

2018

Seed Product
Information
Guide

PanAmericanSeed[®]

KieftSeed

NEW VARIETIES FOR 2018

PLUG & PLAY

Find growing information and more at panamseed.com/plugandplay

Wave® Plug & Play Combos

Flying The Flag
Mad About Red
Sweetheart
Very Valentine

Plug & Play Combos

Cantina Heat
Fire N Nice
Foodie Blues
Italian Bistro
Lunch Date

F1 Spreading Petunia

Combo Blue

ANNUALS

Alternanthera

Purple Prince

F1 Angelonia

Serena® White Improved

F1 Begonia Interspecific

Megawatt Red Bronze Leaf

F1 Calibrachoa

Crave Strawberry Star

Celosia

First Flame Scarlet
First Flame Mixture
Ice Cream Salmon

F1 Interspecific Dianthus

Jolt Pink Magic

F1 New Guinea Impatiens

Divine Lavender Improved
Divine Red

French Marigold

Bonanza Bolero Improved

F1 Ornamental Millet

Copper Prince
Jade Princess

Ornamental Oregano

Kirigami

Ornamental Pepper

Midnight Fire

F1 Osteospermum

Akila Grand Canyon Mixture

F1 Spreading Pansy

Cool Wave® Raspberry

F1 Extra Large-Flowered Pansy

Matrix® Yellow Improved

F1 Large-Flowered Pansy

Promise® Pure Yellow Improved
Spring Matrix Yellow Improved

F1 Pentas

Glitterati Purple Star
Lucky Star Dark Red
Lucky Star Deep Pink
Lucky Star Lavender
Lucky Star Pink
Lucky Star Violet
Lucky Star White

F1 Compact Growing Multiflora Petunia

Ez® Rider Red Improved

F1 Multiflora Single Petunia

Debonair Lime Green Improved

F1 Grandiflora Single Petunia

Dreams Burgundy Improved

F1 Snapdragon

Snapshot Appleblossom

F1 Viola

Sorbet® XP Blue Blotch Improved
Sorbet XP Deep Orange
Sorbet XP Red Blotch
Sorbet XP True Blue
Sorbet XP Yellow Blotch Improved
Sorbet XP Blueberry Sundae Mixture
Sorbet XP Ocean Breeze Mixture
Sorbet XP Raspberry Sundae Mixture
Sorbet Honeybee
Sorbet Yellow Violet Jump Up

Double Zinnia

Double Zahara Fire Improved
Double Zahara Raspberry Ripple
Double Zahara Mixture

PERENNIALS

F1 Dianthus

Rockin' Red

Lavandula

Bandera Pink

Now supplied as primed seed:

Coreopsis Early Sunrise
Coreopsis Sun Up
Coreopsis Sunfire

POT PLANTS

Capsicum

Acapulco® Multicolor
Acapulco Orange
Acapulco Purple
Acapulco Yellow
Acapulco Red
Coba
Cosmo
Fiesta
Cupala
Golden Cayenne
Habanero
Harlequin
Hot Banana
Hot Burrito
Hot Carrot
Hot Fajita
Hot Joker®
Hot Lemon
Hot Tomato
Jalapeño
Joker
Macho
Paracho
Red Bell
Salsa Dark Orange
Salsa Mixture
Salsa Purple
Salsa Red
Salsa Yellow
Salsa Yellow-Red
Samba Dark orange
Samba Mixture
Samba Orange
Samba Red
Samba XL Dark Orange
Samba XL Orange
Samba XL Yellow
Samba Yellow
Santos Flare
Santos Orange
Santos Yellow
Snack Orange
Snack Red
Snack Supreme
Snack Yellow
Torito
Yellow Tomato
Zamora Orange
Zamora Red
Zamora Yellow

Exacum

Princess Deep Blue
Princess White
Royal Dane Deep Blue
Royal Dane Deep Rose
Royal Dane White
Supreme

F1 Gerbera

Mega Revolution Deep Rose with Light Eye
Revolution Red with Light Eye Improved
Revolution Salmon Shades with Light Eye
Revolution Yellow with Light Eye Improved
Revolution Bicolor Mixture

Ornamental Pepper

Blaze
Wicked

Solanum

Apollo
Jupiter
Sagitta Lime
Saturn
Thurino
Tucana
Venus

CUT FLOWERS

Celosia

Neo Gold
Neo Orange
Neo Pink
Neo Red
Neo Rose

F1 Snapdragon

Maryland Dark Orange Improved

HANDPICKED VEGETABLES & HERBS

Basil

Everleaf Genovese

F1 Eggplant

Gretel
Hansel

F1 Snack Pepper

Candy Cane Red

F1 Specialty/Hot Pepper

Mad Hatter

F1 Jalapeño Pepper

La Bomba II

F1 Hot Pepper

Aji Rico

SimplySalad®

Arugula
Cress

F1 Squash (Zucchini)

Easy Pick Gold II

F1 Cherry Tomato

Little Bing
Midnight Snack

F1 Slicer Tomato

Little Sicily

F1 Beefsteak Tomato

Tidy Rose

Now supplied as Precision Multi-Pellets:

SimplyHerbs Basil
SimplyHerbs Try Basil
SimplyHerbs Sage

SUBSTRATE MOISTURE LEVEL TABLE

	Level 1 Dry	Level 2 Medium Dry	Level 3 Medium	Level 4 Medium Wet	Level 5 Saturated
Substrate colour	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



PERENNIALS PROPAGATION GUIDE P. 82 / FINISHING GUIDE P. 96 / FORCING GUIDE P. 110

POT PLANTS PROPAGATION GUIDE P. 114 / FINISHING GUIDE P. 130

CUT FLOWERS PROPAGATION GUIDE P. 140 / FINISHING GUIDE P. 148

HANDPICKED VEGETABLES & HERBS PROPAGATION GUIDE P. 158 / FINISHING GUIDE P. 170

annuals

PanAmerican Seed®

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 <i>Abutilon x hybridum</i> Bella Series	RAW	288	4-5	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	
AGERATUM <i>Ageratum houstonianum</i> High Tide® F1 Series	PEL	288	4-5	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.
ALTERNANTHERA <i>Alternanthera dentata</i> Purple Knight	RAW	288	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 <i>Alternanthera brasiliana</i> Purple Prince	RAW	288	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	A paclobutrazol sprinch at 1ppm, 1 week before plug finish, can be useful to control growth when this item is used in combination planters.
ALYSSUM <i>Lobularia maritima</i> Clear Crystal® Series	COT, MPL	288	4	5-6 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 <i>Lobularia maritima</i> Easter Bonnet Series	COT, RAW	288	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 <i>Lobularia maritima</i> Snow Crystals	RAW	288	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 <i>Angelonia angustifolia</i> Serena® F1 Series	PEL	288 128	5-6 6-7	1 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) 8 mol-m ⁻² -d ⁻¹ , 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) 8-12 mol-m ⁻² -d ⁻¹ , 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) 8-15 mol-m ⁻² -d ⁻¹ , 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	Light is required for germination. Grow on dry side but do not allow plants to wilt.
ANGELONIA <i>Angelonia angustifolia</i> Serenita® F1 Series	PEL	288 128	5-6 6-7	1 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) 8 mol-m ⁻² -d ⁻¹ , 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) 8-12 mol-m ⁻² -d ⁻¹ , 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) 8-15 mol-m ⁻² -d ⁻¹ , 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	Light is required for germination. Grow on dry side but do not allow plants to wilt.
ASTER <i>Callistephus chinensis</i> Pot 'N Patio Series	RAW	288	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 <i>Sutera cordata</i> Blutopia® F1	MPL	288 128	3-4 4	1 1	No	4	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-74°F (20-23°C) (l) Light (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) 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 (p) daminozide 640-950 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.
BACOPA <i>Sutera cordata</i> Snowtopia® F1	MPL	288 128	3-4 4	1 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 (p) daminozide 640-950 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.

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 <i>Begonia x hybrida</i> BabyWing® F1 Series	PEL	288	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 <i>Begonia x hybrida</i> Dragon Wing® F1 Series	PEL	288	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 <i>Begonia x hybrida</i> Gryphon	MPL	288	8-9	1	No	10-12	5.8-6.2 pH 0.5 mmhos/cm	(m) Level 5 (t) 72-78°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.
BEGONIA <i>Begonia interspecific</i> Megawatt F1 Series	PEL	288	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 ⁻² ·d ⁻¹ , 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 ⁻² ·d ⁻¹ , 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) 6-8 mol·m ⁻² ·d ⁻¹ , 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.
BROWALLIA <i>Browallia speciosa major</i> Bells Series	RAW	288	5-6	1	Yes	7-10	5.5-5.8 pH 0.5 mmhos/cm	(m) Level 4 (t) 75-78°F (24-26°C)	(m) Level 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 2 (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 3-2 (t) 62-68°F (17-20°C) (l) 2,500 f.c. (26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
CALIBRACHOA <i>Calibrachoa x hybrida</i> Crave Strawberry Star F1	PEL	288 128	5-6 7-8	1 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 ⁻² ·d ⁻¹ (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,500-2,750 ppm Drench or paclobutrazol 3-4 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 10-15 mol·m ⁻² ·d ⁻¹ (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,500-2,750 ppm Spray or paclobutrazol 3-4 ppm Spray	(m) Level 2-4 (t) 55-64°F (13-18°C) (l) 10-20 mol·m ⁻² ·d ⁻¹ (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,500-2,750 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 <i>Calibrachoa x hybrida</i> Kabloom® F1 Series	PEL	288 128	5-6 7-8	1 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) 68-70°F (20-21°C) (l) 10-12 mol·m ⁻² ·d ⁻¹ (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,000-2,500 ppm Spray or paclobutrazol 2-3 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 10-15 mol·m ⁻² ·d ⁻¹ (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,000-2,500 ppm Spray or paclobutrazol 2-3 ppm Spray	(m) Level 2-4 (t) 55-64°F (13-18°C) (l) 10-20 mol·m ⁻² ·d ⁻¹ (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,000-2,500 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 <i>Celosia cristata</i> Dracula	COT	288	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 Dracula can respond to daylength at a very early stage. Best is to sow and grow plugs between 11 and 14 hours daylength. A 3 to 4-week period of 12 to 14 hours LIP treatment after sowing (during plug stage) will work well to speed up flower timing and reduce flower non-uniformity and deformation when produced in unfavourable daylengths.
CELOSIA <i>Celosia plumosa</i> First Flame Series	COT	288	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 daylength 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 <i>Celosia plumosa</i> Ice Cream Series	COT	288	3-4	1	Light cover	2-4	5.8-6.2 pH 0.7-1.2 mmhos/cm	(m) Level 4 (t) 77°F (25°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 daylength of 14 hours or longer due to short-day flowering response.
CELOSIA <i>Celosia spicata</i> Kosmo Series	COT	288	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. Celosia makes a taproot and is sensitive to root damage.

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 ANEMANTHELE <i>Anemanthele lessoniana</i> Sirocco	MPL	288	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	Colour is better under cool and high light conditions. If temperature permits, it is best to produce Sirocco in outdoor conditions.
COLORGRASS CAREX <i>Carex comans</i> Amazon Mist	MPL	288	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 <i>Carex comans</i> Bronco	MPL	288	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 <i>Carex comans</i> Phoenix Green	MPL	288	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 <i>Carex buechananii</i> Red Rooster	MPL	288	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 <i>Corynephorus canescens</i> Spiky Blue	MPL	288	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 FESTUCA <i>Festuca cinerea (Festuca glauca)</i> Festina	MPL	288	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 <i>Isolepis cernua</i> Live Wire	MPL	288	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 <i>Juncus inflexus</i> Blue Arrows	MPL	288	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 <i>Juncus tenuis</i> Blue Dart	MPL	288	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 <i>Juncus pallidus</i> Javelin	MPL	288	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.
COLORGRASS JUNCUS <i>Juncus ensifolius</i> Starhead	MPL	288	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	(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 <i>Koeleria glauca</i> Coolio	MPL	288	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 <i>Luzula nivea</i> Lucius	MPL	288	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 <i>Stipa tenuissima</i> Pony Tails	MPL	288	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	

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
COSMOS <i>Cosmos bipinnatus</i> Antiquity	RAW	288	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. Daylength extension in the plug stage may be used to prevent premature flowering.
COSMOS <i>Cosmos bipinnatus</i> Sonata Series	RAW	288	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. Daylength extension in the plug stage may be used to prevent premature flowering.
CROSSANDRA <i>Crossandra infundibuliformis</i> Tropic Series	RAW	288	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	
CUPHEA <i>Cuphea ignea</i> Dynamite	RAW	288	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 <i>Dahlia x hybrida</i> Figaro® Series	RAW	288	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) (l) 1,500-3,000 f.c. (16,100-32,300 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 1,500-3,000 f.c. (16,100-32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 2-3 (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	If germ chamber is used, move trays to greenhouse at first sign of germination.
DESCHAMPSIA <i>Deschampsia elongata</i> Zephyr	MPL	288	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 <i>Dianthus chinensis</i> Corona F1 Series	PEL	288	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
DIANTHUS <i>Dianthus barbatus</i> Dash F1 Series	PEL	288	5-6	1	Yes	3-4	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DIANTHUS <i>Dianthus barbatus interspecific</i> Dynasty F1 Series	PEL	288	5-6	1	Yes	3-4	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DIANTHUS <i>Dianthus chinensis x barbatus</i> Floral Lace F1 Series	PEL, RAW	288	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DIANTHUS <i>Dianthus chinensis x barbatus</i> Ideal Select F1 Series	PEL, RAW	288	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DIANTHUS (INTERSPECIFIC) <i>Dianthus barbatus interspecific</i> Jolt F1 Series	PEL	288	5-6	1	Yes	3-4	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DICHONDRA <i>Dichondra repens</i> Emerald Falls	MPL	288	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 (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	(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	Spray daminozide at 2,500 ppm one week before transplant to promote branches. Grows best in warm and dry conditions. Use light feed. Rinse foliage after feeding to avoid salt burn.

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
DICHONDRA <i>Dichondra argentea</i> Silver Falls	RAW	288	5	1-2	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 (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	(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	Spray B-Nine at 2,500 ppm one week before transplant to promote branches. Grows best in warm and dry conditions. Use light feed. Rinse foliage after feeding to avoid salt burn.
DUSTY MILLER MARITIMA <i>Senecio cineraria</i> Silverdust	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Optional	(m) Level 4-2 (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 3-2 (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 2,500-5,000 ppm Spray	(m) Level 3-2 (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	Preventative fungicide for Alternaria is recommended. Keep foliage as dry as possible to reduce risk of diseases.
ERYSIMUM <i>Erysimum species</i> Citrona® Series	RAW	288	4	1	Yes	2-4	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) 65-70°F (18-21°C) (l) 2,500-3,000 f.c. (26,900-32,300 Lux)	(m) Level 4-3 (t) 60-65°F (16-18°C) (l) 2,500-3,000 f.c. (26,900-32,300 Lux) (f) Less than 100 ppm N - Less than 0.7 EC (p) paclobutrazol 10 ppm Spray	(m) Level 4-2 (t) 55-60°F (13-16°C) (l) 2,500-3,000 f.c. (26,900-32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
EUPHORBIA <i>Euphorbia graminea</i> Glitz F1	RAW	288 128	4-5 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	(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 (p) daminozide 2,500 ppm Spray	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 spray for height control with first application at true leaf stage, followed by a second application 7 days later. Alternative to daminozide would be an application of paclobutrazol sprinch at 2.5 ppm or drench at 0.25 to 0.5 ppm at radical emergence. This has 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® <i>Sutera cordata</i> Bacopa Series	PMPL	288	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® <i>Calibrachoa hybrid</i> Calibrachoa Series	PMPL	288	4-5	1	No	4-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 5 (t) 68-77°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® <i>Solenostemon scutellarioides</i> Coleus Series	PMPL	288	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	
FUSEABLES® <i>Petunia x hybrida</i> Petunia Series	PMPL	288	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: Pleasantly Blue responds better to a B-Nine spray than it does to a Bonzi spray or drench, so the use of B-Nine is preferred for this variety.
FUSEABLES® <i>Petunia hybrida, Sutera cordata</i> Petunia-Bacopa Series	PMPL	288	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® <i>Juncus inflexus - Juncus effusus spiralis</i> Twisted Arrows	MPL	288	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® <i>Juncus tenuis - Juncus effusus spiralis</i> Twisted Dart	MPL	288	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® <i>Viola cornuta</i> Viola Series	PMPL	288	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	

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® <i>Viola cornuta, Lobularia maritima</i> Viola-Alyssum Series	PMPL	288	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 <i>Gazania rigens</i> New Day® F₁ Series	COT	288	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 TETRAPLOID <i>Gazania rigens</i> Sunshine Series	RAW	406	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) <i>Pelargonium x peltatum</i> Summer Showers Series	RAW	288	4-6	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 ⁻² ·d ⁻¹ (f) Less than 100 ppm N - Less than 0.7 EC (p) chlormequat chloride 200-300 ppm Spray	(m) Level 2-3 (t) 65-70°F (18-21°C) (l) 12-14 mol·m ⁻² ·d ⁻¹ (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) chlormequat chloride 200-300 ppm Spray	
GOMPHRENA <i>Gomphrena pulchella</i> Fireworks	COT	406	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 <i>Helenium amarum</i> Dakota Gold	MPL	288	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 (t) 68-72°F (20-22°C) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Daylength affects plant growing habit and crop time. See GrowerFacts for details.
HELICHRYSUM <i>Helichrysum microphyllum (Plectostachys serphyllifolia)</i> Silver Mist	MPL	288	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 <i>Hibiscus acetosella</i> Mahogany Splendor	RAW	288	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.
IMPATIENS <i>Impatiens walleriana</i> Dazzler® F₁ Series	COT	288	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 <i>Impatiens walleriana</i> Impreza® F₁ Series	RAW	288	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 <i>Impatiens walleriana</i> Super Elfin® F₁ Series	RAW	288	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 <i>Impatiens walleriana</i> Super Elfin® XP F₁ Series	RAW	288	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.

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
IMPATIENS (NEW GUINEA) <i>Impatiens hawkeri</i> Divine F₁ Series	RAW	288	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) 2,500-5,000 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 1,250 ppm Spray or paclobutrazol 1/2-1 ppm Spray	(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 (p) daminozide 1,500-3,500 ppm Spray or paclobutrazol 1/2-1 ppm Spray	(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 (p) daminozide 1,500-3,500 ppm Spray or paclobutrazol 1/2-1 ppm Spray	Transplanting: Flowering may be delayed from crowded conditions in a plug tray. Do not allow plugs to get rootbound. Growth Regulator: Negative DIF and DROP work very well for New Guinea impatiens height control. As necessary, daminozide can be applied as a spray at 1,250 ppm at first true leaf, followed by rates as high as 3,500 ppm if conditions warrant. Paclobutrazol spray at a low rate (0.5 to 1 ppm) is also effective at first true leaf stage.
IRESINE <i>Iresine herbstii</i> Purple Lady	RAW	288	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 <i>Isotoma hybrida</i> Gemini F₁ Series	PEL	288	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 <i>Isotoma axillaris</i> Tristar Series	PEL	288	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 <i>Juncus effusus spiralis</i> Twister	MPL	288	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	
LEYCESTERIA <i>Leycesteria formosa</i> Jealousy	MPL	288	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.
LINARIA <i>Linaria hybrida</i> Enchantment F₁	MPL	288	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		(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	Stage 1 early PGR application is very important for avoiding leggy/stretchy seedlings.
LISIANTHUS <i>Eustoma grandiflorum</i> Florida F₁ Series	PEL	288 512	8 6-7	1 1	No	8-12	6.2-6.5 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-77°F (22-25°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 6.5 - 6.8. Do not hold lisianthus plugs until they become rootbound as basal branching will be inhibited. Rootbound plugs tend to flower shorter and non-uniformly.
LOBELIA <i>Lobelia erinus</i> Cambridge Blue	MPL, RAW	288	4-5	1	No	4-5	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 <i>Lobelia erinus</i> Cobalt Blue	MPL, RAW	288	4-5	1	No	4-5	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 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 <i>Lobelia erinus</i> Crystal Palace	MPL, RAW	288	4-5	1	No	4-5	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 <i>Lobelia erinus</i> Fountain Series	MPL, RAW	288	4-5	1	No	4-5	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 <i>Lobelia erinus</i> Mrs Clibran	MPL, RAW	288	4-5	1	No	4-5	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 <i>Lobelia erinus</i> Rapid Series	MPL, RAW	288	4-5	1	No	4-5	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	

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
LOBELIA <i>Lobelia erinus</i> Regatta Series	MPL, RAW	288	4-5	1	No	4-5	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 <i>Lobelia erinus</i> Riviera Series	MPL, RAW	288	4-5	1	No	4-5	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 <i>Lobelia erinus</i> Rosamond	MPL, RAW	288	4-5	1	No	4-5	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 <i>Lobelia erinus</i> Sapphire Pendula	MPL, RAW	288	4-5	1	No	4-5	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 <i>Lobelia erinus</i> String Of Pearls	MPL, RAW	288	4-5	1	No	4-5	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 <i>Lobelia erinus</i> White Lady	MPL, RAW	288	4-5	1	No	4-5	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	
MARIGOLD (AFRICAN) <i>Tagetes erecta</i> Garland Orange F₁	DTL	288	3-4	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) <i>Tagetes erecta</i> Lady F₁ Series	DTL	288	3-4	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) <i>Tagetes erecta</i> Marvel F₁ Series	COT, DTL	288	3-4	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) <i>Tagetes erecta</i> Taishan® F₁ Series	COT, DTL	288	3-4	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) <i>Tagetes erecta</i> Vanilla F₁	COT, DTL	288	3-4	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) 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) <i>Tagetes patula</i> Bonanza Series	COT, DTL	288	3-4	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) <i>Tagetes patula</i> Boy Series	COT, DTL, RAW	288	3-4	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) <i>Tagetes patula</i> Durango® Series	COT, DTL	288	3-4	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.

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 (FRENCH) <i>Tagetes patula</i> Fireball	COT, DTL	288	3-4	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) <i>Tagetes patula</i> Gate Series	DTL, RAW	288	3-4	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) <i>Tagetes patula</i> Hot Pak Series	COT, DTL	288	3-4	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) <i>Tagetes patula</i> Janie Series	COT, DTL	288	3-4	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) <i>Tagetes patula</i> Strawberry Blonde	COT, DTL	288	3-4	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	
MATTHIOLA <i>Matthiola incana</i> Hot Cakes Series	RAW	288	4-5	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 colour (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 <i>Nemesia foetans</i> Poetry F₁ Series	PEL	288	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.
NEMESIA <i>Nemesia strumosa</i> Sundrops Mixture	RAW	288	4	1	No	3-5	5.5-6.2 pH 0.75 mmhos/cm	(t) 68-70°F (20-21°C) (l) Optional				Grow cool; optimum temperature 55°F (13°C).
NICOTIANA <i>Nicotiana alata</i> Nicki Series	RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Light	(m) Level 4-2 (t) 68-72°F (20-22°C) (l) 1,500 f.c. (16,100 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 4-2 (t) 68-72°F (20-22°C) (l) 2,000-3,000 f.c. (21,500-32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 62-65°F (17-18°C) (l) 3,000 f.c. (32,300 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
ORNAMENTAL MILLET <i>Pennisetum glaucum</i> Copper Prince F₁	RAW	128	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 <i>Pennisetum glaucum</i> Jade Princess F₁	RAW	128	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	Jade Princess is cold sensitive. 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. Keep Jade Princess above 60°F (16°C). 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
ORNAMENTAL MILLET <i>Pennisetum glaucum</i> Jester F₁	RAW	128	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 <i>Pennisetum glaucum</i> Purple Baron F₁	RAW	128	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 <i>Pennisetum glaucum</i> Purple Majesty	RAW	128	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 <i>Mentha requienii</i> Mini Mint	MPL	288	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 OREGANO <i>Origanum x hybrida</i> Kirigami	RAW	288	5-6	4	No	4-5	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) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3-2 (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 (p) daminozide 1,000-1,500 ppm Spray	(m) Level 2 (t) 60-65°F (16-18°C) (l) 3,500-5,000 f.c. (37,700-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 1,000-1,500 ppm Spray	Provide active growing climate and avoid growing wet.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Black Pearl	RAW	288	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. 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 <i>Capsicum annuum</i> Calico F₁	RAW	288	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. 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 <i>Capsicum annuum</i> Midnight Fire	RAW	288	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. 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 <i>Capsicum annuum</i> Purple Flash	RAW	288	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. 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 <i>Capsicum annuum</i> Sangria F₁	RAW	288	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. 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 <i>Capsicum annuum</i> Sedona Sun	RAW	288	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 <i>Osteospermum ecklonis</i> Akila® F₁ Series	RAW	288 105	4-5 5	1 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. PGRs generally not needed. If necessary, daminozide 2500 ppm spray applied 3 weeks after sowing will tone 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
PANSY <i>Viola x wittrockiana</i> Cool Wave® F₁ Series	PRM	288	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 <i>Viola x wittrockiana</i> Fizzy F₁ Series	PRM, RAW	288	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 <i>Viola x wittrockiana</i> Frizzle Sizzle F₁ Series	PRM, RAW	288	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 <i>Viola x wittrockiana</i> Halloween II F₁	PRM, RAW	288	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 <i>Viola x wittrockiana</i> Matrix® F₁ Series	PRM, RAW	288	5	1	Yes	3-4	5.5-5.8 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) 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. Northwestern Europe: Can use 1 to 2 applications of B-Nine/Alar (daminozide) at 1,280ppm (1.5 g/l of 85% formulation) or 2 g/l of 64% formulation).
PANSY <i>Viola x wittrockiana</i> Panola® F₁ Series	PRM, RAW	288	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 <i>Viola x wittrockiana</i> Panola® XP F₁ Series	PRM, RAW	288	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 <i>Viola x wittrockiana</i> Promise® F₁ Series	PRM, RAW	288	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 <i>Viola x wittrockiana</i> Spring Matrix F₁ Series	PRM, RAW	288	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
PENTAS <i>Pentas lanceolata</i> Butterfly F₁ Series	PEL	288	6-8	1	No	6-9	6.5-6.8 pH 0.75 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 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 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 (p) daminozide 2,500 ppm Spray or paclobutrazol 5 ppm Spray	(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 (p) daminozide 2,500 ppm Spray or paclobutrazol 5 ppm Spray	Pentas have the ability to naturally lower the media pH. High iron levels or pH below 6.0 can cause marginal burn and yellowing on older or lower leaves. Raise pH by adding limestone. Extremely low pH can induce iron and manganese toxicity (brown or tan lesions on the foliage); use a base-forming fertilizer, such as 15-0-15. If symptoms do not improve, or if the pH is below 6.0, irrigate the crop with a hydrated lime solution; rinse foliage after application to avoid phytotoxicity. Calcium and Magnesium deficiency: If pH falls below recommended target values, lower leaf interveinal chlorosis and foliar puckering can develop. Use fertilizers that contain magnesium during early crop development. Supplement with calcium nitrate to adjust pH. Avoid wide fluctuations in media moisture levels. PGR Note: Rates of up to 5,000 ppm daminozide or 10 ppm paclobutrazol have been found to be effective under warmer growing conditions. Temperature differential (DIF) can also be used to minimize height.
PENTAS <i>Pentas lanceolata</i> Glitterati F₁ Series	PEL	288	6-7	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 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 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 (p) daminozide 2,500 ppm Spray or paclobutrazol 5 ppm Spray	(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 (p) daminozide 2,500 ppm Spray or paclobutrazol 5 ppm Spray	Pentas have the ability to naturally lower the media pH. High iron levels or pH below 6.0 can cause marginal burn and yellowing on older or lower leaves. Raise pH by adding limestone. Extremely low pH can induce iron and manganese toxicity (brown or tan lesions on the foliage); use a base-forming fertilizer, such as 15-0-15. If symptoms do not improve, or if the pH is below 6.0, irrigate the crop with a hydrated lime solution; rinse foliage after application to avoid phytotoxicity. Calcium and Magnesium deficiency: If pH falls below recommended target values, lower leaf interveinal chlorosis and foliar puckering can develop. Use fertilizers that contain magnesium during early crop development. Supplement with calcium nitrate to adjust pH. Avoid wide fluctuations in media moisture levels. PGR Note: Rates of up to 5,000 ppm daminozide or 10 ppm paclobutrazol have been found to be effective under warmer growing conditions. Temperature differential (DIF) can also be used to minimize height.

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
PENTAS <i>Pentas lanceolata</i> Lucky Star F₁ Series	PEL	288	6-7	1	No	6-9	6.4-6.6 pH 0.75 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) 4-6 mol·m ⁻² ·d ⁻¹ , 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) 68-75°F (20-24°C) (l) 6-8 mol·m ⁻² ·d ⁻¹ , 2,500 f.c. (26,900 Lux) (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,500 ppm Spray or paclobutrazol 5 ppm Spray	(m) Level 2-4 (t) 65-70°F (18-21°C) (l) 10-12 mol·m ⁻² ·d ⁻¹ , 3,500-5,000 f.c. (37,700-53,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC (p) daminozide 2,500 ppm Spray or paclobutrazol 5 ppm Spray	Pentas have the ability to naturally lower the media pH. High iron levels or pH below 6.0 can cause marginal burn and yellowing on older or lower leaves. Raise pH by adding limestone. Extremely low pH can induce iron and manganese toxicity (brown or tan lesions on the foliage); use a base-forming fertilizer, such as 15-0-15. If symptoms do not improve, or if the pH is below 6.0, irrigate the crop with a hydrated lime solution; rinse foliage after application to avoid phytotoxicity. Calcium and Magnesium deficiency: If pH falls below recommended target values, lower leaf interveinal chlorosis and foliar puckering can develop. Use fertilizers that contain magnesium during early crop development. Supplement with calcium nitrate to adjust pH. Avoid wide fluctuations in media moisture levels. PGR Note: Rates of up to 5,000 ppm daminozide or 10 ppm paclobutrazol have been found to be effective under warmer growing conditions. Temperature differential (DIF) can also be used to minimize height.
PETUNIA <i>Petunia x hybrida</i> Carpet F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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) 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 (p) daminozide 2,500-5,000 ppm Spray	
PETUNIA <i>Petunia x hybrida</i> Daddy® F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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 (p) daminozide 2,500-5,000 ppm Spray	
PETUNIA <i>Petunia x hybrida</i> Debonair Collection F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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 (p) daminozide 2,500-5,000 ppm Spray	PGR options include paclobutrazol or flurprimidol.
PETUNIA <i>Petunia x hybrida</i> Dreams F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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) 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 (p) daminozide 2,500-5,000 ppm Spray	
PETUNIA <i>Petunia x hybrida</i> Ez Rider® F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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) 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 (p) daminozide 2,500-5,000 ppm Spray	Genetically compact, needs less to no PGR after transplant.
PETUNIA <i>Petunia x hybrida</i> Lo Rider® F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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) 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 (p) daminozide 2,500-5,000 ppm Spray	Genetically compact, needs less to no PGR after transplant.
PETUNIA <i>Petunia x hybrida</i> Madness® F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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) 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 (p) daminozide 2,500-5,000 ppm Spray	
PETUNIA <i>Petunia x hybrida</i> Mirage F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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) 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 (p) daminozide 2,500-5,000 ppm Spray	

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 <i>Petunia x hybrida</i> Pretty Flora F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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 (p) daminozide 2,500-5,000 ppm Spray	Genetically compact, needs less to no PGR after transplant.
PETUNIA <i>Petunia x hybrida</i> Pretty Grand F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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) 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 (p) daminozide 2,500-5,000 ppm Spray	Genetically compact, needs less to no PGR after transplant.
PETUNIA <i>Petunia x hybrida</i> Sophistica Collection F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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) 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 (p) daminozide 2,500-5,000 ppm Spray	PGR options include paclobutrazol or flurprimidol.
PETUNIA <i>Petunia x hybrida</i> Supercascade F₁ Series	PEL, RAW	288	4-5	1	No	3-5	5.5-5.8 pH 0.75-1.0 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) 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 (p) daminozide 2,500-5,000 ppm Spray	
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Bonanza F₁ Series	PEL, RAW	288	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.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Double Cascade F₁ Series	PEL, RAW	288	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) 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.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Double Madness® F₁ Series	PEL, RAW	288	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.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Duo F₁ Series	PEL, RAW	288	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.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Glorious F₁ Series	PEL, RAW	288	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) 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.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Pirouette F₁ Series	PEL, RAW	288	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) 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.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Valentine F₁	PEL, RAW	288	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) 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.
PETUNIA (SPREADING) <i>Petunia x hybrida</i> Combo Blue F₁	PEL	288 128	4-6 5-7	1 1	No	3-5	5.5-6.0 pH 0.75 mmhos/cm	(m) Level 4-5 (t) 72-75°F (22-24°C)	(m) Level 3-4 (t) 68-75°F (20-24°C) (l) 6 mol·m ⁻² ·d ⁻¹ , 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) 10-12 mol·m ⁻² ·d ⁻¹ , 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) 8-15 mol·m ⁻² ·d ⁻¹ , 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	

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 (SPREADING) <i>Petunia x hybrida</i> Easy Wave® F1 Series	PEL	288 128	4-6 5-7	1 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 ⁻² -d ⁻¹ , 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 ⁻² -d ⁻¹ , 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) 8-15 mol-m ⁻² -d ⁻¹ , 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) <i>Petunia x hybrida</i> Shock Wave® F1 Series	PEL	288 128	4-6 5-7	1 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 ⁻² -d ⁻¹ , 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 ⁻² -d ⁻¹ , 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) 8-15 mol-m ⁻² -d ⁻¹ , 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) <i>Petunia x hybrida</i> Tidal Wave® F1 Series	PEL	288 128	4-6 5-7	1 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 ⁻² -d ⁻¹ , 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 ⁻² -d ⁻¹ , 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) 8-15 mol-m ⁻² -d ⁻¹ , 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) <i>Petunia x hybrida</i> Wave® F1 Series	PEL	288 128	4-6 5-7	1 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 ⁻² -d ⁻¹ , 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 ⁻² -d ⁻¹ , 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) 8-15 mol-m ⁻² -d ⁻¹ , 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	
PHLOX <i>Phlox drummondii</i> 21st Century F1 Series	PRM	288	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) (l) 1,000 f.c. (10,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-3,000 f.c. (26,900-32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 2,500-3,000 f.c. (26,900-32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	Cover thoroughly with coarse vermiculite. Darkness is required for germination.
PHLOX <i>Phlox drummondii</i> Ethnie Series	RAW	288	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) (l) 1,000 f.c. (10,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-3,000 f.c. (26,900-32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 2,500-3,000 f.c. (26,900-32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	Cover thoroughly with coarse vermiculite. Darkness is required for germination.
PHLOX <i>Phlox drummondii</i> Grammy Pink & White F1	PRM	288	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) (l) 1,000 f.c. (10,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-3,000 f.c. (26,900-32,300 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) 2,500-3,000 f.c. (26,900-32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Cover thoroughly with coarse vermiculite. Darkness is required for germination.
PHLOX <i>Phlox drummondii</i> Promise Series	RAW	288	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) (l) 1,000 f.c. (10,800 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 60-65°F (16-18°C) (l) 2,500-3,000 f.c. (26,900-32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	(m) Level 2-3 (t) 60-65°F (16-18°C) (l) 2,500-3,000 f.c. (26,900-32,300 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,500 ppm Spray	Cover thoroughly with coarse vermiculite. Darkness is required for germination.
PLECTRANTHUS <i>Plectranthus argentatus</i> Silver Crest	RAW	288	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 <i>Plectranthus argentatus</i> Silver Shield	PEL	288	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 <i>Portulaca grandiflora</i> Happy Hour F1 Series	MPL, RAW	288	4-5	1 4-6	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	To prevent plants from rosetting, sow seeds when the natural daylength is longer than 10 hours and 30 minutes. If sowing earlier than suggested, provide long day conditions (daylength extension to 12 to 13 hours) during all phases of production until critical natural daylength is achieved.
PORTULACA <i>Portulaca grandiflora</i> Happy Trails F1 Series	MPL, RAW	288	4-5	1 4-6	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	To prevent plants from rosetting, sow seeds when the natural daylength is longer than 10 hours. If sowing earlier than suggested, provide long day conditions (daylength extension to 12 to 13 hours) during all phases of production until critical natural daylength is achieved.

