

Recommended replacements for dropped annual varieties for 2022

| DROPPED VARIETY | RECOMMENDED REPLACEMENT |
|---|--|
| ANGELFACE® Cascade White <i>Angelonia</i> | ANGELFACE® Cascade Snow <i>Angelonia</i> |
| SUPERBELLS® HOLLYWOOD STAR™ <i>Calibrachoa</i> | SUPERBELLS® CHERRY STAR™ <i>Calibrachoa</i> |
| SUPERBELLS® MORNING STAR™ <i>Calibrachoa</i> | SUPERBELLS® STRAWBERRY PUNCH™ <i>Calibrachoa</i> |
| SUPERBELLS® TABLE TOP™ Blue <i>Calibrachoa</i> | SUPERBELLS® Blue <i>Calibrachoa</i> |
| SUPERBELLS® TABLE TOP™ Red <i>Calibrachoa</i> | SUPERBELLS® Red <i>Calibrachoa</i> |
| SUPERBELLS® TABLE TOP™ White <i>Calibrachoa</i> | SUPERBELLS® White <i>Calibrachoa</i> |
| HIPPO® Pink <i>Hypoestes</i> | HIPPO® Rose <i>Hypoestes</i> |
| INFINITY® Dark Pink <i>Impatiens</i> | INFINITY® Pink <i>Impatiens</i> |
| INFINITY® Pink Frost <i>Impatiens</i> | INFINITY® Pink <i>Impatiens</i> |
| INFINITY® Orange Frost <i>Impatiens</i> | INFINITY® Orange <i>Impatiens</i> |
| ILLUSION® Garnet Lace <i>Ipomoea</i> | Sweet Caroline RED HAWK™ <i>Ipomoea</i> |
| LAGUNA® Sky Blue <i>Lobelia</i> | LAGUNA® Sky Blue Improved <i>Lobelia</i> |
| LAGUNA® White <i>Lobelia</i> | LAGUNA® CLOUD WHITE™ <i>Lobelia</i> |
| DARK KNIGHT™ <i>Lobularia</i> | VIOLET KNIGHT™ <i>Lobularia</i> |
| BRIGHT LIGHTS® Berry Rose <i>Osteospermum</i> | BRIGHT LIGHTS® Pink <i>Osteospermum</i> |
| BOLDLY® Hot Pink <i>Pelargonium</i> | BOLDLY® Hot Pink Improved <i>Pelargonium</i> |
| SUPERTUNIA MINI VISTA® Morning Glory <i>Petunia</i> | SUPERTUNIA MINI VISTA® Indigo <i>Petunia</i> |
| SUPERTUNIA® Mulberry Charm <i>Petunia</i> | SUPERTUNIA® BORDEAUX™ <i>Petunia</i> |
| SUPERTUNIA® PRISCILLA® <i>Petunia</i> | SUPERTUNIA® PRISCILLA® Improved <i>Petunia</i> |
| SUPERTUNIA® Trailing Blue <i>Petunia</i> | SUPERTUNIA® ROYAL VELVET® <i>Petunia</i> |
| SUPERBENA® Dark Blue <i>Verbena</i> | SUPERBENA® IMPERIAL BLUE™ <i>Verbena</i> |

Proven Accents®



SILVER BULLET®

Artemisia stelleriana

LANDSCAPE 15-25cm (6-10") Zones 5-9 Vigor: 3

Meet one of the best plants for in-demand low water combinations and landscapes. Lacy textured, silvery leaves artfully weave their way through combinations, playing well with other medium vigor plants and coordinating well with any colors you choose. Also useful as a low maintenance spreader for sunny landscapes.

Growing Tips for SILVER BULLET®

- Good water management practices are critical to healthy plant growth; water well and then allow the plant to draw the water from the soil.
- Growing plants with too much irrigation can cause chlorosis, keep plants on the dry side.
- Once established in the container, plants can be moved outdoors to create more greenhouse space. Protect if temperatures drop below 29° F especially in the first 10 days after moving outside.
- If the crop becomes overgrown, plants can be sheared to shape. They can also be shaped after flowering in landscape use.
- 150-200 ppm fertilizer for optimal growth.
- In growing group AC (see page 141).

Notes: For all sizes of containers, pinch the liner 1–2 weeks after transplant; for containers larger than 6" and for hanging baskets, trim around the edge of the container as needed prior to spacing or hanging of the baskets. Once established Silver Bullet is a very fast growing plant, growth can be controlled by reducing fertility or withholding water.

AWARD WINNER – SILVER BULLET® *Artemisia*

27 Awards including: Perfect Score, Penn State; Leader of the Pack, NC State; Top Performer, Michigan State University



SILVER BULLET®
Artemisia stelleriana

Asparagus Fern

Asparagus densiflorus 'Sprengeri'

30-61 cm (12-24") Vigor: 2

An iconic accent plant for hanging baskets and upright containers is the asparagus fern. It forms a dense mound of fresh green, arching fronds of needlelike foliage that are soft to the touch. This classic spiller thrives in part shade in all zones and will handle direct sun in cooler climates, so it is easy to use in a wide variety of container recipes.

Growing Tips for Asparagus Fern

- Prefers low to medium light conditions
- Feed with 100–150 ppm N
- Avoid allowing the soil to dry to point of wilting as this will cause leaf drop
- Cold temperatures can cause foliar bleaching
- In growing group BB (see page 141).

Notes: No pinching or PGRs are needed for asparagus fern. General scouting practices are needed; watch for aphids.



Asparagus Fern
Asparagus densiflorous

PEGASUS® *Begonia*

LANDSCAPE 30-46cm (12-18") Vigor: 3

This impressive begonia features glossy, durable, deep green leaves with extensive silver markings. Its upright habit makes it an eye-catching thriller in combination containers and it looks great in landscapes, too.

Growing Tips for PEGASUS®

- 150-200 ppm N.
- No growth regulators recommended or needed.
- Good air circulation and bright but filtered light will decrease the threat of botrytis.
- Pegasus is tough and durable, however still needs temps above 50° F to look its best.
- In growing group BA (see page 141).

Notes: Treat with preventative broad spectrum fungicidal drench at transplant. Scout crops regularly (at least once a week) for disease development.

AWARD WINNER – PEGASUS® *Begonia*

27 Awards including: Top Performer, Colorado State University; Top Performer, Jardin Daniel A Seguin; Top Performer, Massachusetts Horticulture Society; Leader of the Pack, North Carolina State University; Top Performer, Texas A&M; Top Performer, University of Tennessee-Knoxville



PEGASUS® *Begonia*

SILVER FALLS™

Dichondra argentea

LANDSCAPE 5-15cm (2-6") Vigor: 3

This versatile spiller enhances hanging baskets and upright container recipes with its long, trailing stems lined with small, metallic silver leaves that flow from the edges of containers like a sparkling waterfall. It is exceptionally tolerant of heat, humidity and drought.

Growing Tips for SILVER FALLS™

- Requires high light levels in production.
- Feed with 150-200ppm N.
- Easiest to grow in warm, dry conditions. Let the crop dry out well before watering again.
- In growing group BA (see page 141).

Notes: Pinching should not be necessary. A tank mix of 5000ppm B-Nine® and 1000ppm Cycocel® applied one week after transplant will increase branching, control stem length and prevent plants from tangling. It will also increase the silvering of the foliage.



SILVER FALLS™
Dichondra argentea

Collection
Top Seller

Spikes *Dracaena indivisa*

61-91cm (24-36") Vigor: 3

An easy and economical way to add value to container recipes is by adding a single spike as a thriller. Its broad, green, sword-shaped leaves emanate from a single trunk, adding dynamic presence, structure and height to container plantings. Spikes are tolerant of a broad range of growing conditions and are easy to overwinter in a greenhouse or as a houseplant.

Growing Tips for Spikes

- Prefers medium to high light conditions
- Feed with 150–200 ppm N
- Container size will ultimately control height of plant
- Do not bury crown when transplanting
- Avoid dry down as this will cause tip burn
- In growing group BB (see page 141).

Notes: No pinching or PGRs are needed for spike plants. General scouting practices are needed; watch for spider mites.



Spikes
Dracaena indivisa

English Ivy *Hedera helix*

LANDSCAPE 8-20 cm (3-8") Vigor: 2

Ivy is incredibly useful in designing upright containers and hanging basket recipes since it grows in any conditions – sun or shade, moist or dry, in cool or warm climates. Use it as a spiller, a climber on trellises and fences, or on topiary forms. Both solid and variegated-leaf forms are available; variegated selections tend to have a slower growth rate.

Growing Tips for English Ivy

- Prefers medium light conditions
- Feed with 150–200 ppm N
- Do not allow the plant to dry to the point of wilting or leaf burn will occur
- In growing group BB (see page 141).

Notes: Pinch at time of transplant, leaving at least three nodes intact. For larger pot sizes, multiple pinches can be beneficial. No PGRs are necessary. General scouting practices are needed; watch for spider mites.



Yellow Ripple
Hedera helix



Glacier
Hedera helix

PATRICIA®
Hedera helix

Licorice Plant *Helichrysum*

LANDSCAPE 20-30cm (8-12") Vigor: 3 Icicles: 20-41cm (8-16") Vigor: 2

These beautiful and undemanding accent plants are easy to use in hanging baskets, upright containers and window boxes as a fun foliage filler or spiller. Like many silver foliage plants, they are sun, heat and drought tolerant and require little fertilizer to thrive. Icicles makes an eye-catching upright filler with its dense, needlelike foliage. The smaller-leaved selections add a pop of silver on long, arching stems in mixed color combos.

Growing Tips for Licorice Plant

- Prefers medium to high light conditions
- Feed with 150–200 ppm N
- Avoid wet or moist soils in low light months
- In growing group CB (see page 141).

Notes: Pinch plants once and drench with a preventative fungicide two weeks after transplant. General scouting practices are needed; watch for spider mites, aphids and whiteflies. PGRs are not necessary. Trim trailing varieties to shape if growing in large containers or combinations.



Petite Licorice
Helichrysum petiolare

Icicles
Helichrysum thianschanicum

Licorice Splash
Helichrysum petiolare

White Licorice
Helichrysum petiolare


ILLUSION® and SWEET CAROLINE *Ipomoea batatas*

Sweet potato vines have long been essential components of container recipes and landscapes. The exceptional genetics we offer include a wide range of colors, shapes and habits. All are selected against flowering and potato production and are selected against displaying oedema under high stress conditions, which ensures vigorous growth.

ILLUSION® *Ipomoea batatas*

LANDSCAPE    15-25cm (6-10") Vigor: 3

Sweet Caroline *Ipomoea batatas*

LANDSCAPE    15-41cm (6-16") Vigor: 3 except Sweet Caroline Bewitched Green with Envy: Vigor: 4

Growing Tips for ILLUSION® and Sweet Caroline

- 150-200 ppm fertilizer for optimal growth.
- Keep air circulation up and foliage dry. Prolonged wet foliage may lead to bacterial leaf spotting.
- Use 2500 ppm of B-Nine® to maintain shape on 4.5".
- This crop loves the heat and humidity. For the fastest crops keep production temperatures over 70° F and keep fertility levels fairly high.
- In growing group BC (see page 141).

Notes: Treat with a broad spectrum fungicidal drench 1-2 weeks after transplant. For Illusions, no pinch is necessary. For Sweet Caroline varieties, pinch once, 2 weeks after liner planting.

