



PLANTS FOR
GROWING
SUCCESS!



THE DIFFERENCE IS IN THE BREEDING

PanAmerican Seed® is your partner for a wide range of **new and innovative seed products** that provide solutions for your growing challenges. Through a combination of art, science and expertise, our breeders are driven to ensure **every variety we introduce will perform** as well for the home gardener as it does for growers.

This year, we have some **breakthrough introductions!** These unique products make **growing and selling easier.** Products like **NEW Hula™ Spreading Begonias for baskets and landscape beds**, with a trailing habit and **plenty of flowers showing on top.** **NEW Artisan™ Yellow Ombre** adds that all-important yellow variety to the **individual colour Echinacea** collection from seed. The latest must-have small-fruited tomato, **NEW Sun Dipper**, has an elongated shape that is **perfect for hors d'oeuvre platters!** And, **NEW Sunday™ Green Celosia** offers cut flower growers a trendy, **icy pale green celosia.**

Your PanAmerican Seed team **combines the expert talents** of breeders, product managers, sales and marketing, production, technicians, growers, facility managers, trials managers and more to bring you a truly **distinguished product selection.**

Visit panamseed.com for more product information and growing culture on these and all our popular and proven varieties to enhance your program and expand your business. Rely on us for your **best season ever!**

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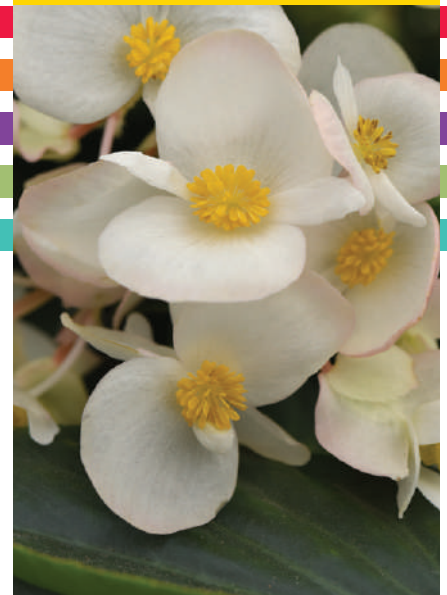
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MEET OUR COVER STARS!

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- BACK** Bluesette Perovskia

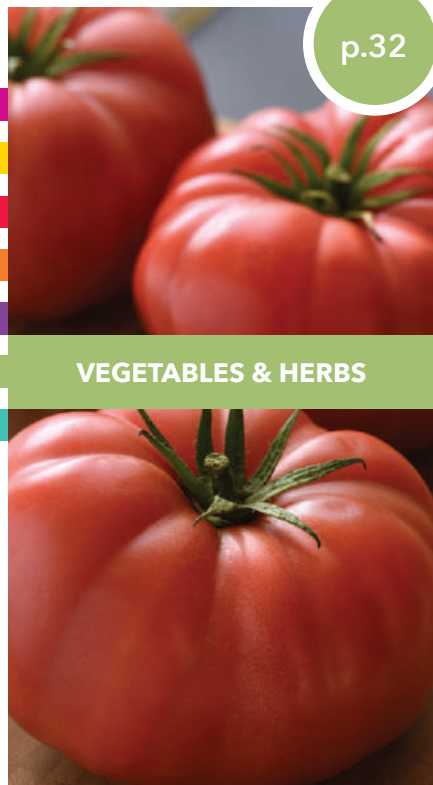


PRO LANDSCAPE PERFORMER

The varieties listed with this icon are plants that excel in professional landscape applications, no matter what challenges they face. Whether it's heat and humidity, drought or rain, these plants get the job done. Look for the Pro Landscape Performer icon for plants that will make you look good all season long.

Visit panamseed.com/landscape to find helpful plant lists and resources like:

- Find a Plant Supplier
- Regional Plant Selector
- Plant Calculator
- Build A Landscape Sell Sheet Tool



wave[®]



THE EVOLUTION OF WAVE[®]

The Wave family continues to evolve, providing *easy spreading colour* in home gardens around the world. That's what has made Wave the brand known, bought and trusted by name.



Twice the spread...double the colour!

Wow 'em with Cool Wave - hands down, it's the *fastest-growing, longest-lasting, truly trailing pansy* for Spring and Autumn. One trip to the garden centre for lush baskets or pots for in-ground planting is enough to convince anyone that Cool Wave is a cool-season gardener's dream.

SPREADING PANSY

Viola x wittrockiana

Cool Wave® Series F1



PRO LANDSCAPE
PERFORMER

Height: 6 to 8 in./15 to 20 cm
Spread: 24 to 30 in./61 to 76 cm
Flower size: 2 to 2.5 in./5 to 6 cm

Seed supplied as: Primed

Plug crop time: 4 to 5 weeks
Transplant to finish: Spring 6 to 7 weeks, Autumn 4 to 5 weeks

- The best-performing spreading pansy series delivers easy *spreading colour* for Spring and Autumn, so you can extend your growing and selling season for the popular Wave® brand.
- More vigorous with the most prostrate habit of any spreading pansy - great in combos and as groundcover.
- Superior overwintering hardiness - Cool Wave is the earliest pansy to return in the Spring.

New Blue Vibrant shade of solid blue with excellent flower presentation makes for an attractive plant at point-of-sale.



NEW
Blue

COOL
wave
PANSIES®



Shock Wave® Series	E3 Easy Wave™ Series	Easy Wave® Series	Tidal Wave® Series	Original Wave® Series
Height: 7-10 in. (18-25 cm) Spread: 20-30 in. (51-76 cm)	Height: 6-12 in. (15-30 cm) Spread: 25-32 in. (64-81 cm)	Height: 6-12 in. (15-30 cm) Spread: 30-39 in. (76-99 cm)	Height: 16-22 in. (41-56 cm) Spread: 30-60 in. (76-152 cm)	Height: 5-7 in. (13-18 cm) Spread: 36-48 in. (91-122 cm)



NEW
Formula Mixture



NEW

Formula Mixture

It's Early, it's Efficient, it's the Evolution of Easy Wave® ...it's E3!

SPREADING PETUNIA ●

Petunia x hybrida

E3 Easy Wave™ Series F1



Height: 6 to 12 in./15 to 30 cm
Spread: 25 to 32 in./64 to 81 cm
Flower size: 2.25 to 3 in./6 to 8 cm

Seed supplied as: Pelleted

Plug crop time: 4 to 6 weeks
Transplant to finish: Spring 6 to 7 weeks, Summer 4 to 5 weeks

- This newest Wave brand series includes popular colours to fulfill sales earlier in the season.
- Flowers at or under 10 hours daylength.
- E3 Easy Wave offers simplified production, as it can be successfully grown at lower PGR rates than Easy Wave (except Blue).

- All E3 Easy Wave varieties have a similar, uniform plant structure and vigour, which means simplified plant management.
- Plant holding capabilities across the series mean better quality over a longer time period for an extended sales window.
- E3 Easy Wave fulfills the Wave brand promise of *easy spreading colour* with superior performance: a manageable spreading habit, long bloom time and sheer colour value!
- Mounding, spreading habit offers a three-dimensional landscape effect, creating impressive baskets and planters.
- Recommended in Wave branded packaging: 6-in./15-cm pots, premium quarts and gallons, 306 premium packs with handle, hanging baskets.

