to 13°C) for 3 to 5 days. Coloured varieties develop pigment very quickly at cooler temperatures.
SIMPLYSALAD® <b>City Garden Mix</b>	128 or larger	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4" Pot, 1 (ppp), 2-4 (weeks), Spring 8" Pot, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot, 5-6 (ppp), 4-6 (weeks), Spring	Can be directly sown into final container. To achieve faster production with good foliage colour, SimplySalad can be grown at moderate to warm temperatures (55 to 70°F/13 to 21°C), and then finished at 45 to 55°F (7 to 13°C) for 3 to 5 days. Coloured varieties develop pigment very quickly at cooler temperatures.
SIMPLYSALAD® <b>Global Gourmet Mix</b>	128 or larger	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4" Pot, 1 (ppp), 2-4 (weeks), Spring 8" Pot, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot, 5-6 (ppp), 4-6 (weeks), Spring	Can be directly sown into final container. To achieve faster production with good foliage colour, SimplySalad can be grown at moderate to warm temperatures (55 to 70°F/13 to 21°C), and then finished at 45 to 55°F (7 to 13°C) for 3 to 5 days. Coloured varieties develop pigment very quickly at cooler temperatures.
SIMPLYSALAD® <b>Kale Storm Mixture</b>	128 or larger	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4" Pot, 1 (ppp), 2-4 (weeks), Spring 8" Pot, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot, 5-6 (ppp), 4-6 (weeks), Spring	Can be directly sown into final container. To achieve faster production with good foliage colour, SimplySalad can be grown at moderate to warm temperatures (55 to 70°F/13 to 21°C), and then finished at 45 to 55°F (7 to 13°C) for 3 to 5 days. Coloured varieties develop pigment very quickly at cooler temperatures. Can be grown in-ground after transplant stage.
SIMPLYSALAD® <b>Summer Picnic</b>	128 or larger	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4" Pot, 1 (ppp), 2-4 (weeks), Spring 8" Pot, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot, 5-6 (ppp), 4-6 (weeks), Spring	Can be directly sown into final container. To achieve faster production with good foliage colour, SimplySalad can be grown at moderate to warm temperatures (55 to 70°F/13 to 21°C), and then finished at 45 to 55°F (7 to 13°C) for 3 to 5 days. Coloured varieties develop pigment very quickly at cooler temperatures.
SIMPLYSALAD® <b>Wonder Wok</b>	128 or larger	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4" Pot, 1 (ppp), 2-4 (weeks), Spring 8" Pot, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot, 5-6 (ppp), 4-6 (weeks), Spring	Can be directly sown into final container. To achieve faster production with good foliage colour, SimplySalad can be grown at moderate to warm temperatures (55 to 70°F/13 to 21°C), and then finished at 45 to 55°F (7 to 13°C) for 3 to 5 days. Coloured varieties develop pigment very quickly at cooler temperatures.
SQUASH <b>Honeynut</b>	Direct sow	(day) 68-72°F (20-22°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1-2 (ppp), 2-4 (weeks), Spring 4" Pot, 1-2 (ppp), 4-6 (weeks), Spring Field grown, 1-2 (ppp), 6-8 (weeks), Late Spring	Direct-sow into final container. Performs best when grown in-ground. Vining plants can be trained up a trellis to save garden space. Approximately 85-90 days from transplant to harvest.
STRAWBERRY <b>Fresca</b>	288 or larger	(day) 60-65°F (16-18°C) (night) 60-62°F (16-17°C)	6.5-7.5 pH 1.0 mmhos/cm	Cell Pack, 1 (ppp), 6-8 (weeks), Spring 4" Pot, 1 (ppp), 8-10 (weeks), Spring 8" Pot, 3-4 (ppp), 10-12 (weeks), Spring	Strawberry is sensitive to high salts and susceptible to mildew.
TOMATO <b>Candyland</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Field grown, 1 (ppp), 6-8 (weeks), Late Spring	Indeterminate variety. Performs best when grown in-ground and with support. Approximately 55-60 days from transplant to harvest.
