

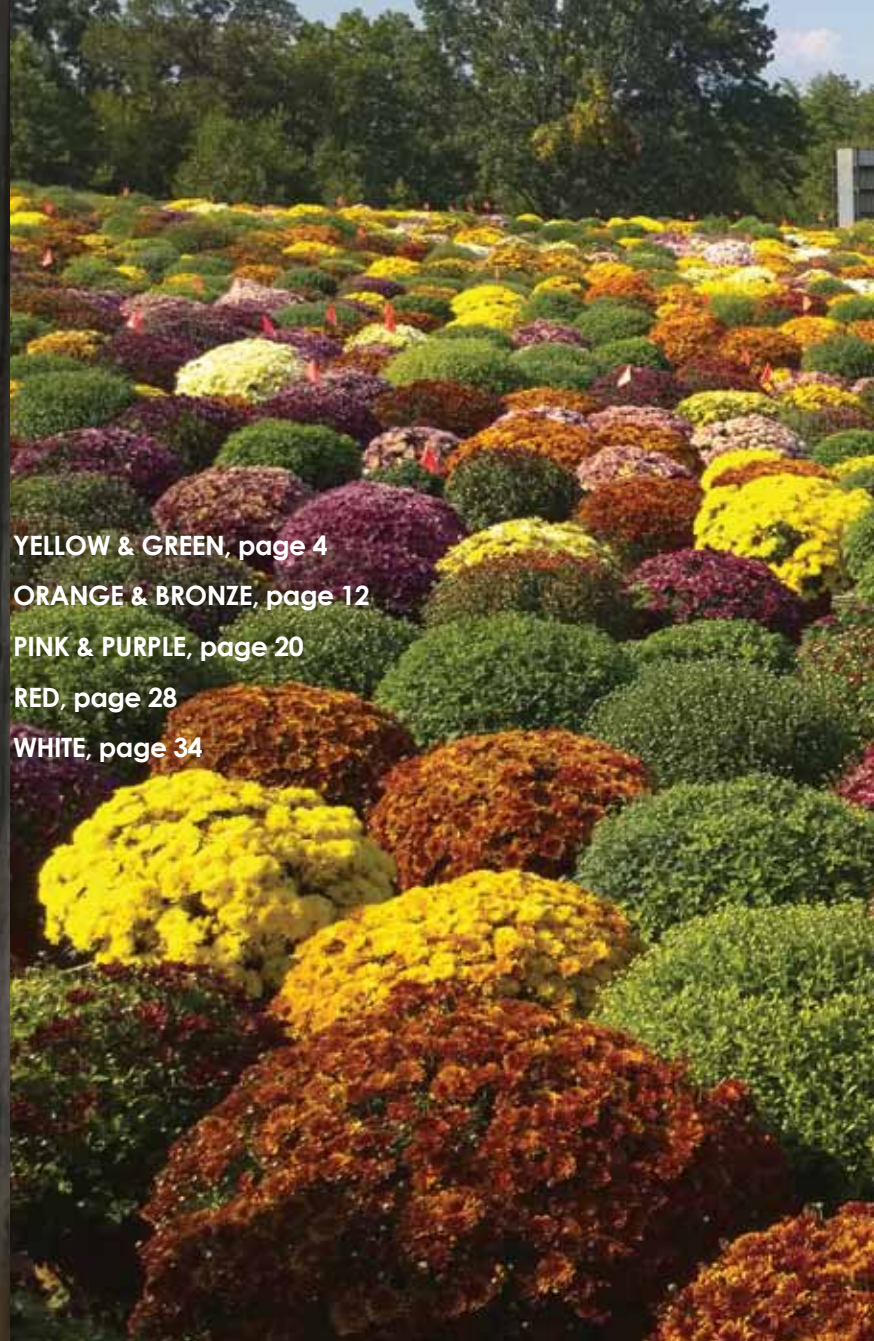


2016

# GARDEN MUMS

BaïMums





Meet **Ed Higgins** of Wadsworth, OH, your Ball "mum guy" for 9 years! Ed has introduced new garden mums to the industry since 1985 and evaluates every Ball Garden Mum in our North American trials. To contact Ed, email [ehiggins@ballhort.com](mailto:ehiggins@ballhort.com) or call 330 256-3628.



- YELLOW & GREEN**, page 4
- ORANGE & BRONZE**, page 12
- PINK & PURPLE**, page 20
- RED**, page 28
- WHITE**, page 34

# ED'S PICKS

## YELLOW & GREEN

---

NEW Gold Riot  
 Goldmine Yellow  
 Honeyblush Yellow  
 NEW Key Lime  
 Stellar Yellow  
 Sundance Yellow  
 Sunny Day  
 Sunrise Yellow  
 Yellow Tang

## ORANGE & BRONZE

---

Atomic Orange  
 Autumn Glow Bronze  
 Avalon Orange  
 Blazing Orange  
 NEW Fireglow  
 Orange Zest  
 Pefit Orange  
 Pumpkin Pie  
 Sunset Orange

## PINK & PURPLE

---

Avalon Pink  
 Avalon Purple  
 Flamingo Pink  
 Grapeberry  
 Pink Frenzy  
 Pizzazz Purple  
 NEW Plumberry  
 Purple Majesty  
 Stellar Purple  
 Venus Purple

## RED

---

NEW Crimson Blush  
 Five Alarm Red  
 Radiant Red  
 Red Hots  
 Red Rover  
 Red Ryder

## WHITE

---

Butter N' Cream  
 Dove White  
 Moonglow White  
 Starburst White





# WELCOME TO BALL MUMS

## OUR MOST COMPREHENSIVE COLLECTION YET!

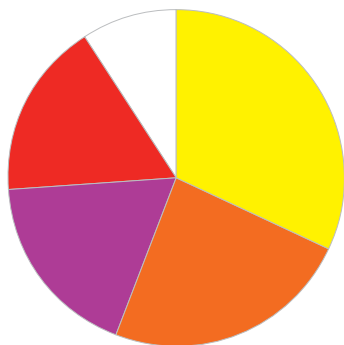
Since our last full catalog, we've been busy trialing and testing across North America to bring you even more brilliant new garden mums in this edition – 16 brand-new varieties.

You can always count on Ball to bring you the best garden mums for most applications and almost every market. This year, we've upped the ante with new Key Lime, an innovative green with big "decorator" appeal. Try marketing this striking variety to younger or more upscale gardeners. You'll also find two new mums families – Paradiso and Skyfall – in addition to our popular Stellars, Flamingos and Avalons, giving you even more options for mixes.

**Need advice on variety selection, crop scheduling or culture? Your Ball Mums customer service team is here to help. We'd also love to hear about your success with Ball Mums...so get growing!**

# Your Perfect Mums Program

**It's all in the percentages.** We build our selection based on what our research tells us are the most popular color groups...and recommend the same for your annual growing program. You'll find plenty of perfectly beautiful picks within each group, along with all the information you need to choose the best varieties for your particular market.



- YELLOW & GREEN, 32%
- ORANGE & BRONZE, 24%
- PINK & PURPLE, 18%
- RED, 17%
- WHITE, 9%

# Early and Efficient

Growing mums in early Spring can be hit or miss at best. Here's a short list of excellent early-Spring performers that will help you grow more efficiently and successfully.

## BALL GARDEN MUMS: WEEK 2-14 EARLY SPRING VARIETY AVAILABILITY

YELLOW & GREEN	ORANGE & BRONZE	PINK & PURPLE	RED	WHITE
NEW Gold Riot	Harvest Bronze	Grapeberry	Blooming Beauty Red	Dove White
Katelli Yellow	Katelli Bronze	NEW Paradiso Pink	Red Hots	NEW Paradiso White
NEW Paradiso Yellow	NEW Paradiso Bronze	Purple Majesty	Red Rover	Sparkle White
Sundance Yellow	Petit Orange	Venus Purple		Starburst White
Sunny Day	Pumpkin Pie			
Yellow Tang	Sunset Orange			
Yellowstone				

Mammoth Mums are also available for early Spring booking.

## KEY TO SYMBOLS

-  European (ball-shaped) habit
-  Heat-tolerant variety (FL/TX)
-  Performs well in Spring flowerings
-  Excellent for landscapes
-  Performs well in black cloth flowerings
-  Ed's Picks



# New 2016

Meet seven sensational new varieties plus two new series! New Key Lime was a natural for this year's cover. Its striking fluorescent green is a brand-new color in garden mums, a real attention-getter that makes for a truly distinctive Fall program.



**Key Lime**  
The first green garden mum in our collection PAGE 8



**Avalon Sunny Yellow**  
Excellent flower form with bright, clear color PAGE 5



**Gold Riot**  
Rich, golden yellow flower color PAGE 7



**Fireglow**  
Practically perfect flowers with beautiful Fall color PAGE 14



**Plumberry**  
Deep, regal purple color on freely branching plants PAGE 25



**Crimson Blush**  
Completely covered with rich burgundy blooms PAGE 29



**Avalon Crème**  
White with a touch of ivory...and no pink PAGE 35



**Paradiso Family**  
Excellent for color combinations – in black cloth or natural season crops  
**Paradiso Yellow** PAGE 9, **Paradiso Bronze** PAGE 17, **Paradiso Pink** PAGE 23, **Paradiso White** PAGE 36



**Skyfall Series**  
Recommended especially for hanging baskets by our breeding partners at Royal Van Zanten PAGE 38



# YELLOW & GREEN

SPREAD SOME AUTUMN SUNSHINE

32%

OF YOUR MUMS  
PROGRAM





### NEW Avalon Sunny Yellow (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/16	8 WEEKS	MOUNDED	MEDIUM

Takes Avalon Yellow to the next level with tighter habit and better flower form. Medium to large flowers with a bright, clear yellow color grow up to 2 in. on dark green foliage. Sunny Yellow branches freely, with very strong stems.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH		•	•	•			



### Avalon Yellow

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/15	8 WEEKS	MOUNDED	MEDIUM

Good-sized, mounded plants with large, dark yellow, decorative flowers can be used in almost any size container. Part of the end-of-season Avalon family, Avalon Yellow grows slowly until early September, then pushes out into full size.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH		•	•	•			



### Buttercup Yellow (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/13	7 WEEKS	EUROPEAN	MEDIUM

Top-notch choice for early-Fall flowering! Features a great European habit combined with prolific, uniform flowering and good keeping qualities. Buttercup Yellow is easy to grow and adapts to all size containers. Earlier, stronger and more uniform than Goldcrest Yellow.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH							



### Dandelion Wine (PP23,616)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/15	7 WEEKS	EUROPEAN	MEDIUM/TALL

Golden-yellow flowers on vigorous, spherical plants with excellent flexibility. Early crown bud flowering may allow for mid-September sales. Best in 8-in. and larger pots.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH		•	•	•	•		





### Eureka Yellow

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/26	7 WEEKS	MOUNDED	MEDIUM/SHORT

Fresh yellow decorative variety performs best in high-temperature areas. Eureka can be used in black cloth or natural season crops; best suited for 4 to 8-in. containers.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•				
BLACK CLOTH	•	•					



### Florina Yellow (PP16,672)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/20	6 WEEKS	EUROPEAN	SHORT

Small yellow daisy delivers big-league flower counts. Our earliest yellow daisy to flower in the Fall. Florina is fast and uniform to flower in black cloth crops. Always extremely prolific and uniform. Ideal in 4 to 6-in. pots, but difficult to size up in containers over 8 in.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•				•
BLACK CLOTH	•	•					



### Gold Ball

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/12	8 WEEKS	EUROPEAN	SHORT

Gold Ball is a good bridge variety between Yellow Tang and Sunny Day. Plants develop into almost perfect spheres completely covered in flowers. Gold Ball is uniform but slow in black cloth crops. Note: Some sensitivity to BLS (bacterial leaf spot).