New Formula Mixture Includes a mixture of all colours in the series.

Wake up petunia-season sales!

E3 Easy Wave series flowers at 10 hours daylength, and it will be ready to kick off Easy Wave sales even earlier! With a manageable, uniform plant structure and vigour, the series offers simple production to save on labour costs. The plants can be grown at lower PGR rates than Easy Wave, so we say it's 'Extra Easy' Wave! The plants stay full and lush longer at retail for increased sell-through and the eye-catching appeal consumers expect from the Wave program.

ANNUALS

COLOURFUL SOLUTIONS FOR HOME GARDEN USE AND PROFESSIONAL LANDSCAPE INSTALLATIONS

Explore our selection of high-performance annuals that bring reliable colour to sun and shade locations, backed by industry-leading seed quality.





4 in./10 cm



Quart/12 cm



Gallon



306 Pack



1801 Tray



GROWS ANYTIME, ANYWHERE

Now you can grow the best seed impatiens for both sun and shade!

NEW Solarscape is the first interspecific impatiens series from seed that provides **vibrant, lasting colour** in **full-sun garden beds and containers**. Durable Solarscape performs just like vegetative varieties with the flexibility of a seed input that is available all year round, making **scheduling a breeze**. Growers will appreciate this **cost-efficient alternative** that's a strong performer in sun or shade! Together with Beacon Impatiens *walleriana* (with high resistance to Impatiens downy mildew) for the shade, it's part of a seed impatiens package that brings real solutions to you and your customers.

Royalty-free Retail Grower's Choice

Seed-propagated Solarscape provides the same great garden performance as vegetative interspecific impatiens without the royalties, making it the ideal choice for opening-price-point, non-branded programs.



NEW

Neon Purple *Ball Seed Limited Exclusive*



NEW

White Shimmer



NEW

Magenta Bliss

INTERSPECIFIC IMPATIENS

Impatiens hybrida

Solarscape™ Series F1



Height: 9 to 11 in./23 to 28 cm
Spread: 15 to 20 in./38 to 51 cm
Flower size: 2.5 to 2.75 in./6 to 7 cm

Seed supplied as: Raw

Plug crop time: (288) 4 to 5 weeks, (128) 5 to 6 weeks
Transplant to finish: 7 to 10 weeks

Available in North America only.

- Great low-maintenance plant provides high-impact colour in full-sun spaces, whether in the ground or in containers.
- The first interspecific impatiens series from seed offers growers the flexibility of an input that is available all year round, making scheduling a breeze.
- Seed-propagated Solarscape provides the same garden performance as vegetative interspecific impatiens without the royalties! Perfect for opening-price-point, non-branded programs at retail.
- Offers landscape growers a non-branded, cost-efficient alternative.
- Blooms have tropical appeal, with a satiny texture in vibrant, glowing hues.

New Magenta Bliss Features a vibrant, warm magenta/violet-purple colour on uniform plants with green foliage.

New Neon Purple (*Ball Seed® Limited Exclusive*) A dense and slightly spreading variety, Neon Purple is the most compact of the series at approximately 10% shorter height. Electrifying blue-purple flower colour with some shading to a lighter purple.

New Orange Burst Deep coral-orange flowers with some shading to a light salmon-orange.

New White Shimmer Shimmering white flowers may have a small percentage of pink at the centre and very pale, blush pink buds and petals.

Impatiens landscapers will love

Solarscape seed-propagated interspecific impatiens provides unbeatable colour in full-sun garden beds and containers. Durable Solarscape performs just like vegetative varieties with the flexibility of seed. Landscape growers will appreciate this option for non-branded needs in-ground that grows strong in the sun!



NEW
Neon Purple
Ball Seed Limited Exclusive



NEW
White Shimmer



NEW
Magenta Bliss



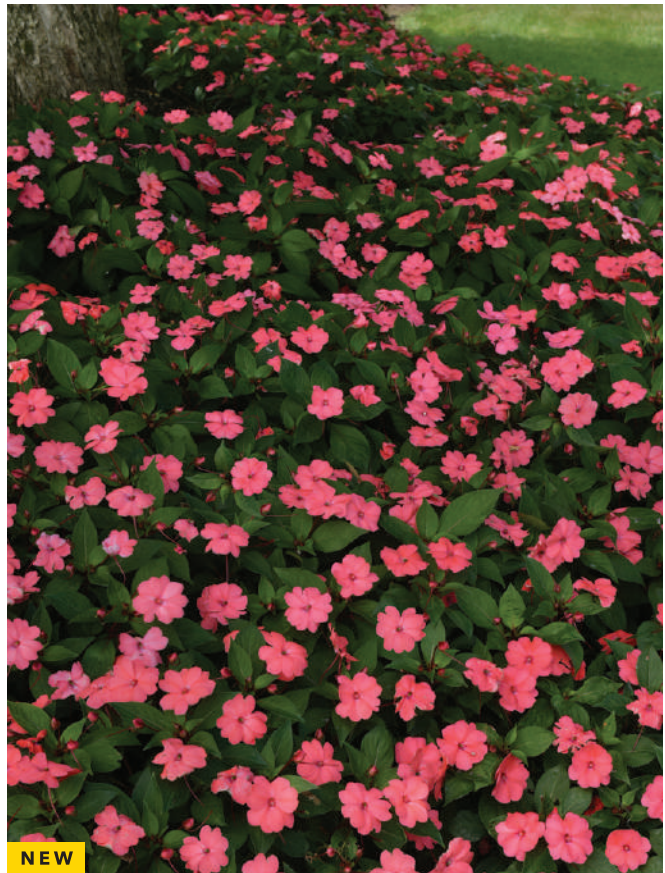
NEW
Orange Burst



NEW
XL Salmon Glow



NEW
Orange Burst



NEW
XL Salmon Glow

INTERSPECIFIC IMPATIENS

Solarscape™ XL Salmon Glow F1



Height: 11 to 13 in./28 to 33 cm
Spread: 18 to 20 in./46 to 51 cm
Flower size: 2.5 to 2.75 in./6 to 7 cm

Seed supplied as: Raw

Plug crop time: (288) 4 to 5 weeks, (128) 5 to 6 weeks

Transplant to finish: 7 to 10 weeks

Available in North America only.

- Flowers start out a bright salmon colour with shading to lighter salmon-coral.
- XL plant height averages about 20% larger than standard Solarscape.

BEACON[®]

IMPATIENS

GROWS STRONGER, SHINES LONGER

SHINE MORE LIGHT ON COLOUR FOR THE SHADE WITH NEW LIGHTHOUSE MIXES

We're introducing **NEW 3-colour Beacon mixes** named after well-known lighthouses in locations where Impatiens downy mildew has been a significant problem. These have been trialed and approved to **grow well together** and look vibrant in the shade, and they offer **high resistance** to the currently known and widely prevalent populations of *Plasmopara destructor* (the rename of *P. obduscens*), the cause of Impatiens downy mildew. All three mixes are suitable for packs, pots, hanging baskets and in-ground beds.

