



# 2015

*Catalog*

**TRIALED & APPROVED**

**BOLD & HARDY**

**TOP GENETICS**

**BRED FOR GROWERS**

DarwinPerennials®





# Darwin Perennials...

**Mike Klopmeier** — General Manager  
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**Welcome to the Darwin Perennials 2015 Catalog!** You'll meet an exciting lineup of introductions to grow and SELL in time for Spring and Summer 2015. Darwin Perennials is introducing 31 NEW varieties for the coming season...that's a near-record in the perennial world. From one-of-a-kind hardy Alyssum Golden Spring, to robust and stunning Foxlight™ Digitalis, to the newest member of our perennial Viola line, Halo Lemon Frost... we have it all for you.

It's easy to talk about new, but it's even more crucial to prove how these products will WORK for you. We do our homework to develop product specs for our extensive breeder network to create the BEST perennials for you. These experimental lines are then extensively trialed in containers and the landscape in Illinois, Georgia, Florida and California so that both you and the consumer always get predictable, successful performance. We're taking 'Trialed and Approved' to a new level!

New to this year's catalog is a propagation and finishing culture guide for every variety in our assortment. We've taken the guesswork out of your perennial production by combining outstanding genetics with these up-to-date "how to" recommendations. You can also see which Root & Sell perennial suppliers are licensed to supply Darwin Perennials varieties through your favorite broker. With all perennial forms readily available — unrooted cuttings, vegetative liners, TC liners and bare root (from Darwin Plants) — you're ready to get started. I promise you won't be disappointed.

Here's to your growing and selling success in 2015!

*Mike*





# ...breaking new ground

The 2013 Darwin Perennials Day  
event was a great success!

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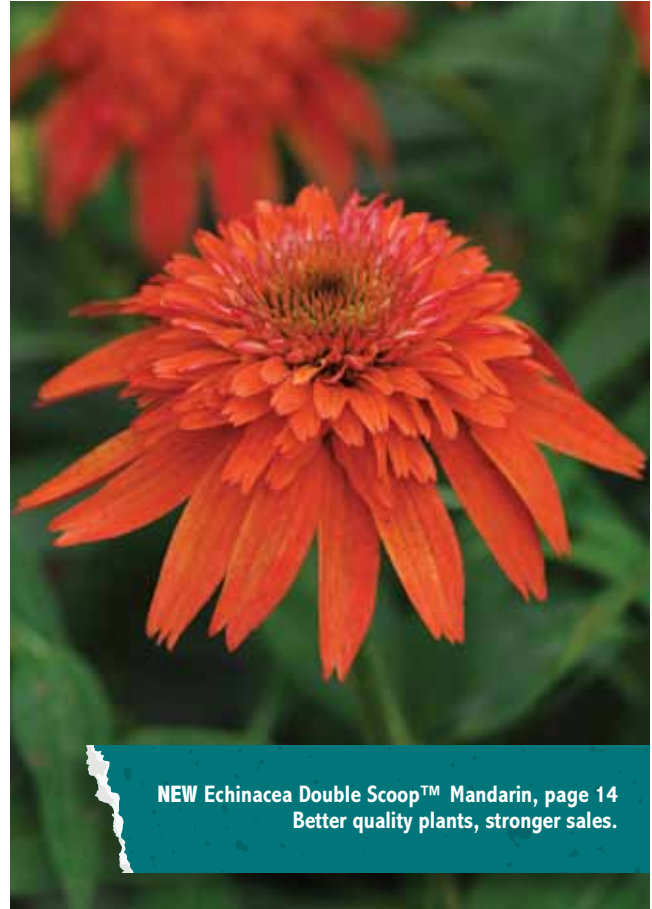


On the cover...NEW Digitalis  
Foxlight™ Ruby Glow



# Darwin Perennials

## Perennials with staying power



Every new variety in this catalog has been extensively trialed and approved to ensure your growing and selling success — as well as your customers' satisfaction. These are just a few of the outstanding additions to the Darwin Perennials lineup.

# Rising Stars



**NEW** Lavandula Bright Luxurious, page 28  
Small novelty containers, big sell-through.



**NEW** Salvia Blue Marvel, page 34  
Largest flowers, perfect premium item.

Some favorite performers on our roster



Coreopsis  
Sylvester  
page 10

**NEW** Heuchera Carnival  
Candy Apple and Black Olive, page 24

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page 32



ACHILLEA   
(YARROW)  
*Achillea millefolium*

## NEW VINTAGE™ SERIES

**Height:** 12 to 14 in. (30 to 35 cm)

**Bloom Months:** June to July

**USDA Hardiness Zones:** 4 to 9



**Achillea New Vintage Red**



**Achillea New Vintage Rose**



**Achillea New Vintage Violet**



**Achillea New Vintage White**

**Compact, heavy-flowering series keeps its color for more “pretty time” on the bench and in the garden.**

- Tidy plant habit with no gap between foliage and flowers — outstanding in containers.
- Bold colors mature to attractive shades instead of fading to brown like other varieties.
- Great for late Spring one-gallon programs.

## SONG SIREN™ COLLECTION

**Height:** 20 to 22 in. (50 to 55 cm)

**Bloom Months:** June to July

**USDA Hardiness Zones:** 4 to 9



**Achillea Song Siren Laura**



**Achillea Song Siren Layla**



**Achillea Song Siren Little Susie**



**Achillea Song Siren Pretty Woman**

**Long-lasting varieties with an attractive price point.**

- Rich color selection in a garden-height Achillea.
- Color holds up well in the garden.
- Ideal for one- or two-gallon Summer programs.

Achillea  
New Vintage Violet





AGASTACHE ●●●  
(ANISE HYSSOP)  
*Agastache rugosa*

## NEW LITTLE ADDER

**Height:** 15 to 18 in. (38 to 45 cm)  
**Bloom Months:** June to September  
**USDA Hardiness Zones:** 3 to 8



NEW Agastache Little Adder

### More flowers, more appeal, better sell-through!

- More compact than Black Adder or Blue Fortune, with better branching.
- Three times the blooms of Black Adder for three times the flower power.
- Great show at retail and in the garden for better sell-through and repeat sales.

ALYSSUM ●  
(BASKET OF GOLD)  
*Alyssum wulfenianum*

## NEW GOLDEN SPRING

**Height:** 6 to 8 in. (15 to 20 cm)  
**Bloom Months:** April to May  
**USDA Hardiness Zones:** 4 to 9



NEW Alyssum Golden Spring

### Exciting new season extender brings a fresh class of 'WOW' to the early Spring-flowering group.

- First vegetative Alyssum of this species, with the largest flowers in its class.
- Easy-to-grow, heat-loving, pest-free, hardy perennial.
- Evergreen foliage.

BOLTONIA ●●●  
(FALSE ASTER)  
*Boltonia asteroides var. latisquama*

## JIM CROCKETT

**Height:** 18 to 24 in. (45 to 60 cm)  
**Bloom Months:** May to September  
**USDA Hardiness Zones:** 4 to 9



Boltonia Jim Crockett

### Daisy-like blooms bring cheer to gardens for much of the Summer.

- Early and free-flowering U.S. native species.
- Medium to dark green foliage and abundant lavender blooms with yellow centers.
- Compact, mounded habit.







**BUDDLEIA** ●  
(BUTTERFLY BUSH)  
*Buddleia x hybrida*

## **BUDDLEIA FLUTTERBY®**

**Bloom Months:** April to September  
**USDA Hardiness Zones:** 5 to 10



**Buddleia Flutterby Lavender**



**Buddleia Flutterby Peace**



**Buddleia Flutterby Pink (sterile)**



**Buddleia Flutterby Grande  
Blueberry Cobbler (sterile)**



**Buddleia Flutterby Grande  
Peach Cobbler (sterile)**



**Buddleia Flutterby Grande Vanilla  
(sterile)**



**Buddleia Flutterby Petite Blue Heaven**



**Buddleia Flutterby Petite Dark Pink**



**Buddleia Flutterby Petite Pink**



**Buddleia Flutterby Petite Snow White  
(sterile)**



**Buddleia Flutterby Petite  
Tutti Fruitti Pink**



**Buddleia Flutterby Flow Lavender**



**Buddleia Flutterby Flow Mauve Pink**

**A complete collection of non-invasive Buddleia to suit any landscaping need.**

- Highly resistant to Downy Mildew
- Available in four different habits:

**Flutterby Flow® Series Height:** 1.5 to 2 ft. (45 to 60 cm) – Groundcover

**Flutterby Grande® Series Height:** 4 to 6 ft. (1.2 to 1.8 m) – Full-size upright

**Flutterby® Series Height:** 4 to 5 ft. (1.2 to 1.5 m) – Compact upright

**Flutterby Petite® Series Height:** 2 to 2.5 ft. (60 to 75 cm) – Dwarf

*From the Ball Ornamentals Collection*



Buddleia Flutterby  
Petite Tutti Fruitti Pink



CENTAUREA ●  
(CORNFLOWER)  
*Centaurea montana*

## NEW LAVENDER MIST

**Height:** 16 to 18 in. (40 to 45 cm)  
**Bloom Months:** April to June  
**USDA Hardiness Zones:** 4 to 9



NEW Centaurea Lavender Mist

### Better branching, shorter habit and lots more flower power!

- 50% more flowers on a compact habit for plenty of retail appeal.
- Uniform flowering when bulked and overwintered.
- Longer blooming time than other cultivars.

COREOPSIS ●  
(TICKSEED)  
*Coreopsis grandiflora*

## SUNNY DAY

**Height:** 24 in. (60 cm)  
**Bloom Months:** May to September  
**USDA Hardiness Zones:** 4 to 9



Coreopsis Sunny Day

### Excellent choice to brighten borders and containers.

- Lots of big, bright, single yellow blooms on compact plants.
- Remove spent flowers to encourage reblooming.
- North American native species.

COREOPSIS ●  
(TICKSEED)  
*Coreopsis verticillata*

## SYLVESTER

**Height:** 16 to 20 in. (40 to 50 cm)  
**Bloom Months:** May to September  
**USDA Hardiness Zones:** 5 to 9



Coreopsis Sylvester

### Long-blooming Sylvester grows fast and full.

- Fuller plants can be finished from first-year cuttings.
- Bright, golden-yellow blooms are twice the size of other *C. verticillata*.
- Perfect for gallon programs.

## TWEETY

**Height:** 14 to 16 in. (35 to 40 cm)  
**Bloom Months:** May to September  
**USDA Hardiness Zones:** 4 to 9



Coreopsis Tweety

### Pure yellow blooms are perfect for small spaces and native gardens.

- Everblooming plant with plenty of sunny yellow flowers.
- Compact, bushy habit requires no PGRs or bulking.
- Perfect for quart programs.