AWARD WINNERS

ILLUSION® *Ipomoea batatas*

170 Awards including: Top Performer, Oklahoma State; Leader of the Pack, North Carolina State; Outstanding Rating, Disney Trials

SWEET CAROLINE *Ipomoea batatas*

341 Awards including: Leader of the Pack, North Carolina State; Prairie Star, Kansas State; Best Varieties, Penn State

Proven Winners Ipomoea Comparison Chart

| Series | Varieties | Distinguishing Characteristics | Breeding Goal | Colors | Habit | Branching – Relative to Others | Flowering | Leaf Shape | PGR Requirements |
|----------------------------------|---|---|--|--|--------------------|--------------------------------|--|-----------------|--|
| Illusion® | Emerald Lace Midnight Lace | Dissected foliage; compact habit | Same as Sweet Caroline | Light green, purple, red or bronze | Compact | High | No – Rarely, when under stress | Dissected | Usually not needed |
| Sweet Caroline Bewitched | Bewitched After Midnight™ Bewitched Green with Envy™ | Compact mounding but not trailing habit; more upright initially; serrated leaf margin | Mounding habit with serrated leaf | Light green, purple-black | Compact | Medium to high | Occasionally under short days, low light | Serrated margin | Not needed |
| Sweet Caroline Sweetheart | Jet Black™ Lime Red | Enhanced branching over Sweet Caroline series; heart-shaped leaves | Same as Sweet Caroline | Light green, purple, red | Moderately compact | Medium | No | Entire, cordate | May be needed for holding plants and small container sizes |
| Sweet Caroline Sweetheart | Kiwi™ Medusa™ Green Raven™ Red Hawk™ | Enhanced branching and reduced stem elongation over free varieties | Bred for reduced internode size, better branching and reduced storage root formation | Chartreuse, Light green, red, purple-black | Mounding | Medium | No | Deeply lobed | May be needed for holding plants and small container sizes |
| | Light Green | Enhanced branching and reduced stem elongation over free varieties | Bred for reduced internode size, better branching and reduced storage root formation | Light green | Trailing | Medium | No | Deeply lobed | May be needed for holding plants and small container sizes |
| | Blackie | Aggressive trailing growth | First ornamental sweet potato on the market | Purple-black | Trailing | Low | Occasionally under short days, low light | Deeply lobed | May be needed for holding plants and small container sizes |
| | Margarita | Aggressive trailing growth | First ornamental sweet potato on the market | Chartreuse | Trailing | Low | Occasionally under short days, low light | Entire, cordate | May be needed for holding plants and small container sizes |



ILLUSION® Emerald Lace
Ipomoea batatas ^{NCORNSP012EMLC} USPP21744 Can4162

ILLUSION® Midnight Lace
Ipomoea batatas ^{NCORNSP011MNL} USPP21743 Can4161



'Sweet Caroline Light Green'
Ipomoea batatas ^{USPP15028} Can2975



Sweet Caroline RAVEN™
Ipomoea batatas ^{NCORNSP-024SCR1} USPP31837 CanPBRAF



Sweet Caroline RED HAWK™
Ipomoea batatas ^{NCORNSP-026SCRH} USPPAF CanPBRAF

ILLUSION® and SWEET CAROLINE *Ipomoea batatas*

continued



Sweet Caroline Bewitched AFTER MIDNIGHT™
Ipomoea batatas *NCDRNSP-020BWAM* USPP23656 Can5778



Sweet Caroline Bewitched GREEN WITH ENVY™
Ipomoea batatas *NCDRNSP-020BWGWE* USPP23803 Can5779



'Sweet Caroline Sweetheart Red'
Ipomoea batatas USPP191013 Can2904



Top 50

Sweet Caroline Sweetheart Lime
Ipomoea batatas *NCDRNSP-019SCSHLM* USPP23318 Can5777



Sweet Caroline KIWI™
Ipomoea batatas *NCDRNSP-025SCK* USPP31855 CanPBRAF



Sweet Caroline MEDUSA™ Green
Ipomoea batatas *** USPPAF CanPBRAF



Collection
Top Seller

Sweet Caroline
Sweetheart JET BLACK™
Ipomoea batatas *NCDRNSP-021SHJB* USPP23378 Can5780

Blackie and Margarita *Ipomoea batatas*

LANDSCAPE 10-25cm (4-10") Vigor: 4

When long, bold, strongly trailing spillers are what you need, choose from these two selections which can trail up to six feet from mostly unbranched stems. Blackie presents deep purple-black, deeply lobed foliage on cascading stems, while Margarita's chartreuse leaves are more heart-shaped. Both exhibit good heat tolerance and are versatile in hanging baskets and landscapes.



Blackie
Ipomoea batatas



Margarita
Ipomoea batatas

PINK CHABLIS®

Lamium maculatum

LANDSCAPE     20-30cm (8-12") Zones 4-8  Vigor: 3

Easily adaptable for containers and landscapes, this versatile plant thrives in sun and shade. Its cool silver foliage complements the pretty pink blossoms that dot the trailing stems.

Growing Tips for PINK CHABLIS®

- Can be produced under high or low light levels.
- 150-200 ppm fertilizer for optimal growth.
- Leaf purpling can occur when grown in low-fertility situations or cold temperatures.
- Very tolerant of cool temperatures; can be moved outdoors once temps are above 28° F (-2° C).
- All Lamiums are susceptible to downy mildew, scout crops regularly.
- In growing group AC (see page 141).

Notes: Winter flowering occurs in Sunbelt states. No pinching or growth regulator needed.

AWARD WINNER – PINK CHABLIS® *Lamium*






6 Awards including: Top Pick, Dallas Arboretum; Top Performer-Perennial, Colorado State University; Knock Your Socks Off, University of Georgia; Top Performer, University Laval



PINK CHABLIS®
Lamium maculatum Check It! USPP17925

ROCKIN® 'Golden Delicious'

Salvia elegans

LANDSCAPE     91-122cm (36-48")  Vigor: 4

Chartreuse plants are always in high demand since they provide an elegant accent to plants of every other color in combinations and landscape designs. This pineapple sage makes an outstanding thriller in large container recipes and forms a robust clump in the garden. It is heat and humidity tolerant and is resistant to downy mildew. Full sun conditions yield radiant yellow foliage; will be more chartreuse in shade. In warm climates with long growing seasons, this short-day plant may produce fire engine red flowers in fall.

Growing Tips for ROCKIN® 'Golden Delicious'

- Requires high light in production.
- Good air circulation and well-drained soil are important. Avoid saturated containers and grow slightly on the dry side.
- 150-200 ppm N. Be careful to not overfertilize. Using fertilizer high in ammonia can cause excessive vegetative growth and lack of flowers.
- Grow in 4.25 Grande™ for early season sales and in 1.0 Royale™ containers for bigger impact.
- In growing group AB. (see page 141).

Notes: Compact early habit is great for container production. Pinch at 1-2 weeks after transplant if needed. Growth can be controlled using lower temperatures. A routine preventative broad spectrum fungicidal spray program is encouraged. Growth can be controlled using B-Nine® at 2500 to 3750 ppm.

AWARD WINNERS – ROCKIN® 'Golden Delicious' *Salvia*

23 Awards including: Top 10, JC Raulston Arboretum; Top Performer, Cornell University; Excellent Cool Season, Disney



ROCKIN® 'Golden Delicious'
Salvia elegans USPP17977

Persian Shield

Strobilanthes dyerianus

LANDSCAPE     46-91cm (18-36") Vigor: 3

This essential tropical accent plant makes a bold thriller in containers and landscapes. Long, narrow leaves are uniquely iridescent purple with black, green and silver accents. It thrives in warm, humid weather. The brightest coloration occurs in part shade in all but the coolest climates where it will grow in full sun. It is also adaptable as a houseplant.

Growing Tips for Persian Shield

- Prefers high light conditions
- Feed with 150–200 ppm N
- In growing group BB (see page 141).

Notes: Pinch plants once and drench with a preventative fungicide two weeks after transplant. A second pinch is optional based on your container size. Cycocel®, B-Nine® and Bonzi® are all effective at controlling height and internodal stretch. General scouting practices are needed; watch for spider mites, aphids and whiteflies.



Persian Shield *Strobilanthes dyerianus*



Persian Shield *Strobilanthes dyerianus* in the landscape.

'Variegata' and 'Wojo's Jem' *Vinca*

LANDSCAPE    8-15cm (3-6")  Vigor: 2

A delicate accent for hanging baskets, upright containers and window boxes, these trailing vinca vines won't take up much room but will make a beautiful visual impact. Use the more subtle toned 'Variegata' with pastels and patterned companions, or the strongly variegated 'Wojo's Jem' with bold, solid colored companions. These vines grow quickly and tolerate sun or shade conditions.

Growing Tips for 'Variegata' and 'Wojo's Jem'

- Prefers high light conditions
- Feed with 150–200 ppm N
- In growing group AB (see page 141).

Notes: Drench with a preventative fungicide two weeks after transplant. For vinca grown in 6" or smaller containers, a single pinch two weeks after transplant is usually sufficient to produce a nicely branched plant. A Florel® application of 500ppm can also help to build a fuller plant. General scouting practices are needed; watch for spider mites and aphids.



'Variegata'
Vinca major

'Wojo's Jem'
Vinca maculata USPP11809

PROVEN HARVEST®



PROVEN HARVEST

AlliYUM![™]

Allium



Carrying crossover appeal as a delicious herb and ornamental perennial, this highly flavorful flat leaf garlic chive carries a blend of onion and soft garlic flavors. Its succulent foliage is topped with lavender purple flowers that are a favorite of pollinators in midsummer. Both the flowers and foliage are edible. AlliYUM! is a tough and durable herb that is capable of withstanding prolonged periods of drought. New this year.

Growing Tips for AlliYUM![™]

- Sold primarily for its foliage; requires a 6-9 week vernalization to bloom
- Feed with 100-150ppm N
- In growing group AB (see page 141).

Notes: Treat with a preventative broad spectrum fungicidal drench 1-2 weeks after transplant. No pinching or PGRs needed. Scout crop regularly for disease development. Foliage is tolerant of frost but not a hard freeze. From transplant to sale in a Grande container is a production time of 8-10 weeks. From garden planting to harvest is an additional 8-10 weeks.

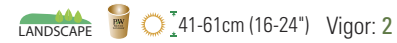


AlliYUM![™]
Allium

FIRE AWAY[®]

Hot and Heavy

Capsicum annuum



This compact snack pepper bears 2 ½-3 ½" long fruits that pack about the same heat as a mild jalapeno. They mature through shades of green, yellow, orange and red. Harvest time is long; crop time from liner to red fruit is 65-72 days. Shows good resistance to blossom-end rot.

Growing Tips for FIRE AWAY[®]

- Best grown under warm conditions with long days. Don't order it in until you can meet these conditions.
- Grow in high light to avoid stretching.
- Feed with 150-200ppm N. Do not overfeed this crop.
- Allow plants to dry, but not wilt, between waterings.
- Pinch liners at 1-2 weeks after transplant if needed.
- In growing group BB (see page 141).

Seed Availability: *Sobkowich*

AWARD WINNER – FIRE AWAY[®] Hot and Heavy

21 Awards including: Top Performer-Pepper, Texas A&M; Leader of the Pack, JC Raulston Arboretum; Perfect Score All Summer, Oregon State University



FIRE AWAY[®] Hot and Heavy
Capsicum annuum

BERRIED TREASURE[®]

Fragaria ananassa



Plants that serve a dual purpose of being ornamental and edible are wildly popular with consumers today, and Berried Treasure strawberries are no exception. These beautiful strawberries bear showy, semi-double flowers and sugary sweet, snack-sized fruits together all summer long. The plants have short runners, making them ideal for growing in patio pots. Everbearing, daylength neutral and hardy in zones 4-9.

Growing Tips for BERRIED TREASURE[®]

- 150 ppm N for optimal growth.
- Pay close attention to watering. Strawberries do not tolerate wilting and the soil must be kept moist but not soggy.
- Bright light and cool nights are best for peak flowering and fruit set.
- Avoid high temperatures in production. Plants should be kept below 80°F to avoid a reduction in fruit quality.
- Watch for spider mites, especially when humidity is low. Spray both the undersides and tops of the foliage.
- Depending on conditions, allow about four weeks from flowering to ripened fruit.
- In growing group BC (see page 141).

Notes: Reduced runner formation results in a more mounding habit and more energy to put into flowers and fruit.

Seed Availability: *Sobkowich*

AWARD WINNER –

BERRIED TREASURE[®] Red *Fragaria*

38 Awards including: Top Performer, University of Guelph; Leader of the Pack, North Carolina State; Top Performer, Oklahoma State University



BERRIED TREASURE[®]
White *Fragaria ananassa*



BERRIED TREASURE[®] Pink
Fragaria ananassa



BERRIED TREASURE[®] Red
Fragaria ananassa

TEMPTING TOMATOES® *Lycopersicon esculentum*

LANDSCAPE   Vigor: 4

TEMPTING TOMATOES® 'Garden Gem'
Lycopersicon esculentum USPV 201400052

76-107cm (30-42")

This strongly disease resistant, semi-determinate tomato produces a high yield of juicy, smooth flavored, snack-sized fruits. Developed in the hot, humid South, resulting in heat tolerant plants that fruit over an extended period. Matures in 60-65 days, 2 weeks before Better Boy®.

TEMPTING TOMATOES® 'Garden Treasure'
Lycopersicon esculentum USPV 201400065

86-122cm (34-48")

This heat tolerant, vigorous, indeterminate tomato produces a heavy yield of large fruits that have versatile uses; delicious eaten fresh and used in sauces. Expect the flavor of an heirloom tomato with modern disease resistance. Matures in 70-75 days.

AWARD WINNERS –

TEMPTING TOMATOES® 'Garden Gem' *Lycopersicon*

17 Awards including: Top Performer, University of Guelph; Perfect Score, Oregon State University; Top Performer, University of Georgia; Consumer Favorite, University of Tennessee-Jackson

TEMPTING TOMATOES® 'Garden Treasure' *Lycopersicon*

18 Awards including: Top Performer, University of Guelph; Perfect Score, Oregon State University; Perfect Score, University of Tennessee-Jackson; Leader of the Pack, North Carolina State



TEMPTING TOMATOES®
'Garden Gem'
Lycopersicon
esculentum

TEMPTING TOMATOES®
'Garden Treasure'
Lycopersicon
esculentum

TEMPTING TOMATOES® GOODHEARTED® *Lycopersicon esculentum*

  20-30cm (8-12") Vigor: 2

This compact, determinate cocktail tomato with a low mounding habit is ideal for hanging baskets and upright patio containers. Juicy, heart to pear-shaped fruits with a tender skin are slightly larger than cherry tomatoes. They have the perfect balance of sweet and acidic flavors. Crop time from liner to red fruit is 65-72 days, making this a great early tomato for Northern gardeners.