Beacon Impatiens will continue to help "shine the light" on lesser-known diseases by **supporting a different charitable organization** each year with a percentage of sales. Visit beaconimpatiens.com for more details.



IMPATIENS 
Impatiens walleriana

Beacon[®] Series F1



Height: 14 to 18 in./36 to 46 cm
Spread: 12 to 14 in./30 to 36 cm

Seed supplied as: Coated

Plug crop time: 4 to 5 weeks
Transplant to finish: 3 to 4 weeks

- Beacon impatiens exhibits high resistance to the currently known and widely prevalent populations of *Plasmopara destructor*, which is the cause of Impatiens downy mildew (IDM).

- Beacon impatiens offers the opportunity to bring back into production a well-known, in-demand, easy-to-grow and versatile product for increased sales.

- Extensive trialing has proven that Beacon impatiens provides genetic high resistance to IDM. Beacon is not immune to IDM; there are scenarios where preventative IDM fungicides may be recommended.

- With a plant structure, flowering time, flower size and crop culture that is similar to Super Elfin[®], Beacon impatiens is easy to incorporate into production planning.

- Fast-filling, season-long colour for gardens and landscapes.

New Lindau Mixture Orange, White and Violet Shades.

New Portland Mixture Rose, Violet Shades and White.

New Sanibel Mixture Bright Red, Orange and Violet Shades.



NEW

Lindau Mixture

US PAF; US 10,285,362; EU PAF

Lindau Lighthouse

Lake Constance, Germany



NEW

Lindau Mixture

US PAF; US 10,285,362; EU PAF



NEW

Portland Mixture

US PAF; US 10,285,362; EU PAF

Portland Bill Lighthouse

Dorset, England



NEW

Portland Mixture

US PAF; US 10,285,362; EU PAF



NEW

Sanibel Mixture

US PAF; US 10,285,362; EU PAF

Sanibel Lighthouse

Sanibel Island, Florida, USA



NEW

Sanibel Mixture

US PAF; US 10,285,362; EU PAF



NEW

Bicolor Red White



NEW

Blush

**SPREADING
BEGONIA** ●●●
Begonia interspecific

Hula™ Series



Height: 6 to 10 in./15 to 25 cm
Spread: 20 to 27 in./51 to 69 cm
Flower size:
0.5 to 1.5 in./1 to 4 cm

Seed supplied as: Pelleted

Plug crop time: 6 to 8 weeks
Transplant to finish:
5 to 7 weeks for Spring timing

- Hula is a unique spreading type of begonia that is highly branched with lots of small flowers.
- Its trailing habit is perfect for baskets and containers.
- Provides an instant performance advantage for landscapers, with masses of flowers showing on top.
- The series is daylength neutral and it is the earliest interspecific begonia to flower, with timing similar to BabyWing.
- Small flowers compared to Megawatt or Dragon Wing, but with the high number of flowers, it has great colour impact.
- Hula starts to spread at an early stage, and along with early flowering, it provides growers with a nice, salable plant that is covered with blooms on the retail shelf.
- It also looks great in hanging baskets above the benches at retail.

New Bicolor Red White

Features a bicolor pattern that can vary under different conditions.

New Blush

This blush-to-white colour is unique for spreading begonias.

New Pink

New Red

Unique spreading begonias fill beds, baskets and containers

The addition of this unique spreading begonia to our portfolio that includes Dragon Wing®, BabyWing® and Megawatt™ allows us to expand our offering of begonias that look great on the retail bench! Hula looks amazing as well in hanging baskets and mixed containers, providing an additional opportunity to offer a more premium product. Plus, it is fast to fill in landscape beds, creating a blanket of flowers with high-impact colour!



NEW
Pink



NEW
Red



NEW
White

BEGONIA ●●●
Begonia x hybrida

Dragon Wing® Series F1



Height: 12 to 15 in./30 to 38 cm
Spread: 15 to 18 in./38 to 46 cm

Seed supplied as: Pelleted

Plug crop time: 7 to 8 weeks
Transplant to finish: 7 to 9 weeks

- Grows lush and vigorous in southern U.S. heat and under cool, stressful conditions of northern Europe and Canada.
 - Unique and beautiful arching, pendulous habit is spectacular in hanging baskets, large containers and commercial landscaping plantings.
 - Angel-wing leaves and large blooms give Dragon Wing a dramatically different look.
 - Easy to grow from pelleted seed, it surpasses vegetative varieties for branching, vigour and “flower power.”
 - Features best-in-class “bulletproof” performance, fast fill-in and an easy-care nature.
- New White** Starts flowering around 2 to 12 days earlier than Pink, with a refined, slightly wider habit, great branching and plenty of flowers covering the plant. Flowers can blush slightly in warmer conditions.

BEGONIA SERIES



Dragon Wing®

Megawatt™

Hula™

BabyWing®

BEGONIA  *Begonia interspecific***Megawatt™ Series F1****Height:** 20 to 28 in./51 to 71 cm**Spread:** 16 to 24 in./41 to 61 cm**Seed supplied as:** Pelleted**Plug crop time:** 7 to 8 weeks**Transplant to finish:** 7 to 9 weeks

- Striking, non-stop flowers keep plants covered in huge colour from Spring through Autumn... even in heat and drought.
- Sturdy flower stems hold flowers above the foliage for superior show versus others.
- Shows well at retail and perfect for landscapes, baskets, big tubs and borders.

New White Green Leaf Starts to flower slightly earlier than other series varieties (5 to 10 days), but it is a more true larger-format type than the competition. Outdoor performance matches the series, with nice branching and less maintenance required.

New Rose Bronze Leaf Improved Offers better variety purity, eliminating green leaf off-types, with deeper bronze foliage colour and improved plant habit with shorter internodes and great basal branching.

MEGAsize + MEGAcour = MEGAsales!

This fresh, high-energy begonia option has quickly proven itself in the marketplace with great timing benefits and ultimate garden power. These bigger-than-life hybrids offer amazing colour for gardeners.

Now we've expanded the series with an all-important White that is a great match for size and habit with the rest of the series. And, we've improved Rose with deeper bronze foliage and a better habit, for masses of colour from Spring right through Autumn.



NEW
White Green Leaf



NEW
Rose Bronze Leaf Improved



NEW

Ruby Heart



NEW

Ruby Heart



NEW

Ruby Heart

COLEUS  
*Solenostemon
 scutellarioides*

**New Premium Sun
 Ruby Heart**



Height: 18 to 26 in./46 to 66 cm
Spread: 18 to 22 in./46 to 56 cm

Seed supplied as: Pelleted

Plug crop time: 5 to 6 weeks
Transplant to finish: 6 to 8 weeks

- Brings a ruby red colour to the Premium Sun Collection.
- The thin chartreuse border on the heart-shaped leaves continues on the undersides and stems, adding brightness.
- Similar greenhouse vigour to Chocolate Mint.
- Similar landscape performance to Crimson Gold.