DIGITALIS   
(FOXGLOVE)  
*Digitalis x hybrida*

## NEW FOXLIGHT™ SERIES

**Height:** 22 to 24 in. (56 to 60 cm)

**Bloom Months:** April to September

**USDA Hardiness Zones:** 7 to 10

**Karl's choice:**

*Foxlight really ratchets up the color in this popular perennial class. No other Digitalis series has these bold novelty colors — plus, Foxlight lowers grower input costs by 20%.*

Karl Batschke,  
Global Product Manager, Perennials



**NEW** Digitalis Foxlight Plum Gold



**NEW** Digitalis Foxlight Rose Ivory



**NEW** Digitalis Foxlight Ruby Glow



**NEW** Digitalis  
Foxlight Ruby Glow

### Three bold novelty colors boost retail appeal and drive impulse sales.

- Lower input costs provide greater profit margin at wholesale and retail.
- First-year-flowering perennial needs no bulking for full plants.
- More compact than competing varieties, with deeper green foliage.
- Blooms all Summer long, with outward-facing flowers for better show.



A photograph of several tall foxglove plants with vibrant red and orange tubular flowers. The plants are in a garden setting with a brick wall in the background and green foliage in the foreground. The lighting is bright, suggesting a sunny day.

NEW Digitalis  
Foxlight Ruby Glow

*Foxlight*



ECHINACEA   
(CONEFLOWER)  
*Echinacea x hybrida*

## DOUBLE SCOOP™ SERIES

**Height:** 22 to 24 in. (56 to 60 cm)

**Bloom Months:** June to August

**USDA Hardiness Zones:** 4 to 9



**NEW** Echinacea Double Scoop  
Mandarin



Echinacea Double Scoop Bubblegum



Echinacea Double Scoop Cranberry



Echinacea Double Scoop Orangeberry



Echinacea Double Scoop Raspberry



Echinacea Double Scoop Raspberry

**Abundant, fully double flowers boast brilliant, non-fading color.**

- Very hardy plants overwinter well and provide long-lasting garden enjoyment.
- First-rate branching and clean foliage for superior show at retail.
- New Mandarin brings a warm, tropical orange to the series. Excellent habit is similar to Double Scoop Cranberry.





NEW Echinacea  
Double Scoop Mandarin

*Double Scoop*

ECHINACEA   
(CONEFLOWER)  
*Echinacea x hybrida*

## SOMBRERO® SERIES

**Height:** 24 to 26 in. (60 to 66 cm)

**Bloom Months:** June to August

**USDA Hardiness Zones:** 4 to 9

**Katie's choice:**

*Put Sombrero on your 'gotta-grow' list, especially new Adobe Orange. It has a compact habit, lots of blooms and excellent availability from high-quality liner growers.*

Katie Neisendorf,  
Business Manager for  
Perennial Inputs



**NEW** Echinacea Sombrero  
Adobe Orange



Echinacea Sombrero Flamenco Orange



Echinacea Sombrero Lemon Yellow



Echinacea Sombrero Sandy Yellow



Echinacea Sombrero Hot Coral



Echinacea Sombrero Salsa Red




Echinacea Sombrero  
Hot Coral

**Unexpectedly bold and bright, Sombrero's vibrant colors are matched by its exceptional Winter hardiness and excellent branching.**

- Highly floriferous series features six rich colors.
- Naturally well-branched and compact for easy shipping.
- Excellent retail presentation, commanding a premium price.
- Series is well-matched in habit and timing.
- Plant Sombrero in the Spring and sell it the same year.
- New Adobe Orange is well-matched to the series, with a bright, pumpkin orange color.





Echinacea Sombrero  
Flamenco Orange

*Sombrero*



ERYSIMUM ●  
(WALLFLOWER)  
*Erysimum linifolium*

## NEW CHEERS™ SERIES

**Height:** 18 to 22 in. (45 to 56 cm)  
**Bloom Months:** March to September  
**USDA Hardiness Zones:** 6 to 10



NEW Erysimum Cheers Lemon Yellow



NEW Erysimum  
Cheers Mighty Mauve

**More flowers, richer colors and better habits than others in its class.**

- Continuous blooming for a longer selling window.
- No vernalization required.
- Excellent heat tolerance.

EUPHORBIA ●●  
*Euphorbia amygdaloides*

## NEW RED VELVET

**Height:** 18 to 20 in. (45 to 50 cm)  
**Bloom Months:** March to May  
**USDA Hardiness Zones:** 6 to 10



NEW Euphorbia Red Velvet



**Strong red color sparks Summer and Fall programs and mixes.**

- Striking foliage color survives Summer heat and intensifies into Fall.
- Perfect for container gardens and landscapes.

GAURA ●●  
(WAND FLOWER)  
*Gaura lindheimeri*

## BALLERINA™ SERIES

**Height:** 12 to 18 in. (30 to 45 cm)  
**Bloom Months:** April to September  
**USDA Hardiness Zones:** 6 to 9



Gaura Ballerina Blush



Gaura Ballerina Rose



Gaura Ballerina Compact White

**Continuous blooms on compact, well-branched, upright plants.**

- Striking flowers complement dark foliage.
- Well-suited to landscapes and combo containers.
- White is the most compact, well-branched Gaura on the market.



NEW Erysimum  
Cheers Mighty Mauve





GAURA continued

## BELLEZA™ SERIES

**Height:** 10 to 18 in. (25 to 45 cm)

**Bloom Months:** May to September

**USDA Hardiness Zones:** 6 to 9



**Gaura Belleza Compact Light Pink**



**Gaura Belleza Dark Pink**



**Gaura Belleza White**

**A great-looking companion plant in containers and landscapes.**

- Excellent branching with short flower stems.
- Compact Light Pink is well-suited to high-density programs.
- Dark Pink and White have an upright habit.

## NEW LITTLE JANIE

**Height:** 16 to 18 in. (40 to 45 cm)

**Bloom Months:** April to September

**USDA Hardiness Zones:** 6 to 9



**NEW Gaura Little Janie**

**Compact, bicolor Gaura holds its shape from bench to garden.**

- Finished plants are easier to ship and arrive in better shape.
- Excellent retail appeal and longer shelf life.
- Maintains a beautiful Spring, Summer and Fall display of white and rose bicolored blooms.

## NEW WHISKERS DEEP ROSE

**Height:** 14 to 16 in. (35 to 40 cm)

**Bloom Months:** April to September

**USDA Hardiness Zones:** 6 to 9



**NEW Gaura Whiskers Deep Rose**

**Unique contrasting flower parts add new color interest to this popular class.**

- White filaments set off deep rose petals.
- Compact, bushy habit and dark red foliage.
- A great container item for impulse sales.



**NEW Gaura  
Little Janie**





GERANIUM ●●●  
(CRANESBILL)  
*Geranium oxonianum*

## NEW MISS HEIDI

**Height:** 14 to 16 in. (35 to 40 cm)

**Bloom Months:** April to June

**USDA Hardiness Zones:** 4 to 9



NEW Geranium Miss Heidi

### At last, a perennial Geranium with real grower appeal!

- Compact habit holds its shape well in containers.
- Attractive pink flowers and patterned foliage with chocolate brown blotch.
- Long blooming time, with heavy flowering in Spring.

HELIOPSIS ●  
(OX-EYE)  
*Heliopsis helianthoides*

## SUNSTRUCK

**Height:** 14 to 16 in. (35 to 40 cm)

**Bloom Months:** June to August

**USDA Hardiness Zones:** 4 to 9



Heliopsis Sunstruck

### The biggest blooms in its class, plus eye-catching variegated foliage.

- Compact habit is easier to ship and shows better at retail.
- Blooms 4 to 6 weeks earlier than other Heliopsis and stays in flower all Summer.
- Produces full one-gallon containers with more plants per rack and lower input costs.

## NEW DOUBLE SUNSTRUCK

**Height:** 14 to 16 in. (35 to 40 cm)

**Bloom Months:** May to July

**USDA Hardiness Zones:** 4 to 9



NEW Heliopsis Double Sunstruck

### Semi-double flowers on free-branching plants make a striking season extender.

- Compact habit lets growers ship more plants per rack.
- Intense yellow flowers and variegated foliage command attention.
- Long-flowering plants light up Spring and Summer gardens.

HEUCHERA ●●●  
(CORAL BELLS)  
*Heuchera x hybrida*

## HARVEST SERIES

**Height:** 6 to 12 in. (15 to 30 cm)

**Bloom Months:** April to May

**USDA Hardiness Zones:** 4 to 9



Heuchera Harvest Burgundy



Heuchera Harvest  
Lemon Chiffon

### Standout foliage displays in gardens and mixed containers.

- Thrives under Fall's shorter days and cooler temperatures.
- Displays wide, arching sprays of airy flowers in Summer above mounds of neat evergreen foliage.



**NEW Geranium**  
**Miss Heidi**





## CARNIVAL SERIES

**Height:** 10 to 12 in. (25 to 30 cm)

**Bloom Months:** April to May

**USDA Hardiness Zones:** 4 to 9



**NEW** Heuchera Carnival Black Olive



**NEW** Heuchera Carnival Candy Apple



Heuchera Carnival Cocomint



Heuchera Carnival Coffee Bean



Heuchera Carnival Fall Festival



Heuchera Carnival Limeade



Heuchera Carnival Peach Parfait



Heuchera Carnival Rose Granita



Heuchera Carnival Silver Streak



Heuchera Carnival Plum Crazy



Heuchera Carnival Watermelon

### Finally – outstanding, bright Heuchera that are well-matched and affordable!

- Incredible color assortment of well-matched varieties with distinct leaf venation.
- Hybrid varieties have *H. villosa* parentage for excellent heat tolerance and better garden performance.
- Series is great for one-gallon programs and shade mixed containers.
- Mounding habits are also brilliant in shady landscapes.
- **NEW Black Olive** in rich purple/black fills containers quickly.
- **NEW Candy Apple** shines in sweet shades of copper and red.





Heuchera Carnival Watermelon,  
Heuchera Carnival Cocomint,  
NEW Gaura Whiskers Deep Rose  
& NEW Alyssum Golden Spring



HEUCHERA continued

## BIG TOP COLLECTION

**Height:** Burgundy 20 in. (50 cm),  
Gold 16 in. (40 cm)

**Bloom Months:** April to May

**USDA Hardiness Zones:** 4 to 9



Heuchera Big Top Gold

Heuchera Big Top Burgundy

### The largest leaves and biggest blooms of any Heuchera!

- Robust, tetraploid varieties form massive mounds of foliage.
- Leaves grow up to 8 in. (20 cm) in size.
- Produces sprays of cream-colored flowers in Spring.

HEUCHERA ●●●  
(CORAL BELLS)  
*Heuchera sanguinea*

## NEW FROSTY MORN

**Height:** 8 to 10 in. (20 to 25 cm)

**Bloom Months:** May to June

**USDA Hardiness Zones:** 4 to 9



NEW Heuchera Frosty Morn



NEW Heuchera Frosty Morn  
variegated foliage

### Keeps its striking coloration all the way to the garden!

- Consistent, stable variegation won't revert to green.
- Eye-catching foliage has big consumer appeal.
- Does well in mixed shade containers and shady gardens.
- Bright red flowers.

IBERIS ●  
(EVERGREEN CANDYTUFT)  
*Iberis amara*

## NEW WHITE HEAT

**Height:** 8 to 10 in. (20 to 25 cm)

**Bloom Months:** January to August

**USDA Hardiness Zones:** 7 to 10



NEW Iberis White Heat

### Extremely long-blooming variety for a longer selling window.

- No vernalization needed for flowering.
- Ideal for very early sales in the South.
- High heat tolerance.