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
PRIMULA <i>Primula acaulis</i> Heritage Crème F₁	RAW	288	5-6	1	Light cover	7-10	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4-5 (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) 60-62°F (16-17°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	Avoid too high light levels (> 3,000 f.c.) to prevent leaf damage.
PRIMULA <i>Primula acaulis</i> Optic F₁ Series	PRM	288	5-6	1	Light cover	7-10	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) 60-62°F (16-17°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 3-4 (t) 60-62°F (16-17°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 3-4 (t) 60-62°F (16-17°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	Avoid too high light levels (> 3,000 f.c.) to prevent leaf damage.
PRIMULA <i>Primula acaulis</i> Primlet® Series	RAW	288	5-6	1	Light cover	7-10	5.5-5.8 pH 0.75 mmhos/cm	(m) Level 4-5 (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) 60-62°F (16-17°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 3-4 (t) 60-62°F (16-17°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 3-4 (t) 60-62°F (16-17°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	Avoid too high light levels (> 3,000 f.c.) to prevent leaf damage.
PURSLANE <i>Portulaca oleracea</i> Toucan Series	RAW	288	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	
RUELLIA <i>Ruellia brittoniana</i> Southern Star Series	RAW	288	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 <i>Salvia splendens</i> Flare	RAW	288	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 <i>Salvia splendens</i> Lighthouse Series	RAW	288	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 <i>Salvia splendens</i> Red Hot Sally I I	RAW	288	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) 1,500-2,000 f.c. (16,100-21,500 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 <i>Salvia splendens</i> Scarlet King	RAW	288	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 <i>Salvia splendens</i> Vista Series	RAW	288	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 <i>Scutellaria javanica</i> Veranda	RAW	288	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 <i>Antirrhinum majus</i> Rocket F₁ Series	RAW	288	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) 2,500-5,000 f.c. (26,900-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	(m) Level 3 (t) 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	
SNAPDRAGON <i>Antirrhinum majus</i> Snapshot F₁ Series	RAW	288	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	Plant Growth Regulators: Use DIF whenever possible. A-Rest sprayed 3 and 4 weeks after sowing at 10 ppm is effective in controlling height.
SNAPDRAGON <i>Antirrhinum majus</i> Solstice F₁ Series	RAW	288	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	Plant Growth Regulators: Use DIF whenever possible. A-Rest sprayed 3 and 4 weeks after sowing at 10 ppm is effective in controlling height.

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
SPILANTHES <i>Acnella oleracea</i> Peek-A-Boo	COT	288	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.
STOCK <i>Matthiola incana</i> Vintage Series	RAW	288	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 <i>Talinum paniculatum</i> Limón	RAW	288	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 <i>Talinum paniculatum</i> Verde	RAW	288	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 <i>Thunbergia alata</i> Susie Series	RAW	288	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.
THYMOPHYLLA <i>Thymophylla tenuiloba</i> Golden Dawn	RAW	288	4-5	2-4	Light cover	7-10	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 64-68°F (18-20°C) (l) Light (f) Less than 100 ppm N - Less than 0.7 EC				Precool 1 week at 10°C(50°F) then 18-20°C(64-68°F). Lowering temperature after germination results in more compact seedlings.
TORENIA <i>Torenia fourmieri</i> Kauai Series	PEL	288	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 <i>Verbena x hybrida</i> Quartz Series	PRM, RAW	288	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. If needed, 1 to 3 applications of B-Nine / Alar (daminozide) at 1,250 ppm (1.5 g/l 85% formulation or 2 g/l 64% formulation) spray has been tested and shown to be effective. In warmer climates it's also possible to apply A-rest (ancymidol) at 10 ppm (37.6 ml/l, 0.0264% formulation) as a foliar spray.
VERBENA <i>Verbena x hybrida</i> Quartz XP Series	PRM, RAW	288	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. If needed, 1 to 3 applications of B-Nine / Alar (daminozide) at 1,250 ppm (1.5 g/l 85% formulation or 2 g/l 64% formulation) spray has been tested and shown to be effective. In warmer climates it's also possible to apply A-Rest (ancymidol) at 10 ppm (37.6 ml/l, 0.0264% formulation) as a foliar spray.
VINCA <i>Catharanthus roseus</i> Jams 'N Jellies Series	RAW	288	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 <i>Catharanthus roseus</i> Mediterranean Series	RAW	288	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 <i>Catharanthus roseus</i> Mediterranean XP Series	RAW	288	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.

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
VINCA <i>Catharanthus roseus</i> Pacifica XP Series	RAW	288	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 <i>Catharanthus roseus</i> Titan® F1 Series	RAW	288	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 <i>Catharanthus roseus</i> Valiant F1 Series	RAW	288	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.
VIOLA <i>Viola cornuta</i> Sorbet® F1 Series	PRM, RAW	288	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 <i>Viola cornuta</i> Sorbet® XP F1 Series	PRM, RAW	288	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 <i>Zinnia marylandica</i> Double Zahara Series	COT, RAW	288	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 <i>Zinnia angustifolia</i> Star Series	RAW	288	4-5	1	Yes	2-5	5.8-6.2 pH 0.75 mmhos/cm	(t) 70-73°F (21-23°C)				
ZINNIA <i>Zinnia elegans (syn. Zinnia violaceae)</i> State Fair Mixture	RAW	288	4-5	1	Yes	2-5	5.8-6.2 pH 0.75 mmhos/cm	(t) 70-73°F (21-23°C)				
ZINNIA <i>Zinnia marylandica</i> UpTown Series	COT	288	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 <i>Zinnia marylandica</i> Zahara® Series	COT, RAW	288	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 <i>Zinnia marylandica</i> Zahara® XL Series	COT, RAW	288	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	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
ABUTILON <i>Abutilon x hybridum</i> Bella Series	288	(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"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 5 ppm Spray 5"/6"/1 Gallon, 2-3 (ppp), 7-10 (weeks), Spring, PGR paclobutrazol 5 ppm Spray	Space plants adequately to get the best branching and the showiest plants.
AGERATUM <i>Ageratum houstonianum</i> High Tide® F1 Series	288	(day) 70-80°F (21-27°C) (night) 58-62°F (14-17°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Facultative Long Day	306 Pack, 1 (ppp), 7-9 (weeks), Late Spring, PGR daminozide 2,500-3,500 ppm Spray 4"/4.5"/Quart, 1 (ppp), 7-9 (weeks), Late Spring, PGR daminozide 2,500-3,500 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 7-9 (weeks), Late Spring, PGR daminozide 2,500-3,500 ppm Spray	
ALTERNANTHERA <i>Alternanthera dentata</i> Purple Knight	288	(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	Obligate Short Day	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"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 4"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 8-9 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray	Grow plants with daylength longer than 12 hours to maintain vegetative growth. Growing under high light conditions will result in deeper purple foliage.
ALTERNANTHERA <i>Alternanthera brasiliana</i> Purple Prince	288	(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	Obligate Short Day	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"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 4"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 8-9 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 15-20 ppm Spray	Alternanthera Purple Prince is grown for its burgundy foliage. Grow plants with daylength longer than 12 hours to maintain vegetative growth. Growing under high light conditions will result in deeper purple foliage. Pinching is not needed.
ALYSSUM <i>Lobularia maritima</i> Clear Crystal® Series	288	(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"/4.5"/Quart, 1 (ppp), 7 (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 <i>Lobularia maritima</i> Easter Bonnet Series	288	(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	Cool-season crop can be grown with little or no heat. Grow outdoors or at cool night temperatures for best colour development.
ALYSSUM <i>Lobularia maritima</i> Snow Crystals	288	(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"/4.5"/Quart, 1 (ppp), 6-7 (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.
ANGELONIA <i>Angelonia angustifolia</i> Serena® F1 Series	288 128	(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"/4.5"/Quart, 1 (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 ⁻² ·d ⁻¹ . If growing in warmer climates, a paclobutrazol drench of 5-10 ppm can be applied 2 weeks after transplant instead of the daminozide/chlormequate chloride tank mix. Do not pinch plants. Pinching will result in uneven plant habit and a delay of flowering.
ANGELONIA <i>Angelonia angustifolia</i> Serenita® F1 Series	288 128	(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"/4.5"/Quart, 1 (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). Recommended DLI range of 12 to 24 mol·m ⁻² ·d ⁻¹ . 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. If growing in warmer climates, a paclobutrazol drench of 3 to 5 ppm can be applied 2 weeks after transplant instead of the daminozide/chlormequate chloride tank mix. Do not pinch plants. Pinching will result in uneven plant habit and a delay of flowering.
ASTER <i>Callistephus chinensis</i> Pot 'N Patio Series	288	(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"/4.5"/Quart, 1 (ppp), 8 (weeks), Spring	Flowers just 90 days from sowing during short days of Winter and early Spring.
BACOPA <i>Sutera cordata</i> Blutopia® F1	288 128	(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	4"/4.5"/Quart, 1 (ppp), 4-6 (weeks), Spring, PGR daminozide 2,500 ppm Spray 10" Pot or HB/3 Gallon, 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 <i>Sutera cordata</i> Snowtopia® F1	288 128	(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"/4.5"/Quart, 1 (ppp), 4-6 (weeks), Spring, PGR daminozide 2,500 ppm Spray 10" Pot or HB/3 Gallon, 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 <i>Begonia x hybrida</i> BabyWing® F1 Series	288	(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	Day Neutral	4"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1-2 (ppp), 6-8 (weeks), Spring 12" Pot or HB/5 Gallon, 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.
BEGONIA <i>Begonia x hybrida</i> Dragon Wing® F1 Series	288	(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 Long day will delay the flower initiation up to 3 - 4 weeks.	5"/6"/1 Gallon, 1 (ppp), 7-9 (weeks), Late Spring 8"/2 Gallon, 3 (ppp), 8-10 (weeks), Late Spring	Dragon Wing will flower faster under short day conditions. After transplant, use Bonzi 3 to 5 ppm spray for height control when needed.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
BEGONIA <i>Begonia x hybrida</i> Gryphon	288	(day) 65-75°F (18-24°C) (night) 62-67°F (17-19°C)	5.4-6.0 pH 1.0 mmhos/cm	Facultative Short Day Gryphon is a foliage plant, but plant could flower when grown under a daylength of 11 hours or shorter. Under daylength longer than 11 hours, flowering will be significantly delayed or plants will never flower.	4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Summer 5"/6"/1 Gallon, 2-3 (ppp), 5-6 (weeks), Summer 8"/2 Gallon, 3 (ppp), 7-8 (weeks), Summer 12" Pot or HB/5 Gallon, 3-4 (ppp), 9-11 (weeks), Summer	To avoid flower as a foliage plant, grow under daylength longer than 11 hours.
BEGONIA <i>Begonia interspecific</i> Megawatt F₁ Series	288	(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	5"/6"/1 Gallon, 1 (ppp), 7-9 (weeks), Late Spring 5"/6"/1 Gallon, 1 (ppp), 7-10 (weeks), Summer 12" Pot or HB/5 Gallon, 3 (ppp), 9-11 (weeks), Summer	All Megawatt varieties flower faster under daylength of 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 vigour than Bronze Leaf varieties. They require slightly heavier growth regulator than Bronze Leaf varieties.
BROWALLIA <i>Browallia speciosa major</i> Bells Series	288	(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	Obligate Long Day	4"/4.5"/Quart, 1 (ppp), 9-11 (weeks), Spring 10" Pot or HB/3 Gallon, 5-7 (ppp), 9-11 (weeks), Late Spring	Requires long day conditions to flower. Maintain light levels below 2,500 f.c.
CALIBRACHOA <i>Calibrachoa x hybrida</i> Crave Strawberry Star F₁	288 128	(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	Obligate Long Day 12 hours. DLI of 10-25 moles·m ⁻² ·d ⁻¹ .	4"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring, PGR flurprimidol 2-3 ppm Drench 4"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 10" Pot or HB/3 Gallon, 3 (ppp), 9-11 (weeks), Spring, PGR flurprimidol 3-4 ppm Drench 10" Pot or HB/3 Gallon, 3 (ppp), 9-11 (weeks), Spring, PGR paclobutrazol 3-4 ppm Drench	Flower colour may shade slightly; under warmer night temperatures the strawberry colour may become lighter.
CALIBRACHOA <i>Calibrachoa x hybrida</i> Kabloom® F₁ Series	288 128	(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	Obligate Long Day 10 hours for Yellow and White, 11 for Deep Blue, 12 for Deep Pink. DLI of 10-25 moles·m ⁻² ·d ⁻¹ .	4"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring, PGR flurprimidol 1-2 ppm Drench 4"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 1-3 ppm Drench 10" Pot or HB/3 Gallon, 3 (ppp), 9-11 (weeks), Spring, PGR flurprimidol 2-3 ppm Drench 10" Pot or HB/3 Gallon, 3 (ppp), 9-11 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 10" Pot or HB/3 Gallon, 3 (ppp), 5-6 (weeks), Summer, PGR flurprimidol 2-3 ppm Drench 10" Pot or HB/3 Gallon, 3 (ppp), 5-6 (weeks), Summer, PGR paclobutrazol 2-3 ppm Drench	
CELOSIA <i>Celosia cristata</i> Dracula	288	(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. It will flower the fastest at daylengths from 12 to 14 hours. Daylengths shorter than 11 hours or longer than 15 hours will significantly delay flowering and can affect flower uniformity and form.	5"/6"/1 Gallon, 1 (ppp), 6-9 (weeks), Spring	Flowers fastest between 12 to 14-hour days.
CELOSIA <i>Celosia plumosa</i> First Flame Series	288	(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"/6"/1 Gallon, 1 (ppp), 7-10 (weeks), Spring 5"/6"/1 Gallon, 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 <i>Celosia plumosa</i> Ice Cream Series	288	(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"/4.5"/Quart, 1 (ppp), 7-9 (weeks), Spring 306 Pack, 1 (ppp), 5-7 (weeks), Summer 4"/4.5"/Quart, 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 <i>Celosia spicata</i> Kosmo Series	288	(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 Will flower faster and uniformly under daylength of 13 hours or shorter.	4"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 5-7 (weeks), Summer	Keep medium constantly moist and do not allow to dry out. Does not need PGR. But if necessary, Alar/B-Nine, 2,000-2,500 ppm (2.4-3.0 g/l 85% formulation or 3.1-4.0 g/l 64% formulation) 2 to 3 applications can be used. Do not treat when flower buds become visible.
COLEUS <i>Solenostemon scutellarioides</i> Black Dragon	288	(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 <i>Solenostemon scutellarioides</i> Wizard® Series	288	(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"/4.5"/Quart, 1 (ppp), 7-9 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 7-9 (weeks), Spring	Ethephon can be applied to increase branching and control height.
COLEUS, PREMIUM SHADE <i>Solenostemon scutellarioides</i> Kong Jr. Series	288	(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"/6"/1 Gallon, 1 (ppp), 4-5 (weeks), Spring 5"/6"/1 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. Growth Regulators: Kong and Kong Jr. are well branched and have short internodes, but because of the large leaves, the plants tend to get too wide and need more space before they get too tall. Growth regulators are generally not needed. But if necessary, B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied at 2 to 3 weeks after transplanting. Repeat if necessary.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
COLEUS, PREMIUM SHADE <i>Solenostemon scutellarioides</i> Kong® Series	288	(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"/6"/1 Gallon, 1 (ppp), 4-5 (weeks), Spring 5"/6"/1 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. Growth Regulators: Kong and Kong Jr. are well branched and have short internodes, but because of the large leaves, the plants tend to get too wide and need more space before they get too tall. Growth regulators are generally not needed. But if necessary, B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied at 2 to 3 weeks after transplanting. Repeat if necessary.
COLEUS, PREMIUM SUN <i>Solenostemon scutellarioides</i> Chocolate Covered Cherry	288	(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"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Florel (ethephon) can be applied for promoting increased branching and height control if necessary. A rate of 300 ppm (7.69 ml/l 3.9% formulation or 0.63 ml/l of 48% formulation) at 2 to 3 weeks after transplanting is effective. Florel also delays flowering. Optional PGR: B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied for height control at 2 to 3 weeks after transplanting. Repeat if necessary.
COLEUS, PREMIUM SUN <i>Solenostemon scutellarioides</i> Chocolate Mint	288	(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"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Florel (ethephon) can be applied for promoting increased branching and height control if necessary. A rate of 300 ppm (7.69 ml/l 3.9% formulation or 0.63 ml/l of 48% formulation) at 2 to 3 weeks after transplanting is effective. Florel also delays flowering. Optional PGR: B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied for height control at 2 to 3 weeks after transplanting. Repeat if necessary.
COLEUS, PREMIUM SUN <i>Solenostemon scutellarioides</i> Crimson Gold	288	(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"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Florel (ethephon) can be applied for promoting increased branching and height control if necessary. A rate of 300 ppm (7.69 ml/l 3.9% formulation or 0.63 ml/l of 48% formulation) at 2 to 3 weeks after transplanting is effective. Florel also delays flowering. Optional PGR: B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied for height control at 2 to 3 weeks after transplanting. Repeat if necessary.
COLEUS, PREMIUM SUN <i>Solenostemon scutellarioides</i> Dark Chocolate	288	(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"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Florel (ethephon) can be applied for promoting increased branching and height control if necessary. A rate of 300 ppm (7.69 ml/l 3.9% formulation or 0.63 ml/l of 48% formulation) at 2 to 3 weeks after transplanting is effective. Florel also delays flowering. Optional PGR: B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied for height control at 2 to 3 weeks after transplanting. Repeat if necessary.
COLEUS, PREMIUM SUN <i>Solenostemon scutellarioides</i> Lime Delight	288	(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"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Florel (ethephon) can be applied for promoting increased branching and height control if necessary. A rate of 300 ppm (7.69 ml/l 3.9% formulation or 0.63 ml/l of 48% formulation) at 2 to 3 weeks after transplanting is effective. Florel also delays flowering. Optional PGR: B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied for height control at 2 to 3 weeks after transplanting. Repeat if necessary.
COLEUS, PREMIUM SUN <i>Solenostemon scutellarioides</i> Mighty Mosaic	288	(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"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Florel (ethephon) can be applied for promoting increased branching and height control if necessary. A rate of 300 ppm (7.69 ml/l 3.9% formulation or 0.63 ml/l of 48% formulation) at 2 to 3 weeks after transplanting is effective. Florel also delays flowering. Optional PGR: B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied for height control at 2 to 3 weeks after transplanting. Repeat if necessary.
COLEUS, PREMIUM SUN <i>Solenostemon scutellarioides</i> Pineapple Surprise	288	(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"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Florel (ethephon) can be applied for promoting increased branching and height control if necessary. A rate of 300 ppm (7.69 ml/l 3.9% formulation or 0.63 ml/l of 48% formulation) at 2 to 3 weeks after transplanting is effective. Florel also delays flowering. Optional PGR: B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied for height control at 2 to 3 weeks after transplanting. Repeat if necessary.
COLEUS, PREMIUM SUN <i>Solenostemon scutellarioides</i> Rose to Lime Magic	288	(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"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Florel (ethephon) can be applied for promoting increased branching and height control if necessary. A rate of 300 ppm (7.69 ml/l 3.9% formulation or 0.63 ml/l of 48% formulation) at 2 to 3 weeks after transplanting is effective. Florel also delays flowering. Optional PGR: B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied for height control at 2 to 3 weeks after transplanting. Repeat if necessary.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
COLEUS, PREMIUM SUN <i>Solenostemon scutellarioides</i> Watermelon	288	(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"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring	Excessive internode elongation under low light or crowding. Florel (ethephon) can be applied for promoting increased branching and height control if necessary. A rate of 300 ppm (7.69 ml/l 3.9% formulation or 0.63 ml/l of 48% formulation) at 2 to 3 weeks after transplanting is effective. Florel also delays flowering. Optional PGR: B-Nine/Alar (daminozide) 2,500 to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 4.0 to 8.0 g/l of 64% formulation) can be applied for height control at 2 to 3 weeks after transplanting. Repeat if necessary.
COLORGRASS ANEMANTHELE <i>Anemantele lessoniana</i> Sirocco	288	(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	Day Neutral	306 Pack, 1 (ppp), 6-8 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1-3 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 8-10 (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 <i>Carex comans</i> Amazon Mist	288	(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	Day Neutral	306 Pack, 1 (ppp), 9-10 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 9-10 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 10-11 (weeks), Spring	
COLORGRASS CAREX <i>Carex comans</i> Bronco	288	(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	Day Neutral	306 Pack, 1 (ppp), 8-9 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 9-10 (weeks), Spring	
COLORGRASS CAREX <i>Carex comans</i> Phoenix Green	288	(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	Day Neutral	306 Pack, 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 7-8 (weeks), Spring	
COLORGRASS CAREX <i>Carex buchmanii</i> Red Rooster	288	(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	Day Neutral	306 Pack, 1 (ppp), 8-9 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 9-10 (weeks), Spring	
COLORGRASS CORYNEPHORUS <i>Corynephorus canescens</i> Spiky Blue	288	(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	Day Neutral	306 Pack, 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 7-8 (weeks), Spring	
COLORGRASS FESTUCA <i>Festuca cinerea (Festuca glauca)</i> Festina	288	(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	Day Neutral	306 Pack, 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 7-8 (weeks), Spring	
COLORGRASS ISOLEPIS <i>Isolepis cernua</i> Live Wire	288	(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	Day Neutral	306 Pack, 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 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 <i>Juncus inflexus</i> Blue Arrows	288	(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	Day Neutral	306 Pack, 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 1-3 (ppp), 7-8 (weeks), Spring	
COLORGRASS JUNCUS <i>Juncus tenuis</i> Blue Dart	288	(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	Day Neutral	306 Pack, 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 1-3 (ppp), 7-8 (weeks), Spring	Excellent substitute for Draecena Spike.
COLORGRASS JUNCUS <i>Juncus pallidus</i> Javelin	288	(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	Day Neutral	306 Pack, 1 (ppp), 5-6 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Spring 5"/6"/1 Gallon, 1-3 (ppp), 6-7 (weeks), Spring	To prevent leaf bending, Bonzi 30 ppm spray can be used.
COLORGRASS JUNCUS <i>Juncus ensifolius</i> Starhead	288	(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	Day Neutral	306 Pack, 1 (ppp), 7-8 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 8-9 (weeks), Spring	
COLORGRASS KOELERIA <i>Koeleria glauca</i> Coolio	288	(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	Day Neutral		
COLORGRASS LUZULA <i>Luzula nivea</i> Lucius	288	(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	Day Neutral	306 Pack, 1 (ppp), 8-9 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 9-10 (weeks), Spring	Make sure plants don't get too wet.
COLORGRASS STIPA <i>Stipa tenuissima</i> Pony Tails	288	(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	Day Neutral	306 Pack, 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-7 (weeks), Spring	
COSMOS <i>Cosmos bipinnatus</i> Antiquity	288	(day) 65-75°F (18-24°C) (night) 61-65°F (16-18°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Facultative Short Day Cosmos flower faster under short days. Daylength extension in the plug stage to more than 12 hours daylength may be used to prevent premature flowering.	4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring	

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
COSMOS <i>Cosmos bipinnatus</i> Sonata Series	288	(day) 70-80°F (21-27°C) (night) 70-75°F (21-24°C)	5.8-6.2 pH 1.0-1.5 mmhos/cm	Facultative Short Day Cosmos flower faster under short days. Daylength extension in the plug stage to more than 12 hours daylength may be used to prevent premature flowering.	4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 7-8 (weeks), Spring	
CROSSANDRA <i>Crossandra infundibuliformis</i> Tropic Series	288	(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	4"/4.5"/Quart, 1 (ppp), 10-11 (weeks), Spring 5"/6"/1 Gallon, 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 <i>Cuphea ignea</i> Dynamite	288	(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	4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring	No pinching required. Well-suited to solo and mixed containers. Also works in indoor plant programs.
DAHLIA <i>Dahlia x hybrida</i> Figaro® Series	288	(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	Obligate Long Day Dahlias require 14 hour or longer days to grow and flower properly. Provide daylength extension if needed.	306 Pack, 1 (ppp), 5-6 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Spring	Very responsive to B-Nine/Alar. Also responsive to day/night temperature differential (DIF), and plants are shorter with a negative DIF.
DESCHAMPSIA <i>Deschampsia elongata</i> Zephyr	288	(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	Day Neutral	306 Pack, 1 (ppp), 5-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 6-7 (weeks), Spring	Will perform better if grown in containers. Will dry out very easily.
DIANTHUS <i>Dianthus chinensis</i> Corona F1 Series	288	(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	Cell Pack, 1 (ppp), 6-8 (weeks), Late Spring, PGR paclobutrazol 10 ppm Spray 4"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Late Spring, PGR paclobutrazol 10 ppm Spray	
DIANTHUS <i>Dianthus barbatus</i> Dash F1 Series	288	(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	4"/4.5"/Quart, 1 (ppp), 9-10 (weeks), Summer, PGR paclobutrazol 20 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 9-10 (weeks), Summer, PGR paclobutrazol 20 ppm Spray 4"/4.5"/Quart, 1 (ppp), 11-12 (weeks), Autumn, PGR paclobutrazol 20 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 11-12 (weeks), Autumn, PGR 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 <i>Dianthus barbatus interspecific</i> Dynasty F1 Series	288	(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	306 Pack, 1 (ppp), 8-9 (weeks), Late Spring, PGR paclobutrazol 15-20 ppm Spray 4"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Late Spring, PGR paclobutrazol 15-20 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 8-9 (weeks), Late Spring, PGR paclobutrazol 15-20 ppm Spray	
DIANTHUS <i>Dianthus chinensis x barbatus</i> Floral Lace F1 Series	288	(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	Cell Pack, 1 (ppp), 4-5 (weeks), Late Spring, PGR paclobutrazol 15-20 ppm Spray 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Late Spring, PGR paclobutrazol 15-20 ppm Spray	Height can be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen. Dianthus are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF.
DIANTHUS <i>Dianthus chinensis x barbatus</i> Ideal Select F1 Series	288	(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	Cell Pack, 1 (ppp), 4-5 (weeks), Late Spring, PGR paclobutrazol 15-20 ppm Spray 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Late Spring, PGR paclobutrazol 15-20 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 4-5 (weeks), Late Spring, PGR paclobutrazol 15-20 ppm Spray	
DIANTHUS (INTERSPECIFIC) <i>Dianthus barbatus interspecific</i> Jolt F1 Series	288	(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 Interspecific Dianthus Jolt is a facultative/ quantitative long day plant and can flower year-round, but it will take slightly longer to flower under short days than long days.	4"/4.5"/Quart, 1 (ppp), 14-18 (weeks), Spring, PGR paclobutrazol 20 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 14-18 (weeks), Spring, PGR paclobutrazol 20 ppm Spray 4"/4.5"/Quart, 1 (ppp), 11-13 (weeks), Summer, PGR paclobutrazol 20 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 11-13 (weeks), Summer, PGR 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 daylengths, but will take slightly longer to flower under short days than long days.
DICHONDRA <i>Dichondra repens</i> Emerald Falls	288	(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"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 5,000/1,000 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 7-8 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 5,000/1,000 ppm Spray 12" Pot or HB/5 Gallon, 5 (ppp), 7-9 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 5,000/1,000 ppm Spray	Grows best in warm and dry conditions. Use light feed. Rinse foliage after feeding to avoid salt burn.
DICHONDRA <i>Dichondra argentea</i> Silver Falls	288	(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"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 5,000/1,000 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 7-8 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 5,000/1,000 ppm Spray 12" Pot or HB/5 Gallon, 5 (ppp), 7-9 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 5,000/1,000 ppm Spray	Grows best in warm and dry conditions. Use light feed. Rinse foliage after feeding to avoid salt burn. Higher light levels result in foliage that is more silver in colour and shorter internodes.
DUSTY MILLER MARITIMA <i>Senecio cineraria</i> Silverdust	288	(day) 60-65°F (16-18°C) (night) 55-58°F (13-14°C)	5.5-5.8 pH 1.2-1.5 mmhos/cm		4"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring, PGR daminozide 5,000 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring, PGR daminozide 5,000 ppm Spray	Pinching not recommended. For height control use daminozide as needed.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
ERYSIMUM <i>Erysimum species</i> Citrona® Series	288	(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	4"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 2,500/1,000 ppm Spray 4"/4.5"/Quart, 1 (ppp), 5 (weeks), Autumn, PGR paclobutrazol 20 ppm Spray	Erysimum performs well when grown under cooler temperatures.
EUPHORBIA <i>Euphorbia graminea</i> Glitz F1	288 128	(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	Day Neutral	4"/4.5"/Quart, 1 (ppp), 5-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 5"/6"/1 Gallon, 1-2 (ppp), 5-8 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" Pot or HB/3 Gallon, 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® <i>Sutera cordata</i> Bacopa Series	288	(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	5"/6"/1 Gallon, 1 (ppp), 6-7 (weeks), Spring, PGR daminozide 1,000-1,500 ppm Spray 8"/2 Gallon, 3 (ppp), 6-7 (weeks), Spring, PGR daminozide 1,000-1,500 ppm Spray 10" Pot or HB/3 Gallon, 4 (ppp), 6-7 (weeks), Spring, PGR daminozide 1,000-1,500 ppm Spray 12" Pot or HB/5 Gallon, 4 (ppp), 6-7 (weeks), Spring, PGR daminozide 1,000-1,500 ppm Spray	Avoid excessive watering and drought. Do not let plants wilt as this will result in bud drop.
FUSEABLES® <i>Calibrachoa hybrid</i> Calibrachoa Series	288	(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	5"/6"/1 Gallon, 1 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 8"/2 Gallon, 1 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 10" Pot or HB/3 Gallon, 1-3 (ppp), 8-11 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 12" Pot or HB/5 Gallon, 3 (ppp), 10-11 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench	Juvenility ends at 6 leaves, at that point growing under 14 hours for 4 weeks induces plants to flower. See GrowerFacts for detailed PGR program and LIP recommendations.
FUSEABLES® <i>Solenostemon scutellariodes</i> Coleus Series	288	(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	5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 8"/2 Gallon, 1 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" Pot or HB/3 Gallon, 1-3 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 12" Pot or HB/5 Gallon, 4-5 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray	Coleus are responsive to day/night DIF, and are shorter with a negative DIF. Crowding can result in excessive internode elongation. Ethephon can be applied at 300 ppm 2-3 weeks after transplant to promote branching and delay flowering.
FUSEABLES® <i>Petunia x hybrida</i> Petunia Series	288	(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	5"/6"/1 Gallon, 1 (ppp), 9-11 (weeks), Spring, PGR daminozide 5,000 ppm Spray 8"/2 Gallon, 1-3 (ppp), 9-11 (weeks), Spring, PGR daminozide 5,000 ppm Spray 10" Pot or HB/3 Gallon, 1-3 (ppp), 10-12 (weeks), Spring, PGR daminozide 5,000 ppm Spray 10" Pot or HB/3 Gallon, 1-3 (ppp), 9-11 (weeks), Spring, PGR daminozide 5,000 ppm Spray 12" Pot or HB/5 Gallon, 4 (ppp), 10-12 (weeks), Spring, PGR daminozide 5,000 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 7-9 (weeks), Summer, PGR daminozide 5,000 ppm Spray 8"/2 Gallon, 1-3 (ppp), 7-9 (weeks), Summer, PGR daminozide 5,000 ppm Spray 10" Pot or HB/3 Gallon, 1-3 (ppp), 8-10 (weeks), Summer, PGR daminozide 5,000 ppm Spray 12" Pot or HB/5 Gallon, 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® <i>Petunia hybrida, Sutera cordata</i> Petunia-Bacopa Series	288	(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		5"/6"/1 Gallon, 1 (ppp), 8-11 (weeks), Spring, PGR paclobutrazol 2-4 ppm Drench 8"/2 Gallon, 1 (ppp), 8-11 (weeks), Spring, PGR paclobutrazol 2-4 ppm Drench 10" Pot or HB/3 Gallon, 1-3 (ppp), 10-12 (weeks), Spring, PGR paclobutrazol 2-4 ppm Drench 12" Pot or HB/5 Gallon, 4 (ppp), 10-12 (weeks), Spring, PGR paclobutrazol 2-4 ppm Drench 5"/6"/1 Gallon, 1 (ppp), 7-9 (weeks), Summer, PGR paclobutrazol 2-4 ppm Drench 8"/2 Gallon, 1 (ppp), 7-9 (weeks), Summer, PGR paclobutrazol 2-4 ppm Drench 10" Pot or HB/3 Gallon, 1-3 (ppp), 8-10 (weeks), Summer, PGR paclobutrazol 2-4 ppm Drench 12" Pot or HB/5 Gallon, 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® <i>Juncus inflexus - Juncus effusus spiralis</i> Twisted Arrows	288	(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"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring 5"/6"/1 Gallon, 1-3 (ppp), 7-8 (weeks), Spring	
FUSEABLES® <i>Juncus tenuis - Juncus effusus spiralis</i> Twisted Dart	288	(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"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring 5"/6"/1 Gallon, 1-3 (ppp), 7-8 (weeks), Spring	