**Show-stopping
 colours...bold
 patterns...
 rich textures**

Pro landscapers and gardeners love these centre stage varieties for their great looks and reliable performance in sunny gardens and patio planters. Our Premium Sun Coleus can tolerate full sun in regions of high relative humidity such as Hardiness Zones 9 and 10. Foliage will scorch in full sun with low relative humidity. All are suitable for shade.

VINCA ●*Catharanthus roseus***Tattoo™ Series****Height:** 10 to 14 in./25 to 36 cm**Spread:** 6 to 8 in./15 to 20 cm**Seed supplied as:** Raw**Plug crop time:** 5 weeks**Transplant to finish:** 5 to 6 weeks

- Very floriferous and well-branched plants display one-of-a-kind flowers.
- Tight flowering window with an easy-to-grow, uniform, upright habit across all colours.
- Outstanding in hot and sunny conditions.

NOTE: Tattoo blooms display the best colour contrast under warm conditions with moderate light; colours lighten with increased temperatures and light. Grown under cooler conditions and lower light, colours appear darker overall with less contrast and more purple colouration being expressed.

New Orange Features a medium orange colour with a consistent dark centre. Petal colour lightens in high light and temperatures. Similar size and timing to Tattoo Black Cherry.



NEW
Tattoo Orange

Make your mark on vinca sales!

The art of plants comes alive on every Tattoo bloom – each petal looks like it is inked or airbrushed with soft brush strokes of dark purple. Adding these novelties to your lineup shows that you have your finger on the pulse of what today's gardener really wants: bold, fun, head-turning. Tattoo...without a doubt, the most unique vinca on the market today!

Titan™ Series F1**Height:** 14 to 16 in./36 to 41 cm**Spread:** 10 to 12 in./25 to 30 cm**Seed supplied as:** Raw**Plug crop time:** 5 weeks**Transplant to finish:** 3 to 4 weeks

- Upgrade your vinca for the best germination and the most reliable supply available on the market!
- More stress-tolerant due to hybrid vigour – tolerates heat and drought and can withstand cooler and wetter conditions compared to O.P. types.
- Perfect for landscapes and containers of all types.
- Well-suited to packs, 4-in./10-cm and 6-in./15-cm pots.

New Cranberry Features a rich, velvety, dark red bloom colour with a lighter centre. Times with Really Red. Landscape height is on the tall side of the series at 16 in. (41 cm).



NEW
Titan Cranberry US 10,212,908

Robust and ready for anything Mother Nature sends!

Titan is up to 2 weeks faster to flower than open-pollinated vincas, with superior branching and big flowers in all the top-selling colours. The most uniform F1 vinca series on the market shows off flowers that are up to 50% larger than O.P. types in cooler temperatures.



NEW
Orange



NEW
Yellow



NEW
Orange



NEW
Yellow

ZINNIA ●
Zinnia elegans
(syn. *Zinnia violaceae*)

Zesty™ Series

Height: 18 to 24 in./46 to 61 cm
Spread: 18 to 24 in./46 to 61 cm
Flower size: 3 to 5 in./8 to 13 cm

Seed supplied as: Coated

Plug crop time: 3 to 4 weeks
Transplant to finish: 6 to 7 weeks

- Extraordinary garden appeal!
- Features fully double flowers and excellent garden vigour.
- Displays huge, vibrant colours all season long.
- Impressive in containers, mixed combinations and borders.
- Pollinators love this plant!

New Orange Vibrant orange colour. Matches the rest of the series in timing and flower size; similar in height to Purple.

New Yellow Matches the rest of the series in flower diameter and timing; in the middle of the series for height. Can be less double than the rest of the colours in low light conditions.

CYCLAMEN ●●
Cyclamen persicum

Dreamscape™ Series F1



Height: 6 to 9 in./15 to 23 cm
Spread: 9 to 13 in./23 to 33 cm

Seed supplied as: Raw

Plug crop time: 8 to 9 weeks
Transplant to finish:
 19 to 20 weeks

- Specially bred and selected to deliver the best outdoor performance of any cyclamen.
- Pro landscapers and home gardeners alike can now confidently plant cyclamen in-ground and count on better, longer performance.
- Sow all colours at the same time to ship and sell together.

New Bright Purple Bright colour stays vibrant - even outdoors in low temperatures.

New Rose Eye Striking colour addition to the series.



NEW
 Bright Purple



NEW
 Rose Eye

NEW
 Bright Purple and Rose Eye



NEW
Purple

DIANTHUS ●
Dianthus chinensis

Coronet™ Series F1



Height: 8 to 10 in./20 to 25 cm
Spread: 8 to 10 in./20 to 25 cm
Flower size: 2 to 3 in./5 to 8 cm

Seed supplied as: Pelleted

Plug crop time: 4 to 6 weeks
Transplant to finish: 6 to 8 weeks

- At 2 to 3 in./5 to 8 cm, Coronet's blooms are larger than the competition, plus it offers uniform flowering time and habit.
- Produces multiple flowers on a compact, mounded plant.
- Gives its best performance in cool weather, making it great planted along with other cool-season annuals such as pansies.

New Purple Times like Cherry with a habit like the solid colours in the series.

New White Purple Eye Sharply contrasting bicolour with the compact size and timing of Strawberry can use half the rate of PGRs needed for the solid colours in the series.



NEW
White Purple Eye

Crowned with huge flower power

These are the biggest blooms of any dianthus of this type, with exceptional flower form and a palette of showstopping colour choices. Coronet adds a regal touch to cool-season landscapes, gardens and patio planters.

Send the best-looking violas to retail

Grow, ship, sell and plant the best-looking violas for Spring and Autumn - Sorbet XP genetics deliver a uniform plant habit and the tightest bloom window.

VIOLA 
Viola cornuta

Sorbet® XP Series F1



Height: 6 to 8 in./15 to 20 cm
Spread: 6 to 8 in./15 to 20 cm
Flower size: 1 to 1.5 in./3 to 4 cm

Seed supplied as: Raw, Primed

Plug crop time: 4.5 to 5 weeks

Transplant to finish:

Early Spring 6 to 8 weeks,
Autumn 4 to 5 weeks

- Sorbet XP needs fewer PGRs, with superior holdability and less shrink.
- F1 vigour assures greater germination, earliness, and excellent plug and garden performance.
- Violas are a key pro landscaper item and Sorbet XP excels at every turn: plants cover the soil at flowering, with more blooms on every plant and less stretching; stay compact in both heat and cold; excellent overwintering; wide range of clear colours allows for custom mixes.
- Well-suited to Spring and Autumn packs and 3.5-in./9-cm pots.

New Red Excellent red colour with staying power; times on the late side of the series.



NEW
Red



NEW
Red

PERENNIALS

KieftSeed™

3-SEASON COLOUR

Our expanded line of perennials has been carefully selected to provide colour, interest and performance from early Spring right through Autumn, year in and year out.