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•					



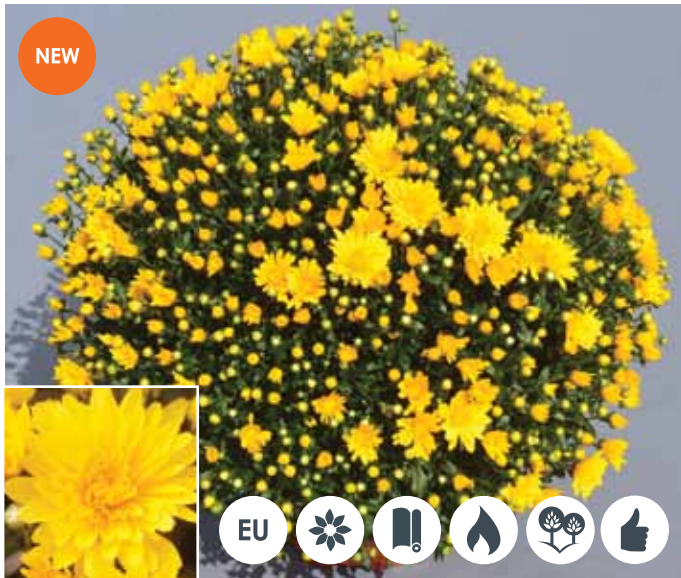
### Gold Cup (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/26	7 WEEKS	EUROPEAN	SHORT

Golden yellow decorative in the color range of Yellow Tang or Goldmine. Well-petaled flowers grow up to 2 in. Develops into a fine spherical plant with excellent flower counts. Solid performance in deep South/Texas natural season crops. Vigor is similar to Yellow Tang and should not require growth regulators.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•				•
BLACK CLOTH	•	•	•				•





### NEW Gold Riot (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/5	8 WEEKS	EUROPEAN	MEDIUM

Prolific flowering like Yellow Tang, with a rich, golden yellow flower color. Medium to large (2-in.) flowers create a bright contrast to dark green foliage on an outstanding European growth habit. Freely branching with strong yet flexible stems. Easier to size up than Yellow Tang.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



### Gold Rush Yellow (PP20,462)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/3	7 WEEKS	EUROPEAN	MEDIUM/TALL

Great plant with great color for late September and into October. Golden yellow flowers framed by very dark foliage. Gold Rush is well-suited for 8-in. and larger containers. Takes high temperatures well. Note: Use PGRs in black cloth to minimize peduncle stretch.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



### Goldcrest Yellow (PP11,606)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/14	7 WEEKS	ROUNDED	MEDIUM

This time-tested variety has an excellent habit, rich yellow flower color and exceptional foliage. Goldcrest Yellow is well-suited for use in any size container in black cloth and natural season crops. Slow 7-week response in black cloth flowering.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



### Goldmine Yellow (PP22,618)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/8	6 WEEKS	EUROPEAN	MEDIUM/TALL

One of the earliest to flower garden mums in Fall crops. Provides rich, golden yellow color; prolific flower counts; and dark, glossy foliage. Fast 6-week response in black cloth programs. Vigor must be controlled in small containers and hanging baskets. Outstanding keeping quality.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•





**Grandeur Yellow** (PP19,814)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/18	7 WEEKS	MOUNDED	MEDIUM

High-quality finished plants have excellent growth habits and big, bright blooms. Flowers after Buttercup Yellow. Strong stems are great in large containers. Note: foliage will be chartreuse in June and July, then green up as plant matures.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



**Honeyblush Yellow** (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/23	7 WEEKS	EUROPEAN	MEDIUM

Virtually peerless among natural season crops! An outstanding performer in the peak September sales season, Honeyblush Yellow delivers fantastic bloom color, superb growth habit and striking dark green foliage. Can upgrade all yellow varieties in its flowering range.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



**Katelli Yellow** (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/15	6 WEEKS	EUROPEAN	SHORT

A bright yellow mutation of Katelli Bronze with similar growth habit and uniformity. Katelli Yellow flowers a couple of days faster in both black cloth and natural season crops. This compact grower performs best in 4-in. through 8-in. pots.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•				•
BLACK CLOTH	•	•	•				•



**NEW Key Lime** (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/23	7 WEEKS	EUROPEAN	MEDIUM/SHORT

A brand-new color in garden mums! Key Lime may be the first truly green garden mum in North America. Freely branching plants boast a profusion of small to medium-sized flowers on strong, flexible stems. The perfect "decorator" choice for Fall displays. Chartreuse when mature.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•	•				•





### Moonglow Yellow (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/17	7 WEEKS	EUROPEAN	MEDIUM

Fresh, lemon-yellow decorative sport from popular Moonglow White. Flower color is in the range of Buttercup. Comparable to Moonglow White in growth habit and flowering response. Performs well in both natural season and black cloth crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



### NEW Paradiso Yellow (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/26	7 WEEKS	EUROPEAN	MEDIUM/SHORT

New Paradiso family joins the Ball Mums lineup, with a cheery, prolific-flowering yellow. Like others in the family, Paradiso Yellow is an excellent choice for color combos in black cloth and natural season crops. It's freely branching, with strong yet flexible stems and medium-size flowers.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•	•	•			•



Goldmine Yellow is perfect for black cloth big pot programs. Great for 8-in. and larger Fall crops, too!





### Stellar Yellow

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/20	7 WEEKS	EUROPEAN	MEDIUM/SHORT

Medium-yellow decorative is comparable in color to Grandeur Yellow, with superior uniformity. Stellar Yellow grows into an almost-perfect ball shape and flowers prolifically. Performs well throughout North America in both natural season and black cloth crops. Makes great combo pots with other Stellars.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



### Sundance Yellow (PP21,163)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/30	8 WEEKS	EUROPEAN	MEDIUM/SHORT

Classic European look and outstanding color in late-September natural season programs. Prolific, uniform, ball-shaped plants can be used in most size pots. Performs well in black cloth crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



### Sunny Day (PP24,670)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/17	7 WEEKS	EUROPEAN	MEDIUM

Maybe the finest yellow decorative to end the Fall season! European growth habit covered with exceptionally bright flowers that exhibit very good keeping qualities. Excellent companion to Emberglow Orange for mid to late-October sales. Outstanding in black cloth crops!

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



### Sunrise Yellow (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/8	7 WEEKS	MOUNDED	MEDIUM

Might be the brightest yellow decorative flowers in the marketplace! Excellent mounded growth habit. Earlier and less vigorous than Goldmine Yellow in black cloth and natural season crops. Loaded with flowers in the Fall. Earlier, more uniform and more prolific than Goldcrest Yellow.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



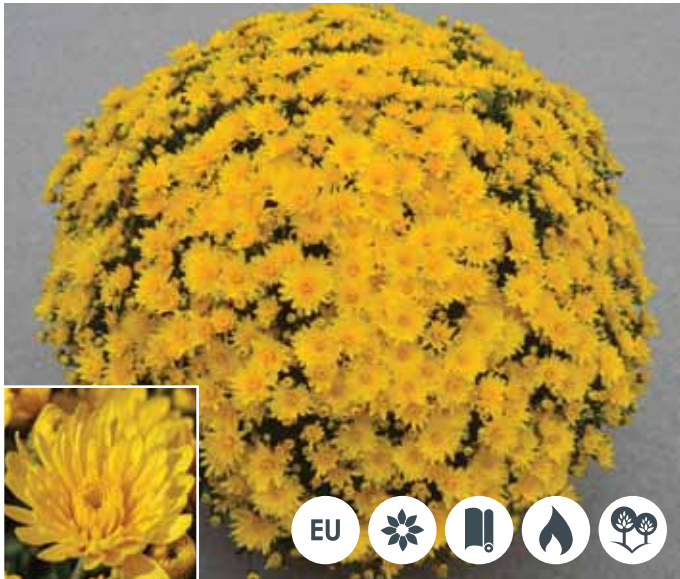


### Yellow Tang (PP23,615)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/9	7 WEEKS	EUROPEAN	MEDIUM

"Best in class" variety is strong, on time, uniform and prolific in black cloth. Showy and full of blooms, with a European habit in both Fall natural season crops and black cloth programs. Displays reliable performance for growers and superior keeping qualities for consumers.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



### Yellowstone (PP22,619)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/20	7 WEEKS	EUROPEAN	MEDIUM

One of the most prolific garden mums around! Yellowstone has far more flowers and better uniformity than Goldcrest Yellow. Yellowstone is fast and efficient in black cloth production. A great companion plant to Celosia Intenz™ in natural season crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



Ball sales rep Peter Scherzer and Noel Hernandez of American Color, Inc. in Orange, VA show off a fine crop of Goldmine Yellow garden mums.



# ORANGE & BRONZE

THE PERFECT PUMPKIN PARTNERS

24%

OF YOUR MUMS  
PROGRAM



### Atomic Orange (PP21,183)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/30	7 WEEKS	EUROPEAN	MEDIUM

Go-to variety for late Fall sales has large, dark orange flowers; spherical growth habit; and glossy, dark foliage. Grow Atomic Orange as a standalone plant or use it in mixed containers.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH							



### Autumn Glow Bronze (PP24,645)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/2	7 WEEKS	MOUNDED	MEDIUM

Chocolate-centered petals with golden bronze outer rays create a showy Fall display. Spreading, mounded plants work well in most size pots. Easy to grow and size up. Follows Sunset Orange by about a week for lots of fresh, lively color in peak season.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•		•



### Avalon Orange (PP24,026)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/15	8 WEEKS	MOUNDED	MEDIUM

Terrific two-tone color, large flowers and an excellent mounded habit. Like all Avalons, Orange grows slowly until early September, when it surges for a beautiful finish – a great garden mum to wrap up the Fall season. Handles heavy Fall rains and light frosts. Try it in black cloth crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



### Blazing Orange (PP22,336)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/12	7 WEEKS	MOUNDED	MEDIUM

Outstanding performer for growers across North America! Large-flowered Blazing Orange displays great color in the North as well as in hot southern areas. Use in all size containers for Spring, Summer and Fall flowerings. Excellent keeping qualities and great in landscapes.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•		•





### Echo Bronze (PP14,981)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/18	6 WEEKS	ROUND	MEDIUM/TALL

Beautiful orange color is a classic for Fall sales. Daisy flowers are large, showy and long-lasting. Echo Bronze always has some early-opening buds, making it one of the first varieties sold in the Fall.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON		•	•	•	•	•	
BLACK CLOTH		•	•	•	•		



### Emberglow Orange (PP23,636)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/16	8 WEEKS	EUROPEAN	MEDIUM

Premium variety for the final weeks of Fall mum sales! Emberglow Orange displays large flowers with true orange color, dark foliage and an exceptional spherical growth habit. It is a perfect companion to flower with Sunny Day. Not for black cloth or Spring-flowering crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON		•	•	•	•	•	
BLACK CLOTH							



### NEW Fireglow (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/20	8 WEEKS	EUROPEAN	MEDIUM/SHORT

Beautiful, traditional Fall color and a perfect decorative flower form. Fireglow features outstanding flower size – 2.25 in. – and prolific flowering on a freely branching, mounded plant. Dark foliage complements classic light orange blooms.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH							



### Harvest Bronze

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/2	7 WEEKS	EUROPEAN	SHORT

Prolific, uniform flowering with ball-shaped habit. In cool environments, color is a stunning blend of golden yellow and honey-bronzes. In hot environments, it takes on a rich yellow color. Black cloth crops also have a golden yellow color. Extremely flexible stems and dark foliage.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•	•				•





**Homer Orange** (PP16,671)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/14	6 WEEKS	MOUNDED	MEDIUM

Large, orange decorative flowers are among the first to bloom in the Fall garden mum market. Mounded growth habit greatly benefits from two pinches, allowing for much fuller and more productive flowerings. Otherwise, low flower count and marginal uniformity.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON		•	•				
BLACK CLOTH							



**Katelli Bronze** (PP16,674)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/17	6 WEEKS	EUROPEAN	SHORT

Katelli Bronze is known for its outstanding color retention. Sharp two-tone flowers with dark bronze centers are carried on uniform, early-flowering plants. Reliable but not vigorous, this variety is best grown in 8-in. and smaller pots. Takes the heat!

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•				•
BLACK CLOTH	•	•					•



Ball garden mums are selected for colors that sell and plants that perform! Here's a beautiful crop of Harvest Bronze.