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
FUSEABLES® <i>Viola cornuta</i> Viola Series	288	(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	5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Early Spring, PGR daminozide 2,500 ppm Spray 10" Pot or HB/3 Gallon, 3-4 (ppp), 6-8 (weeks), Early Spring, PGR daminozide 2,500 ppm Spray 12" Pot or HB/5 Gallon, 3-5 (ppp), 6-8 (weeks), Early Spring, PGR daminozide 2,500 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Autumn, PGR ancymidol 5-10 ppm Spray 10" Pot or HB/3 Gallon, 3-4 (ppp), 5-7 (weeks), Autumn, PGR ancymidol 5-10 ppm Spray 12" Pot or HB/5 Gallon, 3-5 (ppp), 5-7 (weeks), Autumn, PGR ancymidol 5-10 ppm Spray	PGR use is dependent on day/night temperatures.
FUSEABLES® <i>Viola cornuta, Lobularia maritima</i> Viola-Alyssum Series	288	(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		5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring 8"/2 Gallon, 1 (ppp), 5-7 (weeks), Spring 10" Pot or HB/3 Gallon, 4 (ppp), 5-7 (weeks), Spring 12" Pot or HB/5 Gallon, 4-5 (ppp), 5-7 (weeks), Spring	
GAZANIA <i>Gazania rigens</i> New Day® F1 Series	288	(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 5"/6"/1 Gallon, 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 5"/6"/1 Gallon, 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. Plant Growth Regulators If needed can use B-Nine/Alar (daminozide) at 3,500 ppm (4.2 g/l of 85% formulation or 5.6 g/l of 64% formulation) to tone the crop. One application at 2 to 3 weeks after transplant will be sufficient.
GAZANIA TETRAPLOID <i>Gazania rigens</i> Sunshine Series	406	(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	5"/6"/1 Gallon, 3 (ppp), 9-10 (weeks), Early Spring, PGR daminozide 3,500 ppm Spray 5"/6"/1 Gallon, 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 approximately 3 weeks longer. Plant Growth Regulators If needed can use B-Nine/Alar (daminozide) at 3,500 ppm (4.2 g/l of 85% formulation or 5.6 g/l of 64% formulation) to tone the crop. One application at 2 to 3 weeks after transplant will be sufficient.
GERANIUM (IVY) <i>Pelargonium x peltatum</i> Summer Showers Series	288	(day) 70-75°F (21-24°C) (night) 60-65°F (16-18°C)	6.0-6.2 pH 1.2 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 11-12 (weeks), Spring, PGR chlormequat chloride 300-500 ppm Spray 10" Pot or HB/3 Gallon, 3 (ppp), 13-15 (weeks), Spring, PGR chlormequat chloride 300-500 ppm Spray	This is a light accumulating product. Therefore, more light received and higher mols will help to make flowering faster. 15-20 mol·m ⁻² ·d ⁻¹ is a good target.
GOMPHRENA <i>Gomphrena pulchella</i> Fireworks	406	(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"/6"/1 Gallon, 1 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 4-10 ppm Drench 5"/6"/1 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 <i>Helenium amarum</i> Dakota Gold	288	(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	Facultative Long Day Plants will flower regardless of daylength, but the growing habit is quite related to daylength. Plants grow slowly when grown under daylengths shorter than 12 hours and become very flat or even rosette when grown under daylengths shorter than 10 hours. Growing plants under long days (12 hours or more) is recommended.	306 Pack, 1 (ppp), 5-7 (weeks), Spring, PGR daminozide 5,000 ppm Spray 4"/4.5"/Quart, 1 (ppp), 5-7 (weeks), Spring, PGR daminozide 5,000 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring, PGR daminozide 5,000 ppm Spray	
HELICHRYSUM <i>Helichrysum microphyllum</i> (<i>Plectostachys serphyllifolia</i>) Silver Mist	288	(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"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring 5"/6"/1 Gallon, 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 <i>Hibiscus acetosella</i> Mahogany Splendor	288	(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"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/300 ppm Spray 4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Spring, PGR paclobutrazol 5-10 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/300 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 5-10 ppm Spray 8"/2 Gallon, 1 (ppp), 6-8 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/300 ppm Spray 8"/2 Gallon, 1 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 5-10 ppm Spray	
IMPATIENS <i>Impatiens walleriana</i> Dazzler® F1 Series	288	(day) 70-75°F (21-24°C) (night) 62-68°F (17-20°C)	6.2-6.5 pH 0.75-1.0 mmhos/cm	Day Neutral	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 10" Pot or HB/3 Gallon, 3-5 (ppp), 8-10 (weeks), Spring	Impatiens will respond to daminozide, paclobutrazol and uniconazol. Monitoring of water and fertilization can help with controlling plant growth and vigour.
IMPATIENS <i>Impatiens walleriana</i> Impreza® F1 Series	288	(day) 70-75°F (21-24°C) (night) 62-68°F (17-20°C)	6.2-6.5 pH 0.75-1.0 mmhos/cm	Day Neutral	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 10" Pot or HB/3 Gallon, 3-5 (ppp), 8-10 (weeks), Spring	Impatiens will respond to daminozide, paclobutrazol and uniconazol. Monitoring of water and fertilization can help with controlling plant growth and vigour.
IMPATIENS <i>Impatiens walleriana</i> Super Elfin® F1 Series	288	(day) 70-75°F (21-24°C) (night) 62-68°F (17-20°C)	6.2-6.5 pH 0.75-1.0 mmhos/cm	Day Neutral	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 10" Pot or HB/3 Gallon, 3-5 (ppp), 8-10 (weeks), Spring	Impatiens will respond to daminozide, paclobutrazol and uniconazol. Monitoring of water and fertilization can help with controlling plant growth and vigour.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
IMPATIENS <i>Impatiens walleriana</i> Super Elfin® XP F₁ Series	288	(day) 70-75°F (21-24°C) (night) 62-68°F (17-20°C)	6.2-6.5 pH 0.75-1.0 mmhos/cm	Day Neutral	Cell Pack, 1 (ppp), 3-4 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 10" Pot or HB/3 Gallon, 3-5 (ppp), 8-10 (weeks), Spring	Impatiens will respond to daminozide, paclobutrazol and uniconazol. Monitoring of water and fertilization can help with controlling plant growth and vigour.
IMPATIENS (NEW GUINEA) <i>Impatiens hawkeri</i> Divine F₁ Series	288	(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	306 Pack, 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 1-2 (ppp), 8-9 (weeks), Spring	Feed plants moderately. Overfeeding leads to lush, leafy plants at the expense of flowers. 1 or 2 applications of paclobutrazol spray at 2 to 5 ppm can control height without reducing flower size. A paclobutrazol drench at 0.125 to 0.25 ppm is also effective, but may stunt less vigorous varieties (See Table 1 for vigour ratings). Start with low rates and adjust as necessary. Negative DIF and DROP work well for New Guinea impatiens height control. Florel is not needed to promote branching. High vigour: Blue Pearl, Orange Bronze Leaf, Scarlet Bronze Leaf. Mid vigour: Lavender Improved, Orange, White, Orchid, Lipstick, Red. Low vigour: Violet, Pink, Burgundy.
IRESENE <i>Iresine herbstii</i> Purple Lady	288	(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		306 Pack, 1 (ppp), 5-6 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Spring 10" Pot or HB/3 Gallon, 3 (ppp), 6-7 (weeks), Spring 12" Pot or HB/5 Gallon, 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 <i>Isotoma hybrida</i> Gemini F₁ Series	288	(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	306 Pack, 1 (ppp), 9-10 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 4"/4.5"/Quart, 1 (ppp), 9-12 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 12-14 (weeks), Spring, PGR 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 <i>Isotoma axillaris</i> Tristar Series	288	(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	306 Pack, 1 (ppp), 9-10 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 4"/4.5"/Quart, 1 (ppp), 9-12 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 12-14 (weeks), Spring, PGR 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 <i>Juncus effusus spiralis</i> Twister	288	(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		306 Pack, 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 7-8 (weeks), Spring	Do not bury plugs too deeply when transplanting.
LEYCESTERIA <i>Leycesteria formosa</i> Jealousy	288	(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	Obligate Short Day Under short days, plants will flower and develop decorative red berries.	306 Pack, 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 7-8 (weeks), Spring	The best way to control plant growth with good uniform habit is to pinch or trim the plants down to 3 to 4 leaf pairs. It is most uniform when done two weeks after transplanting. Ensure all the main stems of each plant grow out of the multi-seeded pellets for maximum uniformity.
LINARIA <i>Linaria hybrida</i> Enchantment F₁	288	(day) 55-65°F (13-18°C) (night) 50-60°F (10-16°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Day Neutral	306 Pack, 1 (ppp), 6-7 (weeks), Spring, PGR paclobutrazol 10 ppm Spray 4"/4.5"/Quart, 1-3 (ppp), 6-7 (weeks), Spring, PGR paclobutrazol 10 ppm Spray	Cool-season crop will benefit from being grown cooler. Paclobutrazol rates of 10 ppm spray 1 week after transplant have shown to control stretch. Use paclobutrazol at rates of up to 20 ppm.
LISIANTHUS <i>Eustoma grandiflorum</i> Florida F₁ Series	288 512	(day) 68-75°F (20-24°C) (night) 60-65°F (16-18°C)	6.5-6.8 pH 0.75 mmhos/cm	Facultative Long Day	4"/4.5"/Quart, 1 (ppp), 14-16 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 14-16 (weeks), Spring	Maintain pH of 6.5 to 6.8. Do not allow plugs to become rootbound.
LOBELIA <i>Lobelia erinus</i> Cambridge Blue	288	(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 <i>Lobelia erinus</i> Cobalt Blue	288	(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 <i>Lobelia erinus</i> Crystal Palace	288	(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 <i>Lobelia erinus</i> Fountain Series	288	(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	10" Pot or HB/3 Gallon, 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 <i>Lobelia erinus</i> Mrs Clibran	288	(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 <i>Lobelia erinus</i> Rapid Series	288	(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 daylength 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 <i>Lobelia erinus</i> Regatta Series	288	(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	10" Pot or HB/3 Gallon, 5-7 (ppp), 8-10 (weeks), Spring, PGR daminozide 3,000-5,000 ppm Spray	Lobelias flower more freely when daylength 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.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
LOBELIA <i>Lobelia erinus</i> Riviera Series	288	(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 daylength 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 <i>Lobelia erinus</i> Rosamond	288	(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 <i>Lobelia erinus</i> Sapphire Pendula	288	(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" Pot or HB/3 Gallon, 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 <i>Lobelia erinus</i> String Of Pearls	288	(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 <i>Lobelia erinus</i> White Lady	288	(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) <i>Tagetes erecta</i> Garland Orange F₁	288	(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 Will flower quicker when the daylength is 12 hours or shorter. When grown at daylength longer than 12 hours, it will take an additional 10 to 14 days to flower.	4"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Plant Growth Regulators: PGRs are not required when grown under short days, since plants will finish naturally shorter. Treat with PGRs when grown under long days. Daminozide at 5,000 ppm applied twice as a foliar spray can control the plant growth. In northwestern Europe, use daminozide at 1,300 to 2,000 ppm.
MARIGOLD (AFRICAN) <i>Tagetes erecta</i> Lady F₁ Series	288	(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 Will flower quicker when the daylength is 12 hours or shorter. When grown at daylength longer than 12 hours, it will take an additional 10 to 14 days to flower.	4"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Plant Growth Regulators: PGRs are not required when grown under short days, since plants will finish naturally shorter. Treat with PGRs when grown under long days. Daminozide at 5,000 ppm applied twice as a foliar spray can control the plant growth. In northwestern Europe, use daminozide at 1,300 to 2,000 ppm.
MARIGOLD (AFRICAN) <i>Tagetes erecta</i> Marvel F₁ Series	288	(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 Will flower quicker when the daylength is 12 hours or shorter. When grown at daylength longer than 12 hours, it will take an additional 10 to 14 days to flower.	4"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Plant Growth Regulators: PGRs are not required when grown under short days, since plants will finish naturally shorter. Treat with PGRs when grown under long days. Daminozide at 5,000 ppm applied twice as a foliar spray can control the plant growth. In northwestern Europe, use daminozide at 1,300 to 2,000 ppm.
MARIGOLD (AFRICAN) <i>Tagetes erecta</i> Taishan® F₁ Series	288	(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 Will flower quicker when the daylength is 12 hours or shorter. When grown at daylength longer than 12 hours, it will take an additional 10 to 14 days to flower.	306 Pack, 1 (ppp), 4-6 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 4-6 (weeks), Spring 306 Pack, 1 (ppp), 6-7 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Summer	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Plant Growth Regulators: PGRs are not required when grown under short days, since plants will finish naturally shorter. Treat with PGRs when grown under long days. Daminozide at 5,000 ppm applied twice as a foliar spray can control the plant growth. In northwestern Europe, use daminozide at 1,300 to 2,000 ppm.
MARIGOLD (AFRICAN) <i>Tagetes erecta</i> Vanilla F₁	288	(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 Will flower quicker when the daylength is 12 hours or shorter. When grown at daylength longer than 12 hours, it will take an additional 10 to 14 days to flower.	4"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring	Maintain soil pH of 6.2 to 6.5 to avoid iron toxicity. Plant Growth Regulators: PGRs are not required when grown under short days, since plants will finish naturally shorter. Treat with PGRs when grown under long days. Daminozide at 5,000 ppm applied twice as a foliar spray can control the plant growth. In northwestern Europe, use daminozide at 1,300 to 2,000 ppm.
MARIGOLD (FRENCH) <i>Tagetes patula</i> Bonanza Series	288	(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) <i>Tagetes patula</i> Boy Series	288	(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) <i>Tagetes patula</i> Durango® Series	288	(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) <i>Tagetes patula</i> Fireball	288	(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 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 10" Pot or HB/3 Gallon, 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) <i>Tagetes patula</i> Gate Series	288	(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) <i>Tagetes patula</i> Hot Pak Series	288	(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	Facultative Short Day	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 are possible.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
MARIGOLD (FRENCH) <i>Tagetes patula</i> Janie Series	288	(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) <i>Tagetes patula</i> Strawberry Blonde	288	(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 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 10" Pot or HB/3 Gallon, 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 <i>Matthiola incana</i> Hot Cakes Series	288	(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 5-7 (weeks), Spring 5"/6"/1 Gallon, 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 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.
NEMESIA <i>Nemesia foetans</i> Poetry F₁ Series	288	(day) 62-68°F (17-20°C) (night) 55-62°F (13-17°C)	5.8-6.2 pH 0.7-1.0 mmhos/cm	Day Neutral	306 Pack, 1 (ppp), 5-7 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 6-8 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Spring	If necessary, use 2-3 applications of daminozide 2,500-5,000 ppm Spray.
NEMESIA <i>Nemesia strumosa</i> Sundrops Mixture	288	(day) 60-65°F (16-18°C) (night) 55-60°F (13-16°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring	Grow cool; optimum temperature 55°F (13°C).
NICOTIANA <i>Nicotiana alata</i> Nicki Series	288	(day) 65-70°F (18-21°C) (night) 60-65°F (16-18°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	Facultative Long Day	Cell Pack, 1 (ppp), 5-6 (weeks), Spring, PGR daminozide 1,500-2,500 ppm Spray 4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring, PGR daminozide 1,500-2,500 ppm Spray	
ORNAMENTAL MILLET <i>Pennisetum glaucum</i> Copper Prince F₁	128	(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		5"/6"/1 Gallon, 1-2 (ppp), 12-14 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 9-10 (weeks), Autumn	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well. Do not grow below 60°F (16°C). Low temperatures can cause foliage colour to become chlorotic or cause necrosis and flower spike bending. High light results in better basal tillering and stronger stems. When seeds are sown directly to final pot, apply a paclobutrazol drench 6-8 ppm at 4 weeks after sow, and repeat if needed 10 days later. When transplanting plugs, use a 3-5 ppm paclobutrazol drench at 1 week after transplant. Small pot crop times are based on 68°F (20°C) daily average temperature and saleable foliage plants without flower spikes.
ORNAMENTAL MILLET <i>Pennisetum glaucum</i> Jade Princess F₁	128	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 5"/6"/1 Gallon, 1-2 (ppp), 12-14 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 9-10 (weeks), Autumn	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well. Do not grow below 60°F (16°C). Low temperatures can cause foliage colour to become chlorotic or cause necrosis and flower spike bending. Jade Princess is especially cold sensitive. High light results in better basal tillering and stronger stems. When seeds are sown directly to final pot, apply a paclobutrazol drench 6-8 ppm at 4 weeks after sow, and repeat if needed 10 days later. When transplanting plugs, use a 3-5 ppm paclobutrazol drench at 1 week after transplant. Small pot crop times are based on 68°F (20°C) daily average temperature and saleable foliage plants without flower spikes.
ORNAMENTAL MILLET <i>Pennisetum glaucum</i> Jester F₁	128	(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		5"/6"/1 Gallon, 3 (ppp), 11-13 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench 5"/6"/1 Gallon, 3 (ppp), 9-10 (weeks), Autumn	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well. Do not grow below 60°F (16°C). Low temperatures can cause foliage colour to become chlorotic or cause necrosis and flower spike bending. High light results in better basal tillering and stronger stems. When seeds are sown directly to final pot, apply a paclobutrazol drench 6-8 ppm at 4 weeks after sow, and repeat if needed 10 days later. When transplanting plugs, use a 3-5 ppm paclobutrazol drench at 1 week after transplant. Small pot crop times are based on 68°F (20°C) daily average temperature and saleable foliage plants without flower spikes.
ORNAMENTAL MILLET <i>Pennisetum glaucum</i> Purple Baron F₁	128	(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		5"/6"/1 Gallon, 3 (ppp), 11-13 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench 5"/6"/1 Gallon, 3 (ppp), 9-10 (weeks), Autumn	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well. Do not grow below 60°F (16°C). Low temperatures can cause foliage colour to become chlorotic or cause necrosis and flower spike bending. High light results in better basal tillering and stronger stems. When seeds are sown directly to final pot, apply a paclobutrazol drench 6-8 ppm at 4 weeks after sow, and repeat if needed 10 days later. When transplanting plugs, use a 3-5 ppm paclobutrazol drench at 1 week after transplant. Small pot crop times are based on 68°F (20°C) daily average temperature and saleable foliage plants without flower spikes.
ORNAMENTAL MILLET <i>Pennisetum glaucum</i> Purple Majesty	128	(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		5"/6"/1 Gallon, 3 (ppp), 11-13 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench 5"/6"/1 Gallon, 3 (ppp), 9-10 (weeks), Autumn	Plants that are rootbound or stressed due to drought or nutrient deficiency will not perform well. Do not grow below 60°F (16°C). Low temperatures can cause foliage colour to become chlorotic or cause necrosis and flower spike bending. High light results in better basal tillering and stronger stems. When seeds are sown directly to final pot, apply a paclobutrazol drench 6-8 ppm at 4 weeks after sow, and repeat if needed 10 days later. When transplanting plugs, use a 3-5 ppm paclobutrazol drench at 1 week after transplant. Small pot crop times are based on 68°F (20°C) daily average temperature and saleable foliage plants without flower spikes.
ORNAMENTAL MINT <i>Mentha requienii</i> Mini Mint	288	(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"/4.5"/Quart, 1 (ppp), 5-7 (weeks), Spring 5"/6"/1 Gallon, 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).

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
ORNAMENTAL OREGANO <i>Origanum x hybrida</i> Kirigami	288	(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	Obligate Long Day Long day required, critical daylength 14 hrs.	4"/4.5"/Quart, 1 (ppp), 10-12 (weeks), Late Spring, PGR daminozide 1,500-2,000 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 11-13 (weeks), Late Spring, PGR daminozide 1,500-2,000 ppm Spray 10" Pot or HB/3 Gallon, 3-5 (ppp), 12-13 (weeks), Late Spring, PGR daminozide 1,500-2,000 ppm Spray 4"/4.5"/Quart, 1 (ppp), 9-10 (weeks), Summer, PGR daminozide 1,500-2,000 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 9-11 (weeks), Summer, PGR daminozide 1,500-2,500 ppm Spray 10" Pot or HB/3 Gallon, 3-5 (ppp), 10-12 (weeks), Summer, PGR daminozide 2,000-2,500 ppm Spray	Needs an active growing climate with higher light levels. Apply low to moderate fertilization and moderate irrigation. Let media dry slightly between watering. The bracts will develop much deeper purple colour when plants are exposed to high light (12 - 15 mol-m ⁻² .d ⁻¹) and cool night conditions (lower than 50°F/10°C). Kirigami reacts well to daminozide and it should be used at lower concentrations with multiple applications to avoid stunting. Avoid using daminozide once color is starting on the bracts, to prevent bleaching. Needs to grow in well drained soil; cannot stand too wet condition. With its versatile use, there is no specific number of PGR applications. It is easy to mold to your desired look or container size.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Black Pearl	288	(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		4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 6-7 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Autumn 5"/6"/1 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 <i>Capsicum annuum</i> Calico F₁	288	(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		4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 6-7 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Autumn 5"/6"/1 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 <i>Capsicum annuum</i> Midnight Fire	288	(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		4"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 7-13 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Autumn 5"/6"/1 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 <i>Capsicum annuum</i> Purple Flash	288	(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		4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 6-7 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Autumn 5"/6"/1 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.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Sangria F₁	288	(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		5"/6"/1 Gallon, 1-3 (ppp), 7-13 (weeks), Summer 5"/6"/1 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 <i>Capsicum annuum</i> Sedona Sun	288	(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		5"/6"/1 Gallon, 1-3 (ppp), 7-13 (weeks), Summer 5"/6"/1 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.
OSTEOSPERMUM <i>Osteospermum ecklonis</i> Akila® F₁ Series	288 105	(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	306 Pack, 1 (ppp), 10-12 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray 4"/4.5"/Quart, 1 (ppp), 10-12 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 12-14 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray 306 Pack, 1 (ppp), 7-9 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray 4"/4.5"/Quart, 1 (ppp), 7-9 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 9-11 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/500 ppm Spray	Supplemental lighting will reduce days to flower. 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.
PANSY <i>Viola x wittrockiana</i> Cool Wave® F₁ Series	288	(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	5"/6"/1 Gallon, 1-3 (ppp), 6-7 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 2,500/250 ppm Spray 10" Pot or HB/3 Gallon, 4 (ppp), 9-10 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 2,500/250 ppm Spray 5"/6"/1 Gallon, 1-3 (ppp), 5-6 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 5,000/500 ppm Spray 10" Pot or HB/3 Gallon, 4 (ppp), 7-8 (weeks), Autumn, PGR 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 Cool Wave Production Handbook for more detailed information on scheduling for Autumn and Spring programs and variety-specific PGR information.
PANSY <i>Viola x wittrockiana</i> Fizzy F₁ Series	288	(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	5"/6"/1 Gallon, 3 (ppp), 6-8 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray 10" Pot or HB/3 Gallon, 7-9 (ppp), 6-8 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 4-6 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray 10" Pot or HB/3 Gallon, 7-9 (ppp), 4-6 (weeks), Autumn, PGR 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.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
PANSY <i>Viola x wittrockiana</i> Frizzle Sizzle F₁ Series	288	(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	5"/6"/1 Gallon , 3 (ppp), 6-8 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray 10" Pot or HB/3 Gallon , 7-9 (ppp), 6-8 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 4-6 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray 10" Pot or HB/3 Gallon , 7-9 (ppp), 4-6 (weeks), Autumn, PGR 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 <i>Viola x wittrockiana</i> Halloween II F₁	288	(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	Cell Pack , 1 (ppp), 5-6 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray Cell Pack , 1 (ppp), 3-4 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/2,500-5,000/500 ppm Spray Cell Pack , 1 (ppp), 3-4 (weeks), Autumn, PGR paclobutrazol 0.1-0.125 ppm Drench 4"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/2,500-5,000/500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Autumn, PGR 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 <i>Viola x wittrockiana</i> Matrix® F₁ Series	288	(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	Cell Pack , 1 (ppp), 4-5 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray Cell Pack , 1 (ppp), 4-5 (weeks), Autumn, PGR paclobutrazol 0.125 ppm Drench 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Autumn, PGR paclobutrazol 0.125 ppm Drench 10" Pot or HB/3 Gallon , 7-9 (ppp), 4-5 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions.
PANSY <i>Viola x wittrockiana</i> Panola® F₁ Series	288	(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	Cell Pack , 1 (ppp), 5-6 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray Cell Pack , 1 (ppp), 3-4 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray Cell Pack , 1 (ppp), 3-4 (weeks), Autumn, PGR paclobutrazol 0.1-0.125 ppm Drench 4"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Autumn, PGR 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 <i>Viola x wittrockiana</i> Panola® XP F₁ Series	288	(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	Cell Pack , 1 (ppp), 5-6 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/150-2,500/250 ppm Spray Cell Pack , 1 (ppp), 3-4 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/500-5,000/500 ppm Spray Cell Pack , 1 (ppp), 3-4 (weeks), Autumn, PGR paclobutrazol 0.1-0.125 ppm Drench 4"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 2,500/500-5,000/500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 3-4 (weeks), Autumn, PGR 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 <i>Viola x wittrockiana</i> Promise® F₁ Series	288	(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	Cell Pack , 1 (ppp), 6-7 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 6-7 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/500 ppm Spray 10" Pot or HB/3 Gallon , 7-9 (ppp), 6-7 (weeks), Early Spring, PGR 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 <i>Viola x wittrockiana</i> Spring Matrix F₁ Series	288	(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	Cell Pack , 1 (ppp), 6-7 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 6-7 (weeks), Early Spring, PGR daminozide/chlormequat chloride tank mix 1,500/500 ppm Spray 10" Pot or HB/3 Gallon , 7-9 (ppp), 6-7 (weeks), Early Spring, PGR 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.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
PENTAS <i>Pentas lanceolata</i> Butterfly F₁ Series	288	(day) 72-80°F (22-27°C) (night) 65-68°F (18-20°C)	6.5-6.8 pH 1.2-1.5 mmhos/cm	Day Neutral	Cell Pack , 1 (ppp), 8-10 (weeks), Spring 4"/4.5"/Quart , 1 (ppp), 8-10 (weeks), Spring 5"/6"/1 Gallon , 2 (ppp), 8-10 (weeks), Spring	High light levels and temperatures will reduce crop time. Pentas will naturally decrease pH levels in the soil and regular monitoring is necessary. Plants that have pH below 6.4 will slow growth, delay flowering, exhibit signs of iron toxicity (foliar necrosis) and calcium/magnesium deficiency (foliar puckering). When needed, a tank mix of daminozide 2,500-5,000 ppm and chlormequat 500 to 750 ppm can be used. Paclobutrazol sprays of 5-10 ppm are also effective.
PENTAS <i>Pentas lanceolata</i> Glitterati F₁ Series	288	(day) 72-80°F (22-27°C) (night) 65-68°F (18-20°C)	6.5-6.8 pH 1.2-1.5 mmhos/cm	Day Neutral	Cell Pack , 1 (ppp), 7-8 (weeks), Spring 4"/4.5"/Quart , 1 (ppp), 7-8 (weeks), Spring 5"/6"/1 Gallon , 2 (ppp), 7-8 (weeks), Spring	High light levels and temperatures will reduce crop time. Pentas will naturally decrease pH levels in the soil and regular monitoring is necessary. Plants that have pH below 6.4 will slow growth, delay flowering, exhibit signs of iron toxicity (foliar necrosis) and calcium/magnesium deficiency (foliar puckering). When needed, a tank mix of daminozide 2,500-5,000 ppm and chlormequat 500 to 750 ppm can be used. Paclobutrazol sprays of 5-10 ppm are also effective.
PENTAS <i>Pentas lanceolata</i> Lucky Star F₁ Series	288	(day) 72-80°F (22-27°C) (night) 62-65°F (17-18°C)	6.5-6.8 pH 1.2-1.5 mmhos/cm	Day Neutral	Cell Pack , 1 (ppp), 7-8 (weeks), Spring 4"/4.5"/Quart , 1 (ppp), 7-8 (weeks), Spring 5"/6"/1 Gallon , 2 (ppp), 7-8 (weeks), Spring	High light levels and temperatures will reduce crop time. Pentas will naturally decrease pH levels in the soil and regular monitoring is necessary. Plants that have pH below 6.4 will slow growth, delay flowering, exhibit signs of iron toxicity (foliar necrosis) and calcium/magnesium deficiency (foliar puckering). Growth Regulators: The Lucky Star series has been bred and selected for natural compactness. When needed, a tank mix of daminozide 2,500-5,000 ppm and chlormequat 500 to 750 ppm can be used. Paclobutrazol sprays of 5-10 ppm are also effective.
PETUNIA <i>Petunia x hybrida</i> Carpet F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.0-1.5 mmhos/cm	Facultative Long Day	Cell Pack , 1 (ppp), 4-5 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" Pot or HB/3 Gallon , 3 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray	
PETUNIA <i>Petunia x hybrida</i> Daddy® F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.3 pH 1.0-1.5 mmhos/cm	Facultative Long Day	Cell Pack , 1 (ppp), 5-6 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" Pot or HB/3 Gallon , 3 (ppp), 6-7 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray	
PETUNIA <i>Petunia x hybrida</i> Debonair Collection F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.0-1.5 mmhos/cm	Facultative Long Day All varieties can flower successfully at 10-hour daylengths	4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 10" Pot or HB/3 Gallon , 3 (ppp), 6-7 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 4"/4.5"/Quart , 1 (ppp), 3-5 (weeks), Summer, PGR paclobutrazol 2-3 ppm Drench	Avoid using daminozide on Black Cherry as this may impact flower colour. Options include paclobutrazol or flurprimidol.
PETUNIA <i>Petunia x hybrida</i> Dreams F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative Long Day	Cell Pack , 1 (ppp), 5-6 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" Pot or HB/3 Gallon , 3 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray	
PETUNIA <i>Petunia x hybrida</i> Ez Rider® F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative Long Day Similar to Dreams petunia, all Ez Rider varieties can flower successfully at 10-hour daylengths	Cell Pack , 1 (ppp), 5-6 (weeks), Spring 10" Pot or HB/3 Gallon , 3 (ppp), 6-7 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray	Genetically compact and needs less to no PGRs after transplant.
PETUNIA <i>Petunia x hybrida</i> Lo Rider® F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative Long Day All Lo Rider varieties can flower successfully at 10-hour daylengths.	Cell Pack , 1 (ppp), 5-6 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 10" Pot or HB/3 Gallon , 3 (ppp), 6-7 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray	Genetically compact and may need less to no PGRs after transplant.
PETUNIA <i>Petunia x hybrida</i> Madness® F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.0-1.5 mmhos/cm	Facultative Long Day	Cell Pack , 1 (ppp), 5-6 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" Pot or HB/3 Gallon , 3 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray	
PETUNIA <i>Petunia x hybrida</i> Mirage F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.0-1.5 mmhos/cm	Facultative Long Day	Cell Pack , 1 (ppp), 5-6 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" Pot or HB/3 Gallon , 3 (ppp), 5-7 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray	
PETUNIA <i>Petunia x hybrida</i> Pretty Flora F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative Long Day All varieties can flower successfully at 10-hour daylengths.	Cell Pack , 1 (ppp), 5-6 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 10" Pot or HB/3 Gallon , 3 (ppp), 6-7 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray	Genetically compact and needs less to no PGRs after transplant.
PETUNIA <i>Petunia x hybrida</i> Pretty Grand F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative Long Day Similar to Dreams petunia, all Pretty Grand varieties can flower successfully at 10-hour daylengths.	Cell Pack , 1 (ppp), 5-6 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 10" Pot or HB/3 Gallon , 3 (ppp), 6-7 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray	Genetically compact and needs less to no PGRs after transplant.
PETUNIA <i>Petunia x hybrida</i> Sophistica Collection F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative Long Day Can flower successfully at 10-hour daylengths. Crop time is 3 to 6 days faster under longer days.	4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 10" Pot or HB/3 Gallon , 3 (ppp), 6-7 (weeks), Spring, PGR paclobutrazol 2-3 ppm Drench 4"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Summer, PGR paclobutrazol 2-3 ppm Drench 10" Pot or HB/3 Gallon , 3 (ppp), 5-6 (weeks), Summer, PGR paclobutrazol 2-3 ppm Drench	Avoid using daminozide on Lime Bicolor and Blackberry as this may impact flower colour. Options include paclobutrazol or flurprimidol.


CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
PETUNIA <i>Petunia x hybrida</i> Supercascade F₁ Series	288	(day) 62-70°F (17-21°C) (night) 55-65°F (13-18°C)	5.5-6.2 pH 1.2-1.5 mmhos/cm	Facultative Long Day	Cell Pack, 1 (ppp), 5-6 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" Pot or HB/3 Gallon, 3 (ppp), 6-7 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray	
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Bonanza F₁ Series	288	(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	5"/6"/1 Gallon, 1 (ppp), 5-6 (weeks), Spring 5"/6"/1 Gallon, 2-3 (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. Controlling Height: Once plants are rooted to the sides of the containers they can be allowed to wilt prior to irrigation to provide some height control. Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen. Petunias are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF. Florel will promote lateral branching when applied once plants are established. Petunias respond to both B-Nine and Bonzi. A one time Bonzi drench is effective. Varieties may respond differently to growth regulators.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Double Cascade F₁ Series	288	(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	4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 2-3 (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. Controlling Height: Once plants are rooted to the sides of the containers they can be allowed to wilt prior to irrigation to provide some height control. Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen. Petunias are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF. Florel will promote lateral branching when applied once plants are established. Petunias respond to both B-Nine and Bonzi. A one time Bonzi drench is effective. Varieties may respond differently to growth regulators.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Double Madness® F₁ Series	288	(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	4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Spring 5"/6"/1 Gallon, 2-3 (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. Controlling Height: Once plants are rooted to the sides of the containers they can be allowed to wilt prior to irrigation to provide some height control. Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen. Petunias are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF. Florel will promote lateral branching when applied once plants are established. Petunias respond to both B-Nine and Bonzi. A one time Bonzi drench is effective. Varieties may respond differently to growth regulators.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Duo F₁ Series	288	(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	4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Spring 5"/6"/1 Gallon, 2-3 (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. Controlling Height: Once plants are rooted to the sides of the containers they can be allowed to wilt prior to irrigation to provide some height control. Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen. Petunias are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF. Florel will promote lateral branching when applied once plants are established. Petunias respond to both B-Nine and Bonzi. A one time Bonzi drench is effective. Varieties may respond differently to growth regulators.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Glorious F₁ Series	288	(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	4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 2-3 (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. Controlling Height: Once plants are rooted to the sides of the containers they can be allowed to wilt prior to irrigation to provide some height control. Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen. Petunias are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF. Florel will promote lateral branching when applied once plants are established. Petunias respond to both B-Nine and Bonzi. A one time Bonzi drench is effective. Varieties may respond differently to growth regulators.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Pirouette F₁ Series	288	(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	4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 2-3 (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. Controlling Height: Once plants are rooted to the sides of the containers they can be allowed to wilt prior to irrigation to provide some height control. Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen. Petunias are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF. Florel will promote lateral branching when applied once plants are established. Petunias respond to both B-Nine and Bonzi. A one time Bonzi drench is effective. Varieties may respond differently to growth regulators.
PETUNIA (DOUBLE) <i>Petunia x hybrida</i> Valentine F₁	288	(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	4"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon, 2-3 (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. Controlling Height: Once plants are rooted to the sides of the containers they can be allowed to wilt prior to irrigation to provide some height control. Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen. Petunias are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF. Florel will promote lateral branching when applied once plants are established. Petunias respond to both B-Nine and Bonzi. A one time Bonzi drench is effective. Varieties may respond differently to growth regulators.
PETUNIA (SPREADING) <i>Petunia x hybrida</i> Combo Blue F₁	288 128	(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 Minimum Daylength Required: 10.5 hours		See Plug & Play culture recommendations for finishing Combo Blue. Combo Blue is cold durable.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
PETUNIA (SPREADING) <i>Petunia x hybrida</i> Easy Wave® F1 Series	288 128	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Facultative Long Day Minimum Daylength Requirement By Variety: 10 hours: Berry Velour, Pink Passion, Burgundy Star, Coral Reef, Neon Rose, Red, Rosy Dawn, Silver, Violet, White, and Yellow 10.5 hours: Blue, Burgundy Velour 11 hours: Pink, Plum Vein, Red Velour	306 Pack , 1 (ppp), 6-7 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench 4"/4.5"/Quart , 1 (ppp), 6-7 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench 10" Pot or HB/3 Gallon , 3-4 (ppp), 8-9 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench 306 Pack , 1 (ppp), 4-5 (weeks), Summer, PGR paclobutrazol 3-5 ppm Drench 4"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Summer, PGR paclobutrazol 3-5 ppm Drench 10" Pot or HB/3 Gallon , 3-4 (ppp), 6-7 (weeks), Summer, PGR 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 ⁻² ·d ⁻¹ . Burgundy Velour, Plum Vein and Red Velour are more vigorous within the Easy Wave group. They can take higher rates of paclobutrazol, 1-2 ppm more. Cold Durable Varieties: Berry Velour, Blue, Burgundy Star, Burgundy Velour, Coral Reef, Neon Rose, Pink Passion, Pink, Plum Vein, Red, Red Velour, Silver, Violet, White, Yellow Cold Sensitive Variety: Rosy Dawn
PETUNIA (SPREADING) <i>Petunia x hybrida</i> Shock Wave® F1 Series	288 128	(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 Minimum Daylength Requirements By Variety: 10 hours: Coral Crush, Denim, Pink Shades, Red, Yellow 10.5 hours: Coconut, Pink Vein, Deep Purple, Rose	306 Pack , 1 (ppp), 5-6 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench 10" Pot or HB/3 Gallon , 3-4 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 3-5 ppm Drench 306 Pack , 1 (ppp), 4-5 (weeks), Summer, PGR paclobutrazol 3-5 ppm Drench 4"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Summer, PGR paclobutrazol 3-5 ppm Drench 10" Pot or HB/3 Gallon , 3-4 (ppp), 5-6 (weeks), Summer, PGR 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 ⁻² ·d ⁻¹ . Cold Durable Varieties: Coconut, Denim, Pink Shades, Pink Vein, Yellow Cold Sensitive Varieties: Coral Crush, Deep Purple, Red, Rose
PETUNIA (SPREADING) <i>Petunia x hybrida</i> Tidal Wave® F1 Series	288 128	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Facultative Long Day Minimum Daylength Requirement by Variety: 12 hours: Cherry, Hot Pink, Purple, Red Velour, Silver	5"/6"/1 Gallon , 1-3 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 5-8 ppm Drench 8"/2 Gallon , 1-3 (ppp), 6-8 (weeks), Spring, PGR paclobutrazol 5-8 ppm Drench 5"/6"/1 Gallon , 1-3 (ppp), 4-7 (weeks), Summer, PGR paclobutrazol 5-8 ppm Drench 8"/2 Gallon , 1-3 (ppp), 4-7 (weeks), Summer, PGR 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 ⁻² ·d ⁻¹ . Cold Durable Varieties: Red Velour, Silver
PETUNIA (SPREADING) <i>Petunia x hybrida</i> Wave® F1 Series	288 128	(day) 61-75°F (16-24°C) (night) 57-65°F (14-18°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Facultative Long Day Minimum Daylength Requirement by Variety: 11 hours: Blue 11.5 hours: Purple 12 hours: Lavender, Misty Lilac, Pink, Purple, Rose	5"/6"/1 Gallon , 1 (ppp), 7-9 (weeks), Spring, PGR paclobutrazol 5-8 ppm Drench 10" Pot or HB/3 Gallon , 3-4 (ppp), 8-10 (weeks), Spring, PGR paclobutrazol 5-8 ppm Drench 5"/6"/1 Gallon , 1 (ppp), 5-7 (weeks), Summer, PGR paclobutrazol 5-8 ppm Drench 10" Pot or HB/3 Gallon , 3-4 (ppp), 6-8 (weeks), Summer, PGR 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 ⁻² ·d ⁻¹ . Cold Durable Varieties: Blue, Lavender, Pink, Purple, Purple Classic, Rose
PHLOX <i>Phlox drummondii</i> 21st Century F1 Series	288	(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	306 Pack , 1 (ppp), 6 (weeks), Spring 4"/4.5"/Quart , 1 (ppp), 6 (weeks), Spring 5"/6"/1 Gallon , 3 (ppp), 7-8 (weeks), Spring	If necessary, paclobutrazol 7.5-20 ppm Spray can be applied. Application rate and frequency of applications depends upon growth rate. Daminozide 2,500 ppm Spray is also effective.
PHLOX <i>Phlox drummondii</i> Ethnie Series	288	(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	Cell Pack , 1 (ppp), 5-6 (weeks), Spring 4"/4.5"/Quart , 1 (ppp), 6-7 (weeks), Spring	If necessary, paclobutrazol 7.5-20 ppm Spray can be applied. Application rate and frequency of applications depends upon growth rate. Daminozide 2,500 ppm Spray is also effective.
PHLOX <i>Phlox drummondii</i> Grammy Pink & White F1	288	(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	306 Pack , 1 (ppp), 6 (weeks), Spring 4"/4.5"/Quart , 1 (ppp), 6 (weeks), Spring 5"/6"/1 Gallon , 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 <i>Phlox drummondii</i> Promise Series	288	(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	Cell Pack , 1 (ppp), 6-7 (weeks), Spring 4"/4.5"/Quart , 1 (ppp), 7-8 (weeks), Spring	If necessary, paclobutrazol 7.5-20 ppm Spray can be applied. Application rate and frequency of applications depends upon growth rate. Daminozide 2,500 ppm Spray is also effective.
PLECTRANTHUS <i>Plectranthus argentatus</i> Silver Crest	288	(day) 64-80°F (18-27°C) (night) 61-68°F (16-20°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Under short days plants will initiate flowers.	4"/4.5"/Quart , 1 (ppp), 4-6 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 10" Pot or HB/3 Gallon , 3 (ppp), 6-7 (weeks), Spring, PGR 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 <i>Plectranthus argentatus</i> Silver Shield	288	(day) 64-80°F (18-27°C) (night) 61-68°F (16-20°C)	5.8-6.2 pH 1.2-1.5 mmhos/cm	Under short days plants will initiate flowers.	4"/4.5"/Quart , 1 (ppp), 8-9 (weeks), Spring, PGR daminozide 2,500-5,000 ppm Spray 5"/6"/1 Gallon , 1-2 (ppp), 9-10 (weeks), Spring, PGR 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 <i>Portulaca grandiflora</i> Happy Hour F1 Series	288	(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	Day Neutral If transplanting plugs when daylength is shorter than 10 hours and 30 minutes, provide long day conditions.	Cell Pack , 36 (ppp), 5 (weeks), Spring 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Spring	PGRs are generally not needed unless grown under very warm conditions. Height can be controlled by allowing the soil to dry thoroughly between watering. Plants can be allowed to wilt slightly after the roots reach the side of the container. Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen.
PORTULACA <i>Portulaca grandiflora</i> Happy Trails F1 Series	288	(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	Day Neutral If transplanting plugs when daylength is shorter than 10 hours, provide long day conditions.	Cell Pack , 36 (ppp), 5 (weeks), Spring 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Spring	PGRs are generally not needed unless grown under very warm conditions. Height can be controlled by allowing the soil to dry thoroughly between watering. Plants can be allowed to wilt slightly after the roots reach the side of the container. 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	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
PRIMULA <i>Primula acaulis</i> Heritage Crème F₁	288	(day) 55-60°F (13-16°C) (night) 50-55°F (10-13°C)	5.5-6.2 pH 1.0-1.2 mmhos/cm	Facultative Long Day	5"/6"/1 Gallon, 1 (ppp), 15-17 (weeks), Autumn, PGR daminozide 2,500-5,000 ppm Spray	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.
PRIMULA <i>Primula acaulis</i> Optic F₁ Series	288	(day) 55-60°F (13-16°C) (night) 50-55°F (10-13°C)	5.5-6.2 pH 1.0-1.2 mmhos/cm	Facultative Long Day	4"/4.5"/Quart, 1 (ppp), 13-15 (weeks), Autumn, PGR daminozide 2,500-5,000 ppm Spray	Vernalization can be done when plants have 6 to 10 leaves and a well-established root system. Temperature below 50°F/10°C for 5 to 6 weeks is recommended to get uniform initiation of flower buds. After vernalization go back to recommended day and night temperatures. From bud visibility to first opening of flower is approximately 3 to 4 weeks, depending on temperatures. Although Optic series needs less cold to initiate flowers compare to competitive series. Vernalization is not necessary for flowering but will improve crop scheduling and uniformity. Keep plants away from botrytis. Plants are standing often in conditions with low temperatures and high humidity. To avoid Botrytis, make sure that the greenhouse is well-ventilated, and avoid watering and spraying on dark and cold days. It is best to water or spray early in the day on days with brighter light levels. Try to keep foliage of the plants dry as much as possible.
PRIMULA <i>Primula acaulis</i> Primlet® Series	288	(day) 55-60°F (13-16°C) (night) 50-55°F (10-13°C)	5.5-6.2 pH 1.0-1.2 mmhos/cm	Facultative Long Day	5"/6"/1 Gallon, 1 (ppp), 15-17 (weeks), Autumn, PGR daminozide 2,500-5,000 ppm Spray	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 <i>Portulaca oleracea</i> Toucan Series	288	(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	Cell Pack, 1 (ppp), 8-10 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 8-10 (weeks), Spring 5"/6"/1 Gallon, 2-3 (ppp), 8-10 (weeks), Spring	PGR treatment not needed if produced under low feed, dry watering and high-light conditions. If necessary, Topflor (flurprimidol) 30 ppm (7.9 ml/l, 0.38% formulation) spray can be used at 1 week after transplant. Repeat the spray 2 weeks later. Or Bonzi (paclobutrazol) 5 ppm (1.3 ml/l, 0.4% formulation) drench can be used at 1 week after transplant.
RUELLIA <i>Ruellia brittoniana</i> Southern Star Series	288	(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	Cell Pack, 1 (ppp), 10 (weeks), Late Spring 4"/4.5"/Quart, 1 (ppp), 10 (weeks), Late Spring 5"/6"/1 Gallon, 3 (ppp), 10 (weeks), Late Spring 5"/6"/1 Gallon, 3 (ppp), 8 (weeks), Summer	
SALVIA <i>Salvia splendens</i> Flare	288	(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	Cell Pack, 1 (ppp), 4-5 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring	Salvia is very sensitive to high salt during early plug stages.
SALVIA <i>Salvia splendens</i> Lighthouse Series	288	(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	Cell Pack, 1 (ppp), 4-5 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring	Salvia is very sensitive to high salt during early plug stages.
SALVIA <i>Salvia splendens</i> Red Hot Sally I I	288	(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	Cell Pack, 1 (ppp), 4-5 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring	Salvia is very sensitive to high salt during early plug stages.
SALVIA <i>Salvia splendens</i> Scarlet King	288	(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	Cell Pack, 1 (ppp), 4-5 (weeks), Spring	Salvia is very sensitive to high salt during early plug stages.
SALVIA <i>Salvia splendens</i> Vista Series	288	(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	Cell Pack, 1 (ppp), 4-5 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring	Salvia is very sensitive to high salt during early plug stages.
SCUTELLARIA <i>Scutellaria javanica</i> Veranda	288	(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	306 Pack, 1 (ppp), 7-10 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/1,000 ppm Spray 4"/4.5"/Quart, 1 (ppp), 8-11 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/1,000 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 9-12 (weeks), Spring, PGR daminozide/chlormequat chloride tank mix 2,500/1,000 ppm Spray	Heat-loving crop; crop time is very dependent on temperature.
SNAPDRAGON <i>Antirrhinum majus</i> Rocket F₁ Series	288	(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	Field grown, 3 (ppp), 13-16 (weeks), Spring	See also Cut Flower section for more details.
SNAPDRAGON <i>Antirrhinum majus</i> Snapshot F₁ Series	288	(day) 55-70°F (13-21°C) (night) 45-55°F (7-13°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Facultative Long Day	Cell Pack, 1 (ppp), 6 (weeks), Early Spring 4"/4.5"/Quart, 1 (ppp), 6 (weeks), Early Spring	Controlling Height: Once plants are rooted to the sides of the containers they can be allowed to dry slightly prior to irrigation. Withhold fertilizer, especially phosphorus and ammonium-form N. Snapdragons are responsive to day/night temperature differential (DIF) and are shorter with a negative DIF. When grown as recommended under cool temperatures and high light, no growth regulators should be needed. B-Nine, Bonzi and Sumagic are effective in controlling height in snapdragons, but may delay flowering and will lead to less uniform flowering time.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
SNAPDRAGON <i>Antirrhinum majus</i> Solstice F₁ Series	288	(day) 55-70°F (13-21°C) (night) 45-55°F (7-13°C)	5.5-6.2 pH 1.5-2.0 mmhos/cm	Facultative Long Day	Cell Pack, 1 (ppp), 4-6 (weeks), Early Spring 4"/4.5"/Quart, 1 (ppp), 4-6 (weeks), Early Spring 5"/6"/1 Gallon, 3 (ppp), 4-6 (weeks), Early Spring Cell Pack, 1 (ppp), 9-10 (weeks), Autumn 4"/4.5"/Quart, 1 (ppp), 9-10 (weeks), Autumn 5"/6"/1 Gallon, 3 (ppp), 9-10 (weeks), Autumn	
SPILANTHES <i>Acmella oleracea</i> Peek-A-Boo	288	(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"/4.5"/Quart, 1 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-30 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 7-8 (weeks), Spring, PGR paclobutrazol 15-30 ppm Spray	
STOCK <i>Matthiola incana</i> Vintage Series	288	(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"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring, PGR daminozide 2,500 ppm Spray	
TALINUM <i>Talinum paniculatum</i> Limón	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 5"/6"/1 Gallon, 3 (ppp), 4-5 (weeks), Spring	For flowers, add 2 weeks to Finish Crop Time.
TALINUM <i>Talinum paniculatum</i> Verde	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray 5"/6"/1 Gallon, 3 (ppp), 4-5 (weeks), Spring, PGR daminozide 2,500-3,500 ppm Spray	For flowers, add 2 weeks to Finish Crop Time.
THUNBERGIA <i>Thunbergia alata</i> Susie Series	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 8-10 (weeks), Spring	
THYMOPHYLLA <i>Thymophylla tenuiloba</i> Golden Dawn	288	(day) 55-65°F (13-18°C) (night) 50-60°F (10-16°C)	6.5 pH 0.75-1.2 mmhos/cm	Facultative Long Day	5"/6"/1 Gallon, 3 (ppp), 7-8 (weeks), Spring	
TORENIA <i>Torenia foemieri</i> Kauai Series	288	(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"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring, PGR chlormequat chloride 500-750 ppm Spray	No pinch needed. Growth Regulators: Cycocel (chlormequat) can be used at rate of 500-750ppm (4.2 to 6.4 ml/l 1.8% formulation or 0.7 to 1.0 g/l of 75% formulation) at two weeks after transplant, repeat as necessary. Bonzi (paclobutrazol) 20 to 30ppm (5.0 to 7.5 ml/l, 0.4% formulation) spray also works but slightly less effective than Cycocel. Avoid using B-Nine/Alar or tank mix of B-Nine/Cycocel as B-Nine will bleach flower colour to become less intense. B-Nine will also delay flower timing.
VERBENA <i>Verbena x hybrida</i> Quartz Series	288	(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	Growth Regulators: For warm climates B-Nine/Alar (daminozide) at 3,500 ppm applied as foliar spray or 2 applications of A-Rest (ancymidol) at 20 ppm as a foliar spray. For Northern European conditions 2 to 3 applications plus 3,200 B-Nine / Alar at 3,200 ppm plus Cycocel (chlormequat) at 375 ppm is recommended.
VERBENA <i>Verbena x hybrida</i> Quartz XP Series	288	(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	Growth Regulators: For warm climates B-Nine/Alar (daminozide) at 3,500 ppm applied as foliar spray or 2 applications of A-Rest (ancymidol) at 20 ppm as a foliar spray. For Northern European conditions 2 to 3 applications plus 3,200 B-Nine / Alar at 3,200 ppm plus Cycocel (chlormequat) at 375 ppm is recommended.
VINCA <i>Catharanthus roseus</i> Jams 'N Jellies Series	288	(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"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring	Keep light as high as possible (DLI = 12 moles·m ⁻² ·d ⁻¹) while maintaining optimal production temperatures. Maintain even moisture, avoid excessive media and foliage wetness as these conditions are favourable for disease incidence.
VINCA <i>Catharanthus roseus</i> Mediterranean Series	288	(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"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring 10" Pot or HB/3 Gallon, 7 (ppp), 12-14 (weeks), Spring 12" Pot or HB/5 Gallon, 9 (ppp), 12-14 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Summer 10" Pot or HB/3 Gallon, 7 (ppp), 8-10 (weeks), Summer 12" Pot or HB/5 Gallon, 9 (ppp), 8-10 (weeks), Summer	Keep light as high as possible (DLI = 12 moles·m ⁻² ·d ⁻¹) while maintaining optimal production temperatures. Maintain even moisture, avoid excessive media and foliage wetness as these conditions are favourable for disease incidence.
VINCA <i>Catharanthus roseus</i> Mediterranean XP Series	288	(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"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Spring 10" Pot or HB/3 Gallon, 7 (ppp), 12-14 (weeks), Spring 12" Pot or HB/5 Gallon, 9 (ppp), 12-14 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 5-6 (weeks), Summer 10" Pot or HB/3 Gallon, 7 (ppp), 8-10 (weeks), Summer 12" Pot or HB/5 Gallon, 9 (ppp), 8-10 (weeks), Summer	Keep light as high as possible (DLI = 12 moles·m ⁻² ·d ⁻¹) while maintaining optimal production temperatures. Maintain even moisture, avoid excessive media and foliage wetness as these conditions are favourable for disease incidence.
VINCA <i>Catharanthus roseus</i> Pacifica XP Series	288	(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"/4.5"/Quart, 1 (ppp), 6-7 (weeks), Spring	Keep light as high as possible (DLI = 12 moles·m ⁻² ·d ⁻¹) while maintaining optimal production temperatures. Maintain even moisture, avoid excessive media and foliage wetness as these conditions are favourable for disease incidence.
VINCA <i>Catharanthus roseus</i> Titan® F₁ Series	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring	Keep light as high as possible (DLI = 12 moles·m ⁻² ·d ⁻¹) while maintaining optimal production temperatures. Maintain even moisture, avoid excessive media and foliage wetness as these conditions are favourable for disease incidence.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
VINCA <i>Catharanthus roseus</i> Valiant F₁ Series	288	(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"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Spring	Keep light as high as possible (DLI = 12 moles-m ⁻² -d ⁻¹) while maintaining optimal production temperatures. Maintain even moisture, avoid excessive media and foliage wetness as these conditions are favourable for disease incidence.
VIOLA <i>Viola cornuta</i> Sorbet® F₁ Series	288	(day) 60°F (16°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5 mmhos/cm	Facultative Long Day	Cell Pack , 1 (ppp), 5-7 (weeks), Early Spring, PGR daminozide 1,500-2,500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 5-7 (weeks), Early Spring, PGR daminozide 1,500-2,500 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 5-7 (weeks), Early Spring, PGR daminozide 1,500-2,500 ppm Spray Cell Pack , 1 (ppp), 3 (weeks), Autumn, PGR daminozide 2,500-5,000 ppm Spray 4"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Autumn, PGR daminozide 2,500-5,000 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 3-4 (weeks), Autumn, PGR daminozide 2,500-5,000 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions.
VIOLA <i>Viola cornuta</i> Sorbet® XP F₁ Series	288	(day) 60°F (16°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5 mmhos/cm	Facultative Long Day	Cell Pack , 1 (ppp), 5-7 (weeks), Early Spring, PGR daminozide 1,500-2,500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 5-7 (weeks), Early Spring, PGR daminozide 1,500-2,500 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 5-7 (weeks), Early Spring, PGR daminozide 1,500-2,500 ppm Spray Cell Pack , 1 (ppp), 3 (weeks), Autumn, PGR daminozide 2,500-5,000 ppm Spray 4"/4.5"/Quart , 1 (ppp), 4-5 (weeks), Autumn, PGR daminozide 2,500-5,000 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 3-4 (weeks), Autumn, PGR daminozide 2,500-5,000 ppm Spray	Adjust PGR rates and frequency of application depending on local conditions.
ZINNIA <i>Zinnia marylandica</i> Double Zahara Series	288	(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	4"/4.5"/Quart , 1 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500-5,000 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500-5,000 ppm Spray 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Summer, PGR daminozide 3,500-5,000 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 5-6 (weeks), Summer, PGR daminozide 3,500-5,000 ppm Spray	Flowers will be more double, with more intense colour, when grown under high light levels.
ZINNIA <i>Zinnia angustifolia</i> Star Series	288	(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	Cell Pack , 1 (ppp), 5-6 (weeks), Spring 4"/4.5"/Quart , 1 (ppp), 6-7 (weeks), Spring	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.
ZINNIA <i>Zinnia elegans (syn. Zinnia violaceae)</i> State Fair Mixture	288	(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	4"/4.5"/Quart , 1 (ppp), 6-7 (weeks), Spring 5"/6"/1 Gallon , 1 (ppp), 7-8 (weeks), Spring	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.
ZINNIA <i>Zinnia marylandica</i> UpTown Series	288	(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	4"/4.5"/Quart , 1 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Summer, PGR daminozide 3,500 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 5-6 (weeks), Summer, PGR daminozide 3,500 ppm Spray	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.
ZINNIA <i>Zinnia marylandica</i> Zahara® Series	288	(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	4"/4.5"/Quart , 1 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Summer, PGR daminozide 3,500 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 5-6 (weeks), Summer, PGR daminozide 3,500 ppm Spray	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.
ZINNIA <i>Zinnia marylandica</i> Zahara® XL Series	288	(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	4"/4.5"/Quart , 1 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500 ppm Spray 4"/4.5"/Quart , 1 (ppp), 5-6 (weeks), Summer, PGR daminozide 3,500 ppm Spray 5"/6"/1 Gallon , 3 (ppp), 5-6 (weeks), Summer, PGR daminozide 3,500 ppm Spray	Avoid excessive moisture on plants and flowers. Monitor for Botrytis.



ANNUALS PROPAGATION GUIDE P. 6 / FINISHING GUIDE P. 44
POT PLANTS PROPAGATION GUIDE P. 114 / FINISHING GUIDE P. 130
CUT FLOWERS PROPAGATION GUIDE P. 140 / FINISHING GUIDE P. 148
HANDPICKED VEGETABLES & HERBS PROPAGATION GUIDE P. 158 / FINISHING GUIDE P. 170

perennials

KieftSeed

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
AQUILEGIA <i>Aquilegia vulgaris</i> Clementine Series	PRM	288	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	Spray after sowing preventively against fungi.
AQUILEGIA <i>Aquilegia x hybrida</i> Songbird F₁ Series	RAW	288	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) nights and 60°F (15°C) days; 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>Aquilegia x hybrida</i> Swan F₁ Series	RAW	288	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) nights and 60°F (15°C) days; 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>Aquilegia vulgaris</i> Winky Double Series	RAW	288	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>Aquilegia vulgaris</i> Winky Single Series	RAW	288	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	
ARABIS <i>Arabis blepharophylla</i> Spring Charm	RAW	288	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 from 7-8 true leaves onwards	
ARMERIA <i>Armeria pseudarmeria</i> Ballerina Series	RAW	288 128	6-8 13-15	2-4 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	For Mother's Day forcing: See Perennials Forcing Guide
BELLIS <i>Bellis perennis</i> Bellissima Series	PEL	512	5-6	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Use a medium covering of coarse-grade vermiculite to improve seedling uniformity.
CAMPANULA <i>Campanula carpatica</i> Rapido F₁ Series	PEL	288 128	7-10 12-13	4 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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	Avoid high EC in early plug stage - maximum 0.5 in Stages 1 and 2. Grow at less than 13 hours to keep vegetative. Spray damp-off fungicide. For forcing info: See Perennials Forcing Guide
COREOPSIS <i>Coreopsis grandiflora</i> Early Sunrise	PRM	288 128	5-7 7-8	1-2 2-4	Light cover	3-5	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	Critical Daylength: 14 hours For forcing info: See Perennials Forcing Guide 1-2 seeds for 288/4-6 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.

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
COREOPSIS <i>Coreopsis grandiflora</i> Sun Up	PRM	288 128	5-7 7-8	1 2-4	Light cover	3-5	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	Critical Daylength: 12 hours Short day (10 hours) bulk needed for forcing For forcing info: See Perennials Forcing Guide 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>Coreopsis grandiflora</i> Sunfire	PRM	288 128	5-7 7-8	1 2-4	Light cover	3-5	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	Critical Daylength: 13 hours Short day (at 10 hours) bulk needed for forcing For forcing info: See Perennials Forcing Guide 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).
COREOPSIS <i>Coreopsis grandiflora</i> SunKiss	PRM	288 128	5-7 7-8	1 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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	Critical Daylength: 12.5 hours Short day (at 10 hours) bulk needed for forcing For forcing info: See Perennials Forcing Guide 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>Delphinium x belladonna</i> Blue Donna	RAW	288	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No	For forcing info: See Perennials Forcing Guide Spray damp-off fungicide.
DELPHINIUM <i>Delphinium grandiflorum</i> Diamonds Blue F₁	RAW	288	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	For forcing info: See Perennials Forcing Guide Avoid low light conditions.
DELPHINIUM <i>Delphinium elatum</i> Guardian F₁ Series	RAW	288	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	For forcing info: See Perennials Forcing Guide Best germinated in germ chamber with 95-97% RH in Stage 1. Maximum EC in propagation: 1.0.
DIANTHUS <i>Dianthus barbatus interspecific</i> Bouquet F₁ Series	PEL	288	4-6	1	Yes	3-4	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	
DIANTHUS <i>Dianthus x barbatus interspecific</i> Rockin' Red F₁	PEL	288	4-6	1	Yes	3-4	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	No	For forcing info: See Perennials Forcing Guide

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
DIGITALIS <i>Digitalis purpurea</i> Dalmatian F1 Series	PEL	288 128	5-6 6-7	1 3	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	Critical Daylength: 14 hours Short day (10 hours) bulk needed for forcing For forcing info: See Perennials Forcing Guide Spray damp-off fungicide.
ECHINACEA <i>Echinacea x hybrida</i> Cheyenne Spirit	RAW	128 72	5-6 11-13	1 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 ⁻² -d ⁻¹ (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 ⁻² -d ⁻¹ (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 ⁻² -d ⁻¹ (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No - but beneficial	Forcing Protocol: Produce plug or liner to 2 fully mature leaf stage. At the 2 fully mature leaf stage, begin short day conditions. Continue short day conditions until plants reach at least 7 fully mature leaves. The 72 size for forcing reflects this schedule. For more forcing info: See Perennials Forcing Guide
ECHINACEA <i>Echinacea purpurea</i> PowWow® Series	RAW	128 72	5-6 11-13	1 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 ⁻² -d ⁻¹ (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 ⁻² -d ⁻¹ (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 ⁻² -d ⁻¹ (f) 100 to 175 ppm N - 0.7 to 1.2 EC	No - but beneficial	Forcing Protocol: Produce plug or liner to 2 fully mature leaf stage. At the 2 fully mature leaf stage, begin short day conditions. Continue short day conditions until plant reaches 7 fully mature leaves. The 72 size for forcing reflects this schedule. For more forcing info: See Perennials Forcing Guide
GAILLARDIA <i>Gaillardia x grandiflora</i> Mesa F1 Series	RAW	128 288	6-7 5-6	1 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	For forcing info: See Perennials Forcing Guide
GAURA <i>Gaura lindheimeri</i> Sparkle White	RAW	288	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	For forcing info: See Perennials Forcing Guide Gaura seed is a nutlet with 2-3 seeds, so plug cells may have greater than one seedling.
GYPSOPHILA <i>Gypsophila cerastioides</i> Pixie Splash	PRM	288	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 ⁻² -d ⁻¹ (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 ⁻² -d ⁻¹ (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 ⁻² -d ⁻¹	Yes - duration of 8 weeks; max 40°F (4°C)	Spray damp-off fungicide.
HEUCHERA <i>Heuchera x hybrida</i> Melting Fire	PEL	288 128	9-11 10-11	6-8 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 4-3 (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 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) 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	No - vernalization not needed when sold for foliage	For forcing info: See Perennials Forcing Guide Spray damp-off fungicide. This variety is slower to germinate, in 2-3 flushes. Regarding Multi-Sow: note that single sow is possible in 510 trays, for example, with transplant into 128 trays. Grading is needed before transplant. Melting Fire is an alternative for Tissue Culture varieties (i.e., Crimson Curls) and is an economical approach already being applied commercially.
HEUCHERA <i>Heuchera micrantha</i> Palace Purple	PEL	288 128	6-8 8-9	4 6	No	7-10	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 4-3 (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 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) 2,500-3,500 f.c. (26,900-37,700 Lux) (f) Less than 100 ppm N - Less than 0.7 EC	No - vernalization not needed when sold for foliage	For forcing info: See Perennials Forcing Guide Spray damp-off fungicide. NOTE: Palace Purple is quicker to produce as a plug and finished plant than Melting Fire.

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>Hibiscus moscheutos</i> Luna F1 Series	RAW	288 128	3-4 4	1 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 results below 41°F (5°C)	For forcing info: See Perennials Forcing Guide 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>Iberis sempervirens</i> Whiteout	RAW	288	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>Lavandula stoechas</i> Bandera Series	RAW	288 128	6-7 7-8	1 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 plants should not need PGRs in plug production. If needed, use B-Nine (daminozide) spray 2,500 ppm. High pH (> 6.8) causes chlorosis. For forcing info: See Perennials Forcing Guide See Lavender Scheduling Tool at panamseed.com for finishing schedules by region.
LAVANDULA <i>Lavandula angustifolia</i> Ellagance Series	PRM	288 128	6-8 8-9	4 6	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	Short day (maximum 11 hours) bulk needed for forcing For forcing info: See Perennials Forcing Guide See Lavender Scheduling Tool at panamseed.com for finishing schedules by region. 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>Lavandula angustifolia</i> Lavance Deep Purple	PRM	288 128	6-8 8-9	4 6	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	(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	For forcing info: See Perennials Forcing Guide See Lavender Scheduling Tool at panamseed.com for finishing schedules by region. 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>Lavandula angustifolia</i> Mini Blue	PRM	288	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.
LAVANDULA <i>Lavandula multifida</i> Spanish Eyes	RAW	288	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)	(m) Level 2 (t) 60-65°F (16-18°C) (l) 2,000-2,500 f.c. (21,500-26,900 Lux) (p) daminozide 1,500-2,500 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 1,500-2,500 ppm Spray	No	Spray preventive fungicide against damping off. Grow in an active growing climate.
LOBELIA <i>Lobelia x speciosa</i> Starship F1 Series	PEL	288	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	Critical Daylength: 13 hours Short day (10 hours) bulk needed for forcing. Spring Forcing for Week 19 sales: Use 72 plug Fall forcing for Week 36 sales: Use 288 plug For more forcing info: See Perennials Forcing Guide 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>Lobelia x speciosa</i> Vulcan Red	PEL	288	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.
MYOSOTIS <i>Myosotis sylvatica</i> Mon Amie Blue	RAW	288	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>Nepeta nervosa</i> Blue Moon	RAW	288	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>Nepeta nervosa</i> Pink Cat	RAW	288	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.
PAPAYER <i>Papaver nudicaule</i> Champagne Bubbles F1 Series	PRM	288	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.