NEW
Yellow Ombre US 7,982,110

ECHINACEA 
Echinacea x hybrida

Artisan™ Collection F1



Height: 24 to 34 in./61 to 86 cm
Spread: 10 to 25 in./25 to 64 cm
Flower size: 3 to 4 in./8 to 10 cm

USDA Hardiness Zones:
4a to 10b (-30 to 35°F/-34 to 2°C
minimum temperatures)
A First-Year-Flowering Perennial.

Seed supplied as: Amplified

Plug crop time: 5 to 6 weeks
Transplant to finish:
13 to 17 weeks

- The first F1 hybrid Echinacea individual colour collection from seed!

- Offers consistency of plant structure for a uniform, highly branched, full plant.
- Features uniform flowering, so all plants are ready to sell at the same time.
- Seed input provides flexibility for production and labour management.
- Amplified seed form is enhanced through a proprietary process, resulting in faster and more uniform germination compared to non-enhanced seed.

New Yellow Ombre Features the same excellent branching as Red Ombre and Soft Orange, with a more upright habit and the foliage is a lighter mid-green. About 2 to 4 in. (5 to 10 cm) taller than the rest of the collection, and a small percentage of the plants are 6 to 8 in. (15 to 20 cm) taller, with the same plant habit and intense golden yellow colour.

The first F1 hybrid seed Echinacea collection is growing!

NEW Yellow Ombre joins the Artisan Collection of seed Echinacea that offers consistency of plant structure for uniform and highly branched, full plants. The series also provides uniformity of flowering, so all plants are ready to sell at the same time. Plus, the benefit of a seed input provides flexibility for production, so it fits better in your schedule.



NEW
Yellow Ombre US 7,982,110



NEW
Yellow Ombre US 7,982,110



NEW
Bluesette



NEW
Bluesette



NEW
Bluesette

Strong performer in gardens and landscapes

This novelty variety has a controlled habit, early flowering and early finishing, making growing Perovskia for the consumer and landscape market easy.

PEROVSKIA ●
Perovskia atriplicifolia

New Bluesette

Height: 14 to 22 in./36 to 56 cm
Spread: 14 to 24 in./36 to 61 cm
Flower size: 0.2 to 0.3 in./1 cm

USDA Hardiness Zones:
4a to 9a (-30 to 20°F/-34 to -7°C minimum temperatures)
A First-Year-Flowering Perennial.

Seed supplied as: Raw

Plug crop time: 5 to 8 weeks
Transplant to finish:
10 to 14 weeks

- The first and only compact, branching and early Perovskia from seed.
- Works well at the front of the landscape, as well as in a single premium patio container or mixed combo.
- A true alternative to vegetative varieties.
- This facultative long-day plant will flower earlier in long days, as well as in higher light intensity and temperatures.
- Features a long flowering period, with ornamental foliage, a pleasing fragrance and attracts bees and butterflies.
- Novelty type brings added value and appeal to a variety of garden spaces.

RUDBECKIA ●

Rudbeckia fulgida var. *sullivantii*

New Goldblitz

Height: 24 to 28 in./61 to 71 cm
Spread: 14 to 18 in./36 to 46 cm
Flower size: 3 to 3.5 in./8 to 9 cm

USDA Hardiness Zones:
 3a to 9b (-40 to 25°F/-40 to -4°C
 minimum temperatures)
A First-Year-Flowering Perennial.

Seed supplied as: Primed
Plug crop time: 6 to 7 weeks
Transplant to finish:
 15 to 20 weeks

- Will flower fully as an annual crop if sown in early Spring in natural conditions, assuming that Summer provides a minimum of 14.5 hours daylength; Goldsturm requires 15 hours critical daylength.
- Shortens the production time for a finished flowering crop to 2 to 3 weeks compared to Goldsturm.
- Provides a more economical input option for natural daylength growers, as the plugs do not require special treatment.
- It has a slightly smaller leaf and flower size than Goldsturm.
- *Fleuroselect Gold Medal* award winner for both container and garden performance.



NEW
Goldblitz *Fleuroselect Gold Medal*

A natural daylength growing solution

Here's a new first-year-flowering solution for growers that cannot finish Goldsturm under their natural growing conditions. NEW Goldblitz provides a more economical input option for natural daylength growers, as the plugs do not require special treatment to perform to the same quality as Goldsturm.



NEW
Goldblitz *Fleuroselect Gold Medal*

CUT FLOWERS

BLOOMSTUDIOSSM CUT FLOWERS

PanAmerican Seed provides the highest-quality seed to cut flower growers around the world. Our breeders look for stronger stems, richer colours and unique appeal when selecting products for the professional market.



CELOSIA

Celosia plumosa

Sunday™ Series

Form Supplied As: Pelleted

Cultivation Type:

Greenhouse, High Tunnel, Field

Planting Density: 64 to 80 plants/sq. metre (6 to 8 plants/sq. foot).

Usage: Secondary

Stem Length:

28 to 40 in./71 to 102 cm

First professional cut version of the popular plume-shaped celosia. Full plumes and long, strong stems enhance high-end retail mixed bouquets. Short, programmable production time and high yield; ideal for high-density programs. Excellent vase life.

Harvest Recommendation:

Harvest stems as plume is 90-100% developed.

Post-Harvest Recommendation:

Strip 50-75% foliage. Use distilled water; no need for hydration or holding solutions. Avoid cold storage if possible.

Vase Life: 7-14 days

New Bright Pink Improved

Upgraded for improved uniformity and flowering time under greenhouse cultivation, and a more striking colour.

New Cherry Improved

Earlier to flower, so it times better with the series under greenhouse cultivation, and it has a bright, intense colour.

New Gold Improved A better match to the series under greenhouse cultivation, with matching height and a better plume form. More intense gold colour than current variety; Gold Improved has around 2% yellow shades in the population.

New Green A new colour for the series! A trendy, icy pale green with a great plume form.



NEW
Bright Pink Improved



NEW
Bright Pink Improved



NEW
Cherry Improved



NEW
Gold Improved



NEW
Green



NEW

Antique Rose

MATTHIOLA

Matthiola incana

Mathilda™ Series

Form Supplied As: Raw

Cultivation Type:

Greenhouse, High Tunnel

Planting Density: 64 plants/
sq. metre (6 plants/sq. foot).

Usage: Line

Stem Length:

25 to 32 in./64 to 81 cm

(Group 2)

Mathilda is a seedling selectable type matthiola, resulting in maximum yield. It is the newest breeding in this type and offers a highly uniform series for production under moderate temperatures and light levels.

Harvest Recommendation:

Harvest when 3-5
florets have opened.

Post-Harvest Recommendation:

Matthiola are sensitive to ethylene; it is recommended to treat with an ethylene-inhibiting product. Hydrate and store in a cooler at 1-3°C (34-38°F) in commercial floral holding solution at the manufacturer recommended rates.

Vase Life: 5-8 days

New Antique Rose Brings a new, highly desirable, designer colour to the series.

LISIANTHUS

Eustoma grandiflorum

Can Can Series F1

Form Supplied As: Pelleted

Cultivation Type:

Greenhouse, High Tunnel
Planting Density: 65 to 85 plants/
 sq. metre (6 to 8 plants/sq. foot).