### Orange Crush (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/2	7 WEEKS	EUROPEAN	MEDIUM/TALL

**More flowers per plant than most garden mums!** Grow Orange Crush in 8-in. pots and larger to allow for massive amounts of two-tone flowers in late September/early October. This variety always sizes up well, with excellent uniformity. Bracts develop in extreme heat.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	
BLACK CLOTH		•	•	•	•		



### Orange Zest (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/25	8 WEEKS	FULL MOUND	MEDIUM

**Outstanding flower color and color retention!** Prolific flowering, excellent rain tolerance and long-lasting blooms for great landscape potential. Flowers close to Sunset Orange in what may be the biggest sales week in the Fall natural season. Fantastic color, even in Texas.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH							



**Need big garden mums for big retail sales? Work with your Ball sales rep to select the right cultivars – like Orange Crush, shown here.**



### Outrageous Orange (PP24,671)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/3	7 WEEKS	EUROPEAN	MEDIUM

**Prolific, burnt orange decorative flowers are carried on strong, yet flexible, plants.** Outrageous Orange is readily produced in most size containers. Amazing flower count per plant! Note: Flower color dulls with hot temperatures.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH		•	•	•			





### NEW Paradiso Bronze (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/27	7 WEEKS	EUROPEAN	SHORT

Beautiful bronze color on a nicely spherical growth habit. Like others in the new Paradiso family, Paradiso Bronze has medium-size decorative flowers, medium green foliage, free branching and strong, flexible stems. Try it in combos with any of the other Paradiso varieties.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•	•				•



### Perfectly Orange (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/21	7 WEEKS	MOUNDED	MEDIUM/SHORT

Large flowers and great orange color. This color mutation of Perfectly Pink has comparable vigor, habit and uniformity, but flowers a couple of days earlier. Note: Avoid large containers due to low vigor. Avoid Spring flowerings due to poor uniformity.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•				•
BLACK CLOTH	•	•					



### Petit Orange (PP20,318)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/25	7 WEEKS	EUROPEAN	MEDIUM

Grower-friendly variety has perfect growth habit, excellent uniformity and extreme flower count! Use in all container sizes for Spring, Summer and natural season Fall crops. Looks like a decorative early, then opens to a duplex.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



### Pumpkin Pie (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/11	7 WEEKS	EUROPEAN	MEDIUM/TALL

Striking color mimics Fall foliage and pumpkins! Pumpkin Pie is easy to size up, prolific and uniform, with good flower color in the South as well. Excellent for Fall decorations. Butterscotch flower color in hot black cloth flowerings. Note: Plant it late to take advantage of its natural vigor.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•		
BLACK CLOTH	•	•	•	•	•		





### Roadrunner Bronze (PP11,298)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/12	6 WEEKS	MOUNDED	MEDIUM

**One of the first-to-flower Fall varieties!** Flower color varies by temperature; more yellow blends in if hot and the bronze-orange intensifies if cool. Roadrunner Bronze is easy to size up for Fall crops. Not recommended for black cloth.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH							



### Sunset Orange (PP20,475)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/28	7 WEEKS	EUROPEAN	MEDIUM

**An all-around grower favorite!** Easy to grow and size up, with good stem length and excellent flexibility. Prolific, medium-size decorative flowers have sharp, two-tone color and good keeping quality. Good for all pot sizes and flowering seasons.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



**This field of Atomic Orange mums is ready to hit the market. Brisk Fall sales are right ahead!**



### Twilight Bronze (PP20,933)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/8	7 WEEKS	EUROPEAN	MEDIUM

**Attractive and unique color!** Honey-bronze outer petals surround red-bronze center petals. Prolific and uniform in flowering, Twilight Bronze often benefits from an extra week or two of growing time, especially in larger containers.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•					



# FALL DÉCOR

100%  
INSPIRED

Transform your garden store into a Fall showcase with Ball garden mums. You can find plenty of decorative ideas online for inspiration – or use your own imagination. Show customers new ways to liven up porches, patios and indoor spaces, and watch your mum sales soar!

See page 33 for more Fall plant ideas to get you started.





# PINK & PURPLE

CREATE A COOL CONTRAST





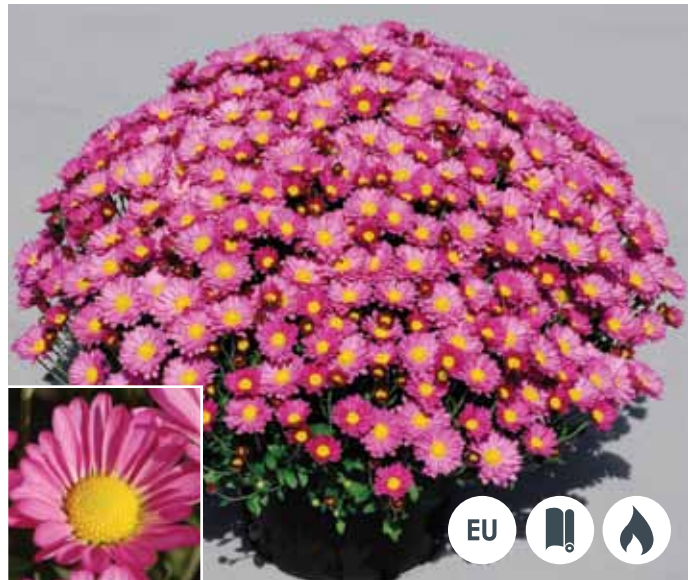


**Adonis Purple** (PP13,273)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/24	7 WEEKS	EUROPEAN	MEDIUM

A reliable, time-tested variety for mid-September sales. Adonis Purple is easy to grow and adaptable to all size pots, with good flower color and keeping quality. Note: Can be used for black cloth crops, but may develop some foliar flecking in high temperatures. Use PGRs for hanging baskets.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



**Amphion Purple** (PP13,271)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/2	6 WEEKS	EUROPEAN	MEDIUM

One of the nicest daisies available in garden mums! Dark pink flowers (almost purple in cool finishes) virtually engulf the plant, making it a great impulse item at retail. Easy to grow in any size pot, Amphion Purple features dark foliage, flexible stems and a spherical European habit.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



**Avalon Pink** (PP22,659)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/15	8 WEEKS	MOUNDED	MEDIUM

The "mother" of the Avalon family offers the family features of very large flowers with fine keeping qualities and sturdy, nicely mounded plants. Plants grow slowly through the Summer, then push through September for an outstanding product to end the natural Fall season.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



**Avalon Purple** (PP24,024)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/15	8 WEEKS	MOUNDED	MEDIUM

A superb Fall season-ending display! Avalon Purple features large, regal purple decorative flowers with excellent color retention on classically mounded plants. This variety is well-matched to all the other Avalons.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•

© Royal Van Zanten





### Avalon Salmon

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/15	8 WEEKS	MOUNDED	MEDIUM

Vibrant, two-tone coral flower color. Comparable to all other Avalons in growth habit, vigor, flowering response and large flower size. Avalon Salmon has very good color retention and overall keeping quality.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



### Brilliance Pink (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/16	8 WEEKS	MOUNDED/BALL	MEDIUM

Brings great color to early-flowering pinks. Prolific, uniform flowering. Excellent spreading habit with strong stems, dark foliage. Earlier than Stellar Purple, times well with Grandeur Yellow in Fall flowerings. Not recommended for black cloth flowerings. Not for landscapes, as color lightens significantly with age.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•		•
BLACK CLOTH							



### Flamingo Neon (PP25,028)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/26	8 WEEKS	EUROPEAN	MEDIUM/SHORT

Earlier flowering and brighter color than Flamingo Pink, but with slightly smaller flowers and less vigor. Flamingo Neon is best for 8-in. and smaller containers. Slow, with marginal uniformity in black cloth.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•		•
BLACK CLOTH							



### Flamingo Pineapple (PP23,484)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/24	8 WEEKS	EUROPEAN	MEDIUM

Always uniquely colored! In higher temperatures, blooms show more cream; in lower, more pink. A sport of Flamingo Pink with similar vigor and growth habit. Slightly earlier flowering than Flamingo Pink. Can be used in northern black cloth crops, but is a bit slow with average uniformity.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH							





### Flamingo Pink (PP20,589)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/28	8 WEEKS	EUROPEAN	MEDIUM

A popular variety with bright coral-pink color, reliable growth habit and long-lasting flowers. Flamingo Pink is adaptable to all container sizes. Best for natural season flowering, but with the cool flower color, it is sometimes used in northern black cloth crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH							

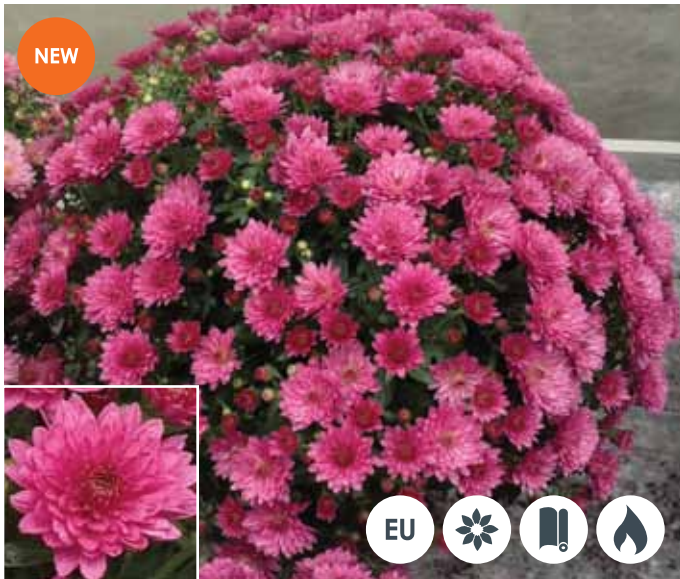


### Grapeberry (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/2	7 WEEKS	EUROPEAN	MEDIUM/SHORT

Brilliant purple may be best-in-class for natural-season flowering! Upgrades all of the purples and bright pinks in the marketplace. Superb color even in Texas heat, classic growth habit and extremely prolific flowering. Great color in hot black cloth flowerings. Short treatment is a must for black cloth schedules.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•				•



### NEW Paradiso Pink (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/25	7 WEEKS	EUROPEAN	SHORT

Add another perfect pink to the Ball Mums collection. New Paradiso Pink is one of four varieties in the new Paradiso family, ideal for color combinations, especially in black cloth. Its European habit, medium-size blooms and prolific flowering match the rest of the family.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•	•				•



### Perfectly Pink (PP23,015)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/23	7 WEEKS	MOUNDED	SHORT

Large, two-tone flowers and a tidy growth habit. Perfectly Pink perfectly fills the mid-September market for pink garden mums.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•	•				•



# Can't-Miss LANDSCAPE MUMS

Nothing livens up Fall landscapes like mums... and pros love Ball Mums for their beautifully mounded habits, fantastic flower counts and long-lasting, richly saturated colors. From classic monochromatic groupings to eye-pleasing patterns, Ball Mums are a landscaper's dream.

## BEST FOR LANDSCAPES:

- |                    |                   |
|--------------------|-------------------|
| Adonis Purple      | Honeyblush Yellow |
| Atomic Orange      | Katelli Bronze    |
| Avalon Pink        | Katelli Yellow    |
| Avalon Purple      | Orange Zest       |
| Blazing Orange     | Purple Majesty    |
| Emberglow Orange   | Radiant Red       |
| Eternal Red        | Red Hots          |
| Flamingo Cranberry | Red Ryder         |
| Flamingo Neon      | Starburst White   |
| Flamingo Pink      | Sundance Yellow   |
| Gold Rush Yellow   | Sunny Day Yellow  |
| Grandeur Yellow    | Sunset Orange     |
| Grapeberry         | Yellow Tang       |







**Pink Frenzy (PP25,012)**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/26	7 WEEKS	MOUNDED	MEDIUM

**The boldest, brightest pink mum ever!** Pink Frenzy is easy to size up and grows best in gallon and larger containers. Excellent color retention, even in Texas trials. Prompt and uniform in black cloth. Apply late PGR to control peduncle stretch.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



**Pizzazz Purple (PPAF)**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/30	7 WEEKS	MOUNDED	MEDIUM

Intense flower color with good color retention – better than Venus. Prolific and uniform flowering response. Pizzazz Purple has excellent rain tolerance and long-lasting flowers. Timely response in black cloth crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



**NEW Plumberry (PPAF)**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/28	7 WEEKS	MOUNDED	MEDIUM

**Well-placed, deep regal purple flowers engulf the canopy.** Plumberry's large 2.5-in. blooms really stand out among its competitors. It has a superb mounded growth habit, dark green foliage, decorative flower form, free branching and strong, flexible stems.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



**Purple Majesty (PPAF)**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/9	7 WEEKS	EUROPEAN	MEDIUM

**Exceptionally rich and saturated flower color!** Excellent growth habit, fantastic flower count and great uniformity provide a quality product in any size container. Flowers after Venus and before the Avalons. Could become the best of all purples in the early October market.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•





### Stellar Pink

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/21	7 WEEKS	EUROPEAN	MEDIUM/SHORT

Medium to light pink decorative joins the popular Stellar family! Light pink but pleasing color in very hot environments like Texas. Has similar vigor and response as Stellar Purple, but has flowered a couple of days behind in our trials. Shares ball-shaped habit and prolific flowering response with other Stellers.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



### Stellar Purple

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/19	7 WEEKS	EUROPEAN	MEDIUM/SHORT

One of our top-selling purples, with phenomenal flower counts, great color and excellent uniformity. Stellar Purple can be used in black cloth and natural season flowerings. Note: Cuttings can bud prematurely and will benefit from early Florel applications and proper fertilizer levels.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



“Mum guy” Ed Higgins (center) joins breeders Rob Noodeljik of Floritec and Wilbert Blom of Royal Van Zanten to check out new varieties for the North American market.



### Venus Purple (PP14,378)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/3	7 WEEKS	EUROPEAN	MEDIUM

One of our most popular varieties, year after year. Large, dark purple decorative flowers top round, ball-shaped plants with strong, flexible stems and dark foliage. Use Venus Purple in all size pots for Spring, Summer or Fall crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	•



# Colorful Combos

When it comes to mixing mums, we say, **"Have a ball!"** Garden mum combos are fun, fashionable and easier to create than you might think. The key to combo success is to keep your selections in the same family, ensuring consistent habit, timing, flower form and scheduling. Our new Paradiso and Skyfall series join our popular Avalon, Flamingo and Stellar families to give you plenty of options to complement or contrast...the choice is yours!