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
PENSTEMON <i>Penstemon x mexicali</i> Carillo Series	RAW	288 128	6-8 7-8	3-4 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	(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 3 (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/10°C ADT). For info on forcing for Mother's Day (Week 19): See Perennials Forcing Guide
PENSTEMON <i>Penstemon heterophyllus</i> Electric Blue	RAW	288	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.
PEROVSKIA <i>Perovskia atriplicifolia</i> Blue Steel	RAW	288 128	5-9 6-10	1 2-3	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,500 ppm Spray	No	Light Accumulator, Daylength Neutral For forcing info: See Perennials Forcing Guide 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. *For larger (2 gallon and up) containers, plugs do not need to be pinched during plug production or after transplant. Instead, use a stronger PGR, B-Nine at 5,000 ppm 1 or 2 applications at 2-3 weeks after transplant.
RUDBECKIA <i>Rudbeckia fulgida var. sullivantii</i> Goldsturm	PRM	288 72	6-8 14	2 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	Annual program for late Summer flowering: provide 10-hour short days. Bulk from 2 true leaves (approximately 4 weeks after sowing) until 10 true leaves for more uniform flowering. Step up 288 plugs into 72 or 50 cell, maintaining 10-hour short days. For forcing info: See Perennials Forcing Guide
SALVIA <i>Salvia nemorosa (superba)</i> New Dimension Series	COT	288 128	5-6 7	4 4-6	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	Critical Daylength: 14 hours Short day (10 hours) bulk needed for forcing For forcing info: See Perennials Forcing Guide Spray damp-off fungicide.
SALVIA <i>Salvia patens</i> Patio Series	RAW	288 128	5-6 7	1 2-3	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	Short day (10 hours) bulk needed for forcing For forcing info: See Perennials Forcing Guide

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
SAXIFRAGA <i>Saxifraga x arendsii</i> Rocco Red	PEL	288	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>Scabiosa columbaria</i> Blue Note	RAW	288 128	6-8 8-9	2-3 4-5	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	Short day (10 hours) bulk needed for forcing and minimum temperature of 62-65°F (17-18°C) for 6 weeks. For forcing info: See Perennials Forcing Guide Spray damp-off fungicide.
SCABIOSA <i>Scabiosa japonica var. alpina</i> Pink Diamonds	RAW	288 128	6-8 8-9	2-3 4-5	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	Short day (10 hours) bulk needed for forcing and minimum temperature of 62-65°F (17-18°C) for 6 weeks. For forcing info: See Perennials Forcing Guide Spray damp-off fungicide.
SILENE <i>Silene alpestris</i> Starry Dreams	RAW	288	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.
VERBASCUM <i>Verbascum x hybrida</i> Southern Charm	RAW	288	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>Verbena bonariensis</i> Buenos Aires	PRM	288 128	6-7 8	4 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	For forcing info: See Perennials Forcing Guide Spray damp-off fungicide. Grow relatively dry after Stage 1.
VERBENA <i>Verbena rigida</i> Santos Purple	PRM	288 128	6-7 8	4 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	For forcing info: see Perennials Forcing Guide Spray damp-off fungicide.
VERONICA <i>Veronica spicata</i> Blue Bouquet	PEL	288	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	DAYLENGTH	VERNALIZATION REQUIRED	FINISHING PROGRAMS FOR ANNUAL AND OVERWINTER PRODUCTION	KEY TIPS
AQUILEGIA <i>Aquilegia vulgaris</i> Clementine Series	3-8	288	(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 Aquilegia is a day-neutral plant after vernalization. Long days of 14 hours or longer could stimulate stem elongation and slightly hasten flowering after the vernalization period.	Yes - duration of 10-12 weeks; juvenility min. 10-12 true leaves	Overwinter, 5"/6"/1 Gallon , 1-3 (ppp), 32-40 (weeks), Spring PGR daminozide 1,500-2,500 ppm Spray Overwinter, 8"/2 Gallon , 4-6 (ppp), 32-40 (weeks), Spring PGR daminozide 1,500-2,500 ppm Spray	Keep RH at optimum 65%. Outside crops can be forced indoors at 54 to 59°F (12 to 15°C).
AQUILEGIA <i>Aquilegia x hybrida</i> Songbird F₁ Series	3-9	288	(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	Day Neutral Aquilegia is a day-neutral plant after vernalization. Long days of 14 hours or longer could stimulate stem elongation and slightly hasten flowering after the vernalization period.	Yes - but vernalization temperature can go as high as 55°F (13°C) nights and 60°F (15°C) days; 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, 5"/6"/1 Gallon , 1 (ppp), 22-28 (weeks), Spring PGR daminozide/ancymidol tank mix 2,500/10 ppm Spray Overwinter, 5"/6"/1 Gallon , 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>Aquilegia x hybrida</i> Swan F₁ Series	3-9	288	(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	Day Neutral Aquilegia is a day-neutral plant after vernalization. Long days of 14 hours or longer could stimulate stem elongation and slightly hasten flowering after the vernalization period.	Yes - but vernalization temperature can go as high as 55°F (13°C) nights and 60°F (15°C) days; 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, 5"/6"/1 Gallon , 1 (ppp), 22-28 (weeks), Spring PGR daminozide/ancymidol tank mix 2,500/10 ppm Spray Overwinter, 5"/6"/1 Gallon , 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>Aquilegia vulgaris</i> Winky Double Series	3-8	288	(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 Aquilegia is a day-neutral plant after vernalization. Long days of 14 hours or longer could stimulate stem elongation and slightly hasten flowering after the vernalization period.	Yes - duration of 8-10 weeks; juvenility min. 10-12 true leaves	Overwinter, 4"/4.5"/Quart , 1-2 (ppp), 32-40 (weeks), Spring PGR daminozide 1,250-2,500 ppm Spray Overwinter, 5"/6"/1 Gallon , 2-4 (ppp), 32-40 (weeks), Spring PGR daminozide 1,250-2,500 ppm Spray	Keep RH at optimum 65%. Outside crops can be forced indoors at 54 to 59°F (12 to 15°C).
AQUILEGIA <i>Aquilegia vulgaris</i> Winky Single Series	3-8	288	(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 Aquilegia is a day-neutral plant after vernalization. Long days of 14 hours or longer could stimulate stem elongation and slightly hasten flowering after the vernalization period.	Yes - duration of 8-10 weeks; juvenility min. 10-12 true leaves	Overwinter, 4"/4.5"/Quart , 1-2 (ppp), 32-40 (weeks), Spring PGR daminozide 1,250-2,500 ppm Spray Overwinter, 5"/6"/1 Gallon , 2-4 (ppp), 32-40 (weeks), Spring PGR daminozide 1,250-2,500 ppm Spray	Keep RH at optimum 65%. Outside crops can be forced indoors at 54 to 59°F (12 to 15°C).
ARABIS <i>Arabis blepharophylla</i> Spring Charm	4-7	288	(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	Day Neutral	Yes - duration of 8-10 weeks from 7-8 true leaves onwards	Overwinter, 5"/6"/1 Gallon , 1 (ppp), 28-34 (weeks), Early Spring	Well-drained soil. Dislikes winter wet. Moderate fertilization.
ARMERIA <i>Armeria pseudarmeria</i> Ballerina Series	7-9	288 128*	(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"/4.5"/Quart , 1 (ppp), 12-15 (weeks), Spring PGR paclobutrazol 5 ppm Spray Annual, 5"/6"/1 Gallon , 1 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 5 ppm Spray Annual, 5"/6"/1 Gallon , 3-5 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 5 ppm Spray Annual, 5"/6"/1 Gallon , 3-5 (ppp), 12-15 (weeks), Spring PGR paclobutrazol 5 ppm Spray Overwinter, 5"/6"/1 Gallon , 1 (ppp), 26-34 (weeks), Spring PGR paclobutrazol 5 ppm Spray Overwinter, 5"/6"/1 Gallon , 3-5 (ppp), 26-34 (weeks), Spring PGR paclobutrazol 5 ppm Spray	Prevent Mg and Fe deficiency. Avoid planting plugs too deep (crown below soil surface) and growing wet in plug and finished stages.
BELLIS <i>Bellis perennis</i> Bellissima Series	4-7	512	(day) 60-65°F (16-18°C) (night) 40-45°F (4-7°C)	5.5-6.4 pH 1.1-1.3 mmhos/cm	Day Neutral	No	Annual, 306 Pack , 1 (ppp), 6-8 (weeks), Autumn PGR daminozide 1,000-2,000 ppm Spray Annual, 306 Pack , 1 (ppp), 6-8 (weeks), Winter PGR daminozide 1,000-2,000 ppm Spray Overwinter, 5"/6"/1 Gallon , 1 (ppp), 16-24 (weeks), Early Spring PGR daminozide 1,000-2,000 ppm Spray	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.

* Preferred plug size for forcing culture

CLASS/SERIES	HARDINESS ZONE	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	VERNALIZATION REQUIRED	FINISHING PROGRAMS FOR ANNUAL AND OVERWINTER PRODUCTION	KEY TIPS
CAMPANULA <i>Campanula carpatica</i> Rapido F₁ Series	3-9	288 128*	(day) 65-68°F (18-20°C) (night) 55-60°F (13-16°C)	5.6-6.2 pH 1.0-1.3 mmhos/cm	Obligate Long Day Long day required (14 hours or 4-hour NI) until buds are visible.	No	Annual, 4"/4.5"/Quart, 1 (ppp), 12-14 (weeks), Late Spring PGR chlormequat chloride 750 ppm Spray Annual, 4"/4.5"/Quart, 1 (ppp), 12-14 (weeks), Late Spring PGR daminozide 2,000-2,500 ppm Spray Annual, 4"/4.5"/Quart, 1 (ppp), 9-12 (weeks), Summer PGR chlormequat chloride 750 ppm Spray Annual, 4"/4.5"/Quart, 1 (ppp), 9-12 (weeks), Summer PGR daminozide 2,000-2,500 ppm Spray Annual, 5"/6"/1 Gallon, 3-5 (ppp), 12-14 (weeks), Late Spring PGR chlormequat chloride 750 ppm Spray Annual, 5"/6"/1 Gallon, 3-5 (ppp), 12-14 (weeks), Late Spring PGR daminozide 2,000-2,500 ppm Spray Annual, 5"/6"/1 Gallon, 3-5 (ppp), 9-12 (weeks), Summer PGR chlormequat chloride 750 ppm Spray Annual, 5"/6"/1 Gallon, 3-5 (ppp), 9-12 (weeks), Summer PGR daminozide 2,000-2,500 ppm Spray	Moist, well-drained medium. Growing too cool delays both plug and finished plant. Long day Summer decreases plant bulk. Use more plugs per container compared to Spring.
COREOPSIS <i>Coreopsis grandiflora</i> Early Sunrise	4-9	288 128*	(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	Obligate Long Day Long day required - minimum 14 hours	No	Annual, 4"/4.5"/Quart, 1 (ppp), 11-13 (weeks), Summer PGR daminozide 5,000 ppm Spray Annual, 5"/6"/1 Gallon, 1-3 (ppp), 12-13 (weeks), Summer PGR daminozide 5,000 ppm Spray Forcing, 5"/6"/1 Gallon, 1-3 (ppp), 12-13 (weeks), Late Spring, ADT 68°F (20°C) PGR daminozide 2,500-5,000 ppm Spray Forcing, 5"/6"/1 Gallon, 1-3 (ppp), 11-12 (weeks), Autumn, ADT 72°F (22°C) PGR daminozide 2,500-5,000 ppm Spray	Apply PGRs when buds are visible.
COREOPSIS <i>Coreopsis grandiflora</i> Sun Up	4-9	288 128*	(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	Obligate Long Day Long day required - minimum 12 hours	No	Forcing, 4"/4.5"/Quart, 1 (ppp), 9 (weeks), Late Spring, ADT 68°F (20°C) PGR daminozide 2,500-5,000 ppm Spray Annual, 4"/4.5"/Quart, 1 (ppp), 8-9 (weeks), Summer, ADT 68°F (20°C) PGR daminozide 5,000 ppm Spray Forcing, 5"/6"/1 Gallon, 1-3 (ppp), 9-11 (weeks), Late Spring, ADT 68°F (20°C) PGR daminozide 2,500-5,000 ppm Spray Annual, 5"/6"/1 Gallon, 1-3 (ppp), 10-11 (weeks), Summer PGR daminozide 5,000 ppm Spray	Apply PGRs when buds are visible.
COREOPSIS <i>Coreopsis grandiflora</i> Sunfire	4-9	288 128*	(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	Obligate Long Day Long day required - minimum 13 hours	No	Annual, 4"/4.5"/Quart, 1 (ppp), 9-11 (weeks), Summer PGR daminozide 5,000 ppm Spray Forcing, 4"/4.5"/Quart, 1 (ppp), 10-11 (weeks), Late Spring, ADT 68°F (20°C) PGR daminozide 2,500-5,000 ppm Spray Forcing, 5"/6"/1 Gallon, 1-3 (ppp), 10-12 (weeks), Late Spring, ADT 68°F (20°C) PGR daminozide 2,500-5,000 ppm Spray Forcing, 5"/6"/1 Gallon, 1-3 (ppp), 10-12 (weeks), Autumn, ADT 72°F (22°C) PGR daminozide 2,500-5,000 ppm Spray Annual, 5"/6"/1 Gallon, 1-3 (ppp), 10-11 (weeks), Summer PGR daminozide 5,000 ppm Spray	Apply PGRs when buds are visible.
COREOPSIS <i>Coreopsis grandiflora</i> SunKiss	4-9	288 128*	(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	Obligate Long Day Long day required - minimum 12.5 hours	No	Annual, 4"/4.5"/Quart, 1 (ppp), 9-10 (weeks), Summer, ADT 72°F (22°C) PGR daminozide 5,000 ppm Spray Forcing, 4"/4.5"/Quart, 1 (ppp), 9-10 (weeks), Late Spring, ADT 72°F (22°C) PGR daminozide 2,500-5,000 ppm Spray Forcing, 4"/4.5"/Quart, 1 (ppp), 10-11 (weeks), Autumn, ADT 72°F (22°C) PGR daminozide 2,500-5,000 ppm Spray Annual, 5"/6"/1 Gallon, 1-3 (ppp), 10-11 (weeks), Summer, ADT 72°F (22°C) PGR daminozide 5,000 ppm Spray Forcing, 5"/6"/1 Gallon, 1-3 (ppp), 10-11 (weeks), Autumn, ADT 72°F (22°C) PGR daminozide 2,500-5,000 ppm Spray Forcing, 5"/6"/1 Gallon, 1-3 (ppp), 10-11 (weeks), Late Spring, ADT 72°F (22°C) PGR daminozide 2,500-5,000 ppm Spray	Apply PGRs when buds are visible.
DELPHINIUM <i>Delphinium x belladonna</i> Blue Donna	5-9	288	(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, 5"/6"/1 Gallon, 1-3 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 20 ppm Spray Annual, 5"/6"/1 Gallon, 1-3 (ppp), 11-13 (weeks), Spring PGR paclobutrazol 20 ppm Spray	See Cut Flower section for cut flower production for both field and greenhouse. Monitor for powdery mildew.

* Preferred plug size for forcing culture

CLASS/SERIES	HARDINESS ZONE	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	VERNALIZATION REQUIRED	FINISHING PROGRAMS FOR ANNUAL AND OVERWINTER PRODUCTION	KEY TIPS
DELPHINIUM <i>Delphinium grandiflorum</i> Diamonds Blue F₁	4-9	288	(day) 65-70°F (18-21°C) (night) 55-63°F (13-17°C)	5.6-6.2 pH 1.5-2.0 mmhos/cm	Day Neutral	No	Annual, 5"/6"/1 Gallon, 1-3 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 20 ppm Spray Annual, 5"/6"/1 Gallon, 1-3 (ppp), 12-14 (weeks), Spring PGR paclobutrazol 20 ppm Spray Annual, 8"/2 Gallon, 3 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 20 ppm Spray Annual, 8"/2 Gallon, 3 (ppp), 12-14 (weeks), Spring 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>Delphinium elatum</i> Guardian F₁ Series	4-7	288	(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	Annual, 5"/6"/1 Gallon, 1 (ppp), 11-13 (weeks), Summer PGR paclobutrazol 20 ppm Spray Annual, 5"/6"/1 Gallon, 1 (ppp), 12-16 (weeks), Spring PGR paclobutrazol 20 ppm Spray	PGRs: 2 Bonzi sprays, the first approximately 3 weeks after transplant and the second approximately 2 weeks later. Possible third application may be necessary, subject to conditions. Delphinium are especially sensitive to powdery mildew; spray preventively if necessary. Ship and sell latest with flower spike one third open to decrease risk of petal shattering. See Cut Flower section for more details on cut flower production. Container production: PGR Bonzi (paclobutrazol) 1 or 2 applications 20 ppm spray
DIANTHUS <i>Dianthus barbatus interspecific</i> Bouquet F₁ Series	4-8	288	(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 Long day beneficial	No	Annual, 4"/4.5"/Quart, 1 (ppp), 9-10 (weeks), Spring PGR paclobutrazol 15-20 ppm Spray Annual, 5"/6"/1 Gallon, 1-3 (ppp), 9-10 (weeks), Spring PGR paclobutrazol 15-20 ppm Spray Annual, 5"/6"/1 Gallon, 3 (ppp), 8-9 (weeks), Autumn PGR paclobutrazol 15-20 ppm Spray Annual, 10" Pot or HB/3 Gallon, 4 (ppp), 8-9 (weeks), Autumn PGR paclobutrazol 15-20 ppm Spray	3-4 applications of PGRs are needed to produce in quart or gallon containers.
DIANTHUS <i>Dianthus x barbatus interspecific</i> Rockin' Red F₁	5-8	288	(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 Long day beneficial	No	Annual, 4"/4.5"/Quart, 1 (ppp), 9-10 (weeks), Spring PGR paclobutrazol 15-20 ppm Spray Annual, 5"/6"/1 Gallon, 1-3 (ppp), 9-10 (weeks), Spring PGR paclobutrazol 15-20 ppm Spray Annual, 5"/6"/1 Gallon, 3 (ppp), 8-9 (weeks), Autumn PGR paclobutrazol 15-20 ppm Spray Annual, 10" Pot or HB/3 Gallon, 4 (ppp), 8-9 (weeks), Autumn PGR paclobutrazol 15-20 ppm Spray	3-4 applications of PGRs are needed to produce in quart or gallon containers.
DIGITALIS <i>Digitalis purpurea</i> Dalmatian F₁ Series	5-9	288 128*	(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	Facultative Long Day Daylength: 14 hours	No	Annual, 5"/6"/1 Gallon, 1-2 (ppp), 10-12 (weeks), Summer, ADT 68°F (20°C) PGR uniconazole 5 ppm Spray Annual, 5"/6"/1 Gallon, 1-2 (ppp), 10-12 (weeks), Summer, ADT 68°F (20°C) PGR daminozide 2,500-3,500 ppm Spray Forcing, 5"/6"/1 Gallon, 1-2 (ppp), 12-13 (weeks), Late Spring, ADT 68°F (20°C) PGR daminozide 2,500-3,500 ppm Spray Forcing, 5"/6"/1 Gallon, 1-2 (ppp), 12-13 (weeks), Late Spring, ADT 68°F (20°C) PGR paclobutrazol 5-10 ppm Spray Annual, 5"/6"/1 Gallon, 1-2 (ppp), 10-12 (weeks), Summer, ADT 68°F (20°C) PGR paclobutrazol 5-10 ppm Spray Forcing, 5"/6"/1 Gallon, 1-2 (ppp), 12-13 (weeks), Late Spring, ADT 68°F (20°C) PGR daminozide 2,500-3,500 ppm Spray Forcing, 8"/2 Gallon, 3-4 (ppp), 12-13 (weeks), Late Spring, ADT 68°F (20°C) PGR uniconazole 5 ppm Spray Forcing, 8"/2 Gallon, 3-4 (ppp), 12-13 (weeks), Late Spring, ADT 68°F (20°C) PGR daminozide 2,500-3,500 ppm Spray Annual, 8"/2 Gallon, 3-4 (ppp), 10-12 (weeks), Summer PGR paclobutrazol 5-10 ppm Spray Annual, 8"/2 Gallon, 3-4 (ppp), 10-12 (weeks), Summer PGR uniconazole 5 ppm Spray Annual, 8"/2 Gallon, 3-4 (ppp), 10-12 (weeks), Summer PGR daminozide 2,500-3,000 ppm Spray Forcing, 8"/2 Gallon, 3-4 (ppp), 12-13 (weeks), Late Spring, ADT 68°F (20°C) PGR paclobutrazol 5-10 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.

* Preferred plug size for forcing culture

CLASS/SERIES	HARDINESS ZONE	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	VERNALIZATION REQUIRED	FINISHING PROGRAMS FOR ANNUAL AND OVERWINTER PRODUCTION	KEY TIPS
ECHINACEA <i>Echinacea x hybrida</i> Cheyenne Spirit	4-10	128 72*	(day) 65-75°F (18-24°C) (night) 60-65°F (16-18°C)	5.8-6.5 pH 1.5-2.0 mmhos/cm	Short Day-Long Day Best plant structure comes with short day conditions (12 hours or less) until 7-mature leaf stage, then long days. For forcing info: See Perennials Forcing Guide	No - but beneficial	Overwinter, 5"/6"/1 Gallon , 1-3 (ppp), 30-34 (weeks), Late Spring, ADT 72°F (22°C) Annual, 5"/6"/1 Gallon , 1-3 (ppp), 13-17 (weeks), Late Spring, ADT 72°F (22°C) Forcing, 5"/6"/1 Gallon , 1-3 (ppp), 9-11 (weeks), Late Summer, ADT 72°F (22°C)	
ECHINACEA <i>Echinacea purpurea</i> PowWow® Series	4-10	128 72*	(day) 65-75°F (18-24°C) (night) 60-65°F (16-18°C)	5.8-6.5 pH 1.5-2.0 mmhos/cm	Short Day-Long Day Best plant structure comes with short day conditions (12 hours or less) until 7-mature leaf stage, then long days. See Bulking Strategy details.	No - but beneficial	Overwinter, 5"/6"/1 Gallon , 1-3 (ppp), 30-34 (weeks), Late Spring, ADT 72°F (22°C) Forcing, 5"/6"/1 Gallon , 1-3 (ppp), 9-11 (weeks), Late Summer, ADT 72°F (22°C) Annual, 5"/6"/1 Gallon , 1-3 (ppp), 13-17 (weeks), Late Spring, ADT 72°F (22°C)	
GAILLARDIA <i>Gaillardia x grandiflora</i> Mesa F1 Series	5-10	128 288*	(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	Forcing, 4"/4.5"/Quart , 1 (ppp), 9-11 (weeks), Late Summer, ADT 72°F (22°C) Annual, 4"/4.5"/Quart , 1 (ppp), 10-14 (weeks), Late Spring, ADT 68°F (20°C)	PGRs are generally not necessary if grown cooler. If necessary, apply daminozide 2,500 to 5,000 ppm spray.
GAURA <i>Gaura lindheimeri</i> Sparkle White	5-9	288	(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 daylength of 13 hours	No	Annual, 4"/4.5"/Quart , 1 (ppp), 7-8 (weeks), Spring PGR daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray Annual, 5"/6"/1 Gallon , 1 (ppp), 8-9 (weeks), Spring PGR daminozide/chlormequat chloride tank mix 2,500/750-2,500/1,000 ppm Spray Annual, 5"/6"/1 Gallon , 1-3 (ppp), 8-9 (weeks), Spring PGR 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 (13°C); add 4 to 5 weeks crop time. See GrowerFacts for more details on overwintered production.
GYPSOPHILA <i>Gypsophila cerastioides</i> Pixie Splash	4-7	288	(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)	Overwinter, 4"/4.5"/Quart , 1 (ppp), 26-40 (weeks), Spring	Well-drained soil. Dislikes wet Winter soils. 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>Heuchera x hybrida</i> Melting Fire	5-8	288 128*	(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	Day Neutral	No - vernalization not needed when sold for foliage	Forcing, 4"/4.5"/Quart , 1 (ppp), 11-12 (weeks), Late Spring, ADT 68°F (20°C) Forcing, 4"/4.5"/Quart , 1 (ppp), 11-12 (weeks), Autumn, ADT 68°F (20°C) Overwinter, 5"/6"/1 Gallon , 1 (ppp), 28-36 (weeks), Spring Overwinter, 5"/6"/1 Gallon , 1-3 (ppp), 30-36 (weeks), Spring Forcing, 5"/6"/1 Gallon , 1-3 (ppp), 13-14 (weeks), Late Spring, ADT 68°F (20°C) Forcing, 5"/6"/1 Gallon , 1-3 (ppp), 12-13 (weeks), Autumn, ADT 68°F (20°C)	Do not plant plugs too deep. Keep plug surface at the same level as the media surface. Avoid wet and overly dry. Needs well-drained medium.
HEUCHERA <i>Heuchera micrantha</i> Palace Purple	4-7	288 128*	(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	Day Neutral	No - vernalization not needed when sold for foliage	Forcing, 4"/4.5"/Quart , 1 (ppp), 10-11 (weeks), Late Spring, ADT 68°F (20°C) Forcing, 4"/4.5"/Quart , 1 (ppp), 9-10 (weeks), Autumn, ADT 68°F (20°C) Forcing, 5"/6"/1 Gallon , 1-2 (ppp), 10-11 (weeks), Autumn, ADT 68°F (20°C) Overwinter, 5"/6"/1 Gallon , 1 (ppp), 26-32 (weeks), Spring Overwinter, 5"/6"/1 Gallon , 1-3 (ppp), 28-32 (weeks), Spring Forcing, 5"/6"/1 Gallon , 1-2 (ppp), 11-12 (weeks), Late Spring, ADT 68°F (20°C)	Do not plant plugs too deep. Keep plug surface at the same level as the media surface. Grow relatively dry. Needs well-drained medium.
HIBISCUS <i>Hibiscus moscheutos</i> Luna F1 Series	5-9	288 128*	(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	Facultative Long Day Long day min. 12 hours; optimum 14 hours or longer	No - damage to plugs results below 41°F (5°C)	Annual, 4"/4.5"/Quart , 1 (ppp), 10-13 (weeks), Summer PGR daminozide/chlormequat chloride tank mix 750-2,500 ppm Spray Annual, 5"/6"/1 Gallon , 1 (ppp), 10-13 (weeks), Summer PGR 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 PGRs may be needed; option is Bonzi 0.5 ppm drench. High light will promote branching and reduce plant height. Spacing when plants touch each other is highly recommended
IBERIS <i>Iberis sempervirens</i> Whiteout	3-8	288	(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.	Overwinter, 4"/4.5"/Quart , 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>Lavandula stoechas</i> Bandera Series	7-10	288 128*	(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	Facultative Long Day See Lavender Scheduling Tool at panamseed.com for finishing schedules by region. Long Day Beneficial, but will flower in Short Days	No	Annual, 4"/4.5"/Quart , 1 (ppp), 12-14 (weeks), Spring Overwinter, 4"/4.5"/Quart , 1 (ppp), 24-32 (weeks), Early Spring Annual, 5"/6"/1 Gallon , 1-3 (ppp), 12-14 (weeks), 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.

* Preferred plug size for forcing culture

CLASS/SERIES	HARDINESS ZONE	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	VERNALIZATION REQUIRED	FINISHING PROGRAMS FOR ANNUAL AND OVERWINTER PRODUCTION	KEY TIPS
LAVANDULA <i>Lavandula angustifolia</i> Ellagance Series	5-8	288 128*	(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	Facultative Long Day See Lavender Scheduling Tool at panamseed.com for finishing schedules by region. Long day beneficial	No	Overwinter, 4"/4.5"/Quart , 1 (ppp), 28-36 (weeks), Spring PGR daminozide 2,000-3,000 ppm Spray Annual, 4"/4.5"/Quart , 1 (ppp), 9-12 (weeks), Late Spring PGR daminozide 2,000-3,000 ppm Spray Annual, 5"/6"/1 Gallon , 3-5 (ppp), 9-12 (weeks), Late Spring PGR 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, approximately 4 weeks before dormant period or in Spring just before regrowth.
LAVANDULA <i>Lavandula angustifolia</i> Lavance Deep Purple	5-8	288 128*	(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	Obligate Short Day See Lavender Scheduling Tool at panamseed.com for finishing schedules by region. Long day required	No		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 Lavender Scheduling Tool at panamseed.com for finishing schedules by region. For overwintered production, cut back just below top foliage; do this mid-Autumn, approximately 4 weeks before dormant period or in Spring just before regrowth.
LAVANDULA <i>Lavandula angustifolia</i> Mini Blue	5-8	288	(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	Facultative Long Day Long day beneficial	No	Annual, 5"/6"/1 Gallon , 1 (ppp), 10-12 (weeks), Summer PGR daminozide 2,000-3,000 ppm Spray Annual, 5"/6"/1 Gallon , 3-5 (ppp), 10-12 (weeks), Summer PGR daminozide 2,000-3,000 ppm Spray Overwinter, 5"/6"/1 Gallon , 1 (ppp), 32-36 (weeks), Spring PGR 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, approximately 4 weeks before dormant period or in Spring just before regrowth.
LAVANDULA <i>Lavandula multifida</i> Spanish Eyes	7-10	288	(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	Facultative Long Day Long day	No	Annual, 4"/4.5"/Quart , 1 (ppp), 12-14 (weeks), Summer PGR daminozide 2,000-3,000 ppm Spray Annual, 8"/2 Gallon , 3-5 (ppp), 12-15 (weeks), Summer PGR 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.
LOBELIA <i>Lobelia x speciosa</i> Starship F1 Series	6-10	288	(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	Obligate Long Day Long day plants. Scarlet flowers faster at 13 hours or longer. Deep Rose requires 13 hours or longer for flowering. See Perennials Forcing Guide for more info on scheduling and plug size and treatments. Forcing for Summer and Autumn sales target Weeks 25 or later. Sow Week 15 to 17, using 288 trays. Grow plugs under 10-hour short-day conditions using black cloth until ready to transplant. Allow about 8 to 9 weeks during Summer production. After short-day treatment, transplant to final container and grow under natural long days. Outdoor production is recommended. Total crop time is approximately 19 to 20 weeks.	No	Annual, 4"/4.5"/Quart , 1 (ppp), 13-17 (weeks), Summer PGR paclobutrazol 30 ppm Spray Annual, 4"/4.5"/Quart , 1 (ppp), 13-17 (weeks), Summer PGR uniconazole 5 ppm Spray Annual, 5"/6"/1 Gallon , 2-3 (ppp), 13-17 (weeks), Summer PGR paclobutrazol 30 ppm Spray Annual, 5"/6"/1 Gallon , 2-3 (ppp), 13-17 (weeks), Summer PGR uniconazole 5 ppm Spray Forcing, 5"/6"/1 Gallon , 2-3 (ppp), 11-13 (weeks), Spring, ADT 68°F (20°C) Forcing, 5"/6"/1 Gallon , 2-3 (ppp), 9-10 (weeks), Autumn, ADT 68°F (20°C) Forcing, 8"/2 Gallon , 4-6 (ppp), 9-10 (weeks), Autumn, ADT 68°F (20°C) Forcing, 8"/2 Gallon , 4-6 (ppp), 11-13 (weeks), Spring, ADT 68°F (20°C)	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>Lobelia x speciosa</i> Vulcan Red	6-10	288	(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	Obligate Long Day Long day required - minimum 14 hours	No	Annual, 4"/4.5"/Quart , 1 (ppp), 14-19 (weeks), Summer PGR paclobutrazol 30 ppm Spray Annual, 4"/4.5"/Quart , 1 (ppp), 14-19 (weeks), Summer PGR uniconazole 5 ppm Spray Annual, 5"/6"/1 Gallon , 2-3 (ppp), 14-19 (weeks), Summer PGR paclobutrazol 30 ppm Spray Annual, 5"/6"/1 Gallon , 2-3 (ppp), 14-19 (weeks), Summer PGR 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.

* Preferred plug size for forcing culture

CLASS/SERIES	HARDINESS ZONE	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	VERNALIZATION REQUIRED	FINISHING PROGRAMS FOR ANNUAL AND OVERWINTER PRODUCTION	KEY TIPS
MYOSOTIS <i>Myosotis sylvatica</i> Mon Amie Blue	6-8	288	(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	Overwinter, 4"/4.5"/Quart , 1 (ppp), 16-22 (weeks), Early Spring PGR daminozide/chlormequat chloride tank mix 3,500-750 ppm Spray Annual, 4"/4.5"/Quart , 1 (ppp), 7-9 (weeks), Spring PGR daminozide/chlormequat chloride tank mix 3,500-750 ppm Spray	Maintain low pH. Mysotis suffer from chlorosis at high pH. Grow like <i>Primula acaulis</i> . See GrowerFacts for details on how to mitigate chlorosis caused by high pH.
NEPETA <i>Nepeta nervosa</i> Blue Moon	4-7	288	(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	Facultative Long Day Long day beneficial	No	Annual, 4"/4.5"/Quart , 1 (ppp), 8-12 (weeks), Late Spring PGR daminozide 2,500 ppm Spray Annual, 5"/6"/1 Gallon , 2-3 (ppp), 8-12 (weeks), Late Spring PGR daminozide 2,500 ppm Spray	Grow relatively dry. Prevent Mg and Fe deficiencies. Monitor for Botrytis, downy mildew and aphids.
NEPETA <i>Nepeta nervosa</i> Pink Cat	4-7	288	(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	Facultative Long Day Long day beneficial	No	Annual, 4"/4.5"/Quart , 1 (ppp), 8-12 (weeks), Late Spring PGR daminozide 2,500 ppm Spray Annual, 5"/6"/1 Gallon , 2-3 (ppp), 8-12 (weeks), Late Spring PGR daminozide 2,500 ppm Spray	Grow relatively dry. Prevent Mg and Fe deficiencies. Monitor for Botrytis, downy mildew and aphids.
PAPAVER <i>Papaver nudicaule</i> Champagne Bubbles F₁ Series	4-8	288	(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	Annual, 4"/4.5"/Quart , 1 (ppp), 5-10 (weeks), Late Spring Annual, 5"/6"/1 Gallon , 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>Penstemon x mexicali</i> Carillo Series	5-7	288 128*	(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	Facultative Long Day Critical daylength 13 hrs. For more info: See Perennials Forcing Guide	No	Annual, 4"/4.5"/Quart , 1 (ppp), 12-14 (weeks), Late Spring PGR daminozide 1,500-2,500 ppm Spray Annual, 4"/4.5"/Quart , 1 (ppp), 12-14 (weeks), Summer PGR daminozide 1,500-2,500 ppm Spray Annual, 5"/6"/1 Gallon , 2-3 (ppp), 12-14 (weeks), Late Spring PGR daminozide 1,500-2,500 ppm Spray Annual, 5"/6"/1 Gallon , 2-3 (ppp), 12-14 (weeks), Summer PGR 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.
PENSTEMON <i>Penstemon heterophyllus</i> Electric Blue	6-8	288	(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 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)	Annual, 4"/4.5"/Quart , 1 (ppp), 11-13 (weeks), Summer Annual, 4"/4.5"/Quart , 1 (ppp), 12-14 (weeks), Late Spring Annual, 5"/6"/1 Gallon , 2-3 (ppp), 11-13 (weeks), Summer Annual, 5"/6"/1 Gallon , 2-3 (ppp), 12-14 (weeks), Late Spring	Bulking prior to vernalization ensures pot-fill and improves flowering uniformity. Monitor for white flies.
PEROVSKIA <i>Perovskia atriplicifolia</i> Blue Steel	4-9	288 128*	(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	Day Neutral Light accumulator - higher light levels increase development and finish	No	Annual, 4"/4.5"/Quart , 1 (ppp), 9-10 (weeks), Summer PGR daminozide 2,500-3,000 ppm Spray Annual, 4"/4.5"/Quart , 1 (ppp), 11-13 (weeks), Late Spring, ADT 68°F (20°C) PGR daminozide 2,500-3,000 ppm Spray Annual, 4"/4.5"/Quart , 1 (ppp), 9-10 (weeks), Autumn, ADT 68°F (20°C) PGR daminozide 2,500-3,000 ppm Spray Annual, 5"/6"/1 Gallon , 1-3 (ppp), 10-11 (weeks), Summer PGR daminozide 2,500-3,000 ppm Spray Annual, 5"/6"/1 Gallon , 1-3 (ppp), 12-14 (weeks), Late Spring, ADT 68°F (20°C) PGR daminozide 2,500-3,000 ppm Spray Annual, 5"/6"/1 Gallon , 1-3 (ppp), 10-11 (weeks), Autumn, ADT 68°F (20°C) PGR daminozide 2,500-3,000 ppm Spray Annual, 8"/2 Gallon , 3-5 (ppp), 13-15 (weeks), Late Spring PGR daminozide 5,000 ppm Spray Annual, 8"/2 Gallon , 3-5 (ppp), 11-13 (weeks), Autumn, ADT 68°F (20°C) PGR daminozide 5,000 ppm Spray Annual, 8"/2 Gallon , 3-5 (ppp), 11-13 (weeks), Summer, ADT 68°F (20°C) PGR daminozide 5,000 ppm Spray	Needs active growing climate with highest possible light levels. Optimum larger than 15 Mol per m ² 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 Northwest Europe: add 2 to 3 weeks 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 weeks after transplant, above 4 to 5 leaf node pairs. NOTE: Pinch not needed for larger (2 gallon and up) containers. Instead, use higher B-Nine concentration 5,000 ppm for 1-2 applications, the first 2-3 weeks after transplant.
RUDBECKIA <i>Rudbeckia fulgida</i> var. <i>sullivantii</i> Goldsturm	3-9	288 72*	(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	Obligate Long Day SD-LD, so combination of SD and LD needed, comparable to Echinacea flowering reaction For forcing info: see Perennials Forcing Guide	No	Annual, 4"/4.5"/Quart , 1 (ppp), 16-23 (weeks), Summer PGR paclobutrazol 20-30 ppm Spray Annual, 4"/4.5"/Quart , 1 (ppp), 16-23 (weeks), Summer PGR uniconazole 5-10 ppm Spray Annual, 5"/6"/1 Gallon , 2-3 (ppp), 16-24 (weeks), Summer PGR paclobutrazol 20-30 ppm Spray Annual, 5"/6"/1 Gallon , 2-3 (ppp), 16-24 (weeks), Summer PGR uniconazole 5-10 ppm Spray Overwinter, 5"/6"/1 Gallon , 1 (ppp), 32-34 (weeks), Summer PGR uniconazole 5-10 ppm Spray Overwinter, 8"/2 Gallon , 3-5 (ppp), 32-34 (weeks), Summer PGR paclobutrazol 20-30 ppm Spray	Relative 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. For Autumn forcing info: See Perennials Forcing Guide