Usage: Focal, Secondary

Stem Length:

36 to 45 in./91 to 114 cm

(Group 2-2.5)

Can Can Lisianthus has medium, double flowers with a top-flowering habit ideal for use in bouquets. It is a group 2-2.5, later-flowering version of the popular Flare series, which is group 1.5-2.

Harvest Recommendation:

Harvest when the first flower has fully opened.

Post-Harvest Recommendation:

Hydrate flowers with a floral hydration solution for one hour at room temperature. Store in a cooler at 2-5°C (36-41°F) in a commercial floral holding solution at the manufacturer recommended rates.

Vase Life: 10-14 days

New Carmine Rose A new colour for the series with a deep, rich rose that is excellent for use in bouquets or grower bunches.



NEW

Can Can Carmine Rose

LIMONIUM

Limonium sinuatum

QIS Series

Form Supplied As: Raw

Cultivation Type:

High Tunnel, Field
Planting Density: 10 to 20 plants/
 sq. metre (1 to 2 plants/sq. foot).

Usage: Filler

Stem Length:

30 to 35 in./76 to 89 cm

Widely recommended by professional cut flower growers in the world, QIS ('Quality in Seed') is a considerable improvement over standard seed varieties in uniformity, colour, flower size and stem quality. Produces clouds of tiny, non-shattering flowers. Delivers shipability and long vase life. Popular for both fresh and preserved cut flower production. Stiff stems do not require netting.

Harvest Recommendation:

Harvest stems when 50% or more of florets are open, and sepals are coloured.

Post-Harvest Recommendation:

Harvested stems should be placed in a hydration solution, then moved to a holding solution for best performance. Ethylene-inhibiting treatments are recommended. Make sure moisture on the stems is dried off prior to storage to prevent botrytis. Store at 3-5°C (36-41°F).

Vase Life: Vase life average 8 days. Stems may also be dried.

New Mixture Improved

Formulated to showcase top-selling colours. Includes Dark Blue, Pale Blue, Rose, White and Yellow.



NEW

QIS Mixture Improved

VEGETABLES & HERBS

FRESH IDEAS™ WITH GREAT TASTE

This novel, high-quality group of vegetables is carefully curated to offer fresh, home-grown flavour and exceptional fruit quality, along with earlier and longer harvests, and loads of tasty produce.



HandPicked
VEGETABLES®



PEPPER ●*Capsicum annuum***New Trailblazer F1****Height:** 20 to 30 in./51 to 76 cm
Spread: 12 to 18 in./30 to 46 cm**Seed supplied as:** Raw**Type:** Sweet**Class:** Bell**Habit:** Tall, upright**Fruit Size:** 3.5-3.75 in./9-10 cm
long x 3.25-3.5 in./8-9 cm
wide, 8-9 oz. (227 to 255 g)**Disease Resistance:**

HR: BLS 1-3, 7, 8

Days to maturity from transplant:
(green) 50-55; (ripe) 70-75**Production Method:**

Field, In Ground, Container

- Tall, upright plants yield early-maturing, vibrant yellow, medium-to-large, blocky bell peppers.
- Holds its yellow colour longer, so it is slower to turn gold/orange.
- Three to four-lobed fruit is perfect for stuffing.
- Sweet, bright flavour and thick-walled fruit add crunch to salads.
- Seed has a high germination rate and offers high disease resistance to Bacterial Leaf Spot 1-3, 7 and 8.

Early, bright yellow bell pepper

This early-ripening sweet bell pepper holds its yellow colour when ripe, adding a vibrant colour to any vegetable retail program. Firm, thick walls maintain shelf life at retail. Sweet, rich flavour and strong, bright yellow colour distinguish this variety with excellent sell-through.

**NEW**
Trailblazer

Disease terminology: HR = High Resistance, IR = Intermediate Resistance
Disease codes: BLS - Bacterial Leaf Spot, TMV - Tobacco Mosaic Virus, TSWV - Tomato Spotted Wilt Virus



NEW
BlushingStar



NEW
BlushingStar

**Classic flavour,
modern
performance**

BlushingStar combines tasty heirloom tomato flavour with modern hybrid tomato performance. Early-maturing, sweet and savoury, pink beefsteak fruit has higher yield potential and fewer blemishes than most heirlooms, and it offers disease resistance to late blight and septoria leaf spot, too.



NEW
BlushingStar

TOMATO ●

Solanum lycopersicum

New BlushingStar F1

Height: 60 to 84 in./152 to 213 cm
Spread: 36 to 48 in./91 to 122 cm

Seed supplied as: Raw

Tomato Class: Large-Fruited
Type: Beefsteak
Habit: Indeterminate

Tomato Colour: Pink
Fruit Characteristics:
Oblate, ribbed
Fruit Size: 2.25-2.5 in./6 cm long x 3.75-4 in./10 cm wide, 12-16 oz. (340 to 454 g)

Disease Resistance: HR: LB, SLS
Days to maturity from transplant: 70-75
Production Method: Field, In Ground

- Upgrade your garden with heirloom tomato flavour and modern hybrid tomato performance.
- Early-maturing, pink beefsteak fruit are sweet and savoury, with higher yield potential and fewer blemishes than most heirlooms.
- Large, pink beefsteak fruit are perfect for eating fresh on a sandwich or preserving in sauce.
- Offers disease resistance to late blight and septoria leaf spot.
- Best grown in the ground with support of a trellis or cage.

Disease terminology: HR = High Resistance, IR = Intermediate Resistance
Disease codes: EB - Early Blight, F1 - Fusarium Race 1, F2 - Fusarium Race 2, LB - Late Blight, LM - Leaf Mold, N - Nematodes, SLS - Septoria Leaf Spot, TMV - Tobacco Mosaic Virus, ToMV - Tomato Mosaic Virus, V - Verticillium
Growth: CD - Compact Determinate, CI - Compact Indeterminate, D - Determinate, I - Indeterminate, SD - Semi-determinate

New Sun Dipper F1

Height: 60 to 84 in./152 to 213 cm

Spread: 36 to 48 in./91 to 122 cm

Seed supplied as: Raw

Tomato Class: Small-Fruited

Type: Specialty Small-Fruited

Habit: Indeterminate

Tomato Colour: Orange

Fruit Characteristics: Dipper, elongated, pointed

Fruit Size: 2-2.5 in./5-6 cm long x 0.5-0.7 in./1-2 cm wide

Disease Resistance:

HR: F1, N, TMV

Days to maturity from transplant: 60-65

Production Method: Field, Protected Culture, In Ground

- Sun Dipper is an orange “dipper” tomato with elongated fruit that is easily held between your fingers for dipping in dressing on a vegetable platter.
- This unique elongated fruit shape is eye-catching and delicious, and it’s perfect for differentiating vegetable programs at retail.
- The plant is indeterminate and has high resistance to Fusarium, Nematodes and Tobacco Mosaic Virus.
- Sun Dipper performs well in field production as well as high tunnels.
- Prune plant to 1 to 2 leaders to increase fruit size up to 3 to 4 in. (8 to 10 cm) long.