IBERIS ●  
(EVERGREEN CANDYTUFT)  
*Iberis gibraltarica*

## NEW LAVISH

**Height:** 10 to 12 in. (25 to 30 cm)

**Bloom Months:** April to August

**USDA Hardiness Zones:** 7 to 10



NEW Iberis Lavish

### Hardy variety in a color consumers love.

- Requires no vernalization for flowering.
- Long bloom time, with deep lavender flowers.
- Great in mixed containers.



NEW Iberis  
Lavish



LAVANDULA ●  
(LAVENDER)  
*Lavandula angustifolia*

## SUPERBLUE

**Height:** 10 to 12 in. (25 to 30 cm)

**Bloom Months:** June to August

**USDA Hardiness Zones:** 5 to 8



**Lavandula SuperBlue**

### Jeff's choice:

*SuperBlue is the earliest and longest flowering of the English Lavenders.*



Jeff LaCourse,  
National Accounts  
Manager

### The biggest blooms of any *L. angustifolia*!

- Rich blue blooms on short flower spikes.
- Less gapping among spikes for more color impact.
- Excellent Winter hardiness and landscape performance.

LAVANDULA ●  
(LAVENDER)  
*Lavandula stoechas*

## ANOUK SERIES

**Height:** 14 to 18 in. (35 to 45 cm);

Silver Anouk 20 to 24 in. (50-60 cm)

**Bloom Months:** March to July

**USDA Hardiness Zones:** 6 to 9



**Lavandula Anouk Supreme**

### Reblooming Spanish Lavenders have excellent weather tolerance and retail shelf life.

- Outstanding in containers and landscapes.
- High resistance to foliar disease.
- **NEW** Deep Rose has deep rose flags on lavender-rose flowers.
- **NEW** Double Anouk has double lavender flags on purple flowers.
- **NEW** White Anouk has bright white flags on blue flowers, with non-burning flags.
- Anouk has dark violet flower spikes topped by clear purple flags.
- Silver Anouk is a compact, upright evergreen shrub with narrow, blue-silver foliage.
- Anouk Supreme flowers one week earlier than Anouk.



**Lavandula Silver Anouk**

## NEW BRIGHT LUXURIOUS

**Height:** 10 to 12 in. (25 to 30 cm)

**Bloom Months:** March to July

**USDA Hardiness Zones:** 6 to 9



**NEW Lavandula Bright Luxurious**

### Compact variety is perfect for small novelty containers... and big sell-through!

- Full, compact habit.
- Excellent reblooming variety.
- Can be grown in quarts and specialty containers.
- Lighter color flags than Luxurious.

## LUXURIOUS

**Height:** 12 to 16 in. (30 to 40 cm)

**Bloom Months:** March to July

**USDA Hardiness Zones:** 6 to 9



**Lavandula Luxurious**

### Long-flowering Lavender is as tough as it is beautiful!

- Stands up to boxing and shipping better than other Spanish Lavenders.
- Outstanding weather and humidity tolerance.
- Very resistant to foliar disease.





Lavender  
Anouk

NEW Lavender  
Anouk Deep Rose

NEW Lavender  
White Anouk

Lavender  
Luxurious

NEW Lavender  
Double Anouk

NEW Lavender  
Bright Luxurious

*Lavender*



LEUCANTHEMUM ●  
(SHASTA DAISY)  
*Leucanthemum x superbum*

## SANTÉ

**Height:** 18 to 24 in. (45 to 60 cm)  
**Bloom Months:** June to August  
**USDA Hardiness Zones:** 4 to 9



Leucanthemum Santé

**Impressively hardy variety of a perennial garden classic!**

- Double, pure white flowers with yellow centers.
- Strong stems make an excellent cut flower.
- Upright habit.

MONARDA ●●  
(BEE BALM, BERGAMOT)  
*Monarda didyma*

## BALMY™ SERIES

**Height:** 10 to 12 in. (15 to 30 cm)  
**Bloom Months:** June to July  
**USDA Hardiness Zones:** 4 to 9



**NEW** Monarda Balmy Lilac



**NEW** Monarda Balmy Pink



Monarda Balmy Purple



**NEW** Monarda Balmy Rose

**True, uniform series is tops in powdery mildew resistance.**

- Full, compact plants with strong, bold color.
- Free-flowering varieties attract attention at retail.
- Deer and rabbit-resistant.

PEROVSKIA ●  
(RUSSIAN SAGE)  
*Perovskia atriplicifolia*

## LACEY BLUE

**Height:** 12 to 18 in. (30 to 45 cm)  
**Bloom Months:** July to September  
**USDA Hardiness Zones:** 4 to 9



Perovskia Lacey Blue

**No flopping with Lacey Blue's dense branching.**

- Truly dwarf variety stays small in subsequent years.
- Features the densest flowers of any Russian Sage.
- Compact habit holds together during wind, rain and shipping.

**Monarda  
Balmy Purple**





PEROVSKIA continued

## CRAZYBLUE

**Height:** 16 to 18 in. (40 to 45 cm)

**Bloom Months:** July to August

**USDA Hardiness Zones:** 4 to 9



Perovskia CrazyBlue

**CrazyBlue won't fall apart when plants come into bloom.**

- Unique interlacing branches prevent breakage during shipping.
- Looks good longer at retail and in patio containers.
- Deeper blue flowers than other Perovskia.

PHLOX ●

*Phlox paniculata*

## FLAME™ SERIES

**Height:** 18 to 24 in. (45 to 60 cm)

**Bloom Months:** June to August

**USDA Hardiness Zones:** 4 to 8



Phlox Flame Light Pink



Phlox Flame Lilac



Phlox Flame Pink



Phlox Flame Purple



Phlox Flame White

**Compact series is bred for peak performance in gardens and pots.**

- Series offers more flexibility in production.
- Varieties maintain their compact habit in the garden.
- Proven performers produce big, fragrant blooms.
- Extremely tolerant of powdery mildew.

## PEPPERMINT TWIST

**Height:** 16 in. (40 cm)

**Bloom Months:** June to August

**USDA Hardiness Zones:** 4 to 8



Phlox Peppermint Twist

**Distinctive spoke-patterned flowers look like peppermint candies.**

- Plants are compact and very strong.
- Stronger variety than 'Natascha', which has similar blooms.
- Good mildew resistance.

## SWIZZLE

**Height:** 15 in. (38 cm)

**Bloom Months:** June to August

**USDA Hardiness Zones:** 4 to 8



Phlox Swizzle

**Dwarf variety boasts a unique color combination.**

- Pink-white overlapping petals around an intense, hot pink eye.
- Healthy, deep green foliage.
- Striking in sunny Summer gardens.

**Perovskia  
CrazyBlue**





SALVIA   
(AUTUMN SAGE)  
*Salvia greggii*

## NEW RADIO RED

**Height:** 16 to 18 in. (40 to 45 cm)  
**Bloom Months:** March to September  
**USDA Hardiness Zones:** 7 to 10



NEW Salvia Radio Red

Finally: a good, true red *S. greggii* to meet demand for this popular color.

- Keeps its color longer than other red varieties.
- Well-branched plants.
- Blooms all Summer long – nice in containers.

SALVIA   
(MEADOW SAGE)  
*Salvia nemorosa*

## NEW BLUE MARVEL

**Height:** 10 to 12 in. (25 to 30 cm)  
**Bloom Months:** March to September  
**USDA Hardiness Zones:** 4 to 9

**Karen's choice:**

*Blue Marvel has the biggest blooms of any Salvia. It also has an outstanding habit and reblooms reliably.*



Karen Bunting,  
Perennial Business Manager



NEW Salvia Blue Marvel

Marvel at the largest flowers of any *S. nemorosa*!

- Ideal for positioning as a premium perennial for greater margin opportunity.
- Can be finished as a first-year-flowering perennial.
- No PGRs needed!

## BURGUNDY CANDLES

**Height:** 26 to 28 in. (65 to 70 cm)  
**Bloom Months:** April to May  
**USDA Hardiness Zones:** 4 to 9



Salvia Burgundy Candles

Attractive burgundy buds and calyxes for long-lasting flower power.

- Strong, semi-upright, vigorous plants.
- Plenty of retail and landscape appeal.
- Excellent performer in Summer heat.
- Suitable for two-gallon programs.



NEW Salvia  
Blue Marvel

Blue Marvel



SALVIA continued

## LYRICAL™ SERIES

**Height:** 22 to 24 in. (55 to 60 cm)

**Bloom Months:** April to June

**USDA Hardiness Zones:** 4 to 9



Salvia Lyrical Blues



Salvia Lyrical Rose



Salvia Lyrical Silvertone



Salvia Lyrical White

**Easy-to-grow, well-matched series in unique, eye-catching colors.**

- Lyrical Blues is your Salvia May Night replacement.
- Burgundy buds and calyxes for longer garden color on Lyrical Blues, Rose and Silvertone.
- Silvertone is the first bicolor Salvia and has blue blooms with silver edges.
- Robust, well-branched plants with a manageable habit readily fill gallon containers.
- More flowers per container for extra show at retail.
- Excellent reblooming and heat tolerance.

SCABIOSA ●●●  
(PINCUSHION FLOWER)  
*Scabiosa columbaria*

## HARLEQUIN BLUE

**Height:** 14 to 18 in. (35 to 45 cm)

**Bloom Months:** April to June

**USDA Hardiness Zones:** 5 to 9



Scabiosa Harlequin Blue

**Superior vigor for better outdoor performance.**

- Lavender-blue, pincushion-like flowers blanket green foliage.
- More compact habit and larger flowers than 'Butterfly Blue'.

VERONICA ●●  
(SPEEDWELL)  
*Veronica austriaca*

## VENICE BLUE

**Height:** 12 to 14 in. (30 to 35 cm)

**Bloom Months:** March to May

**USDA Hardiness Zones:** 4 to 9



Veronica Venice Blue

**Easy-to-grow variety makes an excellent season extender!**

- Requires less vernalization than other *austriaca* types.
- Robust habit with strong foliage and the largest flowers in its class.
- Early Spring-flowering variety loves the heat.



**Salvia**  
**Lyrical Silvertone**





VERONICA ●  
(SPEEDWELL)  
*Veronica x hybrida*

## CHRISTY

**Height:** 6 to 8 in. (15 to 20 cm)  
**Bloom Months:** March to April  
**USDA Hardiness Zones:** 5 to 8



Veronica Christy

**Great groundcover with a neat, controlled habit.**

- Lacy, green foliage.
- True blue flowers bloom in early Spring.

## PURPLEICIOUS

**Height:** 20 in. (50 cm)  
**Bloom Months:** May to August  
**USDA Hardiness Zones:** 4 to 8



Veronica Purpleicious

**Long-blooming variety with intense purple flowers and dark green foliage.**

- Well-branched plants with a strong, tidy habit.
- Very healthy, disease-free cultivar.