Here are some vibrant examples to light your creative spark:



Avalon Family



Try a bold splash of color with new Paradiso Bronze, Pink and Yellow.



An eye-catching Flamingo combo grown in a 4.5-in. pot with black cloth lining. Great for impulse sales!



# RED

FOR LIVELY LANDSCAPES

17%

OF YOUR MUMS  
PROGRAM



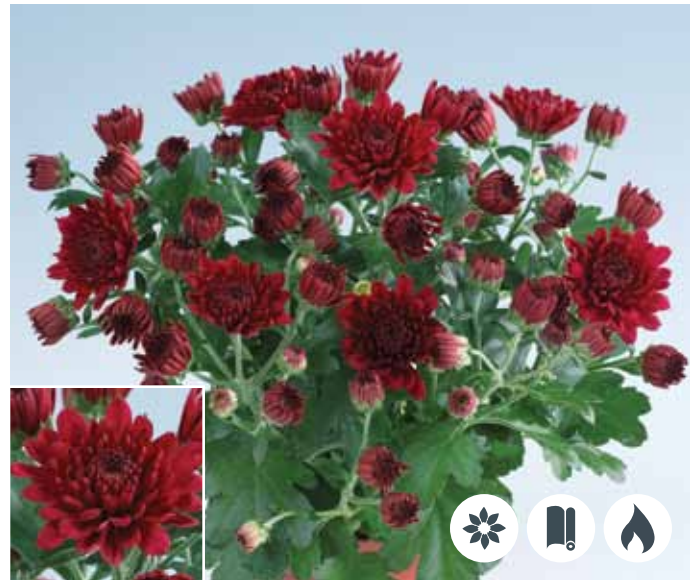


**Avalon Red (PP24,021)**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/15	8 WEEKS	MOUNDED	MEDIUM

The red decorative of the Avalon family. Avalon Red has large flowers for special appeal and good color retention except in warm finishing areas. Adaptable to all pot sizes, it grows slowly until early September when it really takes off!

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



**Blooming Beauty Red**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/10	6 WEEKS	MOUNDED	MEDIUM

The perfect pot mum with a mounded/semi-spreading habit! Blooming Beauty Red fills an important retail niche for impulse sales. It has excellent potential for black cloth crops and natural season production.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•		•
BLACK CLOTH	•	•	•	•			•



**NEW Crimson Blush (PPAF)**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/28	7 WEEKS	MOUNDED	MEDIUM

Large, deep burgundy-red blooms completely cover a canopy of dark green foliage. Flowers grow to 2.25-in. on large, mounded plants. New Crimson Blush branches freely and features strong, flexible stems.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON		•	•	•	•		
BLACK CLOTH							



**Eternal Red**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/15	8 WEEKS	MOUNDED	MEDIUM/SHORT

Deep red flower color and dark green foliage present a classic look. Eternal Red is a strong, sturdy plant with excellent color retention. It tolerates frost and takes heavy Fall rains with no problems. Slow in black cloth flowerings.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•					





### Fame Red

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/18	6 WEEKS	MOUNDED	MEDIUM

Dark red daisy with uniform flowering and a full canopy of flowers. Fame Red features a rounded habit, flexible stems and dark foliage. Because it has only average keeping quality, it is not suitable for landscaping.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			
BLACK CLOTH	•	•	•				



### Five Alarm Red (PP19,791)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/14	6 WEEKS	MOUNDED	MEDIUM

Our earliest-to-flower red decorative for Fall has superb color and very good color retention. Flowering uniformity is average. Some early crown buds help with early sales. Best in 6-in. and larger pots for Spring, Summer or Fall flowerings. Early Florel applications improve uniformity.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	



### Flamingo Cranberry (PP23,367)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/28	8 WEEKS	EUROPEAN	MEDIUM

Color sport of Flamingo Pink with the same excellent growth habit, nice flower size and slow-to-open flowers. The flower color is truly unique in garden mums: red tinged with gold and a wisp of pink. Try it – your customers will love it! Best color with cool finish.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH							



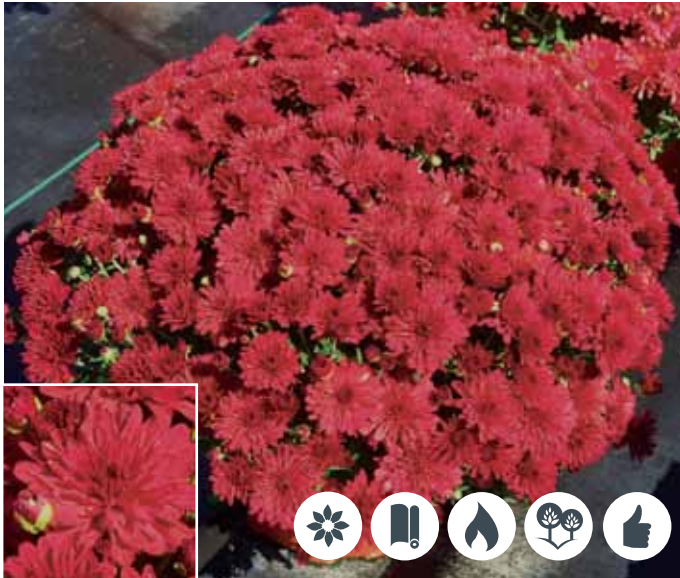
### Radiant Red (PP25,013)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/25	7 WEEKS	EUROPEAN	MEDIUM

A "must-have" variety for mid-September sales! Dark red decorative flowers have superb color retention and rain/frost tolerance. Spherical plants have strong yet flexible stems with dark foliage. Best used in 8-in. and larger containers. Use PGR in black cloth crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•	•	





### Red Hots (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/22	7 WEEKS	MOUNDED	MEDIUM

Bright red flowers on full and productive plants with excellent color retention. Takes the heat, even in the deep South, with no significant fading. Upgrades Stellar Red for flower size and color retention. Good in black cloth and Spring flowering programs.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



### Red Rover (PP23,016)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/8	7 WEEKS	EUROPEAN	MEDIUM

Bright red decorative follows Red Ryder for strong early-October sales. Red Rover delivers solid performance in black cloth crops. Can be compact in the largest containers. Better vigor than Red Alert.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•				•



There's nothing like vivid red to catch the eye! Six Ball garden mum varieties are especially suited for landscape use. Look for the "trees" symbol.





**Red Ryder (PP24,646)**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/28	8 WEEKS	EUROPEAN	MEDIUM

**Profuse, dark red decorative flowers with fantastic keeping quality!** Plants size up readily with strong, flexible stems. Continues the flow of quality red decoratives into October. Slow in black cloth flowerings, but has excellent color and habit. Not for Spring flowering.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH		•	•	•			

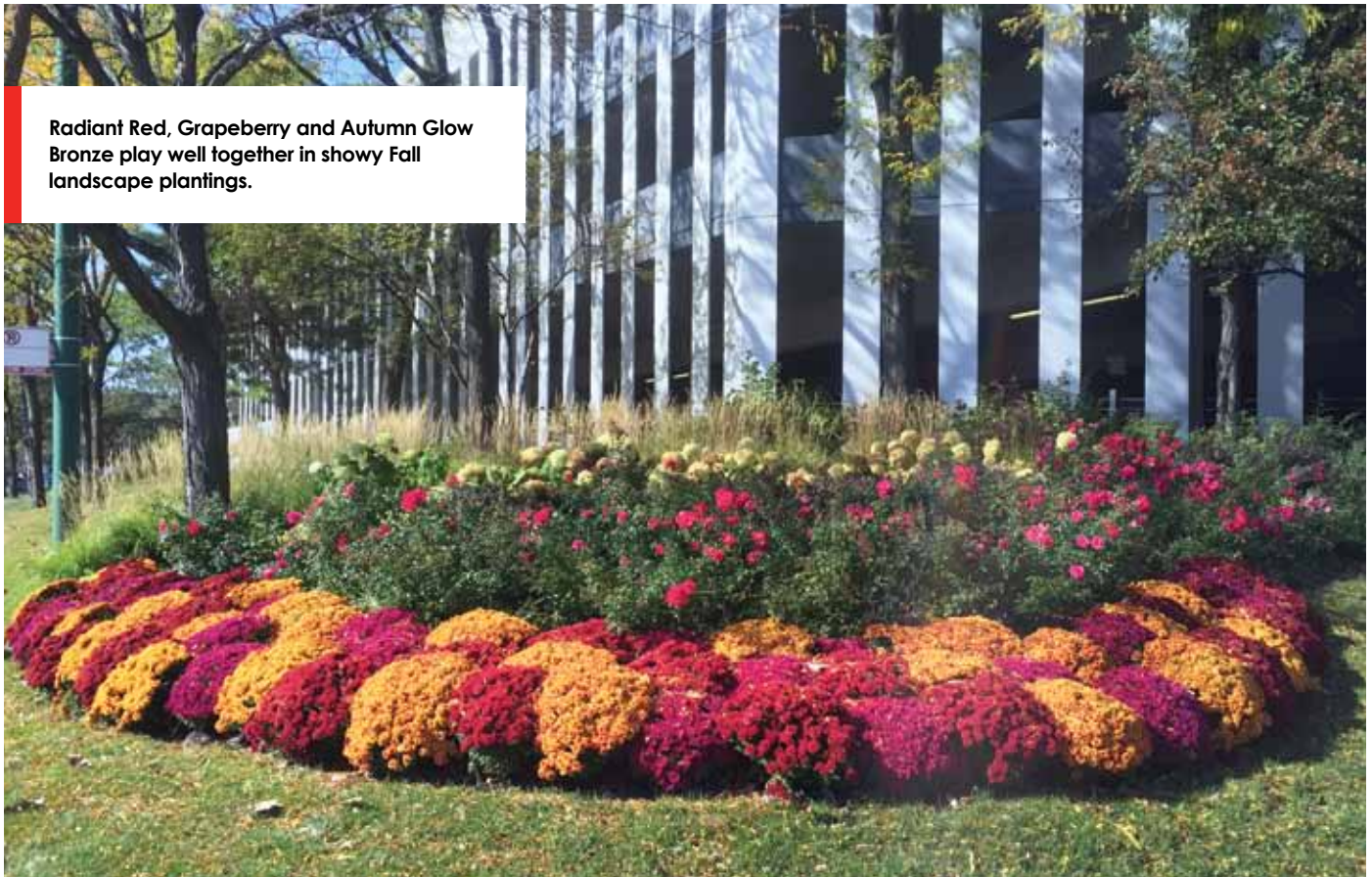


**Stellar Red**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/19	7 WEEKS	EUROPEAN	MEDIUM/SHORT

**A prolific, medium-red sport of Stellar Purple.** Stellar Red is similar in uniformity and growth habit to Stellar Purple, with about 10% less vigor. Flower color may fade in high temperatures. Benefits from early Florel applications to minimize early budding.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•		•
BLACK CLOTH	•	•	•				





# BALL FOR FALL

Everybody wants the **Grand Finale of color before Winter sets in.** Give customers the color they crave with cool-season selections from Ball. A wide variety of annuals, grasses and perennials are available to grow right alongside your mums for brisk Fall sales. Here are some sure-to-satisfy offerings:

## INTENZ™ CLASSIC CELOSIA



A hot item for Fall sales! Two new colors – Dark Purple and Lipstick – will arrive for the 2016 season.



## ORNAMENTAL PEPPERS



Fruiting and foliage varieties lend an exotic touch to Fall displays. Try Black Pearl as a dark contrast to bright mums, or Chilly Chili for an additional splash of color.



## CABBAGE AND KALE



Sturdy Fall favorites bring form, texture and color to late-season landscapes. Check out Dynasty and Emperor for deep purple and creamy white accents.



## MATRIX® PANSY



Easy to grow, even easier to sell – 25 gorgeous, large-flowered varieties and 18 mixtures give you plenty of options to please late-season gardeners.

Find many more Fall favorites at [BallSeed.com/BallForFall](http://BallSeed.com/BallForFall), or ask your Ball Seed sales rep.