Growing Tips for TEMPTING TOMATOES® GOODHEARTED®

Growing Tips for TEMPTING TOMATOES® 'Garden Gem' and 'Garden Treasure'

- 100-150 ppm N for optimal growth.
- A complete micronutrient balanced fertilizer is essential for best growth and flavor.
- Most tomatoes perform well with additional calcium, or a CalMag fertilizer.
- Avoid soil pH higher than 5.0 or micronutrient deficiencies will begin to show.
- Though these tomatoes are disease resistant, watch for signs of virus. Wash hands before handling the crop.
- Good air circulation is essential for pollination of flowers. Ensure good air flow through the greenhouse and keep humidity relatively low for best fruit set.
- In growing group BA (see page 141).

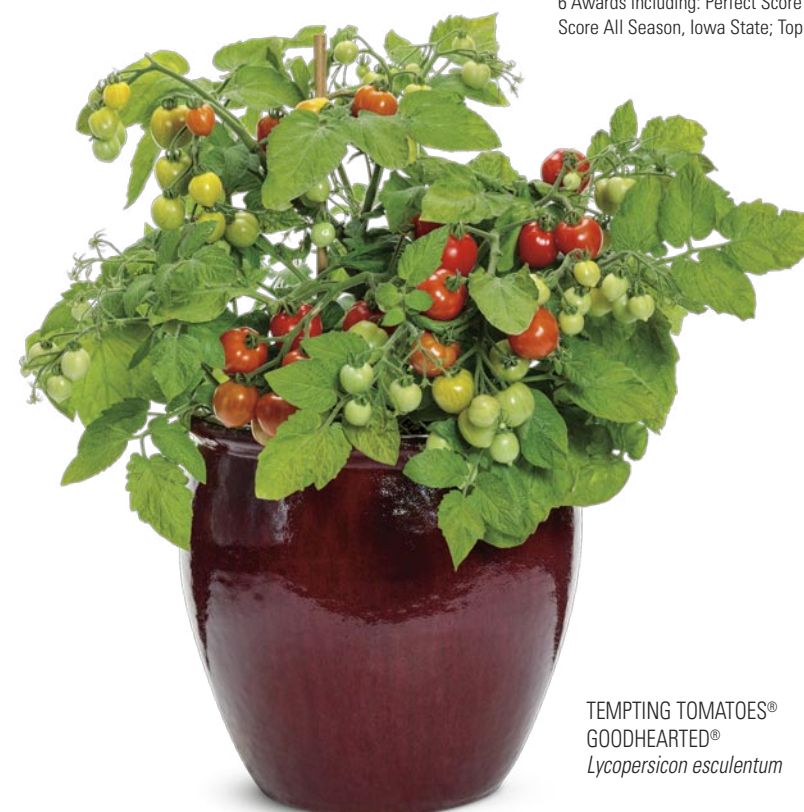
Seed Availability: *Sobkowich*

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- A complete micronutrient balanced fertilizer is essential for best growth and flavor.
- Most tomatoes perform well with additional calcium, or a CalMag fertilizer.
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- Watch for signs of virus. Wash hands before handling the crop.
- Good air circulation is essential for pollination of flowers. Ensure good air flow through the greenhouse and keep humidity relatively low for best fruit set.
- In growing group BA (see page 141).

Seed Availability: *Sobkowich*

AWARD WINNER – TEMPTING TOMATOES® GOODHEARTED® *Lycopersicon*

6 Awards including: Perfect Score All Season, University of Tennessee; Perfect Score All Season, Iowa State; Top Performer, Oregon State University



TEMPTING TOMATOES®
GOODHEARTED®
Lycopersicon
esculentum

AMAZEL BASIL® and PESTO BESTO™ *Ocimum*

LANDSCAPE   Vigor: 4

For superior resistance to downy mildew, look no further than these two outstanding varieties of Italian sweet basil. Both emanate from the same exemplary breeding program at the University of Florida and yield large quantities of highly flavorful leaves.

AMAZEL BASIL® *Ocimum* ^{UF16-23-2} USPP30917 CanPBRAF

The gold standard in vegetatively produced, downy mildew resistant basil. Very large, vigorous, well-branched plants reach harvestable size quickly, remain in a vegetative state longer, and set sterile seed. The very best basil we've ever trialed.

PESTO BESTO™ *Ocimum*

An exceptional seed grown, downy mildew resistant basil. Robust plants yield plenty of highly flavorful foliage, maturing to a slightly smaller size than Amazel Basil. Easily fits growers' current herb production model. New this year.

Growing Tips for AMAZEL BASIL® and PESTO BESTO™

- 150-200 ppm N for optimal growth.
- Pinch floral buds during early plant establishment to promote vegetative growth.
- Grow under high light conditions with good air circulation.
- Avoid temperatures below 40°F.
- Good water management practices are critical to healthy growth; avoid late day overhead watering.
- Employ good sanitation practices including keeping the greenhouse clean, eliminating weeds and debris, keeping hose-ends off the floor, and disinfecting equipment as often as possible.
- Scout for thrips and botrytis.
- In growing group BC (see page 141).

AWARD WINNER – AMAZEL BASIL® *Ocimum*

35 Awards including: Top Performer, University of Guelph; Best of Show, University of Tennessee-Jackson; Perfect Score, Michigan State University; Top Performer, Oregon State University



AMAZEL BASIL® *Ocimum* ^{UF16-23-2} USPP30917 CanPBRAF
51-91cm (20-36")



PESTO BESTO™ *Ocimum*
46-76cm (18-30")

Proven Selections®





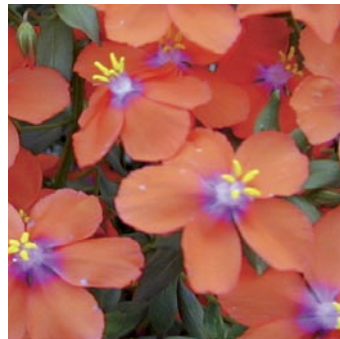
Firetail Chenille Plant *Acalypha pendula*



Green Twist *Agrostis stolonifera*



'Wildcat Blue' *Anagallis*



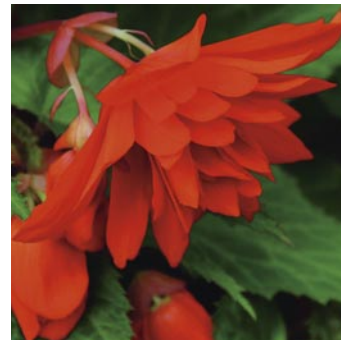
'Wildcat Mandarin' *Anagallis*



SILVER CASCADE® *Artemisia stelleriana*



BELLECONIA™ Cream *Begonia*



BELLECONIA™ Hot Orange *Begonia*



BELLECONIA™ Rose *Begonia*



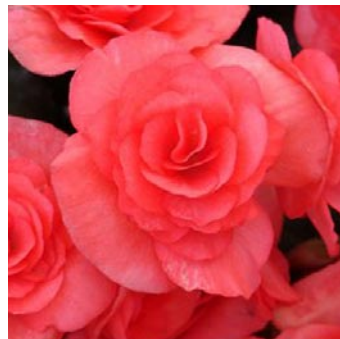
BELLECONIA™ Snow *Begonia*



BELLECONIA™ Soft Orange *Begonia*



SOLENIA® Chocolate Orange *Begonia x hiemalis*



SOLENIA® Dark Pink *Begonia x hiemalis*



SOLENIA® Light Pink *Begonia x hiemalis*



SOLENIA® Red *Begonia x hiemalis*



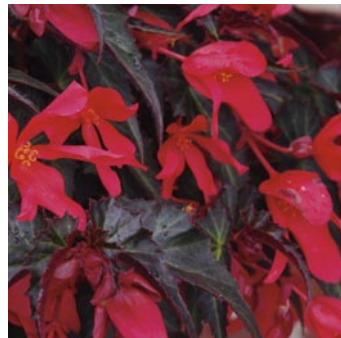
SOLENIA® Red Orange *Begonia x hiemalis*



SOLENIA® Velvet Red *Begonia x hiemalis*



SOLENIA® Yellow *Begonia x hiemalis*



SUMMERWINGS® Dark Elegance *Begonia*



SUMMERWINGS® Deep Red *Begonia*



SUMMERWINGS® Orange *Begonia*

Acalypha pendula
Firetail Chenille Plant

🌞🌱 8-18cm (3-7")

Fluffy masses of bright red chenille flower spikes are produced periodically during the year. *Sobkowich*

Agrostis stolonifera
Green Twist

🌞🌱 25-36cm (10-14")

The bushy, grasslike foliage on this variety resembles bamboo with a healthy looking, unique vining habit. Green Twist must be kept well-watered during hot spells. Trailing habit. *Nordic*

Anagallis
WILDCAT Series

🌞🌱 15-30cm (6-12")

From the breeding program at the University of New Hampshire, Wildcat is a groundbreaking series of early-blooming, compact, large-flowered anagallis. These plants make a stunning addition to any container blooming from April until November.

Nordic, Sobkowich

'Wildcat Blue' ^{USPP15137}

Magnificent blue blooms.

'Wildcat Mandarin' ^{USPP18845}

Exquisite bright orange flowers.

Artemisia stelleriana
SILVER CASCADE®

🌞🌱 10-20cm (4-8")

Silver-grey foliage nicely complements flowering plants and adds contrast. Trailing habit. *Nordic*

Begonia

BELLECONIA™ Series

🌞🌱 20-30cm (8-12")

Large double blooms start earlier and keep blooming longer with increased heat and light level tolerance. *Nordic*

BELLECONIA™ Cream

BELLECONIA™ Hot Orange

BELLECONIA™ Rose

BELLECONIA™ Snow

BELLECONIA™ Soft Orange

Begonia x hiemalis

SOLENIA® Series

🌞🌱 20-30cm (8-12")

Compact, well-branched plants that set big, double blooms on glossy, dark foliage. Great sun tolerance. *Nordic*

SOLENIA® Chocolate Orange

SOLENIA® Dark Pink

SOLENIA® Light Pink

SOLENIA® Red

SOLENIA® Red Orange

SOLENIA® Velvet Red

SOLENIA® Yellow

Begonia

SUMMERWINGS® Series

🌞🌱 20-30cm (8-12")

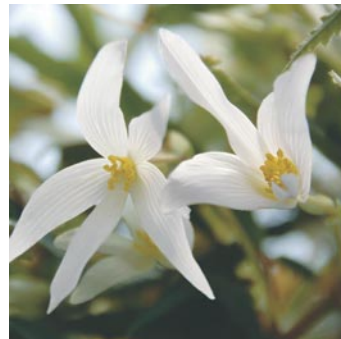
Huge, airy single blooms with continuous flowering all summer. Blooms earlier than traditional tuberous begonias. *Nordic*

SUMMERWINGS® Dark Elegance

SUMMERWINGS® Deep Red

SUMMERWINGS® Orange

Some or all of the varieties listed herein may be protected under one or more for the following: Plant Variety Protection, United States Plant Patents, Utility Patents, and/or Plant Breeders' Rights and may not be propagated or reproduced without authorization.



SUMMERWINGS® White *Begonia*



MILLION BELLS® Trailing Blue *Calibrachoa*



MILLION BELLS® Trailing Pink *Calibrachoa*



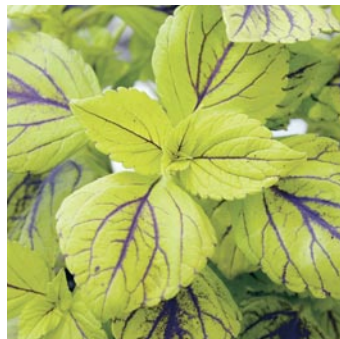
Spider Plant (White Edge) *Chlorophytum comosum*



Fishnet Stockings *Plectranthus* (Coleus)



Freckles *Plectranthus* (Coleus)



Gay's Delight *Plectranthus* (Coleus)



Pineapple *Plectranthus* (Coleus)



Choca Mocha *Cosmos astrosanguineus*



Dark Eyes *Fuchsia*



Swingtime *Fuchsia*



Wilma Verslot *Fuchsia*



DAREDEVIL® Claret *Pelargonium* (Geranium)



DAREDEVIL® Mulberry *Pelargonium* (Geranium)



DAREDEVIL® Orchid *Pelargonium* (Geranium)



DAREDEVIL® Rosita *Pelargonium* (Geranium)



DAREDEVIL® Salmon *Pelargonium* (Geranium)



DAREDEVIL® Snow *Pelargonium* (Geranium)

Begonia

SUMMERWINGS® Series

(continued) *Nordic*

☀️☀️ 20-30cm (8-12")

SUMMERWINGS® White

Calibrachoa

MILLION BELLS® Series

☀️☀️ 8-20cm (3-8")

Incredibly easy to grow, Million Bells are hugely popular. Their profuse, self-cleaning flowers arrive in spring and keep going until fall. Among the most hummingbird-friendly plants on the market. Great garden performers.

MILLION BELLS® Trailing Blue^{USPP20505}

Nearly purple blooms with a bright yellow center.

Sobkowich

MILLION BELLS® Trailing Pink

Bright pink blooms and tight-growing foliage.

Sobkowich

Chlorophytum comosum

Spider Plant (White Edge)

☀️☀️☀️ 25-50cm (10-20")

Arching green leaves rimmed with a white edge and cascading "babies". *Nordic*

Plectranthus scutellarioides

Coleus

☀️☀️☀️

Bold, versatile and colorful, these popular foliage plants are tolerant of varying light conditions, are easy to grow and are among the fastest-selling plants in any program.