* Preferred plug size for forcing culture

CLASS/SERIES	HARDINESS ZONE	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	VERNALIZATION REQUIRED	FINISHING PROGRAMS FOR ANNUAL AND OVERWINTER PRODUCTION	KEY TIPS
SALVIA <i>Salvia nemorosa (superba)</i> New Dimension Series	4-8	288 128*	(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	Facultative Long Day For forcing info: See Perennials Forcing Guide	No	Annual, 4"/4.5"/Quart, 1 (ppp), 7-9 (weeks), Summer PGR daminozide 1,500-2,000 ppm Spray Annual, 4"/4.5"/Quart, 1 (ppp), 8-11 (weeks), Late Spring PGR daminozide 1,500-2,000 ppm Spray Overwinter, 5"/6"/1 Gallon, 1 (ppp), 24-28 (weeks), Spring PGR daminozide 1,500-2,000 ppm Spray Annual, 5"/6"/1 Gallon, 3-4 (ppp), 7-9 (weeks), Summer PGR daminozide 1,500-2,000 ppm Spray Annual, 5"/6"/1 Gallon, 3-4 (ppp), 8-11 (weeks), Late Spring PGR daminozide 1,500-2,000 ppm Spray Overwinter, 8"/2 Gallon, 3-5 (ppp), 24-28 (weeks), Spring PGR 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>Salvia patens</i> Patio Series	8-10	288 128*	(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	Facultative Long Day Long day beneficial For more info: See Perennials Forcing Guide	No	Annual, 4"/4.5"/Quart, 1 (ppp), 7-11 (weeks), Late Spring PGR daminozide 1,500-2,000 ppm Spray Annual, 5"/6"/1 Gallon, 3-4 (ppp), 7-11 (weeks), Late Spring PGR 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>Saxifraga x arendsii</i> Rocco Red	4-7	288	(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)	Overwinter, 4"/4.5"/Quart, 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>Scabiosa columbaria</i> Blue Note	5-9	288 128*	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 1.1-1.3 mmhos/cm	Day Neutral	No	Annual, 4"/4.5"/Quart, 1 (ppp), 12-14 (weeks), Late Spring Overwinter, 4"/4.5"/Quart, 1 (ppp), 26-34 (weeks), Spring Annual, 5"/6"/1 Gallon, 3-4 (ppp), 12-14 (weeks), Late Spring	Needs high light, low RH. Grow relatively dry. Prevent Mg and Fe deficiency. Early Spring forcing needs increased temperature during 6 weeks at 62-65°F (17-18°C), no long days. For forcing info for Mother's Day: See Perennials Forcing Guide
SCABIOSA <i>Scabiosa japonica var. alpina</i> Pink Diamonds	5-9	288 128*	(day) 65-68°F (18-20°C) (night) 60-65°F (16-18°C)	5.8-6.2 pH 1.1-1.3 mmhos/cm	Day Neutral	No	Annual, 4"/4.5"/Quart, 1 (ppp), 12-14 (weeks), Late Spring Overwinter, 4"/4.5"/Quart, 1 (ppp), 26-34 (weeks), Spring Annual, 5"/6"/1 Gallon, 3-4 (ppp), 12-14 (weeks), Late Spring	Needs high light, low RH. Grow relatively dry. Prevent Mg and Fe deficiency. Early Spring forcing needs increased temperature during 6 weeks at 62-65, no long days. For forcing info for Mother's Day: See Perennials Forcing Guide
SILENE <i>Silene alpestris</i> Starry Dreams	5-8	288	(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	Annual, 4"/4.5"/Quart, 1 (ppp), 10-14 (weeks), Late Spring PGR daminozide 2,000-2,500 ppm Spray Annual, 5"/6"/1 Gallon, 3-4 (ppp), 10-14 (weeks), Late Spring PGR daminozide 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.
VERBASCUM <i>Verbascum x hybrida</i> Southern Charm	5-8	288	(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	Annual, 5"/6"/1 Gallon, 1 (ppp), 12-14 (weeks), Summer	Flowering more uniform under high light conditions.
VERBENA <i>Verbena bonariensis</i> Buenos Aires	7-9	288 128	(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	Facultative Long Day For forcing info: See Perennials Forcing Guide	No	Annual, 4"/4.5"/Quart, 1 (ppp), 11-13 (weeks), Late Spring Annual, 5"/6"/1 Gallon, 1-3 (ppp), 10-11 (weeks), Autumn, ADT 68°F (20°C) PGR daminozide 2,500-5,000 ppm Spray	Primarily sold green. Grow dry and light. Relatively high fertilization. Avoid high N. Prevent Mg and Fe deficiency.
VERBENA <i>Verbena rigida</i> Santos Purple	7-11	288 128*	(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	Facultative Long Day For forcing info: See Perennials Forcing Guide	No	Annual, 4"/4.5"/Quart, 1 (ppp), 11-14 (weeks), Late Spring PGR daminozide/chlormequat chloride tank mix 2,000-2,500 ppm Spray Annual, 4"/4.5"/Quart, 1 (ppp), 11-14 (weeks), Late Spring PGR daminozide 2,000-2,500 ppm Spray Annual, 5"/6"/1 Gallon, 3-4 (ppp), 10-13 (weeks), Summer PGR daminozide/chlormequat chloride tank mix 2,000-750 ppm Spray Annual, 5"/6"/1 Gallon, 3-4 (ppp), 10-13 (weeks), Summer PGR daminozide 2,000-2,500 ppm Spray Annual, 5"/6"/1 Gallon, 3-4 (ppp), 11-14 (weeks), Late Spring PGR daminozide/chlormequat chloride tank mix 2,000-750 ppm Spray Annual, 5"/6"/1 Gallon, 3-4 (ppp), 11-14 (weeks), Late Spring PGR daminozide 2,000-2,500 ppm Spray	Grow dry and light. Relatively high fertilization. Avoid high N. Prevent Mg and Fe deficiency.
VERONICA <i>Veronica spicata</i> Blue Bouquet	5-8	288	(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	Annual, 5"/6"/1 Gallon, 1 (ppp), 14-18 (weeks), Summer	

* Preferred plug size for forcing culture

FORCING GUIDE FOR FIRST YEAR FLOWERING PERENNIALS FOR 2 MAJOR DATES IN NORTH AMERICA* (QUICK ANNUAL CYCLE)																			
GENUS	SPECIES	SERIES/VARIETY	USDA HARDINESS ZONE	FORCING FOR SPRING (WEEK 19)						FORCING FOR FALL (WEEK 36)						PLUGS PER POT			
				IDEAL SOWING WEEK	PLUG SIZE*	PLUG BULKED UNDER NATURAL SD OR <=12 HR GROW WEEKS	SUPPLEMENTAL LD (14 HR OR NI) REQUIRED AFTER TRANSPLANT**	FINISH UNDER PROPER DAYLENGTH (H) AND ADT (J) GROW WEEKS	FINISH ADT (*F/°C)	IDEAL SOWING WEEK	PLUG SIZE	PLUG SD BULKING REQUIRED	PLUG GROW WEEKS	FINISH UNDER NATURAL LD AND ADT 72-75°F/22-24°C GROW WEEKS	1 QT	1 GAL	2 GAL	3 GAL (FALL)	
ARMERIA	<i>pseudarmeria</i>	Ballerina	7-9	49	288	7	No	15	60/16	-	-	-	-	-	1	3	-	-	
CAMPANULA	<i>carpatica</i>	Rapido	3-9	48-49	288	10	Yes	12-13	65/18	-	-	-	-	-	1	3-5	-	-	
COREOPSIS	<i>grandiflora</i>	Early Sunrise	4-9	49-50	128	8	Yes	12-13	68/20	-	-	-	-	-	1	1-3	3-5	-	
COREOPSIS	<i>grandiflora</i>	Sun Up	4-9	1-2	128	8	No	9-11	68/20	-	-	-	-	-	1	1-3	3-5	-	
COREOPSIS	<i>grandiflora</i>	Sunfire	4-9	51-52	128	8	Yes	10-12	68/20	22	128	No	6-7	7	1	1-3	3-5	4-6	
COREOPSIS	<i>grandiflora</i>	SunKiss	4-9	51-52	128	8	Yes	10-11	68/20	22	128	No	6-7	7	1	1-3	3-5	4-6	
DELPHINIUM	<i>elatum</i>	Guardian	4-7	51-52	288	6-7	No	14	65/18	-	-	-	-	-	1	1	3	-	
DELPHINIUM	<i>belladonna</i>	Blue Donna	5-9	51-52	288	6-8	No	13	65/18	-	-	-	-	-	1	1	3	-	
DELPHINIUM	<i>grandiflorum</i>	Diamonds Blue	4-9	51-52	288	7	No	14	65/18	-	-	-	-	-	1	1-3	3	-	
DIANTHUS	<i>barbatus interspecific</i>	Rockin' Red	4-9	1-2	288	5	No	13	60/16	22	288	No	5	8	1	3	3	4	
DIANTHUS	<i>barbatus</i>	Dash	6	1-2	288	5	No	13	60/16	22	288	No	5	8-9	1	1	3	4	
DIANTHUS	<i>barbatus</i>	Sweet	6	1-2	288	5	No	13	60/16	-	-	-	-	-	1	1	3	-	
DIANTHUS	<i>barbatus interspecific</i>	Dynasty	6	1-2	288	5	No	13	60/16	24	288	No	5	6	1	1	3	4	
DIANTHUS	<i>barbatus interspecific</i>	Jolt	7	1-2	288	5	No	13	68/20	19-20	288	No	5	9-10	1	1	3	4	
DIANTHUS	<i>chinensis x barbatus</i>	Corona	5	3-4	288	5	No	11	60/16	-	-	-	-	-	1	3	-	-	
DIGITALIS	<i>purpurea</i>	Dalmatian	5-9	52-1	128	7	Yes	12-13	60/16	-	-	-	-	-	-	1	2-3	-	
ECHINACEA	<i>hybrida</i>	Cheyenne Spirit	4-10	45-46	288 to 72+	13-15 weeks; SD from 2 to 7 true leaves	Yes	12	68/20	14-16	288 to 72+	Yes	11 weeks; SD from 2 to 7 true leaves	8-9	1	1	3	4	
ECHINACEA	<i>purpurea</i>	PowWow	4-10	45-46	288 to 72+	13-15 weeks; SD from 2 to 7 true leaves	Yes	12	68/20	14-16	288 to 72+	Yes	11 weeks; SD from 2 to 7 true leaves	8-9	1	1	3	4	
GAILLARDIA	<i>grandiflora</i>	Mesa Bright Bicolor	5-10	52-1	128	7	Yes	12	68/20	21	288	No	5	8-9	1	1	2	3	
GAILLARDIA	<i>grandiflora</i>	Mesa Yellow	5-10	52-1	128	7	Yes	12	68/20	19	288	No	5	10-11	1	1	2	3	
GAILLARDIA	<i>grandiflora</i>	Mesa Peach	5-10	52-1	128	7	Yes	12	68/20	-	-	-	-	-	1	1	2	3	
GAILLARDIA	<i>grandiflora</i>	Mesa Red	5-10	52-1	128	7	Yes	12	68/20	21	288	No	5	8-9	1	1	2	3	
GAURA	<i>lindheimeri</i>	Sparkle White	5b-9	2-3	128	8	Yes	8	68/20	22	288	No	4	7-8	1	1	3	4	
HEUCHERA	<i>micrantha</i>	Palace Purple	4-7	47-48	288	10-11	No	11-12	60/16	15-16	128	No	8	10-11	1	3	4	5	
HEUCHERA	<i>hybrida</i>	Melting Fire	5-8	46-47	288	10-11	No	13-14	60/16	12-14	128	No	9-11	12-13	1	3	4	5	
HIBISCUS	<i>moscheutos</i>	Luna	5-9	-	-	-	-	-	-	21	128	No	4	9-10	1	1	1	1	
LAVANDULA	<i>angustifolia</i>	Ellagance Purple & Pink	5-8	46-47	128	9	Yes	10-11	60/16 Needs high light in South regions	-	-	-	-	-	1	3	-	-	
LAVANDULA	<i>angustifolia</i>	Lavance Deep Purple	5-8	-	-	-	-	-	-	20	128	No	6	8-9	1	3	4	5	
LAVANDULA	<i>stoechas</i>	Bandera	7-10	46-47	288	7	No	12-14	60/16	-	-	-	-	-	1	2	-	-	
LOBELIA	<i>speciosa</i>	Starship	6-10	45-46	288 to 72+	13-15 weeks; 10-hour SD bulk to 10 leaves	Yes	11-12	68/20	14-16	288	Yes	9-10 weeks; 10-hour SD to 6 true leaves	10-11	1	1	3	4	
ORIGANUM	<i>hybrida</i>	Kirigami	5b-9	52-1	128	6-7	Yes	11-13	68/20	19-20	128	No	5	10-11	1	1	3	-	
PENSTEMON	<i>mexicali</i>	Carillo	5-7	52-1	128	7-8	Yes	10-11	65/18	-	-	-	-	-	1	2-3	3-5	-	
PEROVSKIA	<i>atriplicifolia</i>	Blue Steel	4-9	48-49	128	6-8	No	10-14	65/18 Needs low RH and high light in South regions	19-20	128	No	6-7	9-10	1	3	4	5	
RUDBECKIA	<i>fulgida</i>	Goldsturm	3-9	-	-	-	-	-	-	8-9	288 to 50+	Yes	14 weeks; SD from 2 to 10 true leaves	12-13	-	1	1	3	
SALVIA	<i>nemorosa</i>	New Dimension	4-8	1-2	128	7	Yes	10-11	65/18	-	-	-	-	-	1	3	5	-	
SALVIA	<i>patens</i>	Patio	8-10	1-2	128	7	Yes	10-11	65/18	-	-	-	-	-	1	3	5	-	
SCABIOSA	<i>columbaria</i>	Blue Note	5-9	49-51	128	8-9	No	12-14	60/16	-	-	-	-	-	1	3	-	-	
SCABIOSA	<i>japonica</i>	Pink Diamonds	5-9	49-51	128	8-9	No	12-14	60/16	-	-	-	-	-	1	3	-	-	
VERBENA	<i>bonariensis</i>	Buenos Aires	7-9	-	-	-	-	-	-	18-19	128	No	8	10-11	-	1	2	3	
VERBENA	<i>rigida</i>	Santos Purple	7-11	49-50	128	8	No	13-14	65/18 Needs high light in South regions	19-20	128	No	8	9-11	1	1	2	3	

SD = Short Day (12 hours or shorter, except Lobelia is 10 hours)
LD = Long Day
ADT = Average Daily Temperature

* Schedule indicated is based on Midwest Region of the United States trial data and may change based on your local/regional climate. Please trial to re-confirm finish crop times before beginning commercial production.
** If yes, supplemental long day lighting should start after transplanting until visible bud or visible knot stage.



ANNUALS PROPAGATION GUIDE P. 6 / FINISHING GUIDE P. 44

PERENNIALS PROPAGATION GUIDE P. 82 / FINISHING GUIDE P. 96 / FORCING GUIDE P. 110

CUT FLOWERS PROPAGATION GUIDE P. 140 / FINISHING GUIDE P. 148

HANDPICKED VEGETABLES & HERBS PROPAGATION GUIDE P. 158 / FINISHING GUIDE P. 170

pot plants

PanAmerican Seed®

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
EXACUM <i>Exacum affine</i> Princess Series	PEL	288	5-6	1	No	4-5	5.2-5.6 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Light (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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Water adequately to dissolve the pellet. To bench germ: Make sure trays are watered. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 7-8 days. Keep reemay wet. Remove reemay after another 1-2 days. PGRs are not necessary. Sticky traps for pests are recommended.
EXACUM <i>Exacum affine</i> Royal Dane Series	PEL	288	5-6	1	No	4-5	5.2-5.6 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Light (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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Water adequately to dissolve the pellet. To bench germ: Make sure trays are watered. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 7-8 days. Keep reemay wet. Remove reemay after another 1-2 days. PGRs are not necessary. Sticky traps for pests are recommended.
EXACUM <i>Exacum affine</i> Supreme	PEL	288	5-6	1	No	4-5	5.2-5.6 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 72-75°F (22-24°C) (l) Light (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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 225 to 300 ppm N - 1.5 to 2.0 EC	Water adequately to dissolve the pellet. To bench germ: Make sure trays are watered. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 7-8 days. Keep reemay wet. Remove reemay after another 1-2 days. PGRs are not necessary. Sticky traps for pests are recommended.
GERBERA <i>Gerbera jamesonii</i> Mega Revolution Series	COT	128	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) 6-8 mol·m ⁻² ·d ⁻¹ , 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 ⁻² ·d ⁻¹ , 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 ⁻² ·d ⁻¹ , 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Don't water with cold water. Use water with a temperature at least 60°F/16°C or higher. Watering with cold water will give plants with deformed leaves and will disturb growth. 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.
GERBERA <i>Gerbera jamesonii</i> Revolution F1 Series	COT	128	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) 6-8 mol·m ⁻² ·d ⁻¹ , 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 ⁻² ·d ⁻¹ , 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 ⁻² ·d ⁻¹ , 2,000-2,500 f.c. (21,500-26,900 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	Don't water with cold water. Use water with a temperature at least 60°F/16°C or higher. Watering with cold water will give plants with deformed leaves and will disturb growth. 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.
HYPOESTES <i>Hypoestes phyllostachya</i> Splash Select Series	RAW	288	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).
LISIANTHUS <i>Eustoma grandiflorum</i> Sapphire F1 Series	PEL	406	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.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Acapulco® Series	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later as needed. Alternatively for more vigorous varieties, use uniconazole 2.5 ppm spray 14 days after sowing, repeated 14 days later as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.

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 <i>Capsicum annuum</i> Blaze	RAW	288	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. 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 <i>Capsicum annuum</i> Chilly Chili F1	RAW	288	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. 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 <i>Capsicum annuum</i> Coba	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later as needed. Alternatively for more vigorous varieties, use uniconazole 2.5 ppm spray 14 days after sowing, repeated 14 days later as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Cosmo	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist 10-12 days after sowing. An application of uniconazole 2.5 ppm will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Cupala	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 175 to 225 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later as needed. Alternatively for more vigorous varieties, use uniconazole 2.5 ppm spray 14 days after sowing, repeated 14 days later as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Fiesta	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist 10-12 days after sowing. An application of uniconazole 2.5 ppm will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Golden Cayenne	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.

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 <i>Ornamental Pepper</i> Habanero	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Harlequin	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later as needed. Alternatively for more vigorous varieties, use uniconazole 2.5 ppm spray 14 days after sowing, repeated 14 days later as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Banana	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Burrito	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Carrot	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Fajita	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.

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 <i>Capsicum annuum</i> Hot Joker®	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Lemon	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Pops Purple	RAW	288	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 25 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. Hot Pops Purple 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 <i>Capsicum annuum</i> Hot Tomato	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Jalapeño	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Joker	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later as needed. Alternatively for more vigorous varieties, use uniconazole 2.5 ppm spray 14 days after sowing, repeated 14 days later as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.

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 <i>Capsicum annuum</i> Macho	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Although Macho is a naturally compact variety, plugs will be stronger if growth regulator is used. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Masquerade	RAW	288	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. 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 <i>Capsicum annuum</i> Medusa	RAW	288	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. 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 <i>Capsicum annuum</i> Paracho	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later as needed. Alternatively for more vigorous varieties, use uniconazole 2.5 ppm spray 14 days after sowing, repeated 14 days later as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Red Bell	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Red Missile	RAW	288	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. 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 <i>Capsicum annuum</i> Salsa Series	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide/ancymidol tank mix 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later if needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Samba Series	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later as needed. Alternatively for more vigorous varieties, use uniconazole 2.5 ppm spray 14 days after sowing, repeated 14 days later as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.

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 <i>Capsicum annuum</i> Samba XL Series	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later as needed. Alternatively for more vigorous varieties, use uniconazole 2.5 ppm spray 14 days after sowing, repeated 14 days later as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Santos Series	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later as needed. Alternatively for more vigorous varieties, use uniconazole 2.5 ppm spray 14 days after sowing, repeated 14 days later as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Snack Series	RAW	288	3-4	1	No	4-5	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Snack Supreme	RAW	288	3-4	1	No	4-5	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Torito	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 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) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist 10-12 days after sowing. An application of uniconazole 2.5 ppm will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Wicked	RAW	288	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 25 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. Wicked 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.

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 <i>Capsicum annuum</i> Yellow Tomato	RAW	288	3-4	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 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) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 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) 175 to 225 ppm N - 1.2 to 1.5 EC (p) uniconazole 2.5 ppm Spray	To ensure a uniform crop, growth regulator should be applied with a fine mist. For more vigorous varieties, an application of uniconazole 2.5 ppm at 10-12 days after sowing, repeated 2 weeks later if needed, will help control plant size. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Zamora Series	RAW	288	4-5	1	No	5-6	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 68-70°F (20-21°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 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) 175 to 225 ppm N - 1.2 to 1.5 EC	Apply daminozide 2,000 ppm spray 10 days after sowing, when cotyledons are fully expanded. Repeat 7-10 days later as needed. Alternatively for more vigorous varieties, use uniconazole 2.5 ppm spray 14 days after sowing, repeated 14 days later as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days.
SOLANUM <i>Solanum pseudocapsicum</i> Apollo	RAW	288	5-6	1	No	8-10	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°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	Apply daminozide 2,000 ppm spray 12-14 days after sowing, when cotyledons are fully expanded. Repeat 5-7 days later, and weekly as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days. It is recommended to place sticky traps in the propagation area. After the young plant has hardened off, we recommend a preventative treatment against fungus gnats (sciariid flies).
SOLANUM <i>Solanum pseudocapsicum</i> Jupiter	RAW	288	5-6	1	No	8-10	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°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	Apply daminozide 2,000 ppm spray 12-14 days after sowing, when cotyledons are fully expanded. Repeat 5-7 days later, and weekly as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days. It is recommended to place sticky traps in the propagation area. After the young plant has hardened off, we recommend a preventative treatment against fungus gnats (sciariid flies).
SOLANUM <i>Solanum pseudocapsicum</i> Sagitta Lime	RAW	288	5-6	1	No	8-10	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°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	Apply daminozide 2,000 ppm spray 12-14 days after sowing, when cotyledons are fully expanded. Repeat 5-7 days later, and weekly as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days. It is recommended to place sticky traps in the propagation area. After the young plant has hardened off, we recommend a preventative treatment against fungus gnats (sciariid flies).


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
SOLANUM <i>Solanum pseudocapsicum</i> Saturn	RAW	288	5-6	1	No	8-10	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°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	Apply daminozide 2,000 ppm spray 12-14 days after sowing, when cotyledons are fully expanded. Repeat 5-7 days later, and weekly as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days. It is recommended to place sticky traps in the propagation area. After the young plant has hardened off, we recommend a preventative treatment against fungus gnats (sciarid flies).
SOLANUM <i>Solanum pseudocapsicum</i> Thurino	RAW	288	5-6	1	No	8-10	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°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	Apply daminozide 2,000 ppm spray 12-14 days after sowing, when cotyledons are fully expanded. Repeat 5-7 days later, and weekly as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days. It is recommended to place sticky traps in the propagation area. After the young plant has hardened off, we recommend a preventative treatment against fungus gnats (sciarid flies).
SOLANUM <i>Solanum pseudocapsicum</i> Tucana	RAW	288	5-6	1	No	8-10	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°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	Apply daminozide 2,000 ppm spray 12-14 days after sowing, when cotyledons are fully expanded. Repeat 5-7 days later, and weekly as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days. It is recommended to place sticky traps in the propagation area. After the young plant has hardened off, we recommend a preventative treatment against fungus gnats (sciarid flies).
SOLANUM <i>Solanum pseudocapsicum</i> Venus	RAW	288	5-6	1	No	8-10	5.4-5.8 pH 0.8-1.2 mmhos/cm	(m) Level 4 (t) 70-73°F (21-23°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) 100 to 175 ppm N - 0.7 to 1.2 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°C) (l) 1,000-2,500 f.c. (10,800-26,900 Lux) (f) 175 to 225 ppm N - 1.2 to 1.5 EC (p) daminozide 2,000 ppm Spray	(m) Level 2-4 (t) 64-68°F (18-20°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	Apply daminozide 2,000 ppm spray 12-14 days after sowing, when cotyledons are fully expanded. Repeat 5-7 days later, and weekly as needed. To bench germ: Make sure trays are watered before covering. Flat covering: first place one layer of reemay, then one layer of white plastic on top of that. Remove plastic after 8-10 days. Keep reemay wet. Remove reemay after another 2-3 days. It is recommended to place sticky traps in the propagation area. After the young plant has hardened off, we recommend a preventative treatment against fungus gnats (sciarid flies).
SUNFLOWER <i>Helianthus annuus</i> Ballad F1	TRT	288	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	(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	(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).
SUNFLOWER <i>Helianthus annuus</i> Choco Sun	TRT	288	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	(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	(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).
SUNFLOWER <i>Helianthus annuus</i> Miss Sunshine F1	TRT	288	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	(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 propagated by direct sowing when grown in smaller pots (4-in./10 cm, 4.5-in./11-cm, 5-in./13-cm).

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
EXACUM <i>Exacum affine</i> Princess Series	288	(day) 70-75°F (21-24°C) (night) 66-70°F (19-21°C)	5.4-5.8 pH 1.5-2.0 mmhos/cm	Facultative Long Day When light levels are low, use supplemental lighting.	4"/4.5"/Quart, 1 (ppp), 12 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 10 (weeks), Summer	Irrigation from below is recommended. Space when plants begin to touch. Grow on the "dry side" for better compact habit. Humidity must not exceed 80%, to reduce risk of fungal disease. PGR is recommended during the finish. Sprays must begin 3 weeks after potting (small pots, one week after potting). The subsequent treatments are dependent upon growing conditions and the desired size of the plant. Paclobutrazol and flurprimidol have been found to be effective on Exacum.
EXACUM <i>Exacum affine</i> Royal Dane Series	288	(day) 70-75°F (21-24°C) (night) 66-70°F (19-21°C)	5.4-5.8 pH 1.5-2.0 mmhos/cm	Facultative Long Day When light levels are low, use supplemental lighting.	4"/4.5"/Quart, 1 (ppp), 12 (weeks), Spring 4"/4.5"/Quart, 1 (ppp), 10 (weeks), Summer	Irrigation from below is recommended. Space when plants begin to touch. Grow on the "dry side" for better compact habit. Humidity must not exceed 80%, to reduce risk of fungal disease. PGR is recommended during the finish. Sprays must begin 3 weeks after potting (small pots, one week after potting). The subsequent treatments are dependent upon growing conditions and the desired size of the plant. Paclobutrazol and flurprimidol have been found to be effective on Exacum.
EXACUM <i>Exacum affine</i> Supreme	288	(day) 70-75°F (21-24°C) (night) 66-70°F (19-21°C)	5.4-5.8 pH 1.5-2.0 mmhos/cm	Facultative Long Day When light levels are low, use supplemental lighting.	5"/6"/1 Gallon, 1 (ppp), 13 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 11 (weeks), Summer	Irrigation from below is recommended. Space when plants begin to touch. Grow on the "dry side" for better compact habit. Humidity must not exceed 80%, to reduce risk of fungal disease. Supreme requires less PGR than other Exacum affine. PGR may be needed during the finish depending on conditions. Sprays can begin 3 weeks after potting (small pots, one week after potting). The subsequent treatments are dependent upon growing conditions and the desired size of the plant. Paclobutrazol and flurprimidol have been found to be effective on Exacum.
GERBERA <i>Gerbera jamesonii</i> Mega Revolution Series	128	(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"/6"/1 Gallon, 1 (ppp), 10-11 (weeks), Spring, PGR daminozide 1,000-2,500 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 8-9 (weeks), Summer, PGR daminozide 1,000-2,500 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 10-11 (weeks), Autumn, PGR daminozide 1,000-2,500 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 11-12 (weeks), Autumn, PGR daminozide 1,000-2,500 ppm Spray	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 an interval of 9 to 10 days. Don't use this anymore after seeing the first flower buds.
GERBERA <i>Gerbera jamesonii</i> Revolution F1 Series	128	(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"/6"/1 Gallon, 1 (ppp), 9-10 (weeks), Spring, PGR daminozide 1,000-2,500 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 7-8 (weeks), Summer, PGR daminozide 1,000-2,500 ppm Spray 5"/6"/1 Gallon, 1 (ppp), 9-10 (weeks), Autumn, PGR daminozide 1,000-2,500 ppm Spray 5"/6"/1 Gallon, 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. 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 an interval of 9 to 10 days. Don't use this anymore after seeing the first flower buds.
HYPOESTES <i>Hypoestes phyllostachya</i> Splash Select Series	288	(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"/4.5"/Quart, 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).
LISIANTHUS <i>Eustoma grandiflorum</i> Sapphire F1 Series	406	(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	4"/4.5"/Quart, 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.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Acapulco® Series	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 12-13 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Blaze	288	(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"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 7-13 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Autumn 5"/6"/1 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 <i>Capsicum annuum</i> Chilly Chili F1	288	(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"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 7-13 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Autumn 5"/6"/1 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. Growing plants on the dry side, allowing plants to wilt slightly prior to watering, helps provide height control.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Coba	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 12-13 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Cosmo	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 18 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 16 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Cupala	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 11-12 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Fiesta	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 16 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 14 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Golden Cayenne	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 17 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 15 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Ornamental Pepper</i> Habanero	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 20 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 18 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Harlequin	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 13-14 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Banana	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 14 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 13 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Burrito	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 16 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 14 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Carrot	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 17 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 15 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Fajita	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 16 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 14 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Joker®	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 16 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 14 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Lemon	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 17 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 15 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Hot Pops Purple	288	(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"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 7-13 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Autumn 5"/6"/1 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 <i>Capsicum annuum</i> Hot Tomato	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 17 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 15 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Jalapeño	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 18 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 16 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Joker	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 11-12 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Macho	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 17 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 15 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Masquerade	288	(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	5"/6"/1 Gallon, 1-3 (ppp), 7-12 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 7-12 (weeks), Autumn	Performs best under high light and warm temperatures. Add 4 to 5 weeks for Spring production crop times.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Medusa	288	(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"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 7-13 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Autumn 5"/6"/1 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 <i>Capsicum annuum</i> Paracho	288	(day) 68-70°F (20-21°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 12-13 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Red Bell	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 17 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 15 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Red Missile	288	(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"/4.5"/Quart, 1 (ppp), 7-10 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 7-11 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 7-10 (weeks), Autumn 5"/6"/1 Gallon, 1-3 (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 <i>Capsicum annuum</i> Salsa Series	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 12-13 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Samba Series	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 14-15 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Samba XL Series	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 14-15 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Santos Series	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 12-13 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Snack Series	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 17 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 15 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Snack Supreme	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 17 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 15 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Torito	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 16 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 14 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Wicked	288	(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"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Summer 5"/6"/1 Gallon, 1-3 (ppp), 7-13 (weeks), Summer 4"/4.5"/Quart, 1 (ppp), 7-13 (weeks), Autumn 5"/6"/1 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 <i>Capsicum annuum</i> Yellow Tomato	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 17 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 15 (weeks), Summer	Plant plugs deeply. Water from below to keep surface of media dry. It is especially important to grow plants dry until flowering, allowing some wilt between watering. To optimize plant growth, space as soon as the plants touch. Keep the plants very dry from spacing to flowering to avoid stretch. Due to the weight of the fruit, we recommend staking plants to stabilize plants during shipment.
ORNAMENTAL PEPPER <i>Capsicum annuum</i> Zamora Series	288	(day) 68-80°F (20-27°C) (night) 66-70°F (19-21°C)	5.5-5.9 pH 1.8-2.5 mmhos/cm	Day Neutral	4"/4.5"/Quart, 1 (ppp), 12-13 (weeks), Autumn, PGR chlormequat chloride 1,000 ppm Spray	Plant plugs deeply. Water from below to keep surface of media dry. Grow plants dry until flowering, allowing slight wilt between watering. This will reduce stretch. PGR has negative side-effects on fruit-setting. A minimum of 2,000 Lux is recommended when supplemental lighting is being used.
SOLANUM <i>Solanum pseudocapsicum</i> Apollo	288	(day) 64-68°F (18-20°C) (night) 55-64°F (13-18°C)	5.4-5.8 pH 1.5-2.0 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 20-22 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 1,000 ppm Spray	Water from below to keep surface of media dry. Space when plants begin to touch. When the buds first become visible, the plants must be kept fairly dry to promote better flowering. We recommend the use of a PGR during production to avoid stretching and ensure optimum branching. An application of a tank mix of daminozide and chlormequat chloride spray is effective. Avoid daminozide use during flowering, it may lead to flower drop. Paclobutrazol also can be used. Monitoring for pests with sticky traps is recommended.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	DAYLENGTH	FINISHING PROGRAMS	KEY TIPS
SOLANUM <i>Solanum pseudocapsicum</i> Jupiter	288	(day) 64-68°F (18-20°C) (night) 55-64°F (13-18°C)	5.4-5.8 pH 1.5-2.0 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 18-20 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 1,000 ppm Spray	Water from below to keep surface of media dry. Space when plants begin to touch. When the buds first become visible, the plants must be kept fairly dry to promote better flowering. We recommend the use of a PGR during production to avoid stretching and ensure optimum branching. An application of a tank mix of daminozide and chlormequat chloride spray is effective. Avoid daminozide use during flowering, it may lead to flower drop. Paclobutrazol also can be used. Monitoring for pests with sticky traps is recommended.
SOLANUM <i>Solanum pseudocapsicum</i> Sagitta Lime	288	(day) 64-68°F (18-20°C) (night) 55-64°F (13-18°C)	5.4-5.8 pH 1.5-2.0 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 18-20 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 1,000 ppm Spray	Water from below to keep surface of media dry. Space when plants begin to touch. When the buds first become visible, the plants must be kept fairly dry to promote better flowering. We recommend the use of a PGR during production to avoid stretching and ensure optimum branching. An application of a tank mix of daminozide and chlormequat chloride spray is effective. Avoid daminozide use during flowering, it may lead to flower drop. Paclobutrazol also can be used. Monitoring for pests with sticky traps is recommended.
SOLANUM <i>Solanum pseudocapsicum</i> Saturn	288	(day) 64-68°F (18-20°C) (night) 55-64°F (13-18°C)	5.4-5.8 pH 1.5-2.0 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 21-23 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 1,000 ppm Spray	Water from below to keep surface of media dry. Space when plants begin to touch. When the buds first become visible, the plants must be kept fairly dry to promote better flowering. We recommend the use of a PGR during production to avoid stretching and ensure optimum branching. An application of a tank mix of daminozide and chlormequat chloride spray is effective. Avoid daminozide use during flowering, it may lead to flower drop. Paclobutrazol also can be used. Monitoring for pests with sticky traps is recommended.
SOLANUM <i>Solanum pseudocapsicum</i> Thurino	288	(day) 64-68°F (18-20°C) (night) 55-64°F (13-18°C)	5.4-5.8 pH 1.5-2.0 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 20-22 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 1,000 ppm Spray	Water from below to keep surface of media dry. Space when plants begin to touch. When the buds first become visible, the plants must be kept fairly dry to promote better flowering. We recommend the use of a PGR during production to avoid stretching and ensure optimum branching. An application of a tank mix of daminozide and chlormequat chloride spray is effective. Avoid daminozide use during flowering, it may lead to flower drop. Paclobutrazol also can be used. Monitoring for pests with sticky traps is recommended.
SOLANUM <i>Solanum pseudocapsicum</i> Tucana	288	(day) 64-68°F (18-20°C) (night) 55-64°F (13-18°C)	5.4-5.8 pH 1.5-2.0 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 20-22 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 1,000 ppm Spray	Water from below to keep surface of media dry. Space when plants begin to touch. When the buds first become visible, the plants must be kept fairly dry to promote better flowering. We recommend the use of a PGR during production to avoid stretching and ensure optimum branching. An application of a tank mix of daminozide and chlormequat chloride spray is effective. Avoid daminozide use during flowering, it may lead to flower drop. Paclobutrazol also can be used. Monitoring for pests with sticky traps is recommended.
SOLANUM <i>Solanum pseudocapsicum</i> Venus	288	(day) 64-68°F (18-20°C) (night) 55-64°F (13-18°C)	5.4-5.8 pH 1.5-2.0 mmhos/cm	Day Neutral	5"/6"/1 Gallon, 1 (ppp), 18-22 (weeks), Autumn, PGR daminozide/chlormequat chloride tank mix 1,000 ppm Spray	Water from below to keep surface of media dry. Space when plants begin to touch. When the buds first become visible, the plants must be kept fairly dry to promote better flowering. We recommend the use of a PGR during production to avoid stretching and ensure optimum branching. An application of a tank mix of daminozide and chlormequat chloride spray is effective. Avoid daminozide use during flowering, it may lead to flower drop. Paclobutrazol also can be used. Monitoring for pests with sticky traps is recommended.
SUNFLOWER <i>Helianthus annuus</i> Ballad F₁	288	(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	Facultative Short Day Can flower under different daylengths, but will flower slightly quicker under short days.	5"/6"/1 Gallon, 1-3 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500-5,000 ppm Spray 5"/6"/1 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. We recommend 1 ppp in 5-in. (13-cm) pots and 1-3 ppp in gallon pots.
SUNFLOWER <i>Helianthus annuus</i> Choco Sun	288	(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	Facultative Short Day Can flower under different daylengths, but will flower slightly quicker under short days.	5"/6"/1 Gallon, 1 (ppp), 8-9 (weeks), Spring, PGR daminozide 3,500-5,000 ppm Spray 5"/6"/1 Gallon, 1 (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.
SUNFLOWER <i>Helianthus annuus</i> Miss Sunshine F₁	288	(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	Facultative Short Day Can flower under different daylengths, but will flower slightly quicker under short days.	5"/6"/1 Gallon, 1-3 (ppp), 7-8 (weeks), Spring, PGR daminozide 1,250-2,500 ppm Spray 5"/6"/1 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. We recommend 1 ppp in 5-in. (13-cm) pots and 1-3 ppp in gallon pots.