NEW
Sun Dipper



NEW
Sun Dipper

Just right for dipping

Sun Dipper’s elongated fruit can be held between your fingers for easy use with dips and sauces. The orange fruit looks great on a vegetable platter and tastes delicious. The fruit’s unique shape will stand out at retail and the durable plant has great resistance to in-ground diseases, as well.

CLASS/VARIETY	FRESH MARKET			HOME GARDEN	
	Field	Hydroponic	Protected Culture	In Ground	Container
PEPPER					
New Trailblazer F1	X			X	X
TOMATO					
New BlushingStar F1	X			X	
New Sun Dipper F1	X		X	X	

SALES & CUSTOMER SERVICE HERE TO HELP!

THE AMERICAS



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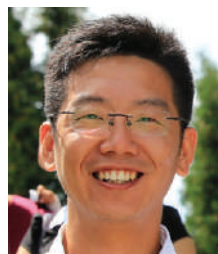
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Katz HI Double Matthiola from Bloom Studios will produce approximately 90% double-flowering plants! We're coming up on key production time for fall sowings/winter harvests, so check out our technical resources here: <https://www.bloomstudios.com/en-us/DigitalCatalog/PlantInfo/074908731005863>



PanAmerican Seed®

KEEPING IN TOUCH

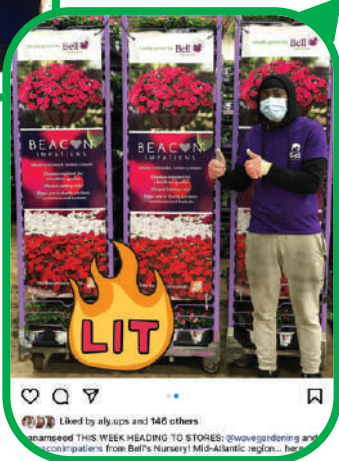


panamseed.com

With online tools on our website, the product information guide, culture documents and social media posts, we can provide up-to-the-minute product and growing information, as well as performance data, merchandising tips, trial data and consumer feedback. We've got the resources to keep you informed about our products anytime, anywhere.

Keep up to date on:
New Varieties • Updated Culture • How-to Videos

Share your experiences and boost your own social media presence with us!



ACCEPTANCE OF TERMS

These terms and conditions shall govern orders for Goods placed with Seller. Purchaser acknowledges that these terms and conditions and Seller's proposal, if any, constitute the entire agreement between Seller and Purchaser and supersede any prior agreements and representations. Any prior or contemporaneous promises, agreements, negotiations or representations whether oral or written or created the custom, usage or course of dealing are also superseded by these terms and conditions. No modification of these terms and conditions shall be effective unless in writing signed by Seller. Placement of the order shall constitute Purchaser's acceptance of these terms and conditions. All orders are subject to acceptance by Seller at our corporate office. Any different or additional terms in any documents from Purchaser are objected to and rejected, are deemed to materially alter these terms, and will not become part of any contract between Seller and Purchaser.

PRICING

Prices and availability are subject to change without notice. Although Seller tries to assure accuracy, it shall not be held responsible for typographical or other errors in the price list. Purchaser's price is determined by referring to the product price and deducting any discount for which Purchaser may qualify. Please contact your sales representative for more information.

TERMS

All payments must be received before Goods are shipped unless otherwise agreed to in writing by Seller. Payment terms can be seen on your Order Confirmation or at the appropriate Terms & Conditions page at panamseed.com for North American, European and International credit-approved customers. A 2% per month finance charge (24% annual rate) will be added to all past due balances at the end of each month. Seller has no obligation to ship any Goods until payment in full is received. PanAmerican Seed Company is a division of Ball Horticultural Company, an Illinois corporation in the USA. PanAmerican Seed Europe B.V. is a Dutch company owned 100% by Ball Horticultural B.V., which is 100% owned by Ball Horticultural Company.

MINIMUM ORDERS

The minimum quantity listed in the price list for each variety is the minimum order for that variety. Seller reserves the right to fill orders using pre-packaged inventory when available. Bulk quantities of items within a series cannot be combined to reach the minimum amount. Special packaging requests can be for any quantity as long as the minimum bulk requirement is met.

ORDER CHANGES

While order changes can be accommodated, there could be an impact to the delivery date. Please contact your customer service representative to discuss the implications of any order changes prior to submission.

FREIGHT & HANDLING CHARGES, INSPECTION, DAMAGED GOODS

(a) The freight and handling charge on Purchaser's invoice covers shipment of the Goods to Purchaser's destination. Seller will pay to return damaged goods, for replacement Goods or provide Purchaser with a credit for damaged Goods if the steps listed in Section (b) below are followed. **PURCHASER WILL NOT REFUSE TO RETURN DAMAGED OR DEFECTIVE GOODS, OR THE RIGHT TO FILE A CLAIM IS LOST AND PURCHASER WILL STILL BE LIABLE FOR THE MATERIAL AND THE FREIGHT.**

(b) When Purchaser receives shipment, it shall immediately: 1) count all cartons; 2) inspect all cartons for external damage; 3) check for open or resealed cartons; 4) note any damages, shortages, open or resealed cartons on the delivery receipt;

the carrier's representative must also sign the receipt; and 5) open all boxes immediately and inspect for damage, including, but not limited to, material shortages. **PURCHASER MUST NOTIFY SELLER WITHIN TWO (2) BUSINESS DAYS IF A SHIPMENT IS DAMAGED** by calling its Customer Service Representative to report the damage and receive details on what is needed to file a claim. The Goods shall be deemed accepted by the Purchaser on the earlier of (a) notice of acceptance to Seller, or (b) ten (10) days after delivery. Any claims for shortage, non-delivery, damage or defect which would reasonably be discoverable in the course of such inspection shall be waived unless Purchaser notifies Seller in writing within ten (10) days after delivery of the goods to which the claim relates.

PACKAGING FEES

All orders will be filled in bulk and/or predetermined packet sizes unless special packaging instructions are given. Special packaging requests must be at or above the Minimum Order requirements. If special packaging is requested, a packaging fee will apply and additional time may be required to complete the order. Purchaser shall contact Customer Service if it requires additional details.

CUSTOM SEED TREATMENTS

If a custom treatment is requested, a \$25 (U.S. Dollars) fee per batch will apply and additional time may be needed to complete the order.

PHYTOSANITARY CERTIFICATES CHARGE

Depending on the Goods ordered by Purchaser, and the location of the Purchaser, Phytosanitary Certificates may be required to comply with government regulations. If the shipment requires Phytosanitary Certificates, an additional cost will be charged.

DELIVERY DATES

Please indicate the required ship date when the order is being placed. No orders can be accepted without a requested ship date. All shipping and delivery dates provided by the Seller are approximate.