Fishnet Stockings

☀️☀️☀️ 61-91cm (24-36")

Symmetrical bright green leaves appear to be hand-painted with a deep burgundy variegation. *Nordic*

Freckles

☀️☀️☀️ 61-76cm (24-30")

Bronze and orange splotches on creamy yellow leaves.

Sobkowich

Gay's Delight

☀️☀️☀️ 61-91cm (24-36")

Lime green foliage with purple veins make a unique accent.

Nordic

Pineapple

☀️☀️☀️ 30-46cm (12-18")

Lime green and yellow scalloped leaves with maroon edges.

Sobkowich

Cosmos astrosanguineus

Choca Mocha

☀️☀️ 25-30cm (10-12")

Delicate chocolate-colored flowers are held on sturdy stems surrounded by fern-like foliage. *Nordic*

Fuchsia

Dark Eyes

☀️☀️ 10-20cm (4-8")

Beautiful, deep blue corollas with red sepals from spring to fall. New this year. *Nordic*

Fuchsia

Swingtime

☀️☀️ 10-30cm (4-12")

Flowers with rich red sepals and white corollas bloom from spring to fall. New this year. *Nordic*

Fuchsia

Wilma Verslot

☀️☀️ 25-36cm (10-14")

Stunning single blooms feature crimson red sepals and royal purple corollas that bloom spring to fall. Everblooming, even in full sun. *Nordic*

Pelargonium zonale

DAREDEVIL® Geranium

☀️☀️☀️ 46-61cm (18-24")

The Daredevil series delivers six complementary colors in a superior performing large geranium. Great in the landscape and in containers, these varieties are sure to provide bright color all summer long. Heat and drought tolerant and deer resistant.

Sobkowich

DAREDEVIL® Claret ^{'Fisrodark' USPP15513 Can1892}

DAREDEVIL® Mulberry ^{'Fisromag' USPP13252 Can1424}

DAREDEVIL® Orchid ^{'Fisrolav' USPP15042 Can1893}

DAREDEVIL® Rosita ^{'Fisrodeep' USPP20516 Can3748}

DAREDEVIL® Salmon ^{'Fisrolamon' USPP19076 Can3594}

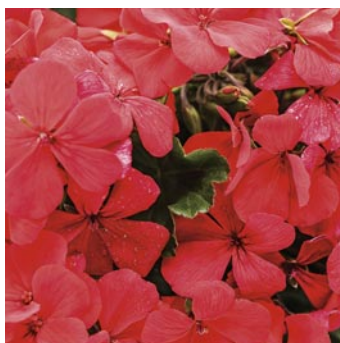
DAREDEVIL® Snow ^{'Fisroweiss' USPP16974 Can2666}



TIMELESS™ Fire *Pelargonium* (Geranium)



TIMELESS™ Lavender *Pelargonium* (Geranium)



TIMELESS™ Orange *Pelargonium* (Geranium)



TIMELESS™ Pink *Pelargonium* (Geranium)



Dappled Light *Glechoma hederacea*



Ritterkreuz *Hedera*



White Ripple *Hedera*



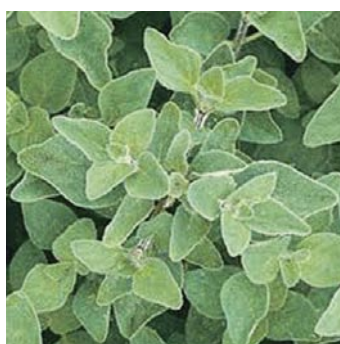
Fragrant Blue *Heliotrope arborescens*



Marine *Heliotrope arborescens*



'Munstead' Lavender



Greek Oregano



Arp Rosemary



Spearmint



English Thyme



Lemon Thyme

Pelargonium

TIMELESS™ Geranium

🌱 30-46cm (12-18")

Timeless geraniums share the same great genetics as their forerunner, Caliente, which are popular with consumers. This interspecific cross between zonal and ivy geraniums exhibits more ivy traits than zonal traits. Available in an array of vibrant colors, they all share exceptional heat tolerance and deliver a strong garden performance. Timeless Pink and Timeless Fire have a more cascading, very well-branched habit while the others in this series are more mounded and compact. *Nordic*

TIMELESS™ Fire **** USPPAF CanPBRAF

TIMELESS™ Lavender **** USPPAF CanPBRAF

TIMELESS™ Orange 'Cante Oran' USPP20686 Can3733

TIMELESS™ Pink 'Cante Pinka' USPP20678 Can3734

Glechoma hederacea

Dappled Light

USPP17683

🌱 8-15cm (3-6")

Vigorous grower with pink stems and brightly variegated chartreuse scalloped leaves. Trailing habit. *Nordic*

Hedera

Ritterkreuz

🌱 8-15cm (3-6") Zone 5

Fairly vigorous grower with trailing, self-branching habit. The small, glossy dark green leaves have five to seven pointed lobes, often with little side branches. *Nordic*

Hedera

White Ripple

🌱 8-15cm (3-6") Zone 5

White Ripple has strong white and green variegation on 5-lobed leaves. Slower growing and self-branching. White Ripple is a trailing variety that works well in baskets or containers. *Nordic*

Heliotrope arborescens

Fragrant Blue

🌱 30-36cm (12-14")

Large clusters of sweet smelling, purple flowers with upright semi-trailing habit. *Nordic*

Heliotrope arborescens

Marine

🌱 38-51cm (15-20")

Large clusters of deep purple, vanilla-scented flowers all summer. Heat tolerant. *Nordic*

Herbs

Nordic

'Munstead' Lavender

🌱 30-46cm (12-18") Zones 5-8

Compact English Lavender strain with soft blue flowers.

Greek Oregano

🌱 30-41cm (12-16")

Compact well-branched variety. Essential herb for Greek or Italian cooking.

Arp Rosemary

🌱 61-91cm (24-36") Zone 6

Strong upright growth with grey green needles.

Spearmint

🌱 30-41cm (12-16")

Traditional spearmint flavor.

English Thyme

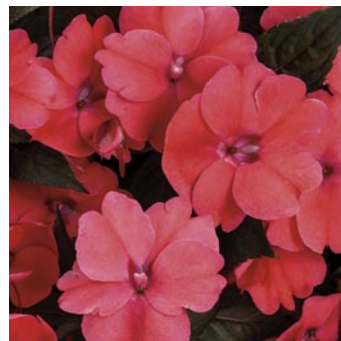
🌱 15-30cm (6-12")

Vigorous, spreading plants with strong flavor.

Lemon Thyme

🌱 15-30cm (6-12")

Semi-upright plants with strong citrusy flavor.



SUNPATIENS® Compact Deep Rose *Impatiens*



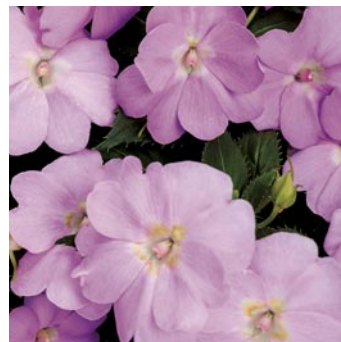
SUNPATIENS® Compact Fire Red *Impatiens*



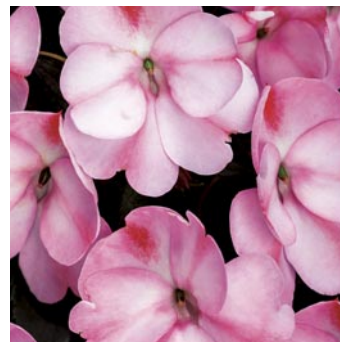
SUNPATIENS® Compact Neon Pink *Impatiens*



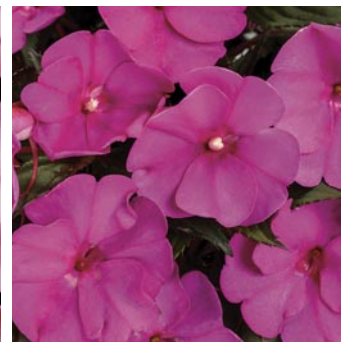
SUNPATIENS® Compact Orange *Impatiens*



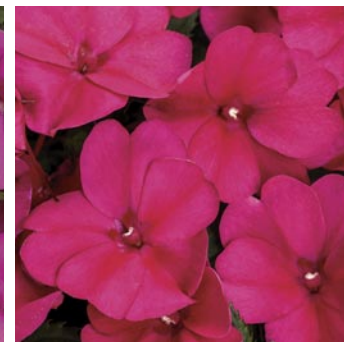
SUNPATIENS® Compact Orchid *Impatiens*



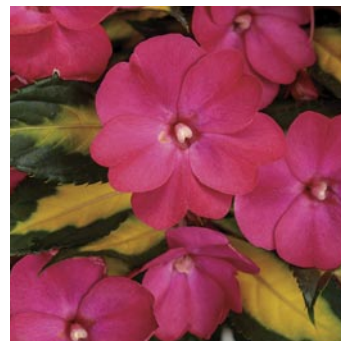
SUNPATIENS® Compact Pink Candy *Impatiens*



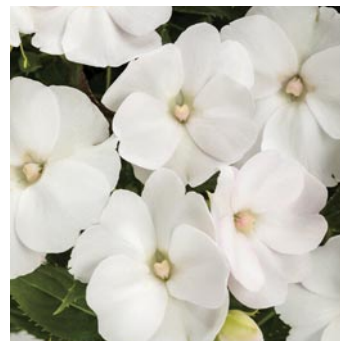
SUNPATIENS® Compact Purple *Impatiens*



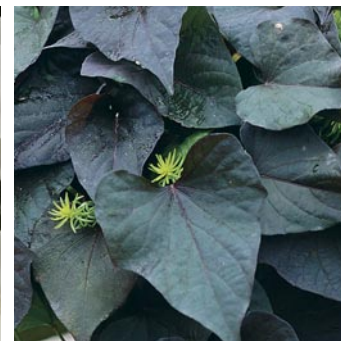
SUNPATIENS® Compact Royal Magenta *Impatiens*



SUNPATIENS® Compact Tropical Rose *Impatiens*



SUNPATIENS® Compact White *Impatiens*



Black Heart *Ipomoea batatas*



Hermann's Pride *Lamiastrum galeobdolon*



LOFOS® Compact Rose *Lophospermum*



LOFOS® Compact White *Lophospermum*



LOFOS® White *Lophospermum*



LOFOS® Wine Red *Lophospermum*



WAIKIKI SUNSET™ *Lysimachia congestiflora*



Goldilocks *Lysimachia nummularia*



Big Leaf *Muehlenbeckia*

Impatiens

SUNPATIENS® Compact Series

☀️🌱 41-76cm (16-30")

An industry leader in sun-loving impatiens, robust SunPatienS® Compact varieties bloom non-stop from spring through fall in full sun to part sun landscapes and containers. Their bushy, well-branched foliage is not affected by downy mildew, making them an ideal replacement for *Impatiens walleriana*, especially in Southern climates. *Nordic*

SUNPATIENS® Compact Deep Rose ^{SAKimp017} USPP21753

SUNPATIENS® Compact Fire Red ^{SAMKIMP039} USPP26590

SUNPATIENS® Compact Neon Pink ^{SAKimp033} USPP26669

SUNPATIENS® Compact Orange ^{SAKimp011} USPP19498

SUNPATIENS® Compact Orchid ^{SAKIMP041} USPP28417

SUNPATIENS® Compact Pink Candy ^{SAKIMP046} USPPAF

SUNPATIENS® Compact Purple ^{SAKIMP044} USPP27995

SUNPATIENS® Compact Royal Magenta ^{SAKIMP016} USPP26692

SUNPATIENS® Compact Tropical Rose ^{SAKIMP037} USPP28027

SUNPATIENS® Compact White ^{SAKIMP027} USPP24230

Ipomoea batatas

Black Heart

☀️🌱 15-30cm (6-12")

Trailing habit with garnet-purple, heart-shaped foliage. *Nordic*

Lamiastrum galeobdolon

Hermann's Pride

☀️🌱 15-30cm (6-12") Zone 4

Hermann's Pride features shiny silver leaves and green venation and a creeping, trailing habit. Also boasts golden yellow flowers in spring. *Nordic*

Lophospermum

LOFOS® Series

☀️🌱 20-30cm (8-12")

The Lofos® series tells it like it is. Tubular flowers adorn a cascading vine, which has a climbing habit and can be trained on a trellis. *Nordic*

LOFOS® Compact Rose

LOFOS® Compact White

LOFOS® White

LOFOS® Wine Red

Lysimachia congestiflora

WAIKIKI SUNSET™

☀️🌱 25-30cm (10-12")

Formerly Walkabout Sunset. Profuse yellow and green foliage provides a fabulous setting for brilliant yellow blooms.