ANNUALS PROPAGATION GUIDE P. 6 / FINISHING GUIDE P. 44
PERENNIALS PROPAGATION GUIDE P. 82 / FINISHING GUIDE P. 96 / FORCING GUIDE P. 110
POT PLANTS PROPAGATION GUIDE P. 114 / FINISHING GUIDE P. 130
HANDPICKED VEGETABLES & HERBS PROPAGATION GUIDE P. 158 / FINISHING GUIDE P. 170

cut flowers

PanAmerican Seed®

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
ANEMONE <i>Anemone coronaria</i> Mona Lisa® Series	RAW	288	7-8	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.
ASCLEPIAS <i>Asclepias curassavica</i> Silky Series	RAW	288	5-6	1	Light cover	5-8	5.8-6.2 pH 0.75 mmhos/cm	(m) Level 4 (t) 68-86°F (20-30°C) (l) Light				Alternating temperatures are required for best germination.
ASTER <i>Callistephus chinensis</i> Meteor Mixture	RAW	288	4	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	Maintain optimal pH and consider applying supplemental Boron to avoid Boron deficiency. Don't delay transplanting; rootbound plugs will reduce finish stem length. Maintain short day conditions (<12 hours) during young plant production.
CAMPANULA <i>Campanula medium</i> Campana F1 Series	PEL	288	7-8	1	No	4-5	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 3-4 (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 short-day conditions in plugstage (<11 hours) from approximately 1.5-2 weeks after sowing. After transplant, keep plants in long days (>14 hours) when planted in Spring or Summer. When producing for Winter flowering, provide long days (> 14 hours) at 4-5 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.
CARTHAMUS <i>Carthamus tinctorius</i> Grenade Series	COT	Direct sow	N/A					(t) 54-60°F (12-16°C) (f) Less than 100 ppm N - Less than 0.7 EC				Direct seeding is recommended. Plan for rows to be spaced 12 in. (30 cm) apart; thin seedlings to 2.5 in. (6 cm) within the row. Carthamus forms a taproot so if attempting to grow from plugs, plan to transplant seedlings 5-7 days after sowing.
CELOSIA <i>Celosia cristata</i> Bombay® Series	COT	288	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 <i>Celosia spicata</i> Celway® Series	COT	288	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 <i>Celosia cristata</i> Neo Series	COT	288	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. 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.

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 <i>Celosia cristata</i> Spring Green	COT	288	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 Spring Green 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 <i>Celosia plumosa</i> Sunday® Series	COT	288	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 <i>Delphinium x belladonna</i> Blue Donna	RAW	288	6-8	1	Yes	7-10	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) 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 ⁻² ·d ⁻¹ , 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 ⁻² ·d ⁻¹ , 4,000-5,000 f.c. (43,100-53,800 Lux) (f) 100 to 175 ppm N - 0.7 to 1.2 EC	
DELPHINIUM <i>Delphinium elatum</i> Guardian F₁ Series	RAW	288	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.
DIANTHUS <i>Dianthus barbatus interspecific</i> Amazon F₁ Series	PEL	288	4-5	1	Yes	3-4	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) 65-70°F (18-21°C) (l) 5-8 mol·m ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) Less than 100 ppm N - Less than 0.7 EC (p) paclobutrazol 4-6 ppm Spray	(m) Level 3 (t) 65-60°F (18-16°C) (l) 10 mol·m ⁻² ·d ⁻¹ (f) 100 to 175 ppm N - 0.7 to 1.2 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 <i>Dianthus barbatus interspecific</i> Bouquet F₁ Series	PEL	288	5-6	1	Yes	3-4	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
DIANTHUS <i>Dianthus barbatus</i> Sweet F₁ Series	PEL	288	5-6	1	Yes	3-4	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 ⁻² ·d ⁻¹ (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 ⁻² ·d ⁻¹ (f) Less than 100 ppm N - Less than 0.7 EC	(m) Level 3 (t) 55-60°F (13-16°C) (l) 10 mol·m ⁻² ·d ⁻¹ (f) 175 to 225 ppm N - 1.2 to 1.5 EC	
GOMPHRENA <i>Gomphrena haageana</i> QIS Series	RAW	288	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	
LIMONIUM <i>Limonium sinuatum</i> QIS Series	RAW	288	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 <i>Eustoma grandiflorum</i> ABC F₁ Series	PEL	406	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 in 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 and insect control practice for Lisianthus production.

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
LISIANTHUS <i>Eustoma grandiflorum</i> Flare F1 Series	PEL	406	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 in 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 and insect control practice for lisianthus production.
MATRICARIA <i>Tanacetum parthenium</i> Vegmo Series	PEL	288	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 <i>Matthiola incana</i> Aida Series	RAW	288	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 <i>Matthiola incana</i> Column Stock Series	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 it's important to maintain the optimal field conditions, especially the moisture conditions, for the seed to germinate and establish.
MATTHIOLA <i>Matthiola incana</i> Figaro Series	RAW	288	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 <i>Matthiola incana</i> Katz Series	RAW	512	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 <i>Matthiola incana</i> Mathilda Series	RAW	288	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 <i>Matthiola incana</i> Opera Series	RAW	288	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
SNAPDRAGON <i>Antirrhinum majus</i> Cool F₁ Series	RAW	406	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 <i>Antirrhinum majus</i> Early Potomac® F₁ Series	RAW	406	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 <i>Antirrhinum majus</i> Maryland F₁ Series	RAW	406	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 <i>Antirrhinum majus</i> Monaco F₁ Series	RAW	406	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 <i>Antirrhinum majus</i> Potomac® F₁ Series	RAW	406	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 <i>Antirrhinum majus</i> Purple Twist F₁	RAW	406	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 <i>Antirrhinum majus</i> Red Delilah F₁	RAW	406	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 <i>Antirrhinum majus</i> Rocket F₁ Series	RAW	406	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.
SUNFLOWER <i>Helianthus annuus</i> Jua F₁ Series	TRT	288 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.
TRACHELIUM <i>Trachelium caeruleum</i> Lake Series	PEL	288	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 (t) 62-70°F (17-21°C) (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	DAYLENGTH	RECOMMENDED PLUG SIZE	FINISHING PROGRAMS	GROWING ON TEMPERATURE (DAYS/NIGHTS)	STEM LENGTH	KEY TIPS
ANEMONE <i>Anemone coronaria</i> Mona Lisa® Series	Day Neutral	288	Spring: 2-4 plants/ft² (22-43 plants/m²), 12-14 weeks	Before flower development: (day) 60-65°F (16-18°C) (night) 55°F (13°C)	18 in. (46 cm)	Optimal stem length can be achieved with cool growing conditions (53-58°F/12-14°C) and long day conditions. NOTE: To produce in 4-in. (10-cm) pots for pot crop or bedding plant programs, PGR treatments are needed. Apply Bonzi as a drench at a 2 ppm concentration about 5-6 weeks after transplant into a 4-in. (10-cm) pot. One application of Bonzi should be enough. Drench rates up to 4 ppm of Bonzi can be used with good results. Make sure that the crop has well-developed root mass before the drench application; the roots should fill the pot.
ASCLEPIAS <i>Asclepias curassavica</i> Silky Series	Day Neutral	288	Greenhouse: Summer: 2-3 plants/ft² (22-32 plants/m²), 11-13 weeks	Summer: (day) 70-75°F (21-24°C) (night) 60-65°F (16-18°C)	22-28 in. (56-71 cm)	Asclepias curassavica has difficulty absorbing water right after harvest. The right harvest time and method reduce fluid loss of the stems and stimulate water absorption. Harvest when unbel is 2/3 open, very early or very late in the day. DO NOT sear the stems in hot water as you would do with other Asclepias. Post Harvest Treatment: 2 ml/l Florissant 100 + Florissant 700 1ml/l for 4 hours immediately after harvest followed by 10 ml/l Florissant 600 after processing the flowers. Send to the auction in this solution. Avoid dry transport. Storage and transport is best between 41-45°F (5-7°C).
ASTER <i>Callistephus chinensis</i> Meteor Mixture	Long Day-Short Day After 5 true leaves, grow plants with long day conditions (>16 hours) until stem length is approximately two-thirds of desired finished length. Finish the crop with short day conditions (<12 hours) for maximum uniformity.	288	Tunnel: Summer: 4-5 plants/ft² (43-54 plants/m²), 13-16 weeks	Before flower development: (day) 60-75°F (16-24°C) (night) 55-60°F (13-16°C)	30-40 in. (76-102 cm)	
CAMPANULA <i>Campanula medium</i> Campana F₁ Series	Obligate Long Day Plants need long day (> 14 hour daylength) for flower initiation.	288	6-8 plants/ft² (65-86 plants/m²), 10-14 weeks	(day) 60-70°F (16-21°C) (night) 54-59°F (12-15°C)	30-34 in. (76-86 cm)	To ensure sufficient vegetative growth and stem length, provide short-day conditions in plugstage (<11 hours) from approximately 1.5-2 weeks after sowing. After transplant keep plants in long days (>14 hours) when planted in Spring or Summer. When producing for Winter flowering, provide long days (> 14 hours) at 4 - 5 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.
CARTHAMUS <i>Carthamus tinctorius</i> Grenade Series		Direct sow	Field grown: Summer: 14 weeks	(day) 70-75°F (21-24°C) (night) 50-55°F (10-13°C)	32-40 in. (81-102 cm)	From Spring sowing in Northern Europe, harvest July through September.
CELOSIA <i>Celosia cristata</i> Bombay® Series	Facultative Short Day The optimum daylength for Bombay to reach the appropriate stem length lies between 12 to 13 hours.	288	6-8 plants/ft² (65-86 plants/m²), 10-14 weeks	(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. (71-102 cm)	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 <i>Celosia spicata</i> Celway® Series	Facultative Short Day 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.	288	6-8 plants/ft² (65-86 plants/m²), 12-16 weeks	(day) 65-75°F (18-24°C) (night) 63-65°F (17-18°C)	40-48 in. (102-122 cm)	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 <i>Celosia cristata</i> Neo Series	Facultative Short Day Quantitative short-day plant. Flowers will initiate faster under short days.	288	6-8 plants/ft² (65-86 plants/m²), 8-12 weeks	(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. (71-102 cm)	We recommend to give the plants a short day treatment for 3-4 weeks after transplant for the best uniformity and quality crop. After the short day treatment, plants can be grown in long days. 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 <i>Celosia cristata</i> Spring Green	Facultative Short Day The optimum daylength to reach the appropriate stem length lies between 12 to 13 hours.	288	6-8 plants/ft² (65-86 plants/m²), 10-14 weeks	(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. (71-102 cm)	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 <i>Celosia plumosa</i> Sunday® Series	Facultative Short Day Will initiate flowers faster in short days. The optimum daylength for Celosia Sunday to reach the appropriate stem length is between 12 to 13 hours. Under short-day conditions provide daylength extension up to 13 hours to allow plants to elongate and to prevent early flowering. When daylength is over 13 hours, short-day treatments can be applied. Provide a dark period for a minimum of 12 hours for 5 to 6 weeks. Do not start short days until one week after planting.	288	6-8 plants/ft² (65-86 plants/m²), 12-16 weeks	(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. (71-102 cm)	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.

CLASS/SERIES	DAYLENGTH	RECOMMENDED PLUG SIZE	FINISHING PROGRAMS	GROWING ON TEMPERATURE (DAYS/NIGHTS)	STEM LENGTH	KEY TIPS
DELPHINIUM <i>Delphinium x belladonna</i> Blue Donna	Facultative Long Day	288		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. (51-89 cm)	Planting density: Annual greenhouse production = 12-16 plants/m ² . Annual field production = 16-18 plants/m ² . Perennial field production = 9 plants/m ² . 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 transplant (January/February); 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 <i>Delphinium elatum</i> Guardian F₁ Series	Facultative Long Day	288	Autumn: 4 plants/ft ² (43 plants/m ²), 13-16 weeks Spring: 4 plants/ft ² (43 plants/m ²), 11-13 weeks Summer: 4 plants/ft ² (43 plants/m ²), 11-13 weeks	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. (76-99 cm)	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 <i>Dianthus barbatus interspecific</i> Amazon F₁ Series	Facultative Long Day Best results are achieved when plants are grown in full sun or in a high-light greenhouse. The combination of high light with high heat will result in shorter stems.	288	Spring: 3-4 plants/ft ² (32-43 plants/m ²), 12-18 weeks	Before flower development: (day) 60-72°F (16-22°C) (night) 50-60°F (10-16°C)	20-36 in. (51-91 cm)	Transplant directly into ground beds approximately 5 weeks after sowing, spacing 3 to 4 plants per net sq. ft. (approximately 30 to 40 plants per net sq. m). If main stem is pinched on Amazon dianthus, then space at 1.5 plants per net sq. ft. (approximately 15 plants per net sq. m). A single layer of support netting is recommended.
DIANTHUS <i>Dianthus barbatus interspecific</i> Bouquet F₁ Series	Facultative Long Day	288	Spring: 3-4 plants/ft ² (32-43 plants/m ²), 8-9 weeks	Before flower development: (day) 60-72°F (16-22°C) (night) 50-60°F (10-16°C)	18-30 in. (46-76 cm)	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 <i>Dianthus barbatus</i> Sweet F₁ Series	Facultative Long Day Best results are achieved when plants are grown in full sun or in a high-light greenhouse. The combination of high light with high heat will result in shorter stems.	288	Spring: 4-6 plants/ft ² (43-65 plants/m ²), 11-15 weeks	Before flower development: (day) 60-72°F (16-22°C) (night) 50-60°F (10-16°C)	18-36 in. (46-91 cm)	Sweet dianthus can be transplanted year-round in coastal California or similar climates, where mid August to February 1 transplants will develop the best stem length. Stem length for the Sweet series from transplants April to July may not be of sufficient length for commercial production depending on the environment. Greenhouse-grown plants generally produce taller stems than plants that are field-grown. Harvest stems with at least 3 open flowers. Plants can be harvested continuously for approximately 2 to 3 weeks. If cut back, a second flush of flowers will be ready to harvest in 8 to 10 weeks. Note: A second crop is only advisable from an Autumn harvest so the second flush develops under the cooler conditions of late Autumn and Winter and builds stronger plants. A single layer of support netting is recommended.
GOMPHRENA <i>Gomphrena haageana</i> QIS Series		288	Spring: 1.5 plants/ft ² (16 plants/m ²), 10-12 weeks	Before flower development: (day) 65-75°F (18-24°C) (night) 63-66°F (17-19°C)	24-26 in. (61-66 cm)	To increase productivity, the first blooms of the plants can be removed so that the secondaries will develop strongly.
LIMONIUM <i>Limonium sinuatum</i> QIS Series	Facultative Long Day	288	Spring: 1-2 plants/ft ² (11-22 plants/m ²), 18-22 weeks	Before flower development: (day) 55-60°F (13-16°C) (night) 50-55°F (10-13°C)	30-35 in. (76-89 cm)	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 <i>Eustoma grandiflorum</i> ABC F₁ Series	Facultative Long Day 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. Reference the Seasonality Number Guide for ABC Lisianthus in the PanAmerican Seed Catalog.	406	Summer: 8 plants/ft ² (86 plants/m ²), 10-12 weeks Winter: 6 plants/ft ² (65 plants/m ²), 14-18 weeks	Before flower development: (day) 68-75°F (20-24°C) (night) 60-65°F (16-18°C)	29-45 in. (74-114 cm)	Full-sun plantings of cut flower lisianthus produce shorter stems than greenhouse-grown lisianthus.
LISIANTHUS <i>Eustoma grandiflorum</i> Flare F₁ Series	Facultative Long Day 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.	406	Summer: 8 plants/ft ² (86 plants/m ²), 10-12 weeks Winter: 6 plants/ft ² (65 plants/m ²), 14-18 weeks	Before flower development: (day) 68-75°F (20-24°C) (night) 60-65°F (16-18°C)	29-45 in. (74-114 cm)	Full-sun plantings of cut flower lisianthus produce shorter stems than greenhouse-grown lisianthus. Flare is a series of F ₁ 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, daylength and light intensity, and also on supplemental lighting and greenhouse conditions.
MATRICARIA <i>Tanacetum parthenium</i> Vegmo Series	Obligate Long Day 16 hours of lighting is required for flower initiation.	288	Summer: 8 plants/ft ² (86 plants/m ²), 7-10 weeks Winter: 7 plants/ft ² (75 plants/m ²), 14-16 weeks	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. (71-91 cm)	Supplemental lighting may be solid or cyclic. Matricaria are not sensitive to ethylene.

CLASS/SERIES	DAYLENGTH	RECOMMENDED PLUG SIZE	FINISHING PROGRAMS	GROWING ON TEMPERATURE (DAYS/NIGHTS)	STEM LENGTH	KEY TIPS
MATTHIOLA <i>Matthiola incana</i> Aida Series	Bred for specific seasonal performance, the PanAmerican Northern Greenhouse Selectable Matthiola assortment is an outstanding lineup for year-round production. Transplanting for seasons earlier than listed will result in later flowering. Aida series is Spring Flowering, Group 2.	288	Greenhouse: Autumn: 6-7 plants/ft ² (65-75 plants/m ²), 8-10 weeks Spring: 6-7 plants/ft ² (65-75 plants/m ²), 10-11 weeks Summer: 6-7 plants/ft ² (65-75 plants/m ²), 6-8 weeks Winter: 6 plants/ft ² (65 plants/m ²), 12-14 weeks	(day) 50-62°F (10-17°C) (night) 50-62°F (10-17°C)	30-34 in. (76-86 cm)	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 <i>Matthiola incana</i> Column Stock Series		Direct sow	Field grown: Winter: 20-22 weeks	Before flower development: (day) 55-65°F (13-18°C) (night) 55-60°F (13-16°C)	24-30 in. (61-76 cm)	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 ²). Optimum stem length will be achieved during cool growing periods. High heat can stunt plants or prevent flower spikes from developing.
MATTHIOLA <i>Matthiola incana</i> Figaro Series	Bred for specific seasonal performance, the PanAmerican Northern Greenhouse Selectable Matthiola assortment is an outstanding lineup for year-round production. Transplanting for seasons earlier than listed will result in later flowering. Figaro series is Winter Flowering, Group 1.	288	Greenhouse: Autumn: 6-7 plants/ft ² (65-75 plants/m ²), 8-10 weeks Spring: 6-7 plants/ft ² (65-75 plants/m ²), 10-11 weeks Summer: 6-7 plants/ft ² (65-75 plants/m ²), 6-8 weeks Winter: 6 plants/ft ² (65 plants/m ²), 12-14 weeks	(day) 50-62°F (10-17°C) (night) 50-62°F (10-17°C)	30-34 in. (76-86 cm)	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 <i>Matthiola incana</i> Katz Series		512	Autumn: 12 plants/ft ² (129 plants/m ²), 7-11 weeks Spring: 12 plants/ft ² (129 plants/m ²), 8-13 weeks	Before flower development: (day) 60-75°F (16-24°C) (night) 45-55°F (7-13°C)	32 in. (81 cm)	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 <i>Matthiola incana</i> Mathilda Series	Bred for specific seasonal performance, the PanAmerican Northern Greenhouse Selectable Matthiola assortment is an outstanding lineup for year-round production. Transplanting for seasons earlier than listed will result in later flowering. Mathilda series is Spring Flowering, Group 2.	288	Greenhouse: Autumn: 6-7 plants/ft ² (65-75 plants/m ²), 8-10 weeks Spring: 6-7 plants/ft ² (65-75 plants/m ²), 10-11 weeks Summer: 6-7 plants/ft ² (65-75 plants/m ²), 6-8 weeks Winter: 6 plants/ft ² (65 plants/m ²), 12-14 weeks	Spring: (day) 50-62°F (10-17°C) (night) 50-62°F (10-17°C)	30-34 in. (76-86 cm)	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 <i>Matthiola incana</i> Opera Series	Bred for specific seasonal performance, the PanAmerican Northern Greenhouse Selectable Matthiola assortment is an outstanding lineup for year-round production. Transplanting for seasons earlier than listed will result in later flowering. Opera series is Spring Flowering, Group 2.	288	Greenhouse: Autumn: 6-7 plants/ft ² (65-75 plants/m ²), 8-10 weeks Spring: 6-7 plants/ft ² (65-75 plants/m ²), 10-11 weeks Summer: 6-7 plants/ft ² (65-75 plants/m ²), 6-8 weeks Winter: 6 plants/ft ² (65 plants/m ²), 12-14 weeks	(day) 50-62°F (10-17°C) (night) 50-62°F (10-17°C)	30-34 in. (76-86 cm)	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 <i>Antirrhinum majus</i> Cool F₁ Series	Bred for specific seasonal performance, the PanAmerican Snapdragon assortment provides market-leading varieties for year-round production. Transplanting outside of recommended seasons is not recommended. Cool Series is Winter/Early Spring Flowering, Group 1,2.	406	Winter: 6-10 plants/ft ² (65-108 plants/m ²), 8-18 weeks	Before flower development: (day) 55-70°F (13-21°C) (night) 45-55°F (7-13°C)	39-60 in. (99-152 cm)	Group 1: Night: 45-50°F (7-10°C), Day: 50-55°F (10-13°C). 1,000-1,500 foot-candles. Group 2: Night: 50-55°F (10-13°C), Day: 55-60°F (13-16°C). 1,500-3,000 foot-candles. Two support nets are the minimum, but three are preferred. Mesh sizes of 4x4 in. (10x10 cm) to 6x6 in. (15x15 cm) are most commonly used. Place the first level at 4-6 inches (10-15 cm) above the soil level. Place the second level at 6 inches (15 cm) above the first level. Raise the upper level of the support nets as the stems lengthen.
SNAPDRAGON <i>Antirrhinum majus</i> Early Potomac® F₁ Series	Bred for specific seasonal performance, the PanAmerican Snapdragon assortment provides market-leading varieties for year-round production. Transplanting outside of recommended seasons is not recommended. Early Potomac Series is 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.	406	Summer: 6-10 plants/ft ² (65-108 plants/m ²), 8-18 weeks	Before flower development: (day) 70-85°F (21-29°C) (night) 55-60°F (13-16°C)	39-60 in. (99-152 cm)	Group 3: Night: 55-60°F (13-16°C), Day: 60-65°F (16-18°C). 2,500-4,500 foot-candles. Group 4: Night: > 60°F (> 16°C), Day: > 65°F (> 18°C). 3,000-5,000 foot-candles. Two support nets are the minimum, but three are preferred. Mesh sizes of 4x4 in. (10x10 cm) to 6x6 in. (15x15 cm) are most commonly used. Place the first level at 4-6 inches (10-15 cm) above the soil level. Place the second level at 6 inches (15 cm) above the first level. Raise the upper level of the support nets as the stems lengthen.
SNAPDRAGON <i>Antirrhinum majus</i> Maryland F₁ Series	Bred for specific seasonal performance, the PanAmerican Snapdragon assortment provides market-leading varieties for year-round production. Transplanting outside of recommended seasons is not recommended. Maryland Series is Winter/Early Spring Flowering, Group 1,2.	406	Autumn: 6-10 plants/ft ² (65-108 plants/m ²), 8-18 weeks Spring: 6-10 plants/ft ² (65-108 plants/m ²), 8-18 weeks	Before flower development: (day) 55-70°F (13-21°C) (night) 45-55°F (7-13°C)	39-60 in. (99-152 cm)	Group 1: Night: 45-50°F (7-10°C), Day: 50-55°F (10-13°C). 1,000-1,500 foot-candles. Group 2: Night: 50-55°F (10-13°C), Day: 55-60°F (13-16°C). 1,500-3,000 foot-candles. Two support nets are the minimum, but three are preferred. Mesh sizes of 4x4 in. (10x10 cm) to 6x6 in. (15x15 cm) are most commonly used. Place the first level at 4-6 inches (10-15 cm) above the soil level. Place the second level at 6 inches (15 cm) above the first level. Raise the upper level of the support nets as the stems lengthen.

CLASS/SERIES	DAYLENGTH	RECOMMENDED PLUG SIZE	FINISHING PROGRAMS	GROWING ON TEMPERATURE (DAYS/NIGHTS)	STEM LENGTH	KEY TIPS
SNAPDRAGON <i>Antirrhinum majus</i> Monaco F₁ Series	Bred for specific seasonal performance, the PanAmerican Snapdragon assortment provides market-leading varieties for year-round production. Transplanting outside of recommended seasons is not recommended. Monaco Series is Group 2,3 and well-suited to difficult transition periods, between group 3,4 (Summer) to Group 1,2 (Autumn/Winter). Monaco tolerates warm Autumn conditions without flowering too quickly, and produces high-quality flower spikes when Autumn weather is unusually cool and dark. Performs well all year in areas with moderate temperatures and little daylength fluctuation.	406	Autumn: 6-10 plants/ft ² (65-108 plants/m ²), 8-18 weeks Spring: 6-10 plants/ft ² (65-108 plants/m ²), 8-18 weeks	Before flower development: (day) 60-75°F (16-24°C) (night) 52-57°F (11-14°C)	39-60 in. (99-152 cm)	Group 2: Night: 50-55°F (10-13°C), Day: 55-60°F (13-16°C). 1,500-3,000 foot-candles. Group 3: Night: 55-60°F (13-16°C), Day: 60-65°F (16-18°C). 2,500-4,500 foot-candles. Two support nets are the minimum, but three are preferred. Mesh sizes of 4x4 in. (10x10 cm) to 6x6 in. (15x15 cm) are most commonly used. Place the first level at 4-6 inches (10-15 cm) above the soil level. Place the second level at 6 inches (15 cm) above the first level. Raise the upper level of the support nets as the stems lengthen.
SNAPDRAGON <i>Antirrhinum majus</i> Potomac® F₁ Series	Bred for specific seasonal performance, the PanAmerican Snapdragon assortment provides market-leading varieties for year-round production. Transplanting outside of recommended seasons is not recommended. Potomac is 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.	406	Summer: 6-10 plants/ft ² (65-108 plants/m ²), 8-18 weeks	Summer: (day) 70-85°F (21-29°C) (night) 60°F (16°C)	39-60 in. (99-152 cm)	Group 3: Night: 55-60°F (13-16°C), Day: 60-65°F (16-18°C). 2,500-4,500 foot-candles. Group 4: Night: > 60°F (> 16°C), Day: > 65°F (> 18°C). 3,000-5,000 foot-candles. Two support nets are the minimum, but three are preferred. Mesh sizes of 4x4 in. (10x10 cm) to 6x6 in. (15x15 cm) are most commonly used. Place the first level at 4-6 inches (10-15 cm) above the soil level. Place the second level at 6 inches (15 cm) above the first level. Raise the upper level of the support nets as the stems lengthen.
SNAPDRAGON <i>Antirrhinum majus</i> Purple Twist F₁	Bred for specific seasonal performance, the PanAmerican Snapdragon assortment provides market-leading varieties for year-round production. Transplanting outside of recommended seasons is not recommended. Purple Twist is Winter/Early Spring Flowering, Group 1,2.	406	Spring: 6-10 plants/ft ² (65-108 plants/m ²), 8-18 weeks	Before flower development: (day) 55-70°F (13-21°C) (night) 50-55°F (10-13°C)	39-60 in. (99-152 cm)	Group 1: Night: 45-50°F (7-10°C), Day: 50-55°F (10-13°C). 1,000-1,500 foot-candles. Group 2: Night: 50-55°F (10-13°C), Day: 55-60°F (13-16°C). 1,500-3,000 foot-candles. Two support nets are the minimum, but three are preferred. Mesh sizes of 4x4 in. (10x10 cm) to 6x6 in. (15x15 cm) are most commonly used. Place the first level at 4-6 inches (10-15 cm) above the soil level. Place the second level at 6 inches (15 cm) above the first level. Raise the upper level of the support nets as the stems lengthen. Unique purple and white striped colour pattern varies depending on growing environment. When grown in warmer greenhouse conditions, white stripes are more prominent, under cool outside/tunnel conditions, purple is more prominent. This unique novelty stand-alone Group 1,2 variety can be produced along with the Maryland series.
SNAPDRAGON <i>Antirrhinum majus</i> Red Delilah F₁	Bred for specific seasonal performance, the PanAmerican Snapdragon assortment provides market-leading varieties for year-round production. Transplanting outside of recommended seasons is not recommended. Red Delilah is Winter/Early Spring Flowering, Group 1,2.	406	Spring: 6-10 plants/ft ² (65-108 plants/m ²), 8-18 weeks Winter: 6-10 plants/ft ² (65-108 plants/m ²), 8-18 weeks	Before flower development: (day) 55-70°F (13-21°C) (night) 50-55°F (10-13°C)	39-60 in. (99-152 cm)	Group 1: Night: 45-50°F (7-10°C), Day: 50-55°F (10-13°C). 1,000-1,500 foot-candles. Group 2: Night: 50-55°F (10-13°C), Day: 55-60°F (13-16°C). 1,500-3,000 foot-candles. Two support nets are the minimum, but three are preferred. Mesh sizes of 4x4 in. (10x10 cm) to 6x6 in. (15x15 cm) are most commonly used. Place the first level at 4-6 inches (10-15 cm) above the soil level. Place the second level at 6 inches (15 cm) above the first level. Raise the upper level of the support nets as the stems lengthen. Unique novelty stand-alone Group 1,2 variety features a flower spike with red and white tube flowers. It can be scheduled and grown along with the Maryland series.
SNAPDRAGON <i>Antirrhinum majus</i> Rocket F₁ Series		406	Spring: 3-4 plants/ft ² (32-43 plants/m ²), 13-16 weeks	Before flower development: (day) 65-80°F (18-27°C) (night) 55-60°F (13-16°C)	30-36 in. (76-91 cm)	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. Group 3: Night: 55-60°F (13-16°C), Day: 60-65°F (16-18°C). 2,500-4,500 foot-candles. Group 4: Night: > 60°F (> 16°C), Day: > 65°F (> 18°C). 3,000-5,000 foot-candles.
SUNFLOWER <i>Helianthus annuus</i> Jua F₁ Series		288 Direct sow	Summer: 4-5 plants/ft ² (43-54 plants/m ²), 8-11 weeks	Before flower development: (day) 65-85°F (18-29°C) (night) 50-65°F (10-18°C)	36-60 in. (91-152 cm)	Suitable for short and long-day conditions. Bred for best-quality flowers under long-day conditions.
TRACHELIUM <i>Trachelium caeruleum</i> Lake Series	Obligate Long Day Trachelium needs 16-hour daylength.	288	Greenhouse: 6-8 plants/ft ² (65-86 plants/m ²), 10-18 weeks	Autumn: (day) 55°F (13°C) (night) 52°F (11°C) Spring: (day) 65°F (18°C) (night) 60°F (16°C) Summer: (day) 78°F (26°C) (night) 60-68°F (16-20°C) Winter: (day) 55°F (13°C) (night) 52°F (11°C)	30-42 in. (76-107 cm)	The greatest potential for year-round production in mild climates. Midseason flowering (transitional Group 3) series for mid-Winter to early Spring transplants to yield late Spring to early Summer flowers. May also be transplanted late Summer to early Autumn for Autumn to early Winter flowering.