VIOLA ●●  
(VIOLET)  
*Viola cornuta*

## CELESTIAL™ SERIES

**Height:** 6 to 8 in. (15 to 20 cm)  
**Bloom Months:** February to October  
**USDA Hardiness Zones:** 5 to 9



**NEW** Viola Celestial Midnight



Viola Celestial Blue Moon



Viola Celestial Northern Lights



Viola Celestial Twilight



Viola Celestial Starry Night

**Ever-blooming, early Spring perennial in bright, rich colors.**

- Overwinters and oversummers.
- Heat-tolerant varieties bloom all Summer.
- No vernalization required.



Viola  
Celestial Blue Moon



## BLACKOUT

**Height:** 5 to 6 in. (13 to 15 cm)  
**Bloom Months:** February to October  
**USDA Hardiness Zones:** 5 to 9



Viola Blackout

**The deepest black Viola blooms around.**

- Compact plants look dainty, but they're durable.
- Heat-tolerant and low-maintenance.
- Perfect for October promotions.

## HALO SERIES

**Height:** 8 to 10 in. (20 to 25 cm)  
**Bloom Months:** February to October  
**USDA Hardiness Zones:** 5 to 9



**NEW** Viola Halo Lemon Frost



Viola Halo Lilac



Viola Halo Sky Blue



Viola Halo Violet

**Extra-large, two-toned flowers captivate customers at retail.**

- Take advantage of early sales.
- Excellent hardiness for long-lasting garden enjoyment.
- Very heat-tolerant.
- Requires no vernalization.
- Oversummers and overwinters.

VIOLA (VIOLET) ●●●  
*x hybrida*

## JUMPING JACK

**Height:** 6 to 8 in. (15 to 20 cm)  
**Bloom Months:** February to October  
**USDA Hardiness Zones:** 5 to 8



Viola Jumping Jack

**Extremely floriferous, continuously blooming variety.**

- Good for Summer bedding, perennial borders and mixed containers.
- Much better heat tolerance than "Johnny Jump-Ups" of the past.

NEW Viola  
Halo Lemon Frost





# Your Unrooted &

## Quality Suppliers Growing Quality Genetics

### Unrooted cuttings are available from Florexpo

in Paraíso, Costa Rica, sourced from our own exclusive, disease-free mother stock that has gone through our Ball Certified Plants® program.



Unrooted cuttings

### Ball Seed Small Liner Availability

Find live availability via WebTrack® at [ballseed.com/webtrack](https://ballseed.com/webtrack) and take advantage of freight savings from their Regional Supply Network.



Liner

#### Ball Seed Regional Suppliers

Region	Supplier	Location
Canada	George Sant & Sons Greenhouses	Kleinburg, ON
Northeast	North Creek Nurseries	Landenburg, PA
	Van de Wetering Greenhouses, Inc.	Jamesport, NY
Southeast	James Greenhouses	Colbert, GA
Pacific	Van Wingerden Greenhouses, Inc.	Blaine, WA
	Ball Tagawa Growers	Arroyo Grande, CA

# Liner Sources

**Order Darwin Perennials liners through your favorite broker.**

Easily source your perennial needs from these reliable North American suppliers licensed to carry Darwin Perennials varieties.

## Licensed Suppliers

Aris Green Leaf Plants

Center Greenhouse

C. Raker and Sons, Inc.

Creek Hill Nursery

DeGoede Bulb Farm & Gardens

Emerald Coast Growers

Gro'n Sell

Gulley Wholesale Greenhouse

Headstart Nursery

James Greenhouses

Knox Nursery

North Creek Nursery

Northwest Horticulture

Pacific Plug & Liner

Pleasant View Gardens

Skagit Gardens

Speedling, Inc.

Swift Greenhouses, Inc.









Walters Gardens, Inc.



Liner tray


















# Darwin Perennials Propagation Guide

Page	Crop	Series/Variety	Media EC/pH	Soil Temperature	Rooting Hormone
 4	<b>Achimillea</b> <i>millifolium</i>	New Vintage™	EC 1.0-1.25 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500-1,000 ppm
 4	<b>Achimillea</b> <i>millifolium</i>	Song Siren™	EC 1.0-1.25 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500-1,000 ppm
 6	<b>Agastache</b> <i>rugosa</i>	Little Adder	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 6	<b>Alyssum</b> <i>wulfenianum</i>	Golden Spring	EC 0.80-1.0 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 6	<b>Boltonia</b> <i>asteroides var. latisquama</i>	Jim Crockett	EC 0.80-1.0 mmhos/pH 5.8-6.2	68-74°F (20-24°C)	300 ppm IBA
 8	<b>Buddleia</b> <i>x hybrida</i>	Flutterby®	EC 0.80-1.0 mmhos/pH 5.8-6.2	68-74°F (20-24°C)	1,000 ppm IBA
 8	<b>Buddleia</b> <i>x hybrida</i>	Flutterby Flow®	EC 0.80-1.0 mmhos/pH 5.8-6.2	68-74°F (20-24°C)	1,000 ppm IBA
 8	<b>Buddleia</b> <i>x hybrida</i>	Flutterby Grande®	EC 0.80-1.0 mmhos/pH 5.8-6.2	68-74°F (20-24°C)	1,000 ppm IBA
 8	<b>Buddleia</b> <i>x hybrida</i>	Flutterby Petite®	EC 0.80-1.0 mmhos/pH 5.8-6.2	68-74°F (20-24°C)	1,000 ppm IBA
 10	<b>Centaurea</b> <i>montana</i>	Lavender Mist	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	1,000 ppm IBA
 10	<b>Coreopsis</b> <i>grandiflora</i>	Sunny Day	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	1,000 ppm IBA
 10	<b>Coreopsis</b> <i>verticillata</i>	Sylvester	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	1,000 ppm IBA
 10	<b>Coreopsis</b> <i>verticillata</i>	Tweety	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	1,000 ppm IBA
 18	<b>Erysimum</b> <i>linifolium</i>	Cheers™	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500-1,000 ppm IBA
 18	<b>Euphorbia</b> <i>amygdaloides</i>	Red Velvet	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500-1,000 ppm IBA
 18	<b>Gaura</b> <i>lindheimeri</i>	Ballerina™	EC 0.75-0.80 mmhos/pH 5.8-6.2	68-73°F (20-24°C)	500 ppm IBA

Mist	Fertilization	Pinching	Transplanting	Comments
Low to moderate	50-75 ppm N	Not necessary, remove premature flowers.	28-35 days after sticking	Do not over-mist.
Low to moderate	50-75 ppm N	Not necessary, remove premature flowers.	28-35 days after sticking	Do not over-mist.
Low to moderate	50-75 ppm N	Recommended after roots are established. Leave 4-5 active internodes.	28-35 days after sticking	Stick cuttings the day of arrival, if possible.
Low	50-75 ppm N	Recommended.	35-42 days after sticking	This Alyssum requires light mist and soil moisture. Can be rooted under a dome or tent. Do not over-mist.
Moderate	75-100 ppm N when roots become visible; increase to 150-200 ppm N as roots develop	Recommended after roots are established.	28-35 days after sticking	Generally roots quickly.
Low	75-100 ppm N when roots become visible; increase to 150-200 ppm N as roots develop	Recommended after roots are established.	35-42 days after sticking	Excessive media moisture will slow rooting. Remove buds in propagation.
Low	75-100 ppm N when roots become visible; increase to 150-200 ppm N as roots develop	Recommended after roots are established.	35-42 days after sticking	Excessive media moisture will slow rooting. Remove buds in propagation.
Low	75-100 ppm N when roots become visible; increase to 150-200 ppm N as roots develop	Recommended after roots are established.	35-42 days after sticking	Excessive media moisture will slow rooting.
Low	75-100 ppm N when roots become visible; increase to 150-200 ppm N as roots develop	Recommended after roots are established.	35-42 days after sticking	Avoid using long days when rooting Flutterby Petite as this tends to encourage premature budding.
Low	50-75 ppm N	Not necessary.	35-42 days after sticking	Use low mist and media moisture levels to avoid stem rot.
Moderate	50-75 ppm N	Pinch once in the liner stage and once after transplant for best results.	28-35 days after sticking	Begin fertilizing 7 days after stick. Avoid over-misting.
Moderate	50-75 ppm N	Pinch once in the liner stage and once after transplant for best results.	35-42 days after sticking	Begin fertilizing 7 days after stick. Avoid over-misting.
Moderate	50-75 ppm N	Pinch once in the liner stage and once after transplant for best results.	35-42 days after sticking	Begin fertilizing 7 days after stick.
Low	50-75 ppm N	Recommended after roots are established. Leave 4-5 active internodes.	35-42 days after sticking	Don't oversaturate media. Low mist levels work best and promote fastest rooting.
Low	50-75 ppm N	Recommended after roots are established. Leave 4-5 active internodes.	35-42 days after sticking	Avoid excess mist and soil moisture during propagation. Use high humidity or tents to minimize excess water use.
Low to moderate	75-100 ppm N when roots become visible; increase to 150-200 ppm N as roots develop	Yes, 7 days before transplanting.	35-42 days after sticking	Pinch once in the liner tray for best finished performance.



# Darwin Perennials Propagation Guide

Page	Crop	Series/Variety	Media EC/pH	Soil Temperature	Rooting Hormone
 20	<b>Gaura</b> <i>lindheimeri</i>	Belleza™	EC 0.75-0.80 mmhos/pH 5.8-6.2	68-73°F (20-24°C)	500 ppm IBA
 20	<b>Gaura</b> <i>lindheimeri</i>	Little Janie, Whiskers Deep Rose	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 22	<b>Geranium</b> <i>oxonianum</i>	Miss Heidi	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	1,000 ppm IBA
 22	<b>Heliopsis</b> <i>helianthoides</i>	Double Sunstruck, Sunstruck	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	1,000 ppm IBA
 22	<b>Heuchera</b> <i>x hybrida</i>	Harvest	EC 0.80-1.0 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500-1,000 ppm
 24	<b>Heuchera</b> <i>x hybrida</i>	Carnival	EC 0.80-1.0 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500-1,000 ppm
 26	<b>Heuchera</b> <i>sanguinea</i>	Frosty Morn	EC 0.80-1.0 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500-1,000 ppm
 26	<b>Iberis</b> <i>amara</i>	White Heat	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 26	<b>Iberis</b> <i>gibraltarica</i>	Lavish	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 28	<b>Lavandula</b> <i>angustifolia</i>	SuperBlue	EC 0.75-0.80 mmhos/pH 5.9-6.2	70-72°F (21-24°C)	500 ppm IBA
 28	<b>Lavandula</b> <i>stoechas</i>	Anouk Series, Bright Luxurious, Luxurious	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 30	<b>Leucanthemum</b> <i>x superbum</i>	Santé	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 30	<b>Monarda</b> <i>didyma</i>	Balmy™	EC 1.0-1.25 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 30, 32	<b>Perovskia</b> <i>atriplicifolia</i>	CrazyBlue, Lacey Blue	EC 1.0-1.25 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	1,000 ppm
 32	<b>Phlox</b> <i>paniculata</i>	Flame™	EC 0.80-1.2 mmhos/pH 5.8-6.4	68-74°F (20-24°C)	May aid rooting in less than favorable environments
 32	<b>Phlox</b> <i>paniculata</i>	Peppermint Twist	EC 0.80-1.2 mmhos/pH 5.8-6.4	68-74°F (20-24°C)	May aid rooting in less than favorable environments