Nordic, Sobkowich

Lysimachia nummularia

Goldilocks

☀️🌱 5-10cm (2-4") Zone 3

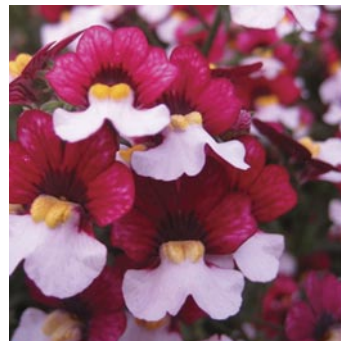
Shiny, round golden leaves create a lovely hanging, creeping effect in both sunny and shady areas. *Nordic*

Muehlenbeckia

Big Leaf

☀️🌱 10-15cm (4-6") Zone 8

Twining growth with dark stems and emerald green leaves. *Nordic*



JUICY FRUITS® Cherry on Ice *Nemesia*



JUICY FRUITS® Kumquat *Nemesia*



MOLTEN LAVA™ *Oxalis vulcanicola*



ZINFANDEL™ *Oxalis vulcanicola*



SURFINIA® Amethyst *Petunia*



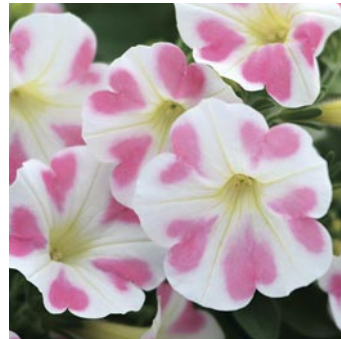
SURFINIA® Deep Red *Petunia*



SURFINIA® Giant Blue *Petunia*



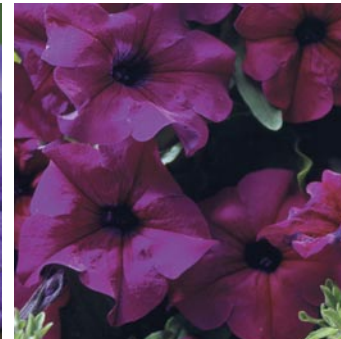
SURFINIA® Giant Purple *Petunia*



SURFINIA® Heartbeat *Petunia*



SURFINIA® Heavenly Blue *Petunia*



SURFINIA® Magenta *Petunia*



Variegata *Plectranthus coleoides*



Black & Blue *Salvia guaranitica*



ANGEL WINGS® *Senecio candicans*



Concord Blue *Streptocarpella*

Nemesia

JUICY FRUITS® Series

🌞🌱 20-30cm (8-12")

Dramatic and distinctive, the Juicy Fruits series is known for its intense colors and bloom production. Tolerates hot, dry conditions too. *Nordic*

JUICY FRUITS® Cherry on Ice

JUICY FRUITS® Kumquat

Oxalis vulcanicola

MOLTEN LAVA™

🌞🌱 15-25cm (6-10")

Great color on this beauty. In low light the foliage is chartreuse, and in sunnier locations it's golden yellow.

Nordic, Sobkowich

ZINFANDEL™

🌞🌱 15-25cm (6-10")

An exotic beauty with extra-dark purple leaves and yellow blooms that appear all summer. *Sobkowich*

Petunia

SURFINIA® Series

🌞🌱 15-25cm (6-10")

These cascading petunias are strong and prolific growers that can take the heat. The Surfinia series features a range of vibrant colors that look spectacular in window boxes and hanging baskets.

SURFINIA® Amethyst

^{"Keiametsum" USPP16804 CanPBRAF} *Sobkowich*

SURFINIA® Deep Red

Nordic, Sobkowich

SURFINIA® Giant Blue

^{"Sunsurfigigabu" USPP17645 Can2839} *Nordic*

SURFINIA® Giant Purple

^{"SUNlapur" USPP13867 Can1689} *Nordic*

SURFINIA® Heartbeat

Nordic

SURFINIA® Heavenly Blue

Nordic, Sobkowich

SURFINIA® Magenta

^{"Sunsurfpapu" USPP16682 Can2837} *Sobkowich*

Plectranthus coleoides

Variegata

🌞🌱 15-30cm (6-12")

Beautiful creamy white and green leaves and a trailing, spreading habit make this beauty ideal for a hanging basket or combo. Also has an herb scent. *Nordic, Sobkowich*

Salvia guaranitica

Black & Blue

🌞🌱 76-102cm (30-40")

Vibrant blue tubular petals are emphasized by the black stems and bright green foliage. *Sobkowich*

Senecio candicans

ANGEL WINGS®

^{"Senaw" USPP28830}

🌞🌱 30cm (12")

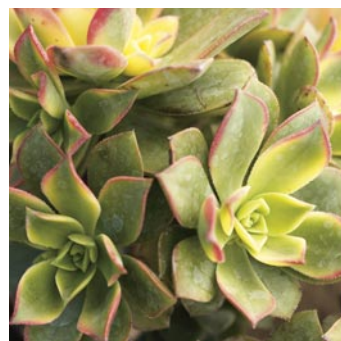
Angel Wings is a stunning stand alone focal plant in containers with large 6"/15cm, textured silver leaves and a mounding habit. Angel Wings loves full sun and is drought and salt tolerant. *Nordic*

Streptocarpella

Concord Blue

🌞🌱 20-30cm (8-12")

A shade-loving member of the African violet family, Concord Blue's lovely blue blooms hover over the felted leaves. *Sobkowich*



Kiwi Aeonium



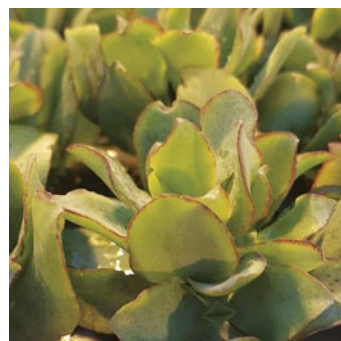
Variegata Aptenia



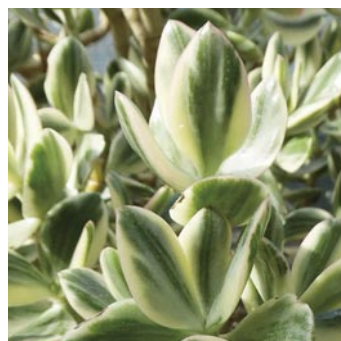
Princess Pine Crassula



Small Red Carpet Stonecrop Crassula



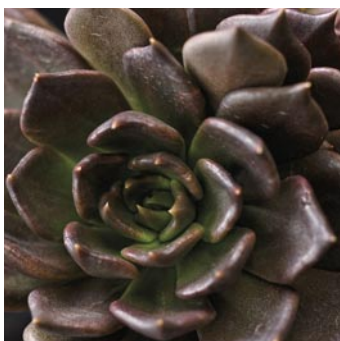
Sunset Curls Crassula



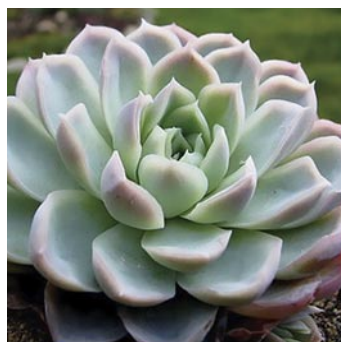
Variegated Jade Crassula



Arrow Echeveria



Black Prince Echeveria



Elegans Echeveria



Frosty Echeveria



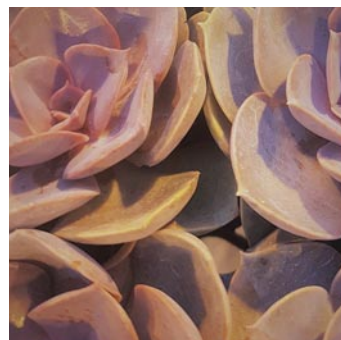
Perle Von Nurnberg Echeveria



Painted Echeveria Echeveria nodulosa



Red Edge Echeveria



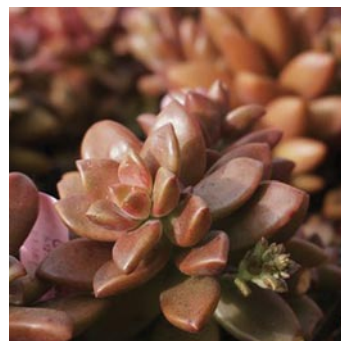
Red Sky Echeveria



Topsy Turvy Echeveria



Firesticks Euphorbia



Vera Higgins Graptosedum



Silver Grey Kalanchoe pumila



Panda Plant Kalanchoe tomentosa



Silver Jelly Bean Pachyphytum

Succulents

Aeonium

Kiwi

15-30cm (6-12")

Low-growing, mounding variety with rosettes of pale yellow in the center become shades of chartreuse green to pink with red edges. *Nordic*

Aptenia

Variegata

15-25cm (6-10")

Aptenia Variegata is a fast growing, trailing succulent that works perfectly in succulent baskets and planters. The cream and green leaves are covered with small magenta flowers in summer and fall. *Nordic*

Crassula

Princess Pine

15-30cm (6-12")

This plant has a nice spreading habit and dark green reeds with slight purple tones throughout. *Nordic*

Crassula

Small Red Carpet Stonecrop

15-20cm (6-8")

Multi-stemmed, upright plant with small, green, fleshy leaves. *Nordic*

Crassula

Sunset Curls

15-20cm (6-8")

Twisted leaves with a soft red edge. *Nordic*

Crassula

Variegated Jade

15-20cm (6-8")

Brightly variegated white and green fleshy leaves. *Nordic*

Echeveria

Arrow

10-20cm (4-8")

Green rosettes with narrow, pointed leaves and bright red tips. *Nordic*

Echeveria

Black Prince

10-15cm (4-6")

Black Prince features tight rosettes up to 3" wide with thin, triangular leaves that are a dark black colour. Rich burgundy red flowers appear on stalks in late autumn. *Nordic*

Echeveria

Elegans

10-15cm (4-6")

Elegans is a rosette forming, grey-leafed succulent with blush pink hues when grown in bright light. *Nordic*

Echeveria

Frosty

10-15cm (4-6")

Thick green leaves covered with white hairs gives it a frosty look. *Nordic*

Echeveria

Perle Von Nurnberg

15-25cm (6-10")

Grey, symmetrical rosettes are highlighted with pink and purple. Coral-colored flowers appear in spring. *Nordic*

Echeveria nodulosa

Painted Echeveria

25-46cm (10-18")

Definitive red lines mark the interior and edges of each leaf. Pinkish white flowers appear in fall. *Nordic*

Echeveria

Red Edge

10-20cm (4-8")

Large, blue-green rosettes with a bright red edge. *Nordic*

Echeveria

Red Sky

15-25cm (6-10")

Soft red leaves on vigorous growing plants. *Nordic*

Echeveria

Topsy Turvy

10-15cm (4-6")

Topsy Turvy is a fast growing, rosette-forming succulent with twisted, blue-grey leaves. Flowers appear in late summer on tall stems. *Nordic*

Euphorbia

Firesticks

15-30cm (6-12")

A great thriller in a succulent bowl with multicolored red, orange yellow and green stems. Cooler temperatures promote coloring. *Nordic*

Graptosedum

Vera Higgins

10-20cm (4-8")

Rosette-shaped, reddish bronze leaves. *Nordic*

Kalanchoe pumila

Silver Grey

15-25cm (6-10")

Scalloped foliage in shades of burgundy to dusty rose. Produces pink flowers in spring. *Nordic*

Kalanchoe tomentosa

Panda Plant

61-91cm (24-36")

This unique plant has thick, soft, furry, silver leaves with a burgundy edge. *Nordic*

Pachyphytum

Silver Jelly Bean

10-15cm (4-6")

Chubby, jelly bean-like, blue-green leaves develop reddish tips when grown in high light conditions. *Nordic*



Happy Bean *Peperomia*



Fine Leaf Gold *Sedum*



Ogon *Sedum makinoi*



Burrito *Sedum morganianum*



Copper Tones *Sedum nussbaumerianum*



Brown Bean Sedum *Sedum rubrotinctum*



String of Pearls *Senecio rowleyanus*



Blue Chalk Sticks *Senecio serpens*



'Illumination' *Vinca minor*

Peperomia

Happy Bean

○ 25cm (10")

Long, narrow, bean-shaped, green leaves with curled edges. Vigorous, upright habit. *Nordic*

Sedum

Fine Leaf Gold

○ 3-10cm (1-4")

A dense sea of finely textured, petite, yellow leaves. *Nordic*

Sedum makinoi

Ogon

○ 8-15cm (3-6") Zone 7

A low growing, mat-forming plant with small, golden yellow leaves. It prefers partial sun and dry to medium moisture. *Nordic*

Sedum morganianum

Burrito

○ 10-20cm (4-8")

Long, trailing stems and densely packed foliage. Short, thick, lime green leaves. *Nordic*

Sedum nussbaumerianum

Copper Tones

○ 8-15cm (3-6")

Slightly fragrant white flowers appear on cylindrical, copper-toned foliage in January through April. *Nordic*

Sedum rubrotinctum

Brown Bean Sedum

○ 15-20cm (6-8")

Jelly bean-like leaves on dense plants that change from green to red in summer. *Nordic*

Senecio rowleyanus

String of Pearls

○ Trails 61-91cm (2-3')

Round, succulent leaves carried down long, slender stems. They look more like peas than pearls, but this succulent is definitely a gem. *Nordic*

Senecio serpens

Blue Chalk Sticks

○ 61-91cm (24-36")

Soft blue, round leaves cover this low-maintenance succulent. *Nordic*

Vinca minor

'Illumination' USPP12132 Can1632

○ 8-15cm (3-6")

Variegated foliage has an interesting coloration with lemon-colored leaves edged with lime. Blue flowers appear in spring.