TOMATO <b>Chocolate Sprinkles F1</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Field grown, 1 (ppp), 6-8 (weeks), Late Spring	Indeterminate variety. Performs best when grown in-ground and with support. Approximately 50-55 days from transplant to harvest.
TOMATO <b>Heirloom Marriage</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Field grown, 1 (ppp), 6-8 (weeks), Late Spring	Indeterminate varieties. Performs best when grown in-ground and with support. Approximately 65-80 days from transplant to harvest.
TOMATO <b>Homeslice F1</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Patio Planter, 1 (ppp), 6-8 (weeks), Late Spring Field grown, 1 (ppp), 6-8 (weeks), Late Spring	Determinate variety. Performs well in a patio planter or in-ground. Best grown with support. Approximately 60-65 days from transplant to harvest.
TOMATO <b>Little Napoli F1</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Patio Planter, 1 (ppp), 6-8 (weeks), Late Spring	Compact, determinate variety. Excellent performance in a patio planter with or without support. Approximately 60-65 days from transplant to harvest.
TOMATO <b>Micro-Tom</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring	Compact, determinate variety. Performs best in small containers. Approximately 50-55 days from transplant to harvest.
TOMATO <b>Orange Zinger F1</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Field grown, 1 (ppp), 6-8 (weeks), Late Spring	Indeterminate variety. Performs best when grown in-ground and with support. Approximately 60-65 days from transplant to harvest.
TOMATO <b>Stellar F1</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Field grown, 1 (ppp), 6-8 (weeks), Late Spring	Determinate variety. Performs best when grown in-ground and with support. Approximately 70-75 days from transplant to harvest.

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TOMATO <b>Sugar Rush F1</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Field grown, 1 (ppp), 6-8 (weeks), Late Spring	Indeterminate variety. Performs best when grown in-ground and with support. Approximately 50-55 days from transplant to harvest.
TOMATO <b>Sunrise Sauce F1</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Field grown, 1 (ppp), 6-8 (weeks), Late Spring	Determinate variety. Performs best when grown in-ground and with support. Approximately 55-60 days from transplant to harvest.
TOMATO <b>Tidy Treats F1</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Patio Planter, 1 (ppp), 6-8 (weeks), Late Spring Field grown, 1 (ppp), 6-8 (weeks), Late Spring	Compact, indeterminate variety. Performs well in a patio planter or in-ground and with support. Approximately 50-55 days from transplant to harvest.
TOMATO <b>Topsy Tom F1</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Hanging Basket, 1 (ppp), 6-8 (weeks), Late Spring Patio Planter, 1 (ppp), 6-8 (weeks), Late Spring	Superior variety for hanging baskets and patio planters. Performs well when grown upside-down. Approximately 50-55 days from transplant to harvest.
TOMATO <b>Tumbler F1</b>	288 or larger	(day) 65-70°F (18-21°C) (night) 62-65°F (17-18°C)	5.5-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1 (ppp), 2-4 (weeks), Spring 4" Pot, 1 (ppp), 2-4 (weeks), Spring 6" Pot, 1 (ppp), 4-6 (weeks), Spring Hanging Basket, 1 (ppp), 6-8 (weeks), Late Spring Patio Planter, 1 (ppp), 6-8 (weeks), Late Spring	Superior variety for hanging baskets and patio planters. Cascading habit. Performs well when grown without support. Approximately 50-55 days from transplant to harvest.
ZUCCHINI <b>Easy Pick F1</b>	Direct sow	(day) 68-72°F (20-22°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 0.75-1.0 mmhos/cm	Cell Pack, 1-2 (ppp), 2-4 (weeks), Spring 4" Pot, 1-2 (ppp), 4-6 (weeks), Spring Field grown, 1-2 (ppp), 6-8 (weeks), Late Spring	Direct-sow into final container. Performs best when grown in-ground. Approximately 45-50 days from transplant to harvest.





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