ANNUALS PROPAGATION GUIDE P. 6 / FINISHING GUIDE P. 44

PERENNIALS PROPAGATION GUIDE P. 82 / FINISHING GUIDE P. 96 / FORCING GUIDE P. 110

POT PLANTS PROPAGATION GUIDE P. 114 / FINISHING GUIDE P. 130

CUT FLOWERS PROPAGATION GUIDE P. 140 / FINISHING GUIDE P. 148

handPicked

VEGETABLES & HERBS



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 <i>Cucumis sativus</i> Gherking F₁	RAW	Direct sow 128	3-4 2-3	1-2 1	Yes	2-3	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. Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible.
CUCUMBER <i>Cucumis sativus</i> Martini F₁	RAW	Direct sow 128	3-4 2-3	1-2 1	Yes	2-3	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. Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible.
CUCUMBER <i>Cucumis sativus</i> Patio Snacker F₁	RAW	Direct sow 128	3-4 2-3	1-2 1	Yes	2-3	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. Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible.
EGGPLANT <i>Solanum melongena</i> Gretel F₁	RAW	288	5-6	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
EGGPLANT <i>Solanum melongena</i> Hansel F₁	RAW	288	5-6	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
EGGPLANT <i>Solanum melongena</i> Patio Baby F₁	RAW	288	5-6	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
HERB (BASIL) <i>Ocimum basilicum</i> Dolce Fresca	RAW	406	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) <i>Ocimum basilicum</i> Everleaf Genovese	RAW	406	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) <i>Ocimum basilicum</i> Purple Ruffles	RAW	406	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) <i>Ocimum basilicum</i> Sweet Dani Lemon	RAW	406	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) <i>Anethum graveolens</i> Fernleaf	RAW	288	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.

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
PEPPER <i>Capsicum baccatum</i> Aji Rico F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
PEPPER <i>Capsicum annuum</i> Cajun Belle	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
PEPPER <i>Capsicum annuum</i> Candy Cane Red F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
PEPPER <i>Capsicum annuum</i> La Bomba II F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
PEPPER <i>Capsicum baccatum</i> Mad Hatter F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
PEPPER <i>Capsicum annuum</i> Sweet Heat F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. Sweet Heat is naturally compact and should not need PGRs.
SIMPLYHERBS <i>Ocimum basilicum</i> Basil	MPL	288	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 <i>Petroselinum crispum</i> Curled Parsley	MPL	288	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 <i>Anethum graveolens</i> Dill	MPL	288	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 <i>Petroselinum crispum</i> Large-Leaf Italian Flat Leaf Parsley	MPL	288	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.

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 <i>Origanum vulgare</i> Oregano	MPL	288	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 <i>Rosmarinus officinalis</i> Rosemary	MPL	288	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 <i>Salvia officinalis</i> Sage	MPL	288	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 <i>Thymus vulgaris</i> Thyme	MPL	288	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 <i>Ocimum basilicum</i> Try Basil	MPL	288	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® Alfresco Mixture	MPL	128	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® <i>Eruca sativa</i> Arugula	PMPL	128	2-3	1	Yes	1-2	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	Total crop time can be reduced by 1 week by directly sowing into the final container.
SIMPLYSALAD® City Garden Mixture	MPL	128	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® <i>Barbarea verna</i> Cress	PMPL	128	3-4	1	Yes	2-3	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	Total crop time can be reduced by 1 week by directly sowing into the final container.
SIMPLYSALAD® Global Gourmet Mixture	MPL	128	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® <i>Brassica oleracea</i> Kale Storm Mixture	PMPL	128	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.
SIMPLYSALAD® Summer Picnic Mixture	MPL	128	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® Wonder Wok Mixture	MPL	128	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.

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
SQUASH <i>Cucurbita pepo</i> Easy Pick F₁ Series	RAW	Direct sow 128	3-4 2-3	1-2 1	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. Height can be controlled by withholding fertilizer, avoiding overwatering, using DIF when possible, and growing under high light conditions.
SQUASH <i>Cucurbita moschata</i> Honeynut	RAW	Direct sow 128	3-4 2-3	1-2 1	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. Height can be controlled by withholding fertilizer, avoiding overwatering, using DIF when possible, and growing under high light conditions.
STRAWBERRY <i>Fragaria x ananassa</i> Fresca	RAW	288	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 susceptible to mildew. Use DIF whenever possible, especially the first 2 hours after sunrise, to control plant height.
TOMATO <i>Solanum lycopersicum</i> Candyland Red	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Chocolate Sprinkles F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Big Brandy F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Cherokee Carbon F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Genuwine F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Jersey Boy F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Marziner F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 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
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Perfect Flame F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Homeslice F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. Homeslice is naturally compact and should not need PGRs.
TOMATO <i>Solanum lycopersicum</i> Little Bing F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. Little Bing is naturally compact and should not need PGRs.
TOMATO <i>Solanum lycopersicum</i> Little Napoli F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. Little Napoli is naturally compact and should not need PGRs.
TOMATO <i>Solanum lycopersicum</i> Little Sicily F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. Little Sicily is naturally compact and should not need PGRs.
TOMATO <i>Solanum lycopersicum</i> Micro Tom	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. Micro Tom is naturally compact and should not need PGRs.
TOMATO <i>Solanum lycopersicum</i> Midnight Snack F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Orange Zinger F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Stellar F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Sugar Rush F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 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
TOMATO <i>Solanum lycopersicum</i> Sunrise Sauce F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Tidy Rose F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Tidy Treats F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. If necessary, uniconazole (Sumagic) at rate of 2.5-5 ppm can be applied at 2 weeks after sowing for height control. Repeat 2 weeks later if needed.
TOMATO <i>Solanum lycopersicum</i> Topsy Tom F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. Topsy Tom is naturally compact and should not need PGRs.
TOMATO <i>Solanum lycopersicum</i> Tumbler F₁	RAW	288	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	Height can be controlled by withholding fertilizer, avoiding overwatering, growing under high light conditions and using DIF when possible. Tumbler is naturally compact and should not need PGRs.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	FINISHING PROGRAMS	KEY TIPS
CUCUMBER <i>Cucumis sativus</i> Gherking F₁	Direct sow 128	(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"/4.5"/Quart, 1-2 (ppp), 2-3 (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.
CUCUMBER <i>Cucumis sativus</i> Martini F₁	Direct sow 128	(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"/4.5"/Quart, 1-2 (ppp), 2-3 (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.
CUCUMBER <i>Cucumis sativus</i> Patio Snacker F₁	Direct sow 128	(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"/4.5"/Quart, 1-2 (ppp), 2-3 (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.
EGGPLANT <i>Solanum melongena</i> Gretel F₁	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring	Performs well in-ground and in containers, with or without support.
EGGPLANT <i>Solanum melongena</i> Hansel F₁	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring	Performs well in-ground and in containers, with or without support.
EGGPLANT <i>Solanum melongena</i> Patio Baby F₁	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring	Performs well in-ground and in containers.
HERB (BASIL) <i>Ocimum basilicum</i> Dolce Fresca	406	(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"/4.5"/Quart, 1 (ppp), 3-4 (weeks), Spring 5"/6"/1 Gallon, 1-3 (ppp), 4-5 (weeks), Spring	Seed can be directly sown into finish containers up to 4 in. (10 cm).
HERB (BASIL) <i>Ocimum basilicum</i> Everleaf Genovese	406	(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"/4.5"/Quart, 1 (ppp), 3-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-5 (weeks), Spring	Approximately 30 to 45 days from transplant to harvest.
HERB (BASIL) <i>Ocimum basilicum</i> Purple Ruffles	406	(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"/4.5"/Quart, 1 (ppp), 3-4 (weeks), Spring 5"/6"/1 Gallon, 1-3 (ppp), 4-5 (weeks), Spring	Seed can be directly sown into finish containers up to 4 in. (10 cm).
HERB (BASIL) <i>Ocimum basilicum</i> Sweet Dani Lemon	406	(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"/4.5"/Quart, 1 (ppp), 3-4 (weeks), Spring 5"/6"/1 Gallon, 1-3 (ppp), 4-5 (weeks), Spring	Seed can be directly sown into finish containers up to 4 in. (10 cm).
HERB (DILL) <i>Anethum graveolens</i> Fernleaf	288	(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"/4.5"/Quart, 1 (ppp), 3-4 (weeks), Spring 5"/6"/1 Gallon, 1-3 (ppp), 4-5 (weeks), Spring	Seed can be directly sown into finish containers up to 4 in. (10 cm).
PEPPER <i>Capsicum baccatum</i> Aji Rico F₁	288	(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"/4.5"/Quart, 1 (ppp), 4-6 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring	Indeterminate variety, large habit. Performs best when grown in-ground and with support.
PEPPER <i>Capsicum annuum</i> Cajun Belle	288	(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"/4.5"/Quart, 1 (ppp), 4-6 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring	Indeterminate variety. Performs well in-ground or medium container, with or without support.
PEPPER <i>Capsicum annuum</i> Candy Cane Red F₁	288	(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"/4.5"/Quart, 1 (ppp), 4-6 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring	Indeterminate variety. Performs well in-ground or container, with or without support.
PEPPER <i>Capsicum annuum</i> La Bomba II F₁	288	(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"/4.5"/Quart, 1 (ppp), 4-6 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring	Indeterminate variety, large habit. Performs best when grown in-ground and with support.
PEPPER <i>Capsicum baccatum</i> Mad Hatter F₁	288	(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"/4.5"/Quart, 1 (ppp), 4-6 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring	Indeterminate variety, large habit. Performs best when grown in-ground and with support.
PEPPER <i>Capsicum annuum</i> Sweet Heat F₁	288	(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"/4.5"/Quart, 1 (ppp), 4-6 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 5-7 (weeks), Spring	Performs very well in containers.
SIMPLYHERBS <i>Ocimum basilicum</i> Basil	288	(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"/4.5"/Quart, 1 (ppp), 3-4 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <i>Petroselinum crispum</i> Curled Parsley	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (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
SIMPLYHERBS <i>Anethum graveolens</i> Dill	288	(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"/4.5"/Quart, 1 (ppp), 3-4 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <i>Petroselinum crispum</i> Large-Leaf Italian Flat Leaf Parsley	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <i>Origanum vulgare</i> Oregano	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <i>Rosmarinus officinalis</i> Rosemary	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <i>Salvia officinalis</i> Sage	288	(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"/4.5"/Quart, 1 (ppp), 3-4 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <i>Thymus vulgaris</i> Thyme	288	(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"/4.5"/Quart, 1 (ppp), 4-5 (weeks), Spring	Can be directly sown into final container.
SIMPLYHERBS <i>Ocimum basilicum</i> Try Basil	288	(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"/4.5"/Quart, 1 (ppp), 3-4 (weeks), Spring	Can be directly sown into final container.
SIMPLYSALAD® Alfresco Mixture	128	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 8"/2 Gallon, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot or HB/3 Gallon, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 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® <i>Eruca sativa</i> Arugula	128	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4"/4.5"/Quart, 1 (ppp), 2-3 (weeks), Spring 8"/2 Gallon, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot or HB/3 Gallon, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 5-6 (ppp), 4-6 (weeks), Spring	Can be directly sown into final container. 30 to 45 days from transplant to harvest.
SIMPLYSALAD® City Garden Mixture	128	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 8"/2 Gallon, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot or HB/3 Gallon, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 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® <i>Barbarea verna</i> Cress	128	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4"/4.5"/Quart, 1 (ppp), 3-4 (weeks), Spring 8"/2 Gallon, 3-4 (ppp), 3-4 (weeks), Spring 10" Pot or HB/3 Gallon, 4-5 (ppp), 5-6 (weeks), Spring 12" Pot or HB/5 Gallon, 5-6 (ppp), 5-6 (weeks), Spring	Can be directly sown into final container. 40 to 60 days from transplant to harvest.
SIMPLYSALAD® Global Gourmet Mixture	128	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 8"/2 Gallon, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot or HB/3 Gallon, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 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® <i>Brassica oleracea</i> Kale Storm Mixture	128	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 8"/2 Gallon, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot or HB/3 Gallon, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 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® Summer Picnic Mixture	128	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 8"/2 Gallon, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot or HB/3 Gallon, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 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.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	FINISHING PROGRAMS	KEY TIPS
SIMPLYSALAD® Wonder Wok Mixture	128	(day) 62-70°F (17-21°C) (night) 56-61°F (13-16°C)	5.8-6.2 pH 0.75 mmhos/cm	4"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 8"/2 Gallon, 3-4 (ppp), 2-4 (weeks), Spring 10" Pot or HB/3 Gallon, 4-5 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 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 <i>Cucurbita pepo</i> Easy Pick F₁ Series	Direct sow 128	(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), 2-3 (weeks), Spring 4"/4.5"/Quart, 1-2 (ppp), 2-3 (weeks), Spring	Direct-sow into final container. Performs best when grown in-ground.
SQUASH <i>Cucurbita moschata</i> Honeynut	Direct sow 128	(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), 2-3 (weeks), Spring 4"/4.5"/Quart, 1-2 (ppp), 2-3 (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.
STRAWBERRY <i>Fragaria x ananassa</i> Fresca	288	(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"/4.5"/Quart, 1 (ppp), 8-10 (weeks), Spring 8"/2 Gallon, 3-4 (ppp), 10-12 (weeks), Spring	Susceptible to mildew.
TOMATO <i>Solanum lycopersicum</i> Candyland Red	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Chocolate Sprinkles F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Big Brandy F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Cherokee Carbon F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Genuwine F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Jersey Boy F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Marziner F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Heirloom Marriage Perfect Flame F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Homeslice F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Determinate variety. Performs well in a patio planter or in-ground. Best grown with support.
TOMATO <i>Solanum lycopersicum</i> Little Bing F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 1 (ppp), 6-8 (weeks), Late Spring	Compact, determinate variety. Excellent performance in a patio planter with or without support.
TOMATO <i>Solanum lycopersicum</i> Little Napoli F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 1 (ppp), 6-8 (weeks), Late Spring	Compact, determinate variety. Excellent performance in a patio planter with or without support.

CLASS/SERIES	RECOMMENDED PLUG SIZE	GROWING ON TEMPERATURE (DAYS/NIGHTS)	TARGET MEDIA PH/EC	FINISHING PROGRAMS	KEY TIPS
TOMATO <i>Solanum lycopersicum</i> Little Sicily F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 1 (ppp), 6-8 (weeks), Late Spring	Compact, determinate variety. Excellent performance in a patio planter with or without support.
TOMATO <i>Solanum lycopersicum</i> Micro Tom	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Compact, determinate variety. Performs best in small containers.
TOMATO <i>Solanum lycopersicum</i> Midnight Snack F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Orange Zinger F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Stellar F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Determinate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Sugar Rush F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Indeterminate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Sunrise Sauce F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring	Determinate variety. Performs best when grown in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Tidy Rose F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring 14" Pot or HB/7 Gallon, 1 (ppp), 6-8 (weeks), Late Spring	Compact, indeterminate variety. Performs well in a patio planter or in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Tidy Treats F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring 14" Pot or HB/7 Gallon, 1 (ppp), 6-8 (weeks), Late Spring	Compact, indeterminate variety. Performs well in a patio planter or in-ground and with support.
TOMATO <i>Solanum lycopersicum</i> Topsy Tom F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 1 (ppp), 6-8 (weeks), Late Spring	Superior variety for hanging baskets and patio planters. Performs well when grown upside-down.
TOMATO <i>Solanum lycopersicum</i> Tumbler F₁	288	(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"/4.5"/Quart, 1 (ppp), 2-4 (weeks), Spring 5"/6"/1 Gallon, 1 (ppp), 4-6 (weeks), Spring 12" Pot or HB/5 Gallon, 1 (ppp), 6-8 (weeks), Late Spring	Superior variety for hanging baskets and patio planters. Cascading habit. Performs well when grown without support.

- Abutilon**
Bella Series 6, 44
- Ageratum**
High Tide® F1 Series 6, 44
- Alternanthera**
Purple Knight..... 6, 44
Purple Prince..... 6, 44
- Alyssum**
Clear Crystal® Series..... 6, 44
Easter Bonnet Series..... 6, 44
Snow Crystals..... 6, 44
- Anemone**
Mona Lisa® Series 140, 148
- Angelonia**
Serena® F1 Series 6, 44
Serenita® F1 Series..... 6, 44
- Aquilegia**
Clementine Series..... 82, 96
Songbird F1 Series 82, 96
Swan F1 Series..... 82, 96
Winky Double Series 82, 96
Winky Single Series..... 82, 96
- Arabis**
Spring Charm 82, 96
- Armeria**
Ballerina Series..... 82, 96
- Asclepias**
Silky Series 140, 148
- Aster**
Meteor Mixture 140, 148
Pot 'N Patio Series 6, 44
- Bacopa**
Blutopia® F1..... 6, 44
Snowtopia® F1 6, 44
- Begonia**
BabyWing® F1 Series..... 8, 44
Dragon Wing® F1 Series..... 8, 44
Gryphon 8, 46
Megawatt F1 Series..... 8, 46
- Bellis**
Bellissima Series 82, 96
- Browallia**
Bells Series..... 8, 46
- Calibrachoa**
Crave Strawberry Star F1..... 8, 46
Kabloom® F1 Series 8, 46
- Campanula**
Campana F1 Series 140, 148
Rapido F1 Series 82, 98
- Carthamus**
Grenade Series 140, 148
- Celosia**
Bombay® Series..... 140, 148
Celway® Series..... 140, 148
Dracula 8, 46
First Flame Series..... 8, 46
Ice Cream Series..... 8, 46
Kosmo Series..... 8, 46
Neo Series..... 140, 148
Spring Green..... 142, 148
Sunday® Series 142, 148
- Coleus**
Black Dragon..... 10, 46
Wizard® Series 10, 46
- Coleus, Premium Shade**
Kong Jr. Series..... 10, 46
Kong® Series..... 10, 48
- Coleus, Premium Sun**
Chocolate Covered Cherry 10, 48
Chocolate Mint 10, 48
Crimson Gold..... 10, 48
Dark Chocolate..... 10, 48
Lime Delight..... 10, 48
Mighty Mosaic..... 10, 48
Pineapple Surprise..... 10, 48
Rose to Lime Magic..... 10, 48
Watermelon..... 10, 50
- ColorGrass Anemanthele**
Sirocco..... 12, 50
- ColorGrass Carex**
Amazon Mist..... 12, 50
Bronco 12, 50
Phoenix Green 12, 50
Red Rooster 12, 50
- ColorGrass Corynephorus**
Spiky Blue..... 12, 50
- ColorGrass Festuca**
Festina..... 12, 50
- ColorGrass Isolepis**
Live Wire..... 12, 50
- ColorGrass Juncus**
Blue Arrows 12, 50
Blue Dart 12, 50
Javelin..... 12, 50
Starhead 12, 50
- ColorGrass Koeleria**
Coolio 12, 50
- ColorGrass Luzula**
Lucius 12, 50
- ColorGrass Stipa**
Pony Tails..... 12, 50
- Coreopsis**
Early Sunrise 82, 98
Sun Up..... 84, 98
Sunfire..... 84, 98
SunKiss 84, 98
- Cosmos**
Antiquity..... 14, 50
Sonata Series..... 14, 52
- Crossandra**
Tropic Series 14, 52
- Cucumber**
Gherking F1 158, 170
Martini F1..... 158, 170
Patio Snacker F1 158, 170
- Cuphea**
Dynamite..... 14, 52
- Dahlia**
Figaro® Series 14, 52
- Delphinium**
Blue Donna..... 84, 98, 142, 150
Diamonds Blue F1 84, 100
Guardian F1 Series 84, 100, 142, 150
- Deschampsia**
Zephyr..... 14, 52
- Dianthus**
Amazon F1 Series 142, 150
Bouquet F1 Series 84, 100, 142, 150
Corona F1 Series..... 14, 52
Dash F1 Series..... 14, 52
Dynasty F1 Series..... 14, 52
Floral Lace F1 Series..... 14, 52
Ideal Select F1 Series 14, 52
Rockin' Red F1 84, 100
Sweet F1 Series 142, 150
- Dianthus (Interspecific)**
Jolt F1 Series..... 14, 52
- Dichondra**
Emerald Falls..... 14, 52
Silver Falls..... 16, 52
- Digitalis**
Dalmatian F1 Series..... 86, 100
- Dusty Miller Maritima**
Silverdust..... 16, 52
- Echinacea**
Cheyenne Spirit..... 86, 102
PowWow® Series..... 86, 102
- Eggplant**
Gretel F1..... 158, 170
Hansel F1..... 158, 170
Patio Baby F1 158, 170
- Erysimum**
Citrona® Series..... 16, 54
- Euphorbia**
Glitz F1 16, 54
- Exacum**
Princess Series..... 114, 130
Royal Dane Series..... 114, 130
Supreme..... 114, 130
- Fuseables®**
Bacopa Series 16, 54
Calibrachoa Series 16, 54
Coleus Series..... 16, 54
Petunia Series 16, 54
Petunia-Bacopa Series..... 16, 54
Twisted Arrows..... 16, 54
Twisted Dart..... 16, 54
Viola Series..... 16, 56
Viola-Alyssum Series..... 18, 56
- Gaillardia**
Mesa F1 Series 86, 102
- Gaura**
Sparkle White 86, 102
- Gazania**
New Day® F1 Series 18, 56
- Gazania Tetraploid**
Sunshine Series..... 18, 56
- Geranium (Ivy)**
Summer Showers Series 18, 56
- Gerbera**
Mega Revolution Series 114, 130
Revolution F1 Series..... 114, 130
- Gomphrena**
Fireworks..... 18, 56
QIS Series..... 142, 150
- Gypsophila**
Pixie Splash..... 86, 102
- Helenium**
Dakota Gold..... 18, 56
- Helichrysum**
Silver Mist..... 18, 56
- Herb (Basil)**
Dolce Fresca..... 158, 170
Everleaf Genovese 158, 170
Purple Ruffles..... 158, 170
Sweet Dani Lemon..... 158, 170
- Herb (Dill)**
Fernleaf..... 158, 170
- Heuchera**
Melting Fire..... 86, 102
Palace Purple..... 86, 102
- Hibiscus**
Luna F1 Series..... 88, 102
Mahogany Splendor..... 18, 56
- Hypoestes**
Splash Select Series 114, 130
- Iberis**
Whiteout..... 88, 102
- Impatiens**
Dazzler® F1 Series 18, 56
Impreza® F1 Series 18, 56
Super Elfin® F1 Series..... 18, 56
Super Elfin® XP F1 Series..... 18, 58
- Impatiens (New Guinea)**
Divine F1 Series..... 20, 58
- Iresine**
Purple Lady..... 20, 58
- Isotoma**
Gemini F1 Series..... 20, 58
Tristar Series..... 20, 58
- Juncus**
Twister..... 20, 58
- Lavandula**
Bandera Series..... 88, 102
Ellagance Series..... 88, 104
Lavance Deep Purple 88, 104
Mini Blue..... 90, 104
Spanish Eyes..... 90, 104
- Leycesteria**
Jealousy..... 20, 58
- Limonium**
QIS Series..... 142, 150
- Linaria**
Enchantment F1 20, 58
- Lisianthus**
ABC F1 Series 142, 150
Flare F1 Series..... 144, 150
Florida F1 Series..... 20, 58
Sapphire F1 Series..... 114, 130
- Lobelia**
Cambridge Blue 20, 58
Cobalt Blue..... 20, 58
Crystal Palace 20, 58
Fountain Series 20, 58
Mrs Clibran 20, 58
Rapid Series..... 20, 58
Regatta Series 22, 58
Riviera Series 22, 60
Rosamond..... 22, 60
Sapphire Pendula 22, 60
Starship F1 Series..... 90, 104
String Of Pearls 22, 60
Vulcan Red..... 90, 104
White Lady..... 22, 60
- Marigold (African)**
Garland Orange F1 22, 60
Lady F1 Series..... 22, 60
Marvel F1 Series..... 22, 60
Taishan® F1 Series 22, 60
Vanilla F1..... 22, 60
- Marigold (French)**
Bonanza Series..... 22, 60
Boy Series 22, 60
Durango® Series..... 22, 60
Fireball..... 24, 60
Gate Series..... 24, 60
Hot Pak Series..... 24, 60
Janie Series..... 24, 62
Strawberry Blonde 24, 62
- Matricaria**
Vegmo Series..... 144, 150

- Matthiola**
Aida Series.....144, 152
Column Stock Series.....144, 152
Figaro Series.....144, 152
Hot Cakes Series.....24, 62
Katz Series.....144, 152
Mathilda Series.....144, 152
Opera Series.....144, 152
- Myosotis**
Mon Amie Blue.....90, 106
- Nemesia**
Poetry F1 Series.....24, 62
Sundrops Mixture.....24, 62
- Nepeta**
Blue Moon.....90, 106
Pink Cat.....90, 106
- Nicotiana**
Nicki Series.....24, 62
- Ornamental Millet**
Copper Prince F1.....24, 62
Jade Princess F1.....24, 62
Jester F1.....26, 62
Purple Baron F1.....26, 62
Purple Majesty.....26, 62
- Ornamental Mint**
Mini Mint.....26, 62
- Ornamental Oregano**
Kirigami.....26, 64
- Ornamental Pepper**
Acapulco® Series.....114, 130
Black Pearl.....26, 64
Blaze.....116, 130
Calico F1.....26, 64
Chilly Chili F1.....116, 130
Coba.....116, 130
Cosmo.....116, 130
Cupala.....116, 132
Fiesta.....116, 132
Golden Cayenne.....116, 132
Habanero.....118, 132
Harlequin.....118, 132
Hot Banana.....118, 132
Hot Burrito.....118, 132
Hot Carrot.....118, 132
Hot Fajita.....118, 132
Hot Joker®.....120, 132
Hot Lemon.....120, 132
Hot Pops Purple.....120, 132
Hot Tomato.....120, 132
Jalapeño.....120, 132
Joker.....120, 132
Macho.....122, 132
Masquerade.....122, 132
Medusa.....122, 134
Midnight Fire.....26, 64
Paracho.....122, 134
Purple Flash.....26, 64
Red Bell.....122, 134
Red Missile.....122, 134
Salsa Series.....122, 134
Samba Series.....122, 134
Samba XL Series.....124, 134
Sangria F1.....26, 64
Santos Series.....124, 134
Sedona Sun.....26, 64
Snack Series.....124, 134
Snack Supreme.....124, 134
Torito.....124, 134
Wicked.....124, 134
Yellow Tomato.....126, 134
Zamora Series.....126, 134
- Osteospermum**
Akila® F1 Series.....26, 64
- Pansy**
Cool Wave® F1 Series.....28, 64
Fizzy F1 Series.....28, 64
Frizzle Sizzle F1 Series.....28, 66
Halloween II F1.....28, 66
Matrix® F1 Series.....28, 66
Panola® F1 Series.....28, 66
Panola® XP F1 Series.....28, 66
Promise® F1 Series.....28, 66
Spring Matrix F1 Series.....28, 66
- Papaver**
Champagne Bubbles F1 Series....90, 106
- Penstemon**
Carillo Series.....92, 106
Electric Blue.....92, 106
- Pentas**
Butterfly F1 Series.....30, 68
Glitterati F1 Series.....30, 68
Lucky Star F1 Series.....32, 68
- Pepper**
Aji Rico F1.....160, 170
Cajun Belle.....160, 170
Candy Cane Red F1.....160, 170
La Bomba II F1.....160, 170
Mad Hatter F1.....160, 170
Sweet Heat F1.....160, 170
- Perovskia**
Blue Steel.....92, 106
- Petunia**
Carpet F1 Series.....32, 68
Daddy® F1 Series.....32, 68
Debonair Collection F1 Series.....32, 68
Dreams F1 Series.....32, 68
Ez Rider® F1 Series.....32, 68
Lo Rider® F1 Series.....32, 68
Madness® F1 Series.....32, 68
Mirage F1 Series.....32, 68
Pretty Flora F1 Series.....34, 68
Pretty Grand F1 Series.....34, 68
Sophistica Collection F1 Series.....34, 68
Supercascade F1 Series.....34, 70
- Petunia (Double)**
Bonanza F1 Series.....34, 70
Double Cascade F1 Series.....34, 70
Double Madness® F1 Series.....34, 70
Duo F1 Series.....34, 70
Glorious F1 Series.....34, 70
Pirouette F1 Series.....34, 70
Valentine F1.....34, 70
- Petunia (Spreading)**
Combo Blue F1.....34, 70
Easy Wave® F1 Series.....36, 72
Shock Wave® F1 Series.....36, 72
Tidal Wave® F1 Series.....36, 72
Wave® F1 Series.....36, 72
- Phlox**
21st Century F1 Series.....36, 72
Ethnie Series.....36, 72
Grammy Pink & White F1.....36, 72
Promise Series.....36, 72
- Plectranthus**
Silver Crest.....36, 72
Silver Shield.....36, 72
- Portulaca**
Happy Hour F1 Series.....36, 72
Happy Trails F1 Series.....36, 72
- Primula**
Heritage Crème F1.....38, 74
Optic F1 Series.....38, 74
Primlet® Series.....38, 74
- Purslane**
Toucan Series.....38, 74
- Rudbeckia**
Goldsturm.....92, 106
- Ruellia**
Southern Star Series.....38, 74
- Salvia**
Flare.....38, 74
Lighthouse Series.....38, 74
New Dimension Series.....92, 108
Patio Series.....92, 108
Red Hot Sally II.....38, 74
Scarlet King.....38, 74
Vista Series.....38, 74
- Saxifraga**
Rocco Red.....94, 108
- Scabiosa**
Blue Note.....94, 108
Pink Diamonds.....94, 108
- Scutellaria**
Veranda.....38, 74
- Silene**
Stary Dreams.....94, 108
- SimplyHerbs**
Basil.....160, 170
Curled Parsley.....160, 170
Dill.....160, 172
Large-Leaf Italian
Flat Leaf Parsley.....160, 172
Oregano.....162, 172
Rosemary.....162, 172
Sage.....162, 172
Thyme.....162, 172
Try Basil.....162, 172
- SimplySalad®**
Alfresco Mixture.....162, 172
Arugula.....162, 172
City Garden Mixture.....162, 172
Cress.....162, 172
Global Gourmet Mixture.....162, 172
Kale Storm Mixture.....162, 172
Summer Picnic Mixture.....162, 172
Wonder Wok Mixture.....162, 174
- Snapdragon**
Cool F1 Series.....146, 152
Early Potomac® F1 Series.....146, 152
Maryland F1 Series.....146, 152
Monaco F1 Series.....146, 154
Potomac® F1 Series.....146, 154
Purple Twist F1.....146, 154
Red Delilah F1.....146, 154
Rocket F1 Series.....38, 74, 146, 154
Snapshot F1 Series.....38, 74
Solstice F1 Series.....38, 76
- Solanum**
Apollo.....126, 134
Jupiter.....126, 136
Sagitta Lime.....126, 136
Saturn.....128, 136
Thurino.....128, 136
Tucana.....128, 136
Venus.....128, 136
- Spilanthes**
Peek-A-Boo.....40, 76
- Squash**
Easy Pick F1 Series.....164, 174
Honeynut.....164, 174
- Stock**
Vintage Series.....40, 76
- Strawberry**
Fresca.....164, 174
- Sunflower**
Ballad F1.....128, 136
Choco Sun.....128, 136
Jua F1 Series.....146, 154
Miss Sunshine F1.....128, 136
- Talinum**
Limón.....40, 76
Verde.....40, 76
- Thunbergia**
Susie Series.....40, 76
- Thymophylla**
Golden Dawn.....40, 76
- Tomato**
Candyland Red.....164, 174
Chocolate Sprinkles F1.....164, 174
Heirloom Marriage
Big Brandy F1.....164, 174
Heirloom Marriage
Cherokee Carbon F1.....164, 174
Heirloom Marriage
Genuwine F1.....164, 174
Heirloom Marriage
Jersey Boy F1.....164, 174
Heirloom Marriage
Marzineria F1.....164, 174
Heirloom Marriage
Perfect Flame F1.....166, 174
Homeslice F1.....166, 174
Little Bing F1.....166, 174
Little Napoli F1.....166, 174
Little Sicily F1.....166, 176
Micro Tom.....166, 176
Midnight Snack F1.....166, 176
Orange Zinger F1.....166, 176
Stellar F1.....166, 176
Sugar Rush F1.....166, 176
Sunrise Sauce F1.....168, 176
Tidy Rose F1.....168, 176
Tidy Treats F1.....168, 176
Topsy Tom F1.....168, 176
Tumbler F1.....168, 176
- Torenia**
Kauai Series.....40, 76
- Trachelium**
Lake Series.....146, 154
- Verbascum**
Southern Charm.....94, 108
- Verbena**
Buenos Aires.....94, 108
Quartz Series.....40, 76
Quartz XP Series.....40, 76
Santos Purple.....94, 108
- Veronica**
Blue Bouquet.....94, 108
- Vinca**
Jams 'N Jellies Series.....40, 76
Mediterranean Series.....40, 76
Mediterranean XP Series.....40, 76
Pacifica XP Series.....42, 76
Titan® F1 Series.....42, 76
Valiant F1 Series.....42, 78
- Viola**
Sorbet® F1 Series.....42, 78
Sorbet® XP F1 Series.....42, 78
- Zinnia**
Double Zahara Series.....42, 78
Star Series.....24, 78
State Fair Mixture.....42, 78
UpTown Series.....42, 78
Zahara® Series.....42, 78
Zahara® XL Series.....42, 78

PanAmerican Seed[®] **KieftSeed**

**Contact your preferred supplier to order PanAmerican Seed products.
Visit panamseed.com for current Terms & Conditions of Sale.**

622 Town Road
West Chicago, Illinois 60185-2698 USA
+1 630 231-1400
+1 800 231-7065
Fax: +1 630 293-2557

P.O. Box 63
1606 ZH Venhuizen, The Netherlands
+31 (0) 228-541-844
Fax: +31 (0) 228-543-440

© 2017 Ball Horticultural Company 17196

♻️ Printed in the U.S. on 10% post-consumer recycled paper with soy-based inks.

® denotes a registered trademark of Ball Horticultural Company in the U.S. and/or the European Community.

ACAPULCO and HOT JOKER are registered trademarks of Ex-Plant A/S in the European Community.