Trailing habit. *Sobkowich*

Cultural Information



Cultural Information for Annuals

| | Vigor | pH/EC | Rooting Out Temperature | Growing Temperature | Holding Temperature | Water Requirements | Planting and Timing | Finish Times in Weeks | Spring Outdoor Finish |
|--|--|---------------------------|-------------------------|---------------------|------------------------------|--------------------|--|--|---|
| ARTIST® <i>Ageratum</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate to Moist | Early Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Last to go outside |
| ANGELFACE® <i>Angelonia</i> | Vigor 3 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 70-75° F (21-24° C) | 60-65° F (16-18° C) | Moderate to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-8; for 8", 7-9; for 10-12", 10-14 | Do not finish outside |
| BUTTERFLY <i>Argyranthemum</i> | Vigor 3 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 60-65° F (16-18° C) | 40-50° F (4-10° C) outdoors | Moderate to Moist | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-8; for 8", 7-9; for 10-12", 10-14 | First to go outside |
| SILVER BULLET® <i>Artemisia</i> | Vigor 3 | 5.8 - 6.5/6 -9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) outdoors | Moderate | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 8-10 | First to go outside |
| Asparagus Fern <i>Asparagus</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 65-72° F (18-22° C) | Moderate to Moist | Spring to Summer Finish. Standard Plants Per Container. | For 4-5" and QT, 5-6; for 6"/gallon, 7-9 | Do not move outside until all danger of frost is past |
| DOUBLE DELIGHT® <i>Begonia</i> | Vigor 2 | 5.5 - 6.2/6 -9 | 70-75° F (21-24° C) | 65-72° F (18-22° C) | 65-72° F (18-22° C) | Dry to Moderate | Spring to Summer Finish. Standard Plants Per Container. | For 4-5", 6-8; for 6"/gallon, 6-8; for 10-12", 8-12 | Do not move outside until all danger of frost is past |
| DOUBLE UP™ <i>Begonia</i> | Vigor 2 | 5.5 - 6.2/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 65-72° F (18-22° C) | Dry to Moderate | Spring to Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 6-8; for 10-12", 10-12 | Do not move outside until all danger of frost is past |
| PEGASUS® <i>Begonia</i> | Vigor 3 | 5.5 - 6.0/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 65-72° F (18-22° C) | Dry to Moderate | Spring to Fall Finish. | For 4-5", 5-7; for quarts, 6-8; for 6"/gal, 7-9; for 10-12", 10-12 | Do not move outside until all danger of frost is past |
| SUREFIRE® <i>Begonia</i> | Vigor 4 | 5.5 - 6.2/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 65-72° F (18-22° C) outdoors | Dry to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 6-8; for 8", 7-9; for 10-12", 10-12 | Do not move outside until all danger of frost is past |
| CAMPFIRE® Flame and GOLDLOCKS ROCKS® <i>Bidens</i> | Vigor 3 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) outdoors | Moderate | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Second to go outside |
| ENDLESS™ <i>Browallia</i> | Vigor 2 | 6.5 - 7.5/6 -9 | 70-85° F (21-29° C) | 70-85° F (21-29° C) | 70-85° F (21-29° C) | Moderate to Moist | Late Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 6-9; for 8", 8-9; for 10-12", 9-13 | Last to go outside |
| HEART TO HEART® <i>Caladium</i> | Vigor 2 | 5.5 - 6.5/6 -9 | 70-85° F (21-29° C) | 70-85° F (21-29° C) | 70-85° F (21-29° C) | Moderate to Moist | Late Spring through Summer Finish. (see below at left) | (see below at left) | Do not move outside unless 70-85° F (21-29° C) temps are guaranteed |
| Pot Size | Tubers Per Pot | March-April Finish | May-June Finish | | | | | | |
| 1.0 QT | #2 size - 2; #1 size - 1 | 8-10 weeks | 5-6 weeks | | | | | | |
| 6.5" | #2 size - 4; #1 size - 2; Jumbo size - 1 | 8-10 weeks | 5-6 weeks | | | | | | |
| 8.5" | #1 size - 4; Jumbo size - 2 | 8-10 weeks | 5-6 weeks | | | | | | |

VIGOR KEY – 1 to 4, with 1 representing the slower, smaller growers and 4 representing the quickest, largest growers. For combinations, choose varieties with the same vigor rating to ensure success.

Cultural Information for Annuals

| | Vigor | pH/EC | Rooting Out Temperature | Growing Temperature | Holding Temperature | Water Requirements | Planting and Timing | Finish Times in Weeks | Spring Outdoor Finish |
|--|---------|--------------------|-------------------------|---------------------|------------------------------|-----------------------|--|---|---|
| LADY GODIVA® <i>Calendula</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) | Moderate | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-9; for 8", 8-10; for 10-12", 10-12 | Second to go outside |
| SUPERBELLS® <i>Calibrachoa</i> | Vigor 2 | 5.5 - 5.8/6 -9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) outdoors | Moderate to Moist | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Second to go outside |
| LADYBIRD™ <i>Calylophus</i> | Vigor 1 | 5.5 - 5.8/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 40-50° F (4-10° C) | Dry to Moderately Dry | Spring to Fall Finish. Standard Plants Per Container. | For 4-5", 6-7; for 6"/gallon, 7-9; for 10-12", 10-12 | Second to go outside |
| TOUCAN® <i>Canna</i> | Vigor 4 | 6.2 - 7.0/1.0 -2.0 | 75-85° F (24-30° C) | 75-85° F (24-30° C) | 65-72° F (18-22° C) | Moist | Late Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 6-8; for 6"/gallon, 6-8; for 8", 8-10; for 10-12", 10-12 | Do not move outside until all danger of frost is past |
| FLAMBE® Yellow <i>Chrysocephalum</i> | Vigor 2 | 6.0 - 6.5/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) outdoors | Dry to Moderate | Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 5-6; for 6"/gallon, 6-8; for 8", 8-10; for 10-12", 10-12 | Do not move outside until all danger of frost is past |
| SEÑORITA <i>Cleome</i> | Vigor 4 | 5.8 - 6.2/1.0 -2.0 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) outdoors | Dry to Moderate | Mid-Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-6; for 6"/gallon, 8-10; for 8", 8-10; for 10-12", 10-12 | Do not move outside until all danger of frost is past |
| 'Coffee Cups' and HEART OF THE JUNGLE® <i>Colocasia</i> | Vigor 3 | 5.8 - 6.2/6 -9 | 70-75° F (21-24° C) | 70-75° F (21-24° C) | 50-60° F (10-16° C) | Moderate to Moist | Spring to Summer Finish. Standard Plants Per Container. | For QT, 7-9; for 6"/gallon, 9-11; for 14", 13-15 | Do not move outside until all danger of frost is past |
| FAIRY DUST® Pink <i>Cuphea</i> | Vigor 3 | 6.0 - 6.5/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate | Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-9; for 10-12", 10-12 | Last group to go outside |
| VERMILLIONAIRE® <i>Cuphea</i> | Vigor 3 | 6.0 - 6.5/6 -9 | 65-72° F (18-22° C) | 70-75° F (21-24° C) | 50-60° F (10-15° C) outdoors | Moderate to Moist | Late Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-6; for 6"/gallon, 8-10; for 10-12", 10-12 | Last group to go outside |
| MYSTIC Illusion <i>Dahlia</i> | Vigor 3 | 5.8 - 6.2/8 -1.2 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-15° C) | Moderate to Moist | Early Spring to Summer Finish. Standard Plants Per Container. | For 4-5", 5-6; for 6"/gallon, 6-8; for 8", 8-10; for 10-12", 10-12 | Do not move outside |
| SILVER FALLS™ <i>Dichondra</i> | Vigor 3 | 5.5 - 5.8/6 -1.0 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 65-72° F (18-22° C) | Dry to Moderate | Spring to Fall Finish. Standard Plants Per Container. | For 4-5", 4-5; for 6"/gallon, 5-7; for 10-12", 7-10 | Do not finish outside |
| Spike <i>Dracaena</i> | Vigor 3 | 5.8 - 6.4/6 -9 | 65-72° F (18-22° C) | 60-65° F (16-18° C) | 45-50° F (7-10° C) | Moderate to Moist | Spring to Summer Finish. Standard Plants Per Container. | For 4-5" and QT, 8-10 for 6"/gallon, 10-12 | Last group to go outside |
| DIAMOND FROST® | Vigor 3 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) outdoors | Moderate to Moist | Early Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Do not move outside until all danger of frost is past |
| DIAMOND SNOW® | Vigor 3 | | | | | | | | |
| DIAMOND MOUNTAIN® <i>Euphorbia</i> | Vigor 4 | | | | | | | | |

Cultural Information for Annuals

| | Vigor | pH/EC | Rooting Out Temperature | Growing Temperature | Holding Temperature | Water Requirements | Planting and Timing | Finish Times in Weeks | Spring Outdoor Finish |
|--|--|---------------------|-------------------------|------------------------|------------------------------------|--------------------|---|---|---|
| HIGH NOON™ <i>Euryops</i> | Vigor 2 | 5.8 - 6.4/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 45-50° F (7-10° C) | Moderate to Moist | Spring to Summer Finish. Standard Plants Per Container. | For 4-5", 6-7; for 6"/gallon, 8-9; for 10-12", 10-11 | Second to go outside |
| BLUE MY MIND® BLUE MY MIND® XL <i>Evolvulus</i> | Vigor 2 | 6 - 6.9//6 -9 | 65-72° F (18-22° C) | 70-75° F (21-24° C) | 50-60° F (10-16° C) outdoors | Dry to Moderate | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 7-9; for 6"/gallon, 10-12; for 8", 10-12; for 10-12", 12-14 | Last to go outside |
| HEAT IT UP® <i>Gaillardia</i> | Vigor 3 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) outdoors | Moderate to Moist | Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 6-8; for 6"/gallon, 8-9; for 10" basket or 14" upright, 9-10 | First to go outside |
| STRATOSPHERE™ and KARALEE® <i>Gaura</i> | Vigor 3 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) outdoors | Moderate to Moist | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 6-8; for 6"/gallon, 7-10; for 8", 8-11; for 10-12", 12-14 | First to go outside |
| TRUFFULA™ Pink <i>Gomphrena</i> | Vigor 4 | 6.0 - 6.5/0.6 -0.9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate | Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-9; for 10-12", 10-12 | Do not move outside |
| GRACEFUL GRASSES® Toffee Twist <i>Carex</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 40-50° F (4-10° C) | Moderate to Moist | Spring through Fall Finish. Standard Plants Per Container. | For 4-5" and QT, 6-8; for 6"/gallon, 8-10; for 7-9", 12-14 | Last to go outside |
| GRACEFUL GRASSES® BABY TUT® KING TUT® PRINCE TUT™ <i>Cyperus</i> | Vigor 4 Vigor 4 Vigor 4 | 6 - 6.5/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-65° F (10-18° C) | Moderate to Moist | Early Spring through Summer Finish. Standard 1 liner per 6" container | For 4-5", 4-6; for 6"/gallon, 6-8; for 8", 7-9; for 10-12", 10-12 | Do not finish outside |
| GRACEFUL GRASSES® BLUE MOHAWK® <i>Juncus</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 40-50° F (4-10° C) | Moist to Wet | Spring to Summer Finish. Standard Plants Per Container. | For 4-5" and QT, 4-6; for 6"/gallon, 6-8 | Last to go outside |
| GRACEFUL GRASSES® 'Fireworks' Purple Fountain Grass 'Sky Rocket' VERTIGO® <i>Pennisetum</i> | Vigor 3 Vigor 3 Vigor 3 Vigor 4 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 70-75° F (21-24° C) | 50-65° F (10-18° C) outdoors | Moderate to Moist | Spring to Fall Finish. Standard Plants Per Container. | For 4-5" and QT, 4-8; for 6"/gallon, 6-9 for 7-9", 8-10; for 10-12" and 2 gallon, 10-14 | Do not move outside until all danger of frost is past |
| GRACEFUL GRASSES® Fiber Optic Grass <i>Scirpus</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 70-75° F (21-24° C) | 50-65° F (10-18° C) outdoors | Moderate to Moist | Late Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-8; for 8", 7-9; for 10-12", 10-14 | Do not move outside until all danger of frost is past |
| English Ivy <i>Hedera</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 60-65° F (16-18° C) | 50-60° F (10-16° C) | Moderate to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5" and QT, 5-6; for 6"/gallon, 7-8 | Last to go outside |
| SUNCREDBLE® <i>Helianthus</i> | Vigor 4 | 5.5 - 5.8/1.0 - 2.0 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate to Moist | Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-5; for 6"/gallon, 7-9; for 10" basket or 14" upright, 8-9 | Second to go outside |
| Licorice Plant <i>Helichrysum</i> Icicles | Vigor 3 Vigor 2 | 6.0 - 6.5/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 40-50° F (4-10° C) | Dry to Moderate | Spring through Summer Finish. Standard Plants Per Container. | For 4-5" and QT, 5-6; for 6"/gallon, 6-8 | Last to go outside |