# WHITE

CLASSIC UPSCALE DÉCOR

9%  
OF YOUR MUMS  
PROGRAM





### Aspen White (PP21,205)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/13	6 WEEKS	MOUNDED	MEDIUM/SHORT

Our earliest decorative white to kick off the Fall mum season. Aspen White combines clean white flower color with good decorative flower form. Strong, productive plants have medium green foliage, good flower counts and mounded growth habit.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•	•				•



### NEW Avalon Crème (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/16	8 WEEKS	MOUNDED	MEDIUM

Beautiful new Avalon Crème keeps its color! Dark green foliage sets off medium-large white flowers with a touch of ivory...and no pink tinge. Growth habit is similar to Avalon White, with free branching and very strong stems.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•		•
BLACK CLOTH	•	•	•	•			•



### Avalon White

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/15	8 WEEKS	MOUNDED	MEDIUM/SHORT

Excellent mounded plants are covered with large decorative flowers. Flowers commonly have a slight pink tinge. Avalon White is similar to all Avalons in growth habit, flowering response, flower size and very dark foliage. Plants grow slowly at first and take off early to mid-September.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



### Butter N' Cream (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/27	8 WEEKS	EUROPEAN	MEDIUM

Clean white decorative with a hint of ivory in center of young flowers. Flowers after Celestial White and Starburst and before Pearly White; easy to grow and size up. Fine spherical growth habit. Solid performance in deep South natural season crops. Slow but superb habit and uniformity in black cloth crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•	•		•





### Celestial White (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/20	6 WEEKS	EUROPEAN	MEDIUM

Easy to grow, flowers prolifically and very uniformly. It performed well in all of our trials in all areas. Flowers after Moonglow White and before Butter N' Cream. Slight ivory center upon opening, then pure white.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•		•
BLACK CLOTH	•	•	•				•



### Dove White (PP24,618)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/12	8 WEEKS	EUROPEAN	MEDIUM/SHORT

Features European traits of prolific and uniform flowering, flexible stems and great plant habit. Flowers a week after Star White in the Fall to maintain a high-quality sequence of varieties through early October. Slow, but with excellent habit and production in black cloth.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•	•	•			•



### Moonglow White (PP22,617)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/15	7 WEEKS	EUROPEAN	MEDIUM

Excellent ball-shaped plants have dark foliage and strong, flexible stems. Large flowers are highlighted with ivory tones in the center. Moonglow White is dependable and productive in black cloth and natural season programs. Now has a 'sister' with new Moonglow Yellow.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•	•			•



### NEW Paradiso White (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/27	7 WEEKS	EUROPEAN	SHORT

Abundant clean white blooms burst forth on medium green foliage. Like its family mates, new Paradiso White flowers prolifically and branches freely, with strong, flexible stems. Pair it with Paradiso Bronze, Pink or Yellow in combos.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•	•				•





**Pearly White (PP22,638)**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/7	8 WEEKS	EUROPEAN	MEDIUM/TALL

Prolific, strong and well-suited to larger pot production. Pearly White features pure white flowers, dark foliage and a European-type growth habit in Fall crops. Slow and lacks uniformity in Spring and Summer flowering crops.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH		•	•	•	•		



**Sparkle White (PP20,525)**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/26	7 WEEKS	EUROPEAN	SHORT

Snow-white daisy offers beautiful flower form, good flower size and better-than-average keeping quality for a daisy. Plants are strong and a bit compact, with luxuriant dark foliage. Sparkle White is reliable in Spring and Summer-flowering crops. Not suitable for large pots.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•			•
BLACK CLOTH	•	•	•				•



**Starburst White (PP20,473)**

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/23	7 WEEKS	EUROPEAN	MEDIUM/SHORT

Prolific and extremely uniform in black cloth and natural season crops. An outstanding variety for most any use. Unique flower form features quilled petals, often tipped with a "spoon." Excellent spreading growth habit.

	4"	6"	8"	10"	12"	½ BUSHEL	H.B.
NATURAL SEASON	•	•	•	•	•	•	•
BLACK CLOTH	•	•	•				•



Well-grown, upscale Aspen White – use creative decorative options like this to maximize Fall sales!



# NEW SKYFALL SERIES

The best habit for baskets, per our breeding partners at Royal Van Zanten! Good production of petite, daisy flowers on strong, flexible plants with a compact, mounded habit. Slow response in black cloth and mid-October natural season. Available in Yellow, Pink, Purple, Red and White.



# BLOOMING BEAUTY® COLLECTION

Spring-blooming, small-pot varieties bred by Royal Van Zanten are produced with "no pinch" culture in Europe and offer the same potential for North American greenhouse production. Try in 1801 trays, 6-pack handle baskets, 3 and 4-in. pots and 5-in. pans. Red also has excellent potential for 6-in. pots in black cloth. Red, Yellow and Purple have made terrific European-style plants in 8 and 10-in. pots in Fall natural season crops.

In Fall flowering, Blooming Beauty Red performs well for Early October, with brighter color and better habit than Red Alert and Red Rover. Blooming Beauty Purple displays a great European habit, very prolific flowering and a nice dark lavender color for late Fall sales.

**Our top pick: Blooming Beauty Red (see pg 29)**



Blooming Beauty Red is great for Spring and Summer black cloth and Fall crops. Here is a no-pinch black cloth 6-pack.





# 10 STEPS TO MUMS SUCCESS

Ball garden mums grown for the natural Fall season can be offered in almost any size and type of container for a sales window from late August until mid to late October! Easy to grow, they are an exciting crop with great performance throughout the Fall season.

- 1 Plan your crop – how many plants will you produce? What size and type of containers? What color percentages? What is your sales window?
- 2 Plant liners or stick URC as soon as they arrive. To hold for a day or two, place in a cooler at 34 to 36°F.
- 3 Always plant liners or stick URC into moist media – never into dry media!
- 4 Grow in full sun. Shaded areas can produce taller and weaker plants.
- 5 Media should always be well-drained, as garden mums require excellent drainage.
- 6 When planting liners, water them in with a balanced fertilizer such as 20-10-20 at 300 to 400 ppm.
- 7 Constant liquid fertilizer programs tend to produce the finest quality crops. Consider 200 to 250 ppm constant liquid feed, with a boost to 300 ppm after heavy rains or a series of cool nights shortly after planting.
- 8 As plants mature, lower fertilizer programs to 100 ppm N or lower. In the last week or two, no fertilizer is really needed, and by lowering the salts, the plants can last longer for consumers.
- 9 If you need growth regulators to slow growth, consider B-Nine during the first half of the crop. If a late growth regulator is needed, consider using a Bonzi drench.
- 10 Always take notes and pictures of your crop as the season progresses, so you can plan for an even better crop next season!

# MAMMOTH MUMS are true perennials that bloom year after year!

- Overwinter to an amazing -30°F/-34°C!
- Huge, high-impact garden displays.
- Low-maintenance in gardens and landscapes.

If you have customers asking for reliably hardy mums, consider growing Mammoth Mums to satisfy their request. Bred by the University of Minnesota, Mammoth Mums are about as hardy as you can find.



VARIETY	TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
Mammoth Bronze Daisy	Late	9/29	6 weeks	Mounded	Medium
Mammoth Coral Daisy	Early	9/17	6 weeks	Mounded	Medium
Mammoth Lavender Daisy	Early	9/7	6 weeks	Mounded	Medium
Mammoth Red Daisy	Early	9/14	6 weeks	Mounded	Medium
Mammoth Yellow Quill	Early	9/11	6 weeks	Mounded	Tall



## Guide to Using the Ball Garden Mum Variety Chart

Use the "Flower date" column to put together a natural season program. NOTE: Bloom dates shown are average flowering dates (half-open flowers) for Eastern and Midwestern regions and represent the time when flowers are at Stage 3 (see photo on page 41). Actual bloom dates will vary by geographic area. Since dates are relative to each other, growers can sequence the varieties for production.

Use the "Black cloth response" column to determine the number of weeks to flower (half open) from the start of short days.

Need a substitute for a natural season program? Select a variety with a similar bloom date. For example, if you need a substitute for Starburst White, Celestial White works well because it is also a white decorative and blooms two days earlier.

Need a substitute for a Summer black cloth program? Select a variety with a similar "Black cloth response" number. For example, if you need an option for Red Hots, both Radiant Red and Stellar Red will work well since they are both red decoratives with a 7-week response time. When working with black cloth crops, please be sure the variety is suitable for use. Refer to variety copy in this catalog.

### Ball Garden Mum Variety Listing Based On Natural Season Flowering Sequence

EARLY Sept. 8 to Sept. 17				
Natural Flower Date	Variety	Black Cloth Response	Flower Form	Vigor
<b>YELLOW &amp; GREEN</b>				
Sept. 8	Goldmine Yellow 👍	6 weeks	Decorative	M/T
Sept. 8	Sunrise Yellow 👍	7 weeks	Decorative	M
Sept. 13	Buttercup Yellow	7 weeks	Decorative	M
Sept. 14	Goldcrest Yellow	7 weeks	Decorative	M
Sept. 15	Dandelion Wine	7 weeks	Decorative	M/T
Sept. 15	Katelli Yellow	6 weeks	Decorative	S
Sept. 17	Moonglow Yellow	7 weeks	Decorative	M
Sept. 18	Grandeur Yellow	7 weeks	Decorative	M
<b>ORANGE &amp; BRONZE</b>				
Sept. 12	Roadrunner Bronze	6 weeks	Decorative	M
Sept. 14	Homer Orange	6 weeks	Decorative	M
Sept. 17	Katelli Bronze	6 weeks	Decorative	S
<b>PINK &amp; PURPLE</b>				
Sept. 16	Brilliance Pink	8 weeks	Decorative	M
<b>RED</b>				
Sept. 14	Five Alarm Red 👍	6 weeks	Decorative	M
<b>WHITE</b>				
Sept. 13	Aspen White	6 weeks	Decorative	M/S
Sept. 15	Moonglow White 👍	7 weeks	Decorative	M

MID Sept. 18 to Sept. 26				
Natural Flower Date	Variety	Black Cloth Response	Flower Form	Vigor
<b>YELLOW &amp; GREEN</b>				
Sept. 20	Florina Yellow	6 weeks	Daisy	S
Sept. 20	Stellar Yellow 👍	7 weeks	Decorative	M/S
Sept. 20	Yellowstone	7 weeks	Decorative	M
Sept. 23	Honeyblush Yellow 👍	7 weeks	Decorative	M
Sept. 23	NEW Key Lime 👍	7 weeks	Decorative	M/S
Sept. 26	Eureka Yellow	7 weeks	Decorative	M/S
Sept. 26	Gold Cup	7 weeks	Decorative	S
Sept. 26	NEW Paradiso Yellow	7 weeks	Decorative	M/S
<b>ORANGE &amp; BRONZE</b>				
Sept. 18	Echo Bronze	6 weeks	Daisy	M/T
Sept. 20	NEW Fireglow 👍	8 weeks	Decorative	M/S
Sept. 21	Perfectly Orange	7 weeks	Decorative	M/S
Sept. 25	Orange Zest 👍	8 weeks	Decorative	M
Sept. 25	Petit Orange 👍	7 weeks	Decorative	M
<b>PINK &amp; PURPLE</b>				
Sept. 19	Stellar Purple 👍	7 weeks	Decorative	M/S
Sept. 21	Stellar Pink	7 weeks	Decorative	M/S
Sept. 23	Perfectly Pink	7 weeks	Decorative	S
Sept. 24	Adonis Purple	7 weeks	Decorative	M
Sept. 24	Flamingo Pineapple	8 weeks	Decorative	M
Sept. 25	NEW Paradiso Pink	7 weeks	Decorative	S
Sept. 26	Flamingo Neon	8 weeks	Decorative	M/S
Sept. 26	Pink Frenzy 👍	7 weeks	Decorative	M
<b>RED</b>				
Sept. 18	Fame Red	6 weeks	Daisy	M
Sept. 19	Stellar Red	7 weeks	Decorative	M/S
Sept. 22	Red Hots 👍	7 weeks	Decorative	M
Sept. 25	Radiant Red 👍	7 weeks	Decorative	M
<b>WHITE</b>				
Sept. 20	Celestial White	6 weeks	Decorative	M
Sept. 23	Starburst White 👍	7 weeks	Decorative	M/S
Sept. 26	Sparkle White	7 weeks	Daisy	S



Ed's Pick



## A Note on Flower Dates

Ever wonder what “flower date” means? The plant on the right gives you a visual of what “flower date” represents. The flowers are fresh – not too open, not too tight, approximately at the 50% open stage of development. If you are a wholesale grower, you likely ship around Stage 1, represented by the plant on the left. These plants are “shippable” approximately 7 to 10 days prior to our “flower date.”