Mist	Fertilization	Pinching	Transplanting	Comments
Low to moderate	75-100 ppm N when roots become visible; increase to 150-200 ppm N as roots develop	Yes, 7 days before transplanting.	35-42 days after sticking	Pinch once in the liner tray for best finished performance.
Low to moderate	50-75 ppm N when roots become visible	Recommended after roots are established. Leave 4-5 active internodes.	35-42 days after sticking	Pinch once in the liner tray for best finished performance.
Low to moderate	50-75 ppm N when roots become visible	Not necessary.	35-42 days after sticking	Do not stick cuttings too deep. Do not over-mist. Although roots may take 15-18 days to form, mist should be used only to reduce excess wilting.
Low	50-75 ppm N when roots become visible	Recommended after roots are established. Leave 4-5 active internodes.	35-42 days after sticking	14 hours of extended day lighting is required for rooting during Winter months. Heliopsis plants go dormant when grown below 13-hour days.
Low to moderate	50-75 ppm N after 14 days	Not necessary.	35-42 days after sticking	Rooting hormone basal dip will greatly improve rooting uniformity and performance.
Low to moderate	50-75 ppm N after 14 days	Not necessary.	35-42 days after sticking	Heuchera Carnival is available as Tissue Culture-raised liners in addition to unrooted cuttings. TC liners finish more uniformly than liners from URC.
Low to moderate	50-75 ppm N after 14 days	Not necessary.	35-42 days after sticking	Heuchera Frosty Morn is available as Tissue Culture-raised liners in addition to unrooted cuttings. TC liners finish more uniformly than liners from URC.
Moderate	50-75 ppm N when roots become visible	Recommended after roots are established. Leave active internodes.	28-35 days after sticking	Avoid over-misting. Pinch after 21 days.
Moderate	50-75 ppm N when roots become visible	Recommended after roots are established. Leave 4-5 active internodes.	28-35 days after sticking	Avoid over-misting. Pinch after 21 days.
Low; prefers high humidity to mist	50-75 ppm N	Recommended.	42-56 days after sticking	Avoid over-misting and saturated media. Pinch when actively growing.
Low; prefers high humidity to mist	50-75 ppm N	Recommended after roots are established. Leave 4-5 active internodes.	42-56 days after sticking	Avoid over-misting and saturated media. Pinch when actively growing.
Low	50-75 ppm N	Not typically necessary.	42-56 days after sticking	Avoid over-saturated media.
Moderate	50-75 ppm N	Recommended.	28-35 days after sticking	Benefits from long days during Winter propagation. Provide 14-hr. extended day lighting.
Moderate to high for first 24 hours, then reduce to low	50-75 ppm N after 10 days	Recommended.	28-35 days after sticking	Allow media to dry moderately once callus begins to form. Do not over-mist.
Moderate	75-100 ppm N when roots become visible; increase to 150-200 ppm N as roots develop	Recommended.	42-56 days after sticking	Plants grow more actively under long days. Use 13-hr. extended day lighting for Winter propagation.
Moderate	75-100 ppm N when roots become visible; increase to 150-200 ppm N as roots develop	Recommended.	42-56 days after sticking	Plants grow more actively under long days. Use 13-hr. extended day lighting for Winter propagation.



# Darwin Perennials Propagation Guide

Page	Crop	Series/Variety	Media EC/pH	Soil Temperature	Rooting Hormone
 32	<b>Phlox</b> <i>paniculata</i>	Swizzle	EC 0.80-1.2 mmhos/pH 5.8-6.4	68-74°F (20-24°C)	May aid rooting in less than favorable environments
 34	<b>Salvia</b> <i>greggii</i>	Radio Red	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 34	<b>Salvia</b> <i>nemorosa</i>	Blue Marvel	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	1,000 ppm IBA
 34	<b>Salvia</b> <i>nemorosa</i>	Burgundy Candles	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	1,000 ppm IBA
 36	<b>Salvia</b> <i>nemorosa</i>	Lyrical™	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	1,000 ppm IBA
 36	<b>Scabiosa</b> <i>columbaria</i>	Harlequin Blue	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 36	<b>Veronica</b> <i>austriaca</i>	Venice Blue	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 38	<b>Veronica</b> <i>x hybrida</i>	Christy	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 38	<b>Veronica</b> <i>x hybrida</i>	Purpleicious	EC 0.75-0.80 mmhos/pH 5.8-6.2	70-72°F (21-24°C)	500 ppm IBA
 40	<b>Viola</b> <i>cornuta</i>	Blackout	EC 0.80-1.0 mmhos/pH 5.5-5.8	70-72°F (21-24°C)	500-750 ppm
 38	<b>Viola</b> <i>cornuta</i>	Celestial™	EC 0.80-1.0 mmhos/pH 5.5-5.8	70-72°F (21-24°C)	500-750 ppm
 40	<b>Viola</b> <i>cornuta</i>	Halo	EC 0.80-1.0 mmhos/pH 5.5-5.8	70-72°F (21-24°C)	500-750 ppm
 40	<b>Viola</b> <i>x hybrida</i>	Jumping Jack	EC 0.80-1.0 mmhos/pH 5.5-5.8	70-72°F (21-24°C)	500-750 ppm

Mist	Fertilization	Pinching	Transplanting	Comments
Moderate	75-100 ppm N when roots become visible; increase to 150-200 ppm N as roots develop	Recommended.	42-56 days after sticking	Plants grow more actively under long days. Use 13-hr. extended day lighting for Winter propagation.
Moderate	50-75 ppm N	Recommended after roots are established. Leave 4-5 active internodes.	35-42 days after sticking	Begin fertilizing 7 days after stick.
Low	50-75 ppm N at Day 7	A soft pinch will increase branching.	35-42 days after sticking	On Blue Marvel, discontinue mist as quickly as possible and only mist to avoid leaf wilt.
Low	50-75 ppm N at Day 7	A soft pinch will increase branching.	35-42 days after sticking	Discontinue mist as quickly as possible and only mist to avoid leaf wilt. Begin feeding 7 days after sticking with 75-100 ppm N.
Low	50-75 ppm N at Day 7	A soft pinch will increase branching.	35-42 days after sticking	Discontinue mist as quickly as possible and only mist to avoid leaf wilt. Begin feeding 7 days after sticking with 75-100 ppm N.
Low	50-75 ppm N	A soft pinch will increase branching.	35-42 days after sticking	Transplant as soon as roots are fully developed.
Moderate	50-75 ppm N	Recommended after roots are established. Leave 4-5 active internodes.	35-42 days after sticking	Roots quickly. Plan to pinch in liner tray.
Moderate	50-75 ppm N	Recommended after roots are established. Leave 4-5 active internodes.	35-42 days after sticking	Will develop more slowly than other Veronica species.
Moderate	50-75 ppm N	Recommended after roots are established. Leave 4-5 active internodes.	35-42 days after sticking	Roots quickly. Plan to pinch in liner tray.
Moderate for first 24-48 hours, then reduce to low.	50-75 ppm N at Day 7	Soft pinch recommended 25-28 days after sticking.	35-42 days after sticking	Excessive media moisture will slow rooting.
Moderate for first 24-48 hours, then reduce to low.	50-75 ppm N at Day 7	Soft pinch recommended 25-28 days after sticking.	35-42 days after sticking	Excessive media moisture will slow rooting. Begin fertilizing at Day 7 with 75 ppm N.
Moderate for first 24-48 hours, then reduce to low.	50-75 ppm N at Day 7	Soft pinch recommended 25-28 days after sticking.	35-42 days after sticking	Excessive media moisture will slow rooting. Begin fertilizing at Day 7 with 75 ppm N.
Moderate for first 24-48 hours, then reduce to low.	50-75 ppm N at Day 7	Soft pinch recommended 25-28 days after sticking.	35-42 days after sticking	Excessive media moisture will slow rooting. Begin fertilizing at Day 7 with 75 ppm N.



# Darwin Perennials Finishing Guide

Page	Crop	Series/Variety	Media pH	Temperature	Light Levels in Foot Candles	Watering	Fertilization	Pinching After Transplant	Plant Growth Regulators
 4	<b>Achillea</b> <i>millifolium</i>	New Vintage™	5.8-6.2	Nights: 55 to 65°F (13 to 18°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry regularly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Generally not required.	PGRs generally not needed
 4	<b>Achillea</b> <i>millifolium</i>	Song Siren™	5.8-6.2	Nights: 55 to 65°F (13 to 18°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry regularly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Generally not required.	PGRs generally not needed
 6	<b>Agastache</b> <i>rugosa</i>	Little Adder	5.8-6.2	Nights: 50 to 55°F (10 to 13°C) Days: 60 to 65°F (16 to 18°C)	3,000 to 5,000	Allow media to dry regularly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 6	<b>Alyssum</b> <i>wulfenianum</i>	Golden Spring	5.8-6.2	Nights: 55 to 65°F (13 to 18°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 6	<b>Boltonia</b> <i>asteroides</i> var. <i>latisquama</i>	Jim Crockett	5.6-6.3	Nights: 62 to 68°F (17 to 20°C) Days: 65 to 75°F (18 to 24°C)	5,000 to 8,000	Allow media to dry evenly between watering.	Maintain constant fertilization at 150 to 200 ppm N.	Recommended	PGRs generally not needed
 8	<b>Buddleia</b> <i>x hybrida</i>	Flutterby®	5.8-6.2	Nights: 45 to 50°F (7 to 10°C) Days: 55 to 60°F (13 to 16°C)	5,000 to 8,000	Allow media to dry evenly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 8	<b>Buddleia</b> <i>x hybrida</i>	Flutterby Flow®	5.8-6.2	Nights: 45 to 50°F (7 to 10°C) Days: 55 to 60°F (13 to 16°C)	5,000 to 8,000	Allow media to dry evenly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 8	<b>Buddleia</b> <i>x hybrida</i>	Flutterby Grande®	5.8-6.2	Nights: 45 to 50°F (7 to 10°C) Days: 55 to 60°F (13 to 16°C)	5,000 to 8,000	Allow media to dry evenly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 8	<b>Buddleia</b> <i>x hybrida</i>	Flutterby Petite®	5.8-6.2	Nights: 45 to 50°F (7 to 10°C) Days: 55 to 60°F (13 to 16°C)	5,000 to 8,000	Allow media to dry evenly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 10	<b>Centaurea</b> <i>montana</i>	Lavender Mist	5.8-6.2	Nights: 45 to 50°F (7 to 10°C) Days: 55 to 60°F (13 to 16°C)	3,000 to 5,000	Allow media to dry regularly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	None	PGRs generally not needed
 10	<b>Coreopsis</b> <i>grandiflora</i>	Sunny Day	5.8-6.2	Nights: 55 to 60°F (13 to 16°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry evenly between watering.	Maintain constant fertilization at 150 to 200 ppm N.	Recommended	B-Nine 1,500 ppm/Cycocel 800 ppm tank mix for height control
 10	<b>Coreopsis</b> <i>verticillata</i>	Sylvester, Tweety	5.8-6.2	Nights: 55 to 60°F (13 to 16°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry evenly between watering.	Maintain constant fertilization at 150 to 200 ppm N.	Recommended	PGRs generally not needed
 12	<b>Digitalis</b> <i>x hybrida</i>	Foxlight™	5.8-6.2	Nights: 55 to 60°F (13 to 16°C) Days: 60 to 65°F (16 to 18°C)	3,000 to 5,000	Allow media to dry moderately between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 14	<b>Echinacea</b> <i>x hybrida</i>	Double Scoop™	5.8-6.2	Nights: 55 to 60°F (13 to 16°C) Days: 60 to 65°F (16 to 18°C)	3,500 to 5,000		Use a balanced fertilizer at a rate of 125 to 150 ppm.	None	None
 16	<b>Echinacea</b> <i>x hybrida</i>	Sombrero®	5.8-6.2	Nights: 55 to 60°F (13 to 16°C) Days: 60 to 65°F (16 to 18°C)	3,500 to 5,000		Use a balanced fertilizer at a rate of 125 to 150 ppm.	None	None
 18	<b>Erysimum</b> <i>linifolium</i>	Cheers™	5.8-6.2	Nights: 50 to 55°F (10 to 13°C) Days: 55 to 60°F (13 to 16°C)	3,000 to 5,000	Allow media to dry moderately between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed

		Crop Schedule and Uses					
Pests and Fungal Diseases	Comments	1-qt. (10-cm) pot, 1 plant per pot	1-gal. (15-cm) pot, 1 plant per pot	2 to 3-gal. (25 to 30-cm) pot, 3 plants per pot	Height	USDA Hardiness Zones	Bloom Months
<i>Pythium</i> and <i>Rhizoctonia</i> can result from overwatering.	Winter/Spring plant for best container results.	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	12-14 in. (30-35 cm)	4-9	June-July
<i>Pythium</i> and <i>Rhizoctonia</i> can result from overwatering.	Winter/Spring plant for best container results.	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	20-22 in. (50-55 cm)	4-9	June-July
Thrips, white fly	Winter/Spring plant for best container results.	Not recommended	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	15-18 in. (38-45 cm)	3-8	June-September
None noted	Requires 5 weeks below 50°F (10°C) to flower.	Unrooted: stick week 30-35 Rooted: plant week 35-40	Unrooted: stick week 26-32 Rooted: plant week 31-36	Unrooted: stick week 22-26 Rooted: plant week 27-31	6-8 in. (15-20 cm)	4-9	April-May
<i>Botrytis</i> , <i>Pythium</i>	No PGRs necessary.	Unrooted: 9-11 weeks Rooted: 5-7 weeks	Unrooted: 11-14 weeks Rooted: 7-10 weeks	Unrooted: 14-16 weeks Rooted: 10-12 weeks	18-24 in. (45-60 cm)	4-9	May-September
None noted	Downy mildew resistant	Not recommended	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	48-60 in. (1.2-1.5 m)	5-10	April-September
None noted	Downy mildew resistant	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	18-24 in. (45-60 cm)	5-10	April-September
None noted	Downy mildew resistant	Not recommended	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	72-96 in. (1.2-1.8 m)	5-10	April-September
None noted	Downy mildew resistant	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	24-30 in. (60-75 cm)	5-10	April-September
Thrips, white fly, spider mites. Can be sensitive to crown and root rot when overwatered.	Finish in full sun conditions for strongest color and best plant habit.	Not recommended	Unrooted: Plant by week 35 (North), week 40 (South) Rooted: Stick by week 30 (North), week 35 (South)	Unrooted: Plant by week 32 (North), week 37 (South) Rooted: Stick by week 28 (North), week 32 (South)	16-18 in. (40-45 cm)	4-9	April-June
Keep good air movement to control powdery mildew.	Great season extender item.	Not recommended	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	18-24 in. (45-60 cm)	4-9	June-September
Manage soil moisture to avoid root diseases.	Pinch once in propagation and once in finished container. Does not require Fall planting or bulking.	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	Sylvester: 16-20 in. (40-50 cm) Tweety: 14-16 in. (35-40 cm)	4-9	June-September
Aphids, white fly, spider mites.	Pinch once plants are established in final containers for best flower power. Leave minimum 8-10 leaf nodes.	Not recommended	12-14 weeks	12-14 weeks	22-24 in. (56-60 cm)	7-10	April-September
None noted	Small liners perform best when started with a minimum 60°F (16°C) soil temperature until established.	14-16 weeks Spring plant 11-13 weeks Summer plant for Fall	14-16 weeks Spring plant 11-13 weeks Summer plant for Fall	14-16 weeks Spring plant 11-13 weeks Summer plant for Fall	22-24 in. (56-60 cm)	4-9	June-August
None noted	Small liners perform best when started with a minimum 60°F (16°C) soil temperature until established.	14-16 weeks Spring plant 11-13 weeks Summer plant for Fall	14-16 weeks Spring plant 11-13 weeks Summer plant for Fall	14-16 weeks Spring plant 11-13 weeks Summer plant for Fall	22-24 in. (56-60 cm)	4-9	June-August
Aphids, thrips, spider mites	<i>Xanthomonas campestris</i> , bacterial leaf spot. Root rot and downy mildew can occur under poor growing conditions.	Not recommended	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-21 weeks Rooted: 14-16 weeks	18-22 in. (45-56 cm)	6-10	March-September



# Darwin Perennials Finishing Guide

Page	Crop	Series/Variety	Media pH	Temperature	Light Levels in Foot Candles	Watering	Fertilization	Pinching After Transplant	Plant Growth Regulators
 <b>18</b>	<b>Euphorbia</b> <i>amygdaloides</i>	Red Velvet	5.6-6.5	Nights: 50 to 55°F (10 to 13°C) Days: 55 to 60°F (13 to 16°C)	3,000 to 5,000	Allow media to dry regularly between watering.	Use a balanced fertilizer at a rate of 100 to 125 ppm.	Recommended	PGRs generally not needed
 <b>18, 20</b>	<b>Gaura</b> <i>lindheimeri</i>	Ballerina™, Belleza™	5.8-6.2	Nights: 56 to 61°F (13 to 16°C) Days: 71 to 76°F (21 to 24°C)	5,000 to 9,000	Allow media to dry slightly between watering.	Maintain constant fertilization at 175 to 225 ppm N.	Recommended	PGRs generally not needed
 <b>20</b>	<b>Gaura</b> <i>lindheimeri</i>	Little Janie, Whiskers Deep Rose	5.8-6.2	Nights: 50 to 55°F (10 to 13°C) Days: 55 to 60°F (13 to 16°C)	3,000 to 5,000	Allow media to dry regularly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 <b>22</b>	<b>Geranium</b> <i>oxonianum</i>	Miss Heidi	5.8-6.2	Nights: 45 to 50°F (7 to 10°C) Days: 50 to 55°F (10 to 13°C)	3,000 to 5,000	Allow media to dry moderately between watering.	Use a balanced fertilizer at a rate of 100 to 125 ppm.	None	PGRs generally not needed
 <b>22</b>	<b>Heliopsis</b> <i>helianthoides</i>	Double Sunstruck, Sunstruck	5.8-6.2	Nights: 55 to 65°F (13 to 18°C) Days: 65 to 75°F (18 to 24°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 150 to 175 ppm.	Recommended	PGRs generally not needed
 <b>24, 26</b>	<b>Heuchera</b> <i>x hybrida</i>	Big Top, Carnival	5.8-6.2	Nights: 50 to 55°F (10 to 13°C) Days: 60 to 65°F (16 to 18°C)	1,500-2,500	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 100 to 125 ppm.	None	PGRs generally not needed
 <b>22</b>	<b>Heuchera</b> <i>x hybrida</i>	Harvest	5.8-6.2	Nights: 50 to 55°F (10 to 13°C) Days: 60 to 65°F (16 to 18°C)	1,500-2,500	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 100 to 125 ppm.	None	PGRs generally not needed
 <b>26</b>	<b>Heuchera</b> <i>sanguinea</i>	Frosty Morn	5.8-6.2	Nights: 45 to 50°F (7 to 10°C) Days: 55 to 60°F (13 to 16°C)	1,500 to 2,500	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	None	PGRs generally not needed
 <b>26</b>	<b>Iberis</b> <i>amara</i>	White Heat	5.8-6.2	Nights: 45 to 55°F (7 to 13°C) Days: 55 to 65°F (13 to 18°C)	3,000 to 5,000	Allow media to dry regularly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 <b>26</b>	<b>Iberis</b> <i>gibraltarica</i>	Lavish	5.8-6.2	Nights: 45 to 55°F (7 to 13°C) Days: 55 to 65°F (13 to 18°C)	3,000 to 5,000	Allow media to dry regularly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 <b>28</b>	<b>Lavandula</b> <i>angustifolia</i>	SuperBlue	5.9-6.2	Nights: 55 to 65°F (13 to 18°C) Days: 65 to 75°F (18 to 24°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Once for smaller pot sizes, twice for larger containers	PGRs generally not needed
 <b>28</b>	<b>Lavandula</b> <i>stoechas</i>	Anouk Series, Bright Luxurious, Luxurious	5.8-6.2	Nights: 56 to 64°F (13 to 18°C) Days: 65 to 76°F (18 to 24°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 100 to 125 ppm.	Recommended	PGRs generally not needed
 <b>30</b>	<b>Leucanthemum</b> <i>x superbum</i>	Santé	5.8-6.2	Nights: 55 to 65°F (13 to 18°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 <b>30</b>	<b>Monarda</b> <i>didyma</i>	Balmy™	5.8-6.2	Nights: 55 to 65°F (13 to 18°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed

		Crop Schedule and Uses					
Pests and Fungal Diseases	Comments	1-qt. (10-cm) pot, 1 plant per pot	1-gal. (15-cm) pot, 1 plant per pot	2 to 3-gal. (25 to 30-cm) pot, 3 plants per pot	Height	USDA Hardiness Zones	Bloom Months
White fly, spider mites. Watch for powdery mildew in Fall.	Not as sensitive to spray chemicals as other Euphorbia; however, test commonly used pesticides prior to use.	Unrooted: 14-16 weeks Rooted: 8-10 weeks	Unrooted: 16-19 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	18-20 in. (45-50 cm)	6-10	March-May
<i>Pythium</i> , <i>Rhizoctonia</i> , <i>Botrytis</i>	Plants can be trimmed after initial bloom for heavier reblooming.	Unrooted: 10-13 weeks Rooted: 7-10 weeks	Unrooted: 12-15 weeks, 2-3 ppp Rooted: 9-12 weeks, 2-3 ppp	Unrooted: 14-16 weeks, 3-5 ppp Rooted: 11-13 weeks, 3-5 ppp	12-18 in. (30-45 cm)	6-9	Ballerina: April- September Belleza: May- September
Spider mites, aphids	Apply one pinch in propagation and one additional pinch once plants are established in final containers.	Unrooted: 12-14 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	Little Janie: 16-18 in. (40-45 cm) Whiskers Deep Rose: 14-16 in. (35-40 cm)	6-9	April- September
White fly	Finish under cool night temperatures and high light for greatest foliage and flower intensity and best plant habit.	Not recommended	Unrooted: Plant by week 35 (North), week 40 (South) Rooted: Stick by week 30 (North), week 35 (South)	Unrooted: Plant by week 32 (North), week 37 (South) Rooted: Stick by week 28 (North), week 32 (South)	14-16 in. (35-40 cm)	4-9	April-June
Thrips, white fly, aphids. <i>Pythium</i> and <i>Rhizoctonia</i> can result from overwatering.	Requires long days (13-hr. min.) to remain actively growing. Use lights for Winter propagation.	Unrooted: 14-16 weeks Rooted: 7-8 weeks	Unrooted: 16-19 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	14-16 in. (45-40 cm)	4-9	Double Sunstruck: May-July Sunstruck: June-August
<i>Pythium</i> and <i>Rhizoctonia</i> can result from overwatering.		Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	10-12 in. (25-30 cm)	4-9	Big Top: June-August Carnival: April-May
<i>Pythium</i> and <i>Rhizoctonia</i> can result from overwatering.	Harvest Lemon Chiffon requires lower light levels for best performance.	Unrooted: 14-16 weeks Rooted: 10-12 weeks	Unrooted: 16-18 weeks Rooted: 12-14 weeks	Unrooted: 19-22 weeks Rooted: 14-16 weeks	10-12 in. (25-30 cm)	4-9	June-August
Aphids, spider mites, <i>Rhizoctonia</i>		Not recommended	Rooted: 10-12 weeks	Rooted: 12-14 weeks	8-10 in. (20-25 cm)	4-9	May-June
Aphids. May experience root rot diseases under poor growing conditions.	High light finishing best. Will bloom continuously. Trim for fresh flower flush. Tender perennial in southern U.S., Spring/Summer annual in northern U.S.	Unrooted: 10-14 weeks Rooted: 8-10 weeks	Unrooted: 16-18 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	8-10 in. (20-25 cm)	7-10	January- August
Aphids	Lavish develops the most intense lavender flower color when grown outdoors under full sun.	Unrooted: 10-14 weeks Rooted: 8-10 weeks	Unrooted: 16-18 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	10-12 in. (25-30 cm)	7-10	April-August
Thrips, white fly, aphids, fungus gnats. <i>Thielaviopsis</i> , <i>Pythium</i> and <i>Rhizoctonia</i> can result from overwatering.	Earliest of English Lavenders.	Unrooted: 14-16 weeks Rooted: 7-8 weeks	Unrooted: 16-19 weeks Rooted: 9-11 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	10-12 in. (25-30 cm)	5-8	June-August
Thrips, white fly, aphids, fungus gnats. <i>Thielaviopsis</i> , <i>Pythium</i> and <i>Rhizoctonia</i> can result from overwatering.	Excellent rain tolerance.	7-10 weeks	9-11 weeks, 1-3 ppp	10-12 weeks, 3-5 ppp	14-18 in. (35-45 cm); Silver Anouk 20-24 in. (50-60 cm)	6-9	March-July; Anouk and Silver Anouk March- September
Watch for leaf spots when growing in wet conditions.	Does not require vernalization for flowering.	Not recommended	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 19-22 weeks Rooted: 12-14 weeks	22-26 in. (56-66 cm)	4-9	June-August
White fly, spider mites. Powdery mildew may be present if grown under poor air circulation and high humidity.	Excellent mildew tolerance.	Unrooted: 12-14 weeks Rooted: 8-10 weeks	Unrooted: 14-16 weeks Rooted: 10-12 weeks	Unrooted: 14-16 weeks Rooted: 10-12 weeks	10-12 in. (25-30 cm)	4-9	June-July



# Darwin Perennials Finishing Guide

Page	Crop	Series/Variety	Media pH	Temperature	Light Levels in Foot Candles	Watering	Fertilization	Pinching After Transplant	Plant Growth Regulators
 30, 32	<b>Perovskia</b> <i>atriplicifolia</i>	CrazyBlue, Lacey Blue	5.6-6.2	Nights: 55 to 65°F (13 to 18°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 32	<b>Phlox</b> <i>paniculata</i>	Flame™, Peppermint Twist, Swizzle	6.0-6.5	Nights: 60 to 65°F (15 to 18°C) Days: 65 to 75°F (18 to 24°C)	5,000 to 9,000	Allow media to dry regularly between watering.	Maintain constant fertilization at 100 to 200 ppm N.	Recommended	PGRs generally not needed
 34	<b>Salvia</b> <i>greggii</i>	Radio Red	5.8-6.2	Nights: 45 to 70°F (7 to 21°C) Days: 55 to 80°F (13 to 27°C)	3,000 to 5,000	Allow media to dry moderately between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Once for smaller pot sizes, twice for larger containers	PGRs generally not needed
 34	<b>Salvia</b> <i>nemorosa</i>	Blue Marvel	5.8-6.2	Nights: 45 to 55°F (7 to 13°C) Days: 55 to 65°F (13 to 18°C)	3,000 to 5,000	Allow media to dry moderately between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	None	PGRs generally not needed
 34	<b>Salvia</b> <i>nemorosa</i>	Burgundy Candles	5.8-6.2	Nights: 45 to 55°F (7 to 13°C) Days: 55 to 65°F (13 to 18°C)	3,000 to 5,000	Allow media to dry moderately between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Yes	PGRs generally not needed
 36	<b>Salvia</b> <i>nemorosa</i>	Lyrical™	5.8-6.2	Nights: 45 to 55°F (7 to 13°C) Days: 55 to 65°F (13 to 18°C)	3,000 to 5,000	Allow media to dry moderately between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Yes	PGRs generally not needed
 36	<b>Scabiosa</b> <i>columbaria</i>	Harlequin Blue	5.8-6.2	Nights: 45 to 55°F (7 to 13°C) Days: 55 to 65°F (13 to 18°C)	5,000 to 8,000	Allow media to dry moderately between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Yes	PGRs generally not needed
 36	<b>Veronica</b> <i>austriaca</i>	Venice Blue	5.8-6.2	Nights: 50 to 55°F (10 to 13°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Yes	PGRs generally not needed
 38	<b>Veronica</b> <i>x hybrida</i>	Christy	5.8-6.2	Nights: 50 to 55°F (10 to 13°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Yes	PGRs generally not needed
 38	<b>Veronica</b> <i>x hybrida</i>	Purpleicious	5.8-6.2	Nights: 50 to 55°F (10 to 13°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced fertilizer at a rate of 125 to 150 ppm.	Yes	PGRs generally not needed
 40	<b>Viola</b> <i>cornuta</i>	Blackout	5.5-5.8	Nights: 50 to 55°F (10 to 13°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced Pansy/ Viola fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 38, 40	<b>Viola</b> <i>cornuta</i>	Celestial™, Halo	5.5-5.8	Nights: 50 to 55°F (10 to 13°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced Pansy/ Viola fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed
 40	<b>Viola</b> <i>x hybrida</i>	Jumping Jack	5.5-5.8	Nights: 50 to 55°F (10 to 13°C) Days: 60 to 65°F (16 to 18°C)	5,000 to 8,000	Allow media to dry slightly between watering.	Use a balanced Pansy/ Viola fertilizer at a rate of 125 to 150 ppm.	Recommended	PGRs generally not needed

		Crop Schedule and Uses					
Pests and Fungal Diseases	Comments	1-qt. (10-cm) pot, 1 plant per pot	1-gal. (15-cm) pot, 1 plant per pot	2 to 3-gal. (25 to 30-cm) pot, 3 plants per pot	Height	USDA Hardiness Zones	Bloom Months
White fly, spider mites. <i>Pythium</i> can be a problem if overwatered.	Largest flowers of any <i>Perovskia</i> .	Not recommended.	Unrooted: 14-16 weeks Rooted: 10-12 weeks	Unrooted: 14-16 weeks Rooted: 10-12 weeks	CrazyBlue: 16-18 in. (40-45 cm) Lacey Blue: 12-18 in. (30-45 cm)	4-9	CrazyBlue: July-August Lacey Blue: July- September
Aphids, white fly, <i>Botrytis</i> , <i>Pythium</i> , <i>Phytophthora</i> , <i>Rhizoctonia</i> , powdery mildew.		Unrooted: 15-17 weeks Rooted: 7-9 weeks	Unrooted: 16-18 weeks. 1-2 ppp Rooted: 8-10 weeks, 1-2 ppp	Not recommended	Flame: 18-24 in. (45-60 cm)	4-8	June-August
White fly, spider mites.	Transplant into soil temperatures with a minimum temperature of 60°F (15°C) for best establishment.	Unrooted: 12-14 weeks Rooted: 8-10 weeks	Unrooted: 14-16 weeks Rooted: 10-12 weeks	Unrooted: 16-18 weeks Rooted: 12-14 weeks	16-18 in. (40-45 cm)	7-10	March- September
White fly, spider mites. <i>Botrytis</i> .	Will bloom continuously or can be cut back for a full flush of flowers 4-5 weeks later.	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 17-19 weeks Rooted: 12-14 weeks	10-12 in. (25-30 cm)	4-9	March- September
White fly, spider mites. <i>Botrytis</i> .	Will rebloom best when old flowers are removed.	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 17-19 weeks Rooted: 12-14 weeks	26-28 in. (66-70 cm)	4-9	March- September
White fly, spider mites. <i>Botrytis</i> .	Lyrical <i>Salvia</i> do not require cold treatments to bulk and flower.	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Unrooted: 17-19 weeks Rooted: 12-14 weeks	22-24 in. (56-60 cm)	4-9	March- September
White fly, spider mites. <i>Botrytis</i> .	Powdery mildew tolerant.	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 15-17 weeks Rooted: 10-12 weeks	Not recommended	12-18 in. (30-45 cm)	5-9	March- September
Aphids	Requires vernalization to flower.	Plant by week 40 (North), week 45 (South) Stick by week 35 (North), week 40 (South)	Plant by week 35 (North), week 40 (South) Stick by week 30 (North), week 35 (South)	Plant by week 32 (North), week 37 (South) Stick by week 28 (North), week 32 (South)	10-12 in. (25-30 cm)	4-9	March-April
Aphids, white fly	Requires vernalization to flower.	Plant by week 40 (North), week 45 (South) Stick by week 35 (North), week 40 (South)	Plant by week 35 (North), week 40 (South) Stick by week 30 (North), week 35 (South)	Not recommended	6-14 in. (15-35 cm)	5-8	March-April
Aphids, white fly	Fall plant vernalization required.	Not recommended	Unrooted: Plant by week 35 (North), week 40 (South) Rooted: Stick by week 30 (North), week 35 (South)	Unrooted: Plant by week 32 (North), week 37 (South) Rooted: Stick by week 28 (North), week 32 (South)	16-20 in. (40-50 cm)	4-8	June-August
White fly, spider mites. Watch for <i>Thielaviopsis</i> and <i>Pythium</i> .	Requires 12.5-hour daylength or longer to flower.	Unrooted: 11-13 weeks Rooted: 6-8 weeks	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 13-15 weeks Rooted: 8-10 weeks	5-6 in. (13-15 cm)	5-9	April- October
White fly, spider mites. Watch for <i>Thielaviopsis</i> and <i>Pythium</i> .	Day neutral	Unrooted: 11-13 weeks Rooted: 6-8 weeks	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Celestial: 6-8 in. (15-20 cm) Halo: 8-10 in. (20-25 cm)	5-9	February-April, September- October
White fly, spider mites. Watch for <i>Thielaviopsis</i> and <i>Pythium</i> .	Day neutral	Unrooted: 11-13 weeks Rooted: 6-8 weeks	Unrooted: 13-15 weeks Rooted: 8-10 weeks	Unrooted: 13-15 weeks Rooted: 8-10 weeks	8-10 in. (20-25 cm)	5-9	February-April, September- October



# Important Plant Protection Information

Darwin Perennials® varieties are covered by Flowering Only terms and conditions. The majority are also protected by U.S. Patents and Plant Breeders' Rights in Canada and elsewhere.