Cultural Information for Annuals

| | Vigor | pH/EC | Rooting Out Temperature | Growing Temperature | Holding Temperature | Water Requirements | Planting and Timing | Finish Times in Weeks | Spring Outdoor Finish |
|---|--------------------|-------------------|-------------------------|------------------------|------------------------------------|--------------------|--|--|---|
| AUGUSTA® Lavender <i>Heliotropium</i> | Vigor 3 | 6.0 - 6.5/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate | Spring to Fall Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 8-10; for 10-12", 10-12 | Last to go outside |
| HIPPO® <i>Hypoestes</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 70-80° F (21-27° C) | 65-70° F (10-18° C) outdoors | Moderate | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-9; for 8", 8-10; for 10-12", 10-12 | Last to go outside |
| ROCKAPULCO® <i>Impatiens</i> | Vigor 2 | 5.8 - 6.2/7.5 -80 | 68-74° F (19-23° C) | 65-75° F (18-24° C) | 50-60° F (10-16° C) | Moderate to Moist | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 6-9; for 6"/gallon, 7-9; for 8", 7-9; for 10-12", 10-12 | Do not finish outside |
| ILLUSION® and Sweet Caroline <i>Ipomoea</i> Sweet Caroline Bewitched Green with Envy™, Blackie, Margarita | Vigor 3 Vigor 4 | 6.0 - 6.5/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) outdoors | Moderate to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 6-8; for 8", 8-10; for 10-12", 10-12 | Do not move outside until all danger of frost is past |
| BETH'S BLUE® and PATTI'S PINK™ <i>Isotoma</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 50-65° F (10-18° C) | 40-50° F (4-10° C) | Moderate to Moist | Early Spring to Fall Finish. Standard Plants Per Container. | For 4-5", 5-6; for 6"/gallon, 8-9; for 8", 9-10; for 10-12", 10-12 | First to go outside |
| SAFARI™ <i>Jamesbrittenia</i> | Vigor 2 | 5.5-6.2/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate | Spring to Fall Finish. Standard Plants Per Container. | For 4-5", 4-5; for 6"/gallon, 7-9; for 10-12", 10-12 | Last to go outside |
| PINK CHABLIS® <i>Lamium</i> | Vigor 3 | 6.0 - 6.5/6 -9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) | Moderate to Moist | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | First to go outside |
| LUSCIOUS® BERRY BLEND™ , CITRON™ , CITRUS BLEND™ , PINKBERRY BLEND™ , BANANARAMA™ , Marmalade, GOLDENGATE™ Grape, Royale Cosmo, Royale Piña Colada, Royale RED ZONE™ <i>Lantana</i> | Vigor 3 Vigor 2 | 5.8 - 6.2/6-1.5 | 65-72° F (18-22° C) | 70-75° F (21-24° C) | 50-60° F (10-16° C) | Moderate to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-9; for 8", 9-10 | Do not finish outside |
| LAGUNA® <i>Lobelia</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 40-50° F (4-10° C) outdoors | Moderate to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Second to go outside |
| BLUSHING PRINCESS®, SNOW PRINCESS®, VIOLET KNIGHT™ , WHITE KNIGHT®, MOONLIGHT KNIGHT™ <i>Lobularia</i> | Vigor 4 Vigor 3 | 6.0 - 6.5/6 -9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-55° F (4-12° C) outdoors | Moderate to Moist | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-5; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | First to go outside |
| GOLDDUST® <i>Mecardonia</i> | Vigor 2 | 5.8 - 6.2/6 -9 | 65-72° F (18-22° C) | 70-75° F (21-24° C) | 70-75° F (21-24° C) | Moderate to Moist | Spring through Summer Finish. Standard Plants per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Do not finish outside |
| SUNSATIA® <i>Nemesia</i> | Vigor 2 | 5.5 - 5.8/6 -9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) | Dry to Moderate | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Second to go outside |

Cultural Information for Annuals

| | Vigor | pH/EC | Rooting Out Temperature | Growing Temperature | Holding Temperature | Water Requirements | Planting and Timing | Finish Times in Weeks | Spring Outdoor Finish |
|---|--------------------|---------------------|-------------------------|------------------------------|-----------------------------|--------------------|---|---|---|
| Bluebird and AROMANCE® Pink <i>Nemesia fruticans</i> | Vigor 2 | 5.5 - 5.8/6-9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) outdoors | Moderate to Moist | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | First to go outside |
| INFINITY® <i>New Guinea Impatiens</i> | Vigor 1 | 6.0-6.5/2-6 | 65-72° F (18-22° C) | 65-75° F (18-24° C) | 65-68° F (18-20° C) | Moderate to Moist | Spring through Summer Finish 4-5". 1 ppp, 6-8" and Gallons; 3 ppp, 10" 4-5 ppp. | For 4-5", 6-8; for 6"/gallon, 8-10; for 8", 8-10; for 10-12", 12-14 | Do not finish outside |
| BRIGHT LIGHTS™ <i>Osteospermum</i> | Vigor 2 | 5.8 - 6.2/6-9 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) outdoors | Dry to Moderate | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Last to go outside |
| CHARMED® Wine <i>Oxalis regnellii</i> | Vigor 1 | 5.8 - 6.2/6-9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate to Moist | Early Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Do not finish outside |
| BOLDLY® <i>Pelargonium</i> | Vigor 3 | 6.0 - 6.5/1.0 - 1.5 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate | Spring through Summer Finish. 4-8" pots, 1 ppp; 10" and larger, 3 ppp. | For 4-5", 6-8; for 6"/gallon, 7-9; for 7-9", 7-9; for 10-12", 10-12 | Do not move outside until all danger of frost is past |
| SUNSTAR® <i>Pentas</i> | Vigor 2 | 6.0 - 6.8/6 - .9 | 70-75° F (21-24° C) | 70-75° F (21-24° C) | 50-60° F (10-16° C) | Moderate | Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 7-8; for 6"/gallon, 8-10; for 10" basket or 14" upright, 10-12 | Do not move out unless temps are guaranteed to be 50-60° (10-16° C) |
| SUPERTUNIA® except Giant Pink and Vista <i>Petunia</i> | Vigor 3 Vigor 4 | 5.5 - 5.8/1.0 - 2.0 | 65-72° F (18-22° C) | 55-65° F (12-18° C) outdoors | 40-50° F (4-10° C) | Moderate to Moist | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 8-10 | First to go outside |
| INTENSIA® <i>Phlox</i> | Vigor 2 | 5.8 - 6.2/1.0 - 2.0 | 65-72° F (18-22° C) | 55-65° F (12-18° C) | 40-50° F (4-10° C) outdoors | Dry to Moderate | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Second to go outside |
| COLORBLAZE® Vigor 3: Royale ALLIGATOR TEARS®, Royale APPLE BRANDY®, Royale CHERRY BRANDY®, Royale PINEAPPLE BRANDY™, LIME TIME®, VELVETEEN® Vigor 4: Dipt in Wine, El Brighto, GOLDEN DREAMS™, NEWLY NOIR™, REDICULOUS®, SEDONA SUNSET®, TORCHLIGHT®, Chocolate Drop, Strawberry Drop, WICKED HOT® and WICKED WITCH™ <i>Plectranthus (Coleus)</i> | | 6.0 - 6.5/0.6-0.9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate to High | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-6; for 6"/gallon, 6-8; for 8", 8-10; for 10-12", 10-12 | Do not finish outside |
| MOJAVE® <i>Portulaca</i> | Vigor 2 | 6.0 - 6.5/<.6 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Dry to Moderate | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 7-9; for 8", 8-10; for 10-12", 10-12 | Last to go outside |
| MACHU™ Morado <i>Ruellia</i> | Vigor 3 | 5.8 - 6.2/6 - 1.5 | 70-75° F (21-24° C) | 70-75° F (21-24° C) | 65-72° F (18-22° C) | Moderate to Moist | Late Spring to Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 6-8; for 8", 7-9; for 10-12", 10-12 | Do not move outside until temperatures are above 60°F |
| ROCKIN® and UNPLUGGED® <i>Salvia</i> | Vigor 4 Vigor 2 | 5.8 - 6.2/6 - .9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate | Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon (best), 7-9; for 8", 8-10; for 10-12", 10-12 | Second to go outside Unplugged: no outdoor finish |
| Sunbini® <i>Sanvitalia</i> | Vigor 2 | 5.8 - 6.2/0 - .6 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Dry to Moderate | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Do not finish outside |

Cultural Information for Annuals

| | Vigor | pH/EC | Rooting Out Temperature | Growing Temperature | Holding Temperature | Water Requirements | Planting and Timing | Finish Times in Weeks | Spring Outdoor Finish |
|---|--------------------|-------------------|-------------------------|---------------------|------------------------------|--------------------|---|--|---|
| WHIRLWIND® <i>Scaevola</i> | Vigor 3 | 5.5 - 5.8/6 - .9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Do not finish outside |
| LEMON CORAL® <i>Sedum</i> | Vigor 2 | 5.8 - 6.2/<.6 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Dry to Moderate | Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 6-7; for 6"/gallon, 8-9; for 8", 8-10; for 10-12", 10-12 | Last to go outside |
| Persian Shield <i>Strobilanthes</i> | Vigor 3 | 5.8 - 6.2/6 - .9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate to Moist | Spring to Summer Finish. Standard Plants Per Container. | For 4-5" and QT, 6-8; for 6"/gallon, 8-10 | Last to go outside |
| SNOWSTORM® except GIANT SNOWFLAKE® <i>Sutera (Bacopa)</i> | Vigor 2 Vigor 3 | 5.5 - 5.8/1.0-2.0 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) outdoors | Moderate to Moist | Early Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 8-10 | Last to go outside |
| A-PEEL® <i>Thunbergia</i> | Vigor 4 | 5.8 - 6.2/6-9 | 65-72° F (18-22° C) | 70-80° F (21-27° C) | 65-70° F (18-21° C) | Moderate | Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-9; for 8", 8-10; for 10-12", 10-12 | Last to go outside |
| CATALINA® and SUMMER WAVE® <i>Torenia</i> | Vigor 2 Vigor 3 | 5.5 - 6.2/6-9 | 65-72° F (18-22° C) | 70-75° F (21-24° C) | 70-75° F (21-24° C) | Moderate to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12 | Do not finish outside |
| SUPERBENA® <i>Verbena</i> | Vigor 3 | 5.8 - 6.2/6-9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) outdoors | Moderate to Moist | Early Spring through Fall Finish. Standard Plants Per Container. | For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 8-10 | Last to go outside |
| CAKE POPS™ <i>Verbena rigida</i> | Vigor 2 | 5.8 - 6.2/6-9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate to Dry | Spring to Fall Finish. Standard Plants Per Container. | For 4-5", 6-8; for 6"/gallon, 8-9; for 10-12", 10-12 | Last to go outside |
| METEOR SHOWER® <i>Verbena</i> | Vigor 3 | 5.5 - 6.2/6-9 | 65-70° F (18-21° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate to Moist | Spring through Fall Finish. 4" container - 1PPPP 6" container - 1-3PPPP 10" or larger - 3-5PPPP | For 4-5", 5-6; for 6"/gallon, 8-10; for 10-12", 10-12 | Second to go outside |
| 'Variegata' 'Wojo's Jem' <i>Vinca</i> | Vigor 2 | 5.5 - 5.8/6-9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate to Moist | Spring to Fall Finish. Standard Plants Per Container. | For 4-5" and QT, 5-6; for 6"/gallon, 7-8 | Do not move outside until all danger of frost is past |

Cultural Information for Proven Harvest®

| | Vigor | pH/EC | Rooting Out Temperature | Growing Temperature | Holding Temperature | Water Requirements | Planting and Timing | Finish Times in Weeks | Spring Outdoor Finish |
|---|---------|---------------------|-------------------------|------------------------|------------------------------------|--------------------|--|---|-----------------------|
| AlliYUM™ <i>Allium</i> | Vigor 1 | 5.8 - 6.2/0.6 - 1.5 | 65-72° F (18-22° C) | 60-65° F (16-18° C) | 40-50° F (4-10° C) | Moderate to Low | Spring to Fall Finish. Standard Plants Per Container. | For 4-5", 8-10; for 6"/gallon, 8-10 | Second to go outside |
| FIRE AWAY® Hot and Heavy <i>Capsicum</i> | Vigor 2 | 5.8 - 6.2/0.6 - 0.9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-9; for 10" basket or 14" upright, 10-12 | Last to go outside |
| BERRIED TREASURE® <i>Fragaria</i> | Vigor 2 | 5.8 - 6.5/0.6 - 0.9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) outdoors | Moderate to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-9; for 10-12", 10-12 | Second to go outside |
| TEMPTING TOMATOES® 'Garden Gem' 'Garden Treasure' <i>Lycopersicon</i> | Vigor 4 | 5.6 - 5.8/0.6 - 0.9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 50-60° F (10-16° C) | Moderate to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 4-5; for 6"/gallon, 6-7; for 10-12", 8-10 | Last to go outside |
| TEMPTING TOMATOES® GOODHEARTED® <i>Lycopersicon</i> | Vigor 2 | 5.6 - 5.8/0.6 - 0.9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 65-72° F (18-22° C) | Moderate to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 5-7; for 6"/gallon, 7-9; for 10" basket or 14" upright, 10-12 | Last to go outside |
| AMAZEL BASIL® PESTO BESTO™ <i>Ocimum</i> | Vigor 4 | 6.0 - 6.5/0.6 - 0.9 | 65-72° F (18-22° C) | 65-72° F (18-22° C) | 65-72° F (18-22° C) | Moderate to Moist | Spring through Summer Finish. Standard Plants Per Container. | For 4-5", 4-5; for 6"/gallon, 5-7; for 10-12", 7-9 | Last to go outside |

Online Cultural Guide

When you have growing questions, you can access our **online growing guide** for answers.