Stage 1 (Cracking Color)



Stage 3 (Flower Date)



LATE Sept. 27 to Oct. 5				
Natural Flower Date	Variety	Black Cloth Response	Flower Form	Vigor
<b>YELLOW &amp; GREEN</b>				
Sept. 30	Sundance Yellow 👍	8 weeks	Decorative	M/S
Oct. 3	Gold Rush Yellow	7 weeks	Decorative	M/T
Oct. 5	NEW Gold Riot 👍	8 weeks	Decorative	M
<b>ORANGE &amp; BRONZE</b>				
Sept. 27	NEW Paradiso Bronze	7 weeks	Decorative	S
Sept. 28	Sunset Orange 👍	7 weeks	Decorative	M
Sept. 30	Atomic Orange 👍	7 weeks	Decorative	M
Oct. 2	Autumn Glow Bronze 👍	7 weeks	Decorative	M
Oct. 2	Harvest Bronze	7 weeks	Decorative	S
Oct. 2	Orange Crush	7 weeks	Decorative	M/T
Oct. 3	Outrageous Orange	7 weeks	Decorative	M
<b>PINK &amp; PURPLE</b>				
Sept. 28	Flamingo Pink 👍	8 weeks	Decorative	M
Sept. 28	NEW Plumbery 👍	7 weeks	Decorative	M
Sept. 30	Pizzazz Purple 👍	7 weeks	Decorative	M
Oct. 2	Amphion Purple	6 weeks	Daisy	M
Oct. 2	Grapeberry 👍	7 weeks	Decorative	M/S
Oct. 3	Venus Purple 👍	7 weeks	Decorative	M
<b>RED</b>				
Sept. 28	NEW Crimson Blush 👍	7 weeks	Decorative	M
Sept. 28	Flamingo Cranberry	8 weeks	Decorative	M
Sept. 28	Red Ryder 👍	8 weeks	Decorative	M
<b>WHITE</b>				
Sept. 27	Blooming Beauty White	7 weeks	Decorative	M
Sept. 27	Butter N' Cream 👍	8 weeks	Decorative	M
Sept. 27	NEW Paradiso White	7 weeks	Decorative	S

VERY LATE Oct. 6 to Oct. 22				
Natural Flower Date	Variety	Black Cloth Response	Flower Form	Vigor
<b>YELLOW &amp; GREEN</b>				
Oct. 9	Yellow Tang 👍	7 weeks	Decorative	M
Oct. 12	Gold Ball	8 weeks	Decorative	S
Oct. 14	Blooming Beauty Yellow	7 weeks	Decorative	M
Oct. 15	Avalon Yellow	8 weeks	Decorative	M
Oct. 15	NEW Skyfall Yellow	8 weeks	Decorative	S
Oct. 16	NEW Avalon Sunny Yellow	8 weeks	Decorative	M
Oct. 17	Sunny Day 👍	7 weeks	Decorative	M
<b>ORANGE &amp; BRONZE</b>				
Oct. 8	Twilight Bronze	7 weeks	Decorative	M
Oct. 11	Pumpkin Pie 👍	7 weeks	Decorative	M/T
Oct. 12	Blazing Orange 👍	7 weeks	Decorative	M
Oct. 15	Avalon Orange 👍	8 weeks	Decorative	M
Oct. 16	Emberglow Orange	8 weeks	Decorative	M
<b>PINK &amp; PURPLE</b>				
Oct. 9	Purple Majesty 👍	7 weeks	Decorative	M
Oct. 13	NEW Skyfall Purple	8 weeks	Decorative	S
Oct. 14	Blooming Beauty Purple	8 weeks	Decorative	M
Oct. 15	Avalon Pink 👍	8 weeks	Decorative	M
Oct. 15	Avalon Purple 👍	8 weeks	Decorative	M
Oct. 15	Avalon Salmon	8 weeks	Decorative	M
Oct. 19	NEW Skyfall Pink	8 weeks	Decorative	S
<b>RED</b>				
Oct. 8	Red Rover 👍	7 weeks	Decorative	M
Oct. 10	Blooming Beauty Red	6 weeks	Decorative	M
Oct. 15	Avalon Red	8 weeks	Decorative	M
Oct. 15	Eternal Red	8 weeks	Decorative	M/S
Oct. 22	NEW Skyfall Red	8 weeks	Decorative	S
<b>WHITE</b>				
Oct. 7	Pearly White	8 weeks	Decorative	M/T
Oct. 12	Dove White 👍	8 weeks	Decorative	M/S
Oct. 15	Avalon White	8 weeks	Decorative	M/S
Oct. 15	NEW Skyfall White	8 weeks	Decorative	S
Oct. 16	NEW Avalon Creme	8 weeks	Decorative	M



## 2016 Ball Garden Mum Usage

Variety	Spring Flowering	Black Cloth Crop	Large Pots and Bushel Baskets	Hanging Baskets	Southern Heat Tolerance
<b>YELLOW &amp; GREEN</b>					
NEW Avalon Sunny Yellow		•	•	•	•
Avalon Yellow		•	•	•	•
Blooming Beauty Yellow		•		•	•
Buttercup Yellow			•	•	
Dandelion Wine		•	•		
Eureka Yellow		•			•
Florina Yellow		•		•	•
Gold Ball		•		•	•
Gold Cup				•	•
NEW Gold Riot	•	•	•	•	•
Gold Rush Yellow		•	•	•	•
Goldcrest Yellow		•	•	•	•
Goldmine Yellow		•	•	•	•
Grandeur Yellow		•	•	•	•
Honeyblush Yellow			•	•	•
Katelli Yellow	•	•		•	•
NEW Key Lime		•		•	•
Moonglow Yellow		•	•	•	•
NEW Paradiso Yellow	•	•		•	
NEW Skyfall Yellow				•	
Stellar Yellow		•	•	•	•
Sundance Yellow	•	•	•	•	•
Sunny Day	•	•	•	•	•
Sunrise Yellow		•	•	•	•
Yellow Tang	•	•	•	•	•
Yellowstone	•	•	•	•	•
<b>ORANGE &amp; BRONZE</b>					
Atomic Orange			•	•	•
Autumn Glow Bronze		•	•	•	•
Avalon Orange		•	•	•	•
Blazing Orange		•	•	•	•
Echo Bronze		•	•		•
Emberglow Orange			•	•	•
NEW Fireglow			•	•	•
Harvest Bronze	•	•		•	
Homer Orange					
Katelli Bronze	•	•		•	•
Orange Crush		•	•		
Orange Zest			•	•	•
Outrageous Orange		•	•	•	
NEW Paradiso Bronze	•	•		•	
Perfectly Orange		•		•	•
Petit Orange	•	•	•	•	•
Pumpkin Pie	•	•	•		•
Roadrunner Bronze			•	•	•
Sunset Orange	•	•	•	•	•
Twilight Bronze		•		•	

Variety	Spring Flowering	Black Cloth Crop	Large Pots and Bushel Baskets	Hanging Baskets	Southern Heat Tolerance
<b>PINK &amp; PURPLE</b>					
Adonis Purple		•	•		•
Amphion Purple		•	•	•	•
Avalon Pink		•	•	•	•
Avalon Purple		•	•	•	•
Avalon Salmon		•	•	•	•
Blooming Beauty Purple		•		•	•
Brilliance Pink				•	
Flamingo Neon				•	•
Flamingo Pineapple			•	•	
Flamingo Pink			•	•	•
Grapeberry	•	•	•	•	•
NEW Paradiso Pink	•	•		•	
Perfectly Pink		•		•	•
Pink Frenzy		•	•		•
Pizzazz Purple		•		•	•
NEW Plumberry		•	•	•	•
Purple Majesty	•	•	•	•	•
NEW Skyfall Pink				•	
NEW Skyfall Purple				•	
Stellar Pink		•	•	•	•
Stellar Purple		•	•	•	•
Venus Purple	•	•	•	•	•
<b>RED</b>					
Avalon Red		•	•	•	
Blooming Beauty Red	•	•			•
NEW Crimson Blush					•
Eternal Red		•		•	•
Fame Red		•			
Five Alarm Red		•	•	•	•
Flamingo Cranberry			•	•	
Radiant Red		•	•		•
Red Hots	•	•	•	•	•
Red Rover	•	•	•	•	•
Red Ryder		•	•	•	•
NEW Skyfall Red				•	
Stellar Red		•		•	•
<b>WHITE</b>					
Aspen White		•		•	•
NEW Avalon Crème		•		•	•
Avalon White		•	•	•	•
Blooming Beauty White					•
Butter N' Cream		•	•	•	•
Celestial White		•		•	
Dove White	•	•		•	•
Moonglow White		•	•	•	•
NEW Paradiso White	•	•		•	
Pearly White		•	•	•	•
NEW Skyfall White				•	
Sparkle White	•	•		•	•
Starburst White	•	•	•	•	•



# REDUCE SHRINK WITH GREEN MUM NETTING!

Mum netting is an easy and inexpensive way to keep plants retail-ready longer. Netted mums also ship and sell better and last longer in the landscape.

Apply netting at the first visible flower bud, usually when the plant reaches 60 to 70% of its final size, so the netting will be positioned 4 to 5 in. below the top canopy at the time of cracking color.

Two sizes of netting are offered. The 17" x 3,280' size is for use on 10-in. and smaller sizes, with each roll yielding approx. 2,200 pieces. The 23" x 3,280' size is for use on 11-in. and larger sizes, yielding approx. 1,700 pieces per roll.

**For more information, contact your Ball Seed sales rep, or order at [ballseed.com/webtrack](http://ballseed.com/webtrack) or 800 879-BALL.**



Green mum netting helps you make the most of your mums.



Outdoor-produced black cloth garden mums being forced into flower for August sales at Adam Henning Greenhouses in DeMotte, IN.



# Keys to Producing Quality Garden Mums

Start with quality cuttings of the best varieties. Ed's Picks (listed on the inside front cover of this catalog) are varieties we have selected to be the very best for most garden mum programs.

As soon as possible after receiving cuttings, plant into a moist, well-drained media.

Keep well-fertilized, starting at the day of planting and reducing feed as the crop matures. Feed is not needed as buds show some color.

Plants should not be allowed to wilt.

Provide adequate space for the plant to grow to its ultimate size without crowding.

## Spacing Requirements for Garden Mums

APPROXIMATE CONTAINER SIZE	PLANTS PER POT (PPP)	FINAL SPACING (ON CENTER)
Cell pack	1	Pack to pack
4-in. (10-cm) pot	1	4 to 6 in. (10 to 15 cm)
4.5-in. (11-cm) pot	1	5 to 7 in. (13 to 18 cm)
5-in. (13-cm) pot	1 to 3	5 to 8 in. (13 to 20 cm)
6-in. (15-cm) pot	1 to 3	6 to 12 in. (15 to 30 cm)
6.5-in. (16-cm) pot	1 to 3	6.5 to 12 in. (16 to 30 cm)
8-in. (20-cm) pot	1 to 3	16 to 20 in. (40 to 50 cm)
10-in. (25-cm) pot	1 to 3	18 to 24 in. (45 to 60 cm)
12-in. (30-cm) pot	3 to 4	22 to 26 in. (56 to 65 cm)
14-in. (35-cm) pot	4 to 5	26 to 30 in. (65 to 75 cm)
1/2 bu. basket	4 to 5	28 to 34 in. (70 to 86 cm)
1 gallon	1 to 3	9 to 16 in. (23 to 40 cm)
2 gallon	1 to 3	18 to 24 in. (45 to 60 cm)
3 gallon	2 to 3	20 to 30 in. (50 to 75 cm)
5-in. (13-cm) pan	1 to 3	6 to 8 in. (15 to 20 cm)
8 x 5-in. (20 x 13-cm) mum pan	1 to 3	16 to 20 in. (40 to 50 cm)
12-in. (30-cm) color bowl	3 to 5	14 to 20 in. (35 to 50 cm)
14-in. (35-cm) color bowl	3 to 5	28 to 30 in. (70 to 75 cm)
6-in. (15-cm) hanging basket	1 to 3	14 to 16 in. (35 to 40 cm)
10-in. (25-cm) hanging basket	1 to 3	18 to 24 in. (45 to 60 cm)
12-in. (30-cm) hanging basket	2 to 4	26 to 28 in. (65 to 70 cm)

## Upon Arrival

- Ball Garden Mum cuttings are available as both unrooted and rooted cuttings in several tray sizes, pinched and unpinched.
- All cuttings should be planted as soon as possible.
- If necessary to hold cuttings, open the boxes and check the cuttings.
- Unrooted and rooted cuttings can be stored at 34 to 38°F (1 to 3°C), being careful not to freeze.
- For rooted cuttings, place trays on a greenhouse bench, maintain a minimum temperature of 60 to 62°F (16 to 17°C), water, do not let the plants wilt and do not hold for more than 2 to 3 days.

## Unrooted Cuttings

See the section Unrooted Cuttings, page 48.

## Planting

- *This is the most critical period in the production of a quality Garden Mum crop.* Most growers plant the rooted cuttings directly into the final container whenever the space is available. Be prepared – have all the containers filled and the media slightly moist.

- A lighter, well-drained media makes deeper planting less risky. In a heavier media, root loss will delay take-off, reducing the quality of the finished crop.