**Flowering Only Terms and Conditions:** Plants shall be sold only as "finished plants". "Finished plants" - defined as plants grown for: 1) at least five weeks in a 3-in. (7.5-cm) pot/container or larger; 2) at least four weeks from planting of a rooted cutting; and 3) seven weeks from planting of an unrooted cutting. Self-propagation and/or taking tip cuttings, as well as the unlicensed sale and transfer of rooted or unrooted cuttings to any other company or individual, is strictly prohibited. By accepting an order and/or opening the box of Darwin Perennials, you signify agreement with these Flowering Only terms and conditions.

Commercial Name	Variety Name	Commercial Name	Variety Name
ACHILLEA		HEUCHERA	
New Vintage™ Red .....	'Balvinred' PPAF	Big Top Burgundy.....	'Big Top Burgundy' PP21,774
New Vintage™ Rose.....	'Balvinrose' PPAF	Big Top Gold .....	'Big Top Gold' PP21,775
New Vintage™ Violet.....	'Balviolet' PPAF	Carnival Black Olive.....	'Carnival Black Olive'
New Vintage™ White.....	'Balvinwhite' PPAF	Carnival Candy Apple.....	'Carnival Candy Apple'
Song Siren™ Laura.....	'Laura'	Carnival Cocomint.....	'Carnival Cocomint' PPAF
Song Siren™ Layla.....	'Layla'	Carnival Coffee Bean .....	'Carnival Coffee Bean' PPAF
Song Siren™ Little Susie .....	'Little Susie'	Carnival Fall Festival.....	'Carnival Fall Festival'
Song Siren™ Pretty Woman.....	'Pretty Woman'	Carnival Limeade.....	'Carnival Limeade' PPAF
AGASTACHE		Carnival Peach Parfait.....	'Carnival Peach Parfait' PPAF
Little Adder.....	'Little Adder' PPAF	Carnival Rose Granita.....	'Carnival Rose Granita'
ALYSSUM		Carnival Silver Streak.....	'Carnival Silver Streak' PPAF
Golden Spring.....	'Golden Spring' PPAF	Carnival Sugar Plum.....	'Carnival Sugar Plum' PPAF
BOLTONIA		Carnival Watermelon.....	'Carnival Watermelon' PPAF
Jim Crockett .....	'Masbolimket' PP16,678	Frosty Morn.....	'Frosty Morn'
BUDDLEIA		Harvest Burgundy .....	'Balhebur'
Flutterby Flow® Lavender .....	'Podaras #12' PP22,098	Harvest Lemon Chiffon .....	'Lemon Chiffon' PP19,033
Flutterby Flow® Mauve Pink .....	'Podaras #7' PP22,110	IBERIS	
Flutterby Grande® Blueberry Cobbler.....	'Podaras #4' PP22,109	Lavish .....	'Lavish' PPAF
Flutterby Grande® Peach Cobbler .....	'Podaras #5' PP22,144	White Heat .....	'White Heat' PPAF
Flutterby Grande® Vanilla.....	'Podaras #1' PP22,080	LAVANDULA	
Flutterby® Lavender .....	'Podaras #11' PP22,067	Anouk.....	'Anouk' PP16,685
Flutterby® Peace .....	'Podaras #6' PP22,142	Anouk Deep Rose .....	'Anouk Deluxe 179' PPAF
Flutterby® Pink.....	'Podaras #9' PP22,065	Anouk Double Anouk .....	'Anouk Deluxe 1205' PPAF
Flutterby Petite® Blue Heaven .....	'Podaras #8' PP22,069	Anouk Silver Anouk.....	'Silver Anouk' PP20,068
Flutterby Petite® Dark Pink.....	'Podaras #10' PP22,066	Anouk Supreme .....	'Anouk Deluxe 901' PPAF
Flutterby Petite® Pink.....	'Podaras #16' PP22,108	Anouk White Anouk.....	'Anouk Deluxe 10173' PPAF
Flutterby Petite® Snow White.....	'Podaras #15' PP22,143	Bright Luxurious .....	'Anouk Deluxe 1956' PPAF
Flutterby Petite® Tutti Fruitti Pink .....	'Podaras #13' PP22,177	Luxurious .....	'Anouk Deluxe 109' PPAF
CENTAUREA		SuperBlue.....	'Balavurlu' PPAF
Lavender Mist.....	'Lavender Mist' PPAF	LEUCANTHEMUM	
COREOPSIS		Santé.....	PP19,829
Sunny Day.....	'Balcorsunay' PP17,405	MONARDA	
Sylvester.....	'Sylvester' PPAF	Balmy™ Lilac .....	'Balbalmac' PPAF
Tweety.....	'Tweety' PP23,347	Balmy™ Pink.....	'Balbalmink' PPAF
DIGITALIS		Balmy™ Purple.....	'Balbalmurp' PPAF
Foxlight™ Plum Gold.....	'Takfoplgo' PPAF	Balmy™ Rose.....	'Balbalmrose' PPAF
Foxlight™ Rose Ivory .....	'Takforoiv' PPAF	PEROVSKIA	
Foxlight™ Ruby Glow.....	'Takforugl' PPAF	CrazyBlue.....	'CrazyBlue' PPAF
ECHINACEA		Lacey Blue.....	'Lisslit' PP20,845
Double Scoop™ Bubble Gum.....	'Balscblum' PP23,103; US7,982,110	PHLOX	
Double Scoop™ Cranberry.....	'Balscanery' PPAF; US7,982,110	Flame™ Light Pink.....	'Bareleven' PP11,805
Double Scoop™ Mandarin .....	'Balscandin' PPAF; US7,982,110	Flame™ Lilac.....	'Barten' PP11,802
Double Scoop™ Orangeberry .....	'Balscoberr' PP23,145; US7,982,110	Flame™ Pink.....	'Bartwelve' PP11,804
Double Scoop™ Raspberry .....	'Balsceras' PP23,117; US7,982,110	Flame™ Purple .....	'Barfourteen' PP12,605
Sombrero® Adobe Orange.....	'Balsomador' PPAF; US7,982,110	Flame™ White .....	'Bartwenty-nine' PP15,259
Sombrero® Flamenco Orange.....	'Balsomenco' PPAF; US7,982,110	Peppermint Twist.....	'Peppermint Twist' PP18,196
Sombrero® Hot Coral.....	'Balsomcor' PP23,097; US7,982,110	Swizzle.....	'Swizzle' PP19,813
Sombrero® Lemon Yellow .....	'Balsomemy' PPAF; US7,982,110	SALVIA	
Sombrero® Salsa Red .....	'Balsomsed' PP23,105; US7,982,110	Blue Marvel.....	'Blue Marvel' PPAF
Sombrero® Sandy Yellow.....	'Balsomselo' PP23,104; US7,982,110	Burgundy Candles .....	'Burgundy Candles' PP22,754
ERYSIMUM		Lyrical™ Blues .....	'Balyriclu' PP22,919
Cheers™ Lemon Yellow.....	'Balcherlemy' PPAF	Lyrical™ Rose .....	'Balyricose' PP24,274
Cheers™ Mighty Mauve .....	'Balchermauv' PPAF	Lyrical™ Silvertone .....	'Balyricsil' PP23,310
EUPHORBIA		Lyrical™ White.....	'Florsalwhite' PP21,243
Red Velvet.....	'Florepred' PPAF	Radio Red .....	'Radio Red' PPAF
GAURA		SCABIOSA	
Ballerina™ Blush .....	'Baltinblus' PP14,683	Harlequin Blue.....	'Balharbu'
Ballerina™ Rose .....	'Baltinrose' PP14,635	VERONICA	
Ballerina™ White.....	'Baltincite' PP20,326	Christy.....	'Christy' PP18,142
Belleza™ Compact Light Pink.....	'KLEGL06261'	Purpleicious.....	'Purpleicious' PP17,639
Belleza™ Dark Pink.....	'KLEAU04263'	Venice Blue.....	'Florverblue' PPAF
Belleza™ White .....	'KLEGL10716' PP23,440	VIOLA	
Little Janie .....	'Little Janie' PPAF	Blackout.....	'Blackout' PP23,369
Whiskers Deep Rose.....	'Whiskers Deep Rose' PPAF	Celestial™ Blue Moon.....	'SMEV1' PP19,882
GERANIUM		Celestial™ Midnight.....	'Midnight' PPAF
Miss Heidi .....	'Miss Heidi' PPAF	Celestial™ Northern Lights.....	'Northern Lights' PPAF
HELIOPSIS		Celestial™ Starry Night.....	'Lord Primrose' PP18,253
Double Sunstruck.....	'Double Sunstruck' PPAF	Celestial™ Twilight .....	'Twilight' PPAF
Sunstruck.....	'Sunstruck' PPAF	Halo Lemon Frost.....	'Halo Lemon Frost' PPAF
		Halo Lilac.....	'Halo Lilac' PPAF
		Halo Sky Blue.....	'Halo Sky Blue' PPAF
		Halo Violet.....	'Halo Violet' PP24,428
		Jumping Jack .....	'Balvijas' PP21,084

# Darwin Perennials Combination Containers

## More perennial selling options for you



Heuchera Carnival Coffee Bean, Plum Crazy and Limeade with Begonia



Gaura Ballerina Rose and Viola Celestial Harvest Moon with Scabiosa and Sedum



Gaura Ballerina Rose and Lavandula Anouk with Festuca and Delphinium



Lavandula Anouk and Viola Celestial Blue Moon with Delphinium and Sedum



Viola Celestial Blue Moon and Scabiosa Harlequin Blue with Osteospermum and Sedum



Viola Celestial Blue Moon and Scabiosa Harlequin Blue with Dianthus



Viola Celestial Blue Moon and Scabiosa Harlequin Blue with Festuca and Delphinium



Achillea New Vintage Red and Echinacea Sombrero Sandy Yellow with Dianthus and Petunia

You can plant Darwin Perennials varieties with other favorites — including annuals — to create stunning tabletop and patio displays. Examples shown here represent some of our trialed and approved perennial combinations. See our website for more combo ideas.



# Trialed and Approved for Your Satisfaction

It takes more than good looks to get into the Darwin Perennials lineup! Every potential new variety, like our reliable *Salvia Lyrical*™ Blues, undergoes extensive trialing and testing to ensure it will perform as consistently for you – and your customers – as it has for us.

Get more information and culture at [darwinperennials.com](http://darwinperennials.com).  
Contact your sales rep to order.

Visit our website for current Terms & Conditions of Sale.

## DarwinPerennials.

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