By providing easy, 24/7 access to this information, we save you time – and money – so you can spend it tending to business and building that business, too.

Grower Culture on provenwinners.com

- Culture search by variety
- Culture groups
- New variety culture
- Flowering timing charts
- Outdoor growing tips
- Perennial timing

Cultural Information and Growing Tips

To produce the highest quality plant material, growers must have detailed crop culture information. In order to help our grower customers produce the best finished crops, our propagators have developed this user-friendly guide which categorizes plants by their basic cultural needs – pH, growing temperature, and fertilization. The goal is to aide our grower customers in setting up custom growing environments for plants grouped by their basic needs. Visit provenwinners.com for more detailed cultural information on all Proven Winners varieties.

Proven Winners® Annuals

| Growing Temp | A pH 5.5 - 5.8 | B pH 5.8 - 6.2 | C pH 6.0 - 6.5 |
|-------------------------------------|--|---|--|
| A 55°-65° F (12-18° C) | Superbells® <i>Calibrachoa</i> , Sunsatia®, Aromance® Pink and other <i>Nemesia</i> , Supertunia® <i>Petunia</i> | AlliYUM!™ <i>Allium</i> , Butterfly <i>Argyranthemum</i> , Campfire® Fireburst and Goldilocks Rocks® <i>Bidens</i> , Lady Godiva® <i>Calendula</i> , High Noon® <i>Euryops</i> , Heat It Up® <i>Gaillardia</i> , Karalee® and Stratosphere™ <i>Gaura</i> , Beth's Blue® and Patti's Pink™ <i>Isotoma</i> , Bright Lights™ <i>Osteospermum</i> , Intensia® <i>Phlox</i> , Rockin'® <i>Salvia</i> and Unplugged® <i>Salvia</i> , 'Variegata' and 'Wojo's Jem' <i>Vinca</i> | Silver Bullet® <i>Artemisia</i> , Pink Chablis® <i>Lamium</i> , Princess and Knight <i>Lobularia</i> |
| B 65°-72° F (18-22° C) | Pegasus® <i>Begonia</i> , Ladybird™ <i>Calylophus</i> , Silver Falls™ <i>Dichondra</i> , Suncredible® <i>Helianthus</i> , Tempting Tomatoes® 'Garden Gem', 'Garden Treasure' and Goodhearted® <i>Lycopersicon</i> , Whirlwind® <i>Scaevola</i> , and Snowstorm® <i>Sutera</i> (Bacopa) | Artist® <i>Ageratum</i> , Asparagus Fern <i>Asparagus</i> , Double Delight®, Double Up™ and Surefire® <i>Begonia</i> , Fire Away® Hot and Heavy <i>Capsicum</i> , Toffee Twist <i>Carex</i> , Señorita Rosalita® and Señorita Blanca® <i>Cleome</i> , Mystic Illusion <i>Dahlia</i> , Spikes <i>Dracaena</i> , Diamond <i>Euphorbia</i> , English Ivy <i>Hedera</i> , Rockapulco® <i>Impatiens</i> , Safari™ <i>Jamesbrittenia</i> , Blue Mohawk® <i>Juncus</i> , Laguna® <i>Lobelia</i> , Charmed® Wine <i>Oxalis</i> , Vertigo® <i>Pennisetum</i> , Sunbini® <i>Sanvitalia</i> , Lemon Coral® <i>Sedum</i> , Persian Shield <i>Strobilanthes</i> , Cake Pops™, Superbena® and Meteor Shower® <i>Verbena</i> | Flambé® <i>Chrysocephalum</i> , 'Coffee Cups' and Heart of the Jungle® <i>Colocasia</i> , Fairy Dust® <i>Cuphea</i> , ColorBlaze® <i>Coleus</i> , Baby Tut®, King Tut® and Prince Tut™ <i>Cyperus</i> , Berried Treasure® <i>Fragaria</i> , Truffula™ Pink <i>Gomphrena</i> , Augusta® <i>Heliotropium</i> , Illusion®, Sweet Caroline, Blackie and Margarita <i>Ipomoea</i> , Boldly® <i>Pelargonium</i> , Mojave® <i>Portulaca</i> , Amazel Basil® and Pesto Besto™ <i>Ocimum</i> |
| C 70°-75° F (21-24° C) | | Angelface® <i>Angelonia</i> , Licorice Plant <i>Helichrysum</i> , Hippo® <i>Hypoestes</i> , Luscious® <i>Lantana</i> , GoldDust® <i>Mecardonia</i> , 'Fireworks', Purple Fountain Grass and 'Sky Rocket' <i>Pennisetum</i> , Machu™ Morado <i>Ruellia</i> , Fiber Optic Grass <i>Scirpus</i> , A-Peel® <i>Thunbergia</i> , Catalina® and Summer Wave® <i>Torenia</i> | Endless™ <i>Browallia</i> , Vermillionaire® <i>Cuphea</i> , Blue My Mind® <i>Evolvulus</i> , Infinity® <i>New Guinea Impatiens</i> and Sunstar® <i>Pentas</i> |
| Growing Temp | D pH 5.5 - 6.5 | | E pH 6.2 - 7.0 |
| D 70°-85° F (21-29° C) | Heart to Heart® <i>Caladium</i> | | Toucan® <i>Canna</i> |

In growing group codes, the first letter represents the Growing Temp and the second letter represents the pH.

Fertilizer rate for all plants listed above is 150-200 Constant Liquid Feed (CLF) with the following exceptions:

75-100 CLF

Endless™ *Browallia*
Heart to Heart® *Caladium*
Blue My Mind® *Evolvulus*

100-150 CLF

Asparagus Fern *Asparagus*
Double Delight® *Begonia*
Double Up™ *Begonia*
Toffee Twist *Carex*
Berried Treasure® *Fragaria*

Rockapulco® *Impatiens*,
Tempting Tomatoes® 'Garden Gem',
'Garden Treasure' and Goodhearted®
Lycopersicon
Infinity® *New Guinea Impatiens*
'Fireworks', Purple Fountain Grass,
'Sky Rocket' and Vertigo® *Pennisetum*
Sunstar® *Pentas*
Mojave® *Portulaca*
Sunbini® *Sanvitalia*

Fiber Optic Grass *Scirpus*
Lemon Coral® *Sedum*

200-300 CLF

Toucan® *Canna*
Señorita *Cleome*
Illusion® and Sweet Caroline *Ipomoea*
Boldly® *Pelargonium*
Intensia® *Phlox*
Supertunia® *Petunia*
A-Peel® *Thunbergia*

Culture Notes and Groups:

pH:

- A: pH 5.5-5.8
B: pH 5.8-6.2
C: pH 6.0-6.5

EC:

- A: < .6
B: .6-.9
C: 1.0-2.0

Well-Balanced Fertilizer

N-P-K, 2:1:1.5 with adequate amounts of micronutrients
Low: 100-150 ppm Constant Liquid Feed
Medium: 150-200 ppm Constant Liquid Feed
High: 200-300 ppm Constant Liquid Feed

Fertilizer Disclaimer:

It is a good practice to clear water (leach) once every 3-4 times you water to lower soluble salt levels in the media. EC should also be monitored using weekly EC measurements.

Rooting Out Temperatures:

The first 10 days of container growth: establishing root system to outside edge of container from the newly planted liner.

65-72° F (18-22° C)

Growing Temperatures:

Once roots are to the edge of the container – growing on the plant and bulking up foliage and flowers.

- A: 55-65° F (12-18° C)
B: 65-72° F (18-22° C)
C: 70-75° F (21-24° C)
D: 70-85° F (21-29° C)

Night temperatures should be run 5° F (-15° C) lower than day temperatures

Holding Temperatures:

(For toning crops and/or for when you have to hold the crop when it is ready to go)

- A: 40-50° F (4-10° F) outdoors*
B: 50-60° F (10-16° F)
C: Maintain Growing Temperatures

Light Levels:

High: Full sun crops need very high, bright light

Moderate: Sun to partial shade crops, High to moderate light

Low: Partial to full shade crops, Moderate to low light

Moisture Regimes:

Transplant:

Water lightly to maintain moisture level within root zone until roots reach the side of the finished container. Once roots are developed to the side of the pot, see finish watering regime.

Finish Watering Regimes:

A: Dry to Moderate: Water thoroughly without over-saturating; keep moist during root development; allow soil surface to dry completely before watering after the crop is rooted to the edge of the pot.

B: Moderate to Moist: Water thoroughly without over-saturating; keep moist but not wet throughout entire growth cycle.

C: Moist to Wet: Water thoroughly and keep moisture constant throughout entire growth cycle.

Standard Plants Per Pot (PPP):

- 4-5": 1 ppp
6": 1-2 ppp
Gallon: 1-3 ppp
8": 3 ppp
10-12": 3-5 ppp

More cuttings per pot will yield faster finishing times.

The higher light and temperatures experienced with summer production will dramatically reduce crop times.

Soil Mix for Container Growing:

Use a high-quality, professional grade soil mix that is adjusted to work with your water quality and growing style to help manage pH and water control.

Use a well-drained, high-quality professional grade soil mix. A peat-lite based soil or equivalent that gives you 60% organic matter and 40% secondary aggregates, such as perlite, rock-wool, coir, and/or bark, will provide proper soil porosity (well-drained soil).

Growth Regulator Disclaimer:

All PGR rates should be trialed by each individual grower before applications are made to entire crop to ensure desired results. All rates are given as a spray unless otherwise stated. Summer production may require higher PGR rates when crops are grown indoors. Proven Winners and its affiliates are not responsible for misapplication or misuse of these products. Check manufacturers' labels for approved rates and usage recommendations.

Pest Management:

A weekly scouting program is suggested. Monitor for common greenhouse pests. Treat accordingly, using label instructions. Be sure to rotate chemical classes to guard against development of resistance to chemicals.

Disease Management:

Treat with preventative broad spectrum fungicidal drench one week after transplant. Scout crops regularly (at least once a week) for disease development. Good air circulation, control of humidity, and good sanitation practices are critical. Good sanitation practices include keeping greenhouses clean at all times, eliminating weeds and debris, disinfecting equipment and greenhouses as often as possible, and keeping hose ends off the floor. Good water management practices are critical to healthy plant growth.

Day Neutral:

Ability of plants to flower freely regardless of daylength.

Spring Outdoor Finish:

Many Proven Winners crops can be finished outdoors under cool temperatures. Finishing under cool temperatures will allow you to expand production area, allows additional spacing inside greenhouse, allows additional turns, and improves quality of the product. Those plants finished outdoors will need additional time to finish. Specific finishing times are difficult to predict due to variability in weather patterns. Outdoor mum production areas are perfect to use as spring cold temperature finishing space.

Before plants are moved outside, they should be acclimated to colder temperatures using holding temperatures stated above.

Ideally, plants should be moved outdoors on an overcast day, with moderate temperatures, little wind, and no severe cold (freezing temperatures) forecasted for the next 24 hours. Often a full moon will mean clear skies, which will allow temperatures to drop more than expected. To maintain proper nutrition after a heavy rain, a light water application with 400-500 ppm N can be used on the already wet plants (this high fertilizer application on dry plants will result in burn).

Plants vary in ability to withstand cold temperature finishing. To help you manage when crops can be placed outdoors, we have split our plant material into 3 groups (Not all crops can be finished outdoors and will be noted as No). In the case of unusually cold temperatures, you should have frost protection measures ready (frost cloth, sprinklers, or ability to move plants under cover).

It is generally too cold for insects and disease to prosper. You should continue to scout for problems, however, chemical control measures probably won't be needed. Plant growth regulators will not be needed to control growth.

Growers who wish to try this method of finishing plants should trial a small portion of their plant material the first year to gain experience and comfort. Each year will differ and growers need to be prepared to adapt as conditions change.

A: First to go outside – 33-36° F (0-2° C):

These plants can be placed outside the earliest. When temperatures are not forecasted to drop below freezing for the next 10 days you should be able to move these plants outdoors. Should the temperature be forecasted to drop below 28° F (-2° C), protection measures should be taken.

B: Second to go outside – 38-42° F (3-5° C):

This is the second wave of plant material. These plants can be moved outside when odds are that temperatures are much less likely to drop below freezing. Protection measures should be taken for this group when temperatures are forecasted to reach 32° F (0° C). Average daily temperatures should be higher than when group A material was moved out. Generally, a few weeks after group A is moved out, group B can be moved outside.

C: Last to go outside – 45° F + (7° C +):

This is the third wave of plant material. These plants can be moved outside when temperatures are no longer likely to reach freezing. A hard frost will cause damage to this group. If a hard frost is forecasted, protection measures should be implemented.

For questions please call the grower hotlines:

Nordic Nurseries – 604.607.7074

Ed Sobkowich Greenhouses – 905.945.8870



Need help? Give us a call.

We're totally committed to helping you grow quality crops.

* Sometimes this temperature is indoors when prompted not to finish the plants outdoors.

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Above: Lady Luck Front cover: Blind Love

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