- Immediately after planting, water the cuttings in with fertilizer such as 20-10-20 at 300 to 400 ppm.

- It may be necessary to mist or syringe the newly planted cuttings for the first few days after planting to prevent wilting.

- If outdoor temperatures are cool (nights in the 50s°F/10 to 15°C), it is recommended that the plants be started in a greenhouse where the night temperatures can be maintained in the 60s°F (15 to 20°C), with 65°F (18°C) being ideal. Better take-off and initial growth will be seen. This is especially important when growing the earliest-flowering varieties (indicated by Early response in the descriptions).

- If nights are cool, apply Florel at 500 ppm 14 days after sticking URC. If using liners, apply 2 to 8 days after planting. Florel can reduce premature budding due to cool temperatures.

## Media

- Many soil mixes are available for growing Garden Mums, including several Ball® Growing Mixes that are excellent for Garden Mum production. Check with your Ball Seed sales rep for the appropriate mix to use in your area.
- Choose a well-drained mix, but avoid mixes that are too light and may dry out too rapidly.
- The mix must also provide enough weight to support the crop.
- The starting pH in a soil-based mix should be 6.0 to 6.5, and in a soilless mix slightly lower at 5.8 to 6.4.

## Pinching

To pinch or not to pinch is the question. The answer is that either will work for natural season Fall crops. Modern varieties do not need any pinching in natural season Fall programs. They will pinch themselves by producing premature buds that do not develop but cause branching to occur. For black cloth crops, we suggest pinching, although many growers are producing black cloth crops without pinching.

## Spacing

Refer to the chart at the left for specific spacing requirements.

- A key to excellent quality, spacing depends on the pot size and the desired finished product.

- Spacing plants too tightly promotes weak, stretched and poor-quality plants. Disease problems are also more likely to occur.

- Many sizes of plastic, fiber and wood containers are suitable for growing Garden Mums.

- The number of plants per pot (ppp) varies depending on the pot size and desired crop time.

## Temperature

- Many times in late Spring to early Summer, cool nights may trigger premature bud formation. One cool night at 50°F (10°C) will not do this, but several days or more of cool temperatures can promote crown bud formation. This is not desirable and may cause the plants to finish too small.

- The best solution is to start the crop in the greenhouse if you are in an area that has cooler night temperatures in the Spring.



However, a little crown bud formation followed by warm night temperatures will be no problem, as the plants will go back to being vegetative and grow around the crown buds.

- To minimize crown bud formation, applications of Florel at 500 ppm a week after planting will help to promote vegetative growth. Most importantly, be sure fertility levels are high.

## Heat Delay

- High day and night temperatures may cause heat delay. As temperatures increase, there is a point when chrysanthemum flower initiation and development begin to slow down. Some varieties are more sensitive than others. All efforts should be made to minimize extremely high day and night temperatures.

- Suggestions to avoid heat delay for shaded crops:

- Start cooling very early in the morning.

- Cool at night with a pad and fan system that pulls air under the black cloth.

- Close the black cloth late in the day at 8 p.m. to avoid heat buildup and leave the cloth closed until 8 a.m.

- For enhanced cooling, a computerized black cloth system may be programmed to open after the sun has set and closed before the sun comes up in the morning.

- Cover before sunrise versus evening.

## Light Intensity

- Garden Mums should be grown in full sun.

- Newly planted cuttings may need light shade for a few days until they are fully established.

## Irrigation & Fertilization

- Garden Mums may be grown using overhead irrigation, sub-irrigation and drip methods. A drip irrigation system is often the best choice, as it keeps the foliage dry to prevent spotting of the leaves and also reduces the chance of developing foliar disease problems.

- When irrigating, apply enough water to thoroughly wet the soil mass. At each irrigation there should be adequate water applied to drip from the container. Never allow the plant to wilt during the early stages of production.

- It is very important to fertilize immediately after planting. Watering in with a fertilizer solution is recommended. A constant liquid feed program using a 20-10-20 type of fertilizer at a rate of 250 to 350 ppm will usually work well. In some growing situations, other formulations may be better. A program of regular soil testing is the best guide to determine the optimum fertilization program.

- Slow-release fertilizers, such as Osmocote, in combination with liquid feeds may also be used.

- Once you see color in the crop, stop feeding and finish the crop with fresh water, which will improve the post-harvest shelf life.

## Height Control & Growth Regulators

NOTE: *With all growth regulators, we recommend an initial small-scale trial.*

- B-Nine has been used for decades for height control and is the preferred chemical to improve the quality of a mum crop. B-Nine applications not only control height but also produce darker, greener leaves and stronger stems.

- If using unrooted cuttings, apply B-Nine at approximately 1,200 to 2,500 ppm at Day 7 after sticking the unrooted cutting.

- An application of B-Nine at 1,200 to 2,500 ppm 7 days after planting the rooted cuttings will tone the plant and reduce the possibility of stretch. This very important step helps produce strong plants with close internodes.

- An application at 5,000 ppm 14 to 21 days after the pinch may be necessary to control the more vigorous varieties, especially for greenhouse-forced Summer-flowering crops.

- B-Nine may not be necessary for most Garden Mums grown outside. Selection of varieties, proper scheduling and pinching are good alternatives to consider before relying too heavily on applications of B-Nine or any growth regulator.

- Bonzi is also a very effective chemical, but takes more skill to apply correctly. A 2 ppm drench when the plants are at the desired finished height will stop the growth. Growers must be extremely careful when using Bonzi.

- Florel has been used to promote branching, prevent premature budding and delay flowering. We suggest applying it early in the crop cycle. A rate of 300 to 500 ppm may be used. Different varieties respond differently and growers must use caution when applying Florel. In general, an application at 500 ppm at the time of pinching, or in place of pinching, is useful in developing a quality plant with little or no delay in flowering. A later application is useful in delaying flowering for late sales.

- Mammoth Mums tend to be more vigorous. An additional application of growth retardant may be required to produce the same size plant as regular Garden Mums.

## Fall-Flowering Programs

### Natural Season Fall Mums

Chrysanthemums are short-day plants and initiate flower buds in response to an interaction of daylength, temperature and plant age. Traditional "natural season" Garden Mums for Fall are planted from May to early July. The time to plant depends on projected sales date, size of the container, number of cuttings per container, variety and local climatic conditions.

- Typical natural season schedule for 6 to 8-in. (15 to 20-cm) containers:

- Plant rooted cuttings June to early July. Stick unrooted cuttings 2 to 3 weeks earlier.

- If pinching, pinch when the plant is established.

- Space plants at 16 to 18 in. (40 to 45 cm) for pot sizes up to 8 in. (20 cm). Space pots larger than 8 in. (20 cm) at 24 in. (60 cm).

- Natural flowering season is September through mid-October. Refer to the Garden Mum Variety Flowering Sequence chart on pages 40-41 to determine the natural season flower date. Record keeping is critical, as it enables the grower to make adjustments to the schedule from the previous season's program as needed. Carefully evaluating your Garden Mum program each year will enable you to fine-tune the planting time to produce consistent plant sizes that will flower in relatively the same time period each year.

- For example, if plants in 4.5-in. (11-cm) pots are consistently too big, make sure you have selected the less-vigorous varieties and consider planting 1 to 2 weeks later.

- If 8-in. (20-cm) pans with 1 cutting per container are consistently too small, make sure you have selected the proper variety, and consider planting 1 week earlier or possibly using 2 cuttings per container.

### Key to Natural-Season Flowering

SEASON	AVERAGE NATURAL FLOWER DATE
Early	September 8-17
Mid	September 18-26
Late	September 27-October 5
Very Late	October 6-20

## Fast Crops

A "fast crop" program can enable growers to produce a quality crop even when starting later than a normal natural season program.

- A 4-in. (10-cm) crop with 1 cutting per container can be planted the last week of July until August 12 for flowering from late September to mid-October.

- A 6 to 6.5-in. (15 to 16-cm) crop with 1 cutting per container can be planted mid-July to late July.

- Larger containers such as 8-in. (20-cm) pans or 2 gallon pots can be planted July 10 to 20, but use 2 cuttings per container.

- The key to a fast crop is to not inhibit the growth by stressing the plants in any way. Do not pinch. Flowering will generally be 4 to 7 days later than a June-planted crop.

- Typical Fast Crop schedule for 6-in. (15-cm) containers:

- Plant rooted cuttings during the third week of July.

- Do not pinch.

- Space plants at 16 to 18 in. (40 to 45 cm) for pot sizes up to 8 in. (20 cm). Space pots larger than 8 in. (20 cm) at 24 in. (60 cm).

- Do not stress plants by wilting or low fertility.

- Plants flower 7 to 10 days later than a natural season crop.





## Premature Budding

Buds may be visible on cuttings you receive or may develop during the early stages of production. In general, this is not an unusual or serious problem and plants will usually develop normally. Small buds, as shown in the photo, are the Garden Mum's way of pinching itself. Larger premature buds are a sign of stress and can usually be minimized by adequate fertilizer levels and not allowing plants to wilt. Early applications of Florel can help minimize premature bud set.

## Scheduling Considerations for a Natural Season Fall Program

There are many schedules for the traditional 8-in. (20-cm) or equivalent natural season Garden Mum, but today most growers are planting rooted cuttings between the first and fourth week of June. If you are using unrooted cuttings, add 2 to 3 weeks for rooting. For a shorter crop time, plant 2 cuttings per container. This will make a late June/mid-July planting possible.

Although many growers like to plant all their Garden Mum crop at one time and let the natural flowering time of the various varieties spread the finish time, this may not produce the most uniformly sized crop.

- Ball Garden Mums are classified into Early, Mid, Late and Very Late-flowering varieties.
- Our breeders have been working to develop more quality varieties in the earlier classes to meet demand in selected markets. These Early-flowering varieties no longer flower primarily in response to short days. The stimulus is the age of the plant, temperature and day-length. Moderate nights and warm days will promote flowering. Extremely hot nights and days will cause delay. Shortening days enhances flowering. Flowering response times are modified by these interacting factors in the Early flowering class, making them tricky to grow. For example, if they are stressed by being allowed to dry out in the rooting trays, they may harden off enough to stop growing and form a well-developed premature bud. Optimum conditions must be provided to keep the plants growing by planting the rooted cuttings as soon as possible, keeping them warm and feeding them well. For natural season flowering, start the earlier varieties in a warm greenhouse, where temperatures and lighting can be controlled. If they are put outside and the temperatures are too cool, these varieties may be thrown into premature flowering. Spraying Florel at 500 ppm on earlier varieties may be beneficial.

• Plant the Early classes the first week of the planting season. The following weeks, start planting the Mid varieties, and then reserve the last planting weeks for the Late and Very Late varieties.

• If all the varieties were planted in the same week, the Mid and especially the Late and Very Late varieties may be given too much crop time. They may eventually outgrow their spacing, which will lead to very poor-quality plants. Planting over a 2 to 3-week period also evens out the workload during the very busy Spring season.

## Controlled Flowering of Summer-Fall Garden Mums (Black Cloth Mums)

Growing Garden Mums using black cloth to shorten the daylength is not difficult. It enables the grower to flower Garden Mums over a longer season and to have the crop ready when desired. The detailed schedule (at left) is a guide to determine the number of short days required.

• Typical controlled Summer-Fall schedule for 6 to 8-in. (15 to 20-cm) containers:

- Plant rooted cuttings in mid-April.
- Pinch when ready, about 10 to 14 days after planting. Pinching is recommended for controlled programs, but try no pinch as well.
- When the plants are established, start shade 2 to 3 weeks after planting.
- Plants flower 6 to 8 weeks after shading, depending on response group (indicated by Black cloth response number under the variety photos on pages 5 to 37).
- Black cloth or 4 to 6-mil black plastic can be used to provide an impermeable light barrier over the crop. The material is pulled over the crop to provide 12 to 15 hours of darkness daily. To reduce heat buildup which can delay flowering, a 7 p.m. to 7 a.m. schedule is helpful. Some growers use supports and nylon wire slightly above the crop or simply lay the plastic right on the plants and hold it down along the edges with pipes, soil or stones. This may not be that easy to manage during heavy rains or wind. A better structure can be

## Summer Controlled-Flowering for 7-Week Response Garden Mums (6 to 6.5-in./15 to 16-cm Pots)

PLANT ROOTED CUTTINGS*	PINCH** (9 DAYS FROM PLANT DATE)	SHADE (12 DAYS FROM PINCH DATE)	SALE*** (7 WEEKS FROM SHADE DATE)
April 4, 2016	April 13, 2016	April 25, 2016	June 13, 2016
April 11, 2016	April 20, 2016	May 2, 2016	June 20, 2016
April 18, 2016	April 27, 2016	May 9, 2016	June 27, 2016
April 25, 2016	May 4, 2016	May 16, 2016	July 4, 2016
May 2, 2016	May 11, 2016	May 23, 2016	July 11, 2016
May 9, 2016	May 18, 2016	May 30, 2016	July 18, 2016
May 16, 2016	May 25, 2016	June 6, 2016	July 25, 2016
May 23, 2016	June 1, 2016	June 13, 2016	August 1, 2016
May 30, 2016	June 8, 2016	June 20, 2016	August 8, 2016
June 6, 2016	June 15, 2016	June 27, 2016	August 15, 2016
June 13, 2016	June 22, 2016	July 4, 2016	August 22, 2016
June 20, 2016	June 29, 2016	July 11, 2016	August 29, 2016
June 27, 2016	July 6, 2016	July 18, 2016	September 5, 2016

\* For 4-in. (10-cm) pot/1 ppp programs, delay the plant and pinch date 1 week. For 8-in. (20-cm) pot/ 2 ppp programs, plant date and pinch date are 1 to 2 weeks earlier.