DELAYS, SHORTAGES & SUBSTITUTIONS

Seller shall not be responsible for delays in delivery or for losses resulting from such delays. Seller reserves the right to make partial shipments. Seller will not be liable for any delay in performing or for partial or complete failure to perform hereunder if such delay or failure is due to fire, explosion, flood, Act of God, force majeure, accident, war, intervention of governmental authorities, strikes, labor disputes, material shortages, transportation delays, any act or omission of Purchaser, its agents or employees or any party retained by, through or under the control of Purchaser, or any other cause similar or dissimilar which is beyond Seller's reasonable control.

INSURANCE

Seller does not insure shipments via Air Mail, but insures all other shipments in transit, in commercially reasonable amounts.

SHIPPING

Any shipment outside of the United States will be charged normal carrier rates.

RETURNS

No Goods may be returned without first obtaining written authorization. Authorized returns will only be considered if they are in original, unopened Seller packages. All returns are subject to a 15% service charge.

No credit or replacement will be given for Goods returned after nine (9) months from the ship date.

Upon receiving authorization, returns can be shipped to:

PanAmerican Seed
Attn: Returns
622 Town Road
West Chicago, Illinois USA 60185-2698

SEED COUNT

All seed counts given are approximate quantities due to variation based on a lot by lot comparison. Seed counts may also vary widely between colors and series.

NOTICE REGARDING SEED-BORNE DISEASES

Seller makes no representation regarding the freedom from seed-borne diseases of the seed sold and disclaims any liability relating to such diseases, whether previously known to exist or not identified until such seed is grown.

RESERVATION OF OWNERSHIP

In the event of bankruptcy, products delivered by the Seller remain the property of Seller until the Purchaser has paid the purchase price amount. This reservation of ownership is also extended to claims that Seller may obtain towards Purchaser on account of the Purchaser's failure to meet their obligations to Sale.

LIMITATION OF WARRANTY

Seller warrants, to the extent required by law, that Goods conform to the description appearing in Seller's catalog and on container labels, within recognized tolerances. **THE FOREGOING WARRANTIES ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES NOT EXPRESSLY SET FORTH HEREIN, WHETHER EXPRESSED OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT.**

LIMITATION OF REMEDY

PURCHASER'S SOLE AND EXCLUSIVE REMEDY SHALL BE REFUND OF THE PURCHASE PRICE. SELLER'S LIABILITY, WHETHER FOR BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, PRODUCTS LIABILITY OR ANY OTHER THEORY OF LIABILITY, IS LIMITED TO THE AMOUNT OF THE PURCHASE PRICE. PURCHASER AGREES THAT IN NO EVENT, REGARDLESS OF THE FORM OF LEGAL ACTION OR THE THEORY OF RECOVERY, WILL SELLER BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT OR PUNITIVE DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUES.

USE RESTRICTION

Merchandise is not intended for sale to large-scale commercial growers of herbs or vegetables. Use, transfer and/or acquisition of merchandise constitutes acceptance of a limited right to use the merchandise solely to grow a single crop for food, feed, processing or ornamental purposes. No other use is permitted. Any transfer of merchandise must be accompanied by this use restriction.

MANDATORY ARBITRATION

ANY CLAIM WHICH PURCHASER MAY HAVE AGAINST SELLER ARISING OUT OF OR RELATING TO THE SALE OF THE GOODS HEREUNDER MUST BE BROUGHT, IF AT ALL, WITHIN TWELVE (12) MONTHS OF THE DELIVERY OF THE GOODS WHICH ARE THE SUBJECT OF THE CLAIM AND SHALL BE SETTLED BY BINDING ARBITRATION IN ACCORDANCE WITH THE COMMERCIAL ARBITRATION RULES OF THE AMERICAN ARBITRATION ASSOCIATION, SAID ARBITRATION TO BE VENUED IN COOK OR DUPAGE COUNTIES, ILLINOIS.

GOVERNING LAW, JURISDICTION & VENUE

The laws of the State of Illinois, including but not limited to the Uniform Commercial Code as adopted therein, shall govern all matters arising out of or relating to Seller's sale of merchandise. **ANY DISPUTE NOT SUBJECT TO ARBITRATION AND ANY ACTION TO ENFORCE AN ARBITRATION AWARD ARISING OUT OF OR RELATING TO THE SALE OF MERCHANDISE HEREUNDER SHALL BE MAINTAINED IN THE STATE OR FEDERAL COURTS LOCATED IN DUPAGE OR COOK COUNTIES, ILLINOIS, AND PURCHASER SUBMITS TO THE JURISDICTION OF AND VENUE IN SAID COURTS.**

INDEMNITY

By accepting the Goods, Purchaser agrees to indemnify, defend and hold harmless Seller, its affiliates, successors and assigns from and against any claim or liabilities, claims, demands, damages, losses and expense (including attorney's fees) asserted by any or all transferees of such Goods or users of the products of such Goods (i) arising from any act or omission of Customer or its employees or agents, or (ii) who were not notified by Purchaser in writing of Limitation of Warranty, Limitation of Remedy, Mandatory Arbitration, Governing Law, Jurisdiction and Venue, and Notice Regarding Seed-Borne Diseases, in language substantially equivalent to that contained in these Terms and Conditions of Sale.

TRADEMARKS

* denotes a U.S. registered trademark and TM denotes a trademark of Ball Horticultural Company, unless otherwise indicated.

SALE LIMITATIONS

EXPORT CONTROL
PANAMERICAN SEED PRODUCTS ARE NOT AVAILABLE FOR SALE IN AND MAY NOT BE RESOLD INTO AUSTRALIA, NEW ZEALAND, KOREA, BRAZIL AND SOUTH AFRICA. THE COMPANY'S PRODUCTS MAY NOT BE SOLD, DIVERTED, TRANSFERRED OR RE-EXPORTED, DIRECTLY OR INDIRECTLY, TO ANY INDIVIDUAL, ENTITY, OR DESTINATION THAT IS SUBJECT TO UNITED STATES OR UNITED NATIONS SANCTIONS PROGRAMS OR EMBARGOS (INCLUDING, BUT NOT LIMITED TO, OFAC SANCTIONS PROGRAMS AND THOSE LISTED ON OFAC'S "SPECIALLY DESIGNATED NATIONALS" LIST) WITHOUT AN APPROPRIATE EXPORT LICENSE.

FOREIGN CORRUPT PRACTICES ACT

EACH PARTY REPRESENTS AND WARRANTS TO THE OTHER PARTY THAT IT WILL TAKE NO ACTION IN RELATION TO THIS TRANSACTION THAT WOULD BE IN VIOLATION OF THE APPLICABLE LAWS AND REGULATIONS OF ANY COUNTRY AND THE UNITED STATES OF AMERICA. NO PAYMENTS OF MONEY OR ANYTHING OF VALUE WILL BE OFFERED, PROMISED OR PAID, DIRECTLY OR INDIRECTLY, TO ANY OFFICIALS TO INFLUENCE THE ACTS OF SUCH OFFICIALS TO INDUCE THEM TO USE THEIR INFLUENCE WITH A GOVERNMENT OR AN INSTRUMENTALITY THEREOF, OR TO OBTAIN AN IMPROPER ADVANTAGE.

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