\*\* Pinch plants when established and have approximately 1 in. (2.5 cm) of new growth.

\*\*\*6-week varieties will flower 1 week earlier; 8-week varieties will flower 1 week later.

Lighting the crop between planting date and shade date is recommended.



made from 10-ft. (3-m) electrical conduit or PVC pipe at 8 to 10-ft. (2.4 to 3-m) spacing. These are bent and stuck into pipe driven into the ground. The material is then pulled over the frame at the end of the day.

- It is best to black cloth the crop until the buds are well-formed and show color. A minimum of 4 weeks of blackout is suggested.

- Select varieties carefully for any controlled flowering program. See suggested varieties throughout the catalog. As always, keep careful notes of the varieties that work best for your particular location. Planting over a 2 to 3-week period also evens out the workload during the very busy Spring season.

## Spring-Flowering Programs

See the chart below for suggested Spring Garden Mum schedules, including Light & Shade recommendations. Variety suggestions are on page 42.

### No Light/No Shade Program

Obviously this is a crop that you need not bother with shade or lights.

- Best results are realized with smaller containers, such as packs to 3-in. (7-cm) pots with 1 cutting per pot.

- Crop time is in the 7-week range.

- Do not attempt to flower after May 1.

- A minimum night temperature of 60°F (16°C) is required for uniform growth and flowering.

- Typical No Light/No Shade schedule for 3-in. (7-cm) containers:

- Plant rooted cuttings in mid-February.

- Pinch when ready, 10 to 14 days after planting.

- Plants flower 6 to 8 weeks after planting.

### Light/Shade Program

Refer to the chart below for specific Light/Shade requirements.

- This program enables the grower to more accurately control the size and flowering time than with a No Light/No Shade program.

- Larger-sized plants may be produced.

- It is essential to maintain a minimum night temperature of 60°F (16°C).

- Typical Light/Shade Spring schedule for 4-in. (10-cm) containers:

- Plant rooted cuttings in February.

- Pinch when ready, 10 to 14 days after planting.

- Light for 2 weeks after planting.

- Plants flower in mid-April, 6 to 8 weeks after the start of short days, depending on the response group.

- For crops flowering after May 1, shade or black cloth is required for controlled flowering response.

- Artificial long days are achieved by lighting the crop from 10 p.m. to 2 a.m. each day for the number of days required. A string of 75 to 100-watt bulbs spaced 3 ft. (90 cm) apart and 3 to 4 ft. (90 cm to 1.2 m) above the crop will provide adequate light for a 6-ft. (1.8-cm) wide row of containers. Control the lights with a simple timer.

- Black cloth or 4 to 6-mil black plastic can be used to provide an impermeable light barrier over the crop. Use as indicated in Controlled Flowering of Summer-Fall Garden Mums on page 46.

### Post-Harvest, Shipping & Consumer Enjoyment or Greenhouse

It is best to sell Garden Mums right out of the field; however, Garden Mums may be stored for up to a week without greatly reducing quality. For best storage results:

- Always reduce the salt levels in the pot by irrigating with fresh water during the last 10 days to 2 weeks of the crop.

- Maintain a storage temperature of 35 to 38°F (2 to 3°C) in the cooler.

- Water the plants well prior to storage. Be certain that the foliage is dry prior to placing in a cooler.

### Pests & Diseases

An IPM (Integrated Pest Management) program is the best defense against the various insects and related pests that attack a mum crop. Constant monitoring of the crop will enable the grower to detect pests before they become a problem and take appropriate action to control them. Many diseases of mums have been overcome by culture-indexing programs being done by the propagator, but there are still a number of root, stem, foliar and flower diseases which the grower might face.

- The best control is to start with clean cuttings and growing media. Proper control of the environment, heat, moisture, ventilation, etc., will then be the best defense.

- There are many effective chemical and natural controls for the numerous insects and diseases that attack mums. Before using any pesticides, check with local agencies in your state to ensure they are registered for specific use. Always follow the labeled rates and application methods.

### Light/Shade Spring-Flowering Program for 7-Week Response Garden Mums (4 to 4.5-in./10 to 11-cm Pots)

PLANT ROOTED CUTTINGS*	PINCH** (ONE WEEK AFTER PLANT DATE)	LIGHT FROM (SAME DAY AS PLANT DATE)	LIGHT TO (14 DAYS FROM PLANT DATE)	START SHADE	SALE***
January 4, 2016	January 11, 2016	January 4, 2016	January 18, 2016	No	March 7, 2016
January 11, 2016	January 18, 2016	January 11, 2016	January 25, 2016	No	March 14, 2016
January 18, 2016	January 25, 2016	January 18, 2016	February 1, 2016	No	March 21, 2016
January 25, 2016	February 1, 2016	January 25, 2016	February 8, 2016	No	March 28, 2016
February 1, 2016	February 8, 2016	February 1, 2016	February 15, 2016	No	April 4, 2016
February 8, 2016	February 15, 2016	February 8, 2016	February 22, 2016	No	April 11, 2016
February 15, 2016	February 22, 2016	February 15, 2016	February 29, 2016	No	April 18, 2016
February 22, 2016	February 29, 2016	February 22, 2016	March 7, 2016	No	April 25, 2016
February 29, 2016	March 7, 2016	February 29, 2016	March 14, 2016	No	May 2, 2016
March 7, 2016	March 14, 2016	March 7, 2016	March 21, 2016	March 21, 2016	May 9, 2016
March 14, 2016	March 21, 2016	March 14, 2016	March 28, 2016	March 28, 2016	May 16, 2016
March 21, 2016	March 28, 2016	March 21, 2016	April 4, 2016	April 4, 2016	May 23, 2016
March 28, 2016	April 4, 2016	March 28, 2016	April 11, 2016	April 11, 2016	May 30, 2016

\* 5 to 6.5-in. (13 to 16-cm) containers should be planted and pinched 1 week earlier for the desired flowering date.

\*\* Pinch plants when established and have approximately 1 in. (2.5 cm) of new growth.

\*\*\* 6-week varieties will flower 1 week earlier; 8-week varieties will flower 1 week later.





The rooting stations for Ball Garden Mums are selected for their ability to produce high-quality rooted liners – here’s an example. Every day counts with a Garden Mum crop, so look to Ball for a great start!

## Unrooted Cuttings

### Upon Arrival

- Cuttings should be stuck immediately after receiving.
- If necessary to hold cuttings, open the boxes and check the cuttings.
- Unrooted cuttings can be stored at 34 to 38°F (1 to 3°C), being careful not to freeze.
- Do not hold cuttings for more than 2 to 3 days.

### Recommended Facilities

- A separate environment where high humidity and temperatures can be maintained is critical.
- A mist system with a cycle that can be adjusted to maintain the cuttings in a turgid condition, reducing stress.
- A heating system that can maintain a 70 to 72°F (21 to 22°C) soil temperature.
- A lighting system to supply 10 f.c. (100 Lux) at plant level, in the middle of the night (10 p.m. to 2 a.m.), to help keep the cuttings vegetative.

## Media

- Use soilless media that is well-drained, affords good aeration and has good moisture retention.
- Maintain soil pH at 5.8 to 6.2 with a soil EC of less than 1.0 (mmhos/cm).

## Sticking Cuttings

- Fill containers and moisten media before sticking cuttings.
- Holes may be dibbled into the media or the cutting may be directly stuck into the media.
- Cuttings should be stuck approximately 1 to 1.5 in. (2.5 to 4 cm) into the media; it may be necessary to remove the lower leaf.

- Garden Mums are usually started in 50 to 100-trays. The larger size tray gives the grower more time in which to transplant, since the plant must not be allowed to become rootbound.

## After Sticking

- Water in immediately. Place under mist; the misting cycle will depend on the light, temperature, humidity, degree of rooting, etc. The following is a guide.

<b>Days 1 to 4</b>	5 seconds mist every 10 to 15 minutes
<b>Days 5 to 8</b>	5 seconds mist every 15 to 20 minutes
<b>Days 9 to 14</b>	5 seconds mist every 25 to 30 minutes

- Use the minimum mist that will prevent wilting.
- Too much mist or for too long after the plant has initiated roots can result in stretched plants.
- Maintain 70 to 72°F (21 to 22°C) soil temperature.
- Maintain high light intensity. It may be necessary to provide some shade under severe heat conditions, but high intensity will produce a higher-quality rooted cutting.

- During rooting, fertilize every 5 to 6 days with a solution of 250 to 300 ppm nitrogen using a 20-10-20 or similar feed.

- B-Nine applied at 1,000 to 1,500 ppm on Day 7 will reduce stretch. An additional application at Day 14 may be needed on varieties that are taking off quickly.

- Night interruption (10 p.m. to 2 a.m.) is required in the rooting area.

TIME OF YEAR	HOURS OF LIGHT (MIDDLE OF THE NIGHT)
October to March	4 hrs. per night
April to May & August to September	3 hrs. per night
June to July	2 hrs. per night

## After the Cutting is Rooted

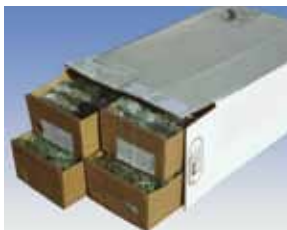
- At this point, the container can be placed in the growing-on environment or the plants can be transplanted into the finish containers.
- Any stressing of the plant at this time will reduce quality.
- Mist or syringe the plants as required to prevent wilting.
- Water in immediately after transplanting with fertilizer at 300 to 400 ppm.
- Continue night interruption or start short days as the schedule may require.
- Begin constant liquid feed program of 250 to 300 ppm with each irrigation.
- Lower fertilizer rate to 200 to 250 ppm in mid to late Summer as plant size warrants.



Ball Mums are packed neatly and uniformly.



Ball unrooted cuttings are well labeled and easy to handle.



Our unrooted cuttings are organized for your convenience.

More mum culture questions?  
Call our Technical Services team at 800 879-BALL.

# Ball Mum Rooting Stations

Your Ball Seed sales rep works with the most reliable suppliers in North America to provide you with the highest quality rooted mum cuttings.

**D. S. Cole Growers**, Loudon, New Hampshire

**Genesis Plant Propagation Ltd.**, Langley, British Columbia

**George Sant & Sons**, Kleinburg, Ontario

**Green Leaf Plants®**, Smoketown, Pennsylvania

**Greenstreet Growers, Inc.**, Lothian, Maryland

**GroLink®**, Oxnard, California

**Keepsake Plants®**, Alva, Florida

**Kube-Pak**, Allentown, New Jersey

**Mast Young Plants**, Grand Rapids, Michigan

**C. Raker & Sons, Inc.**, Litchfield, Michigan

**Timbuk Farms, Inc.**, Granville, Ohio

**Van de Wetering Greenhouses, Inc.**, Jamesport, New York

## Index

Adonis Purple.....21	Grapeberry.....23
Amphion Purple.....21	Harvest Bronze.....14
Aspen White.....35	Homer Orange.....15
Atomic Orange.....13	Honeyblush Yellow.....8
Autumn Glow Bronze.....13	Katelli Bronze.....15
NEW Avalon Crème.....35	Katelli Yellow.....8
Avalon Orange.....13	NEW Key Lime.....8
Avalon Pink.....21	Moonglow White.....36
Avalon Purple.....21	Moonglow Yellow.....9
Avalon Red.....29	Orange Crush.....16
Avalon Salmon.....22	Orange Zest.....16
NEW Avalon Sunny Yellow.....5	Outrageous Orange.....16
Avalon White.....35	NEW Paradiso Bronze.....17
Avalon Yellow.....5	NEW Paradiso Pink.....23
Blooming Beauty Collection.....38	NEW Paradiso White.....36
Blooming Beauty Red.....29	NEW Paradiso Yellow.....9
Blazing Orange.....13	Pearly White.....37
Brilliance Pink.....22	Perfectly Orange.....17
Butter N' Cream.....35	Perfectly Pink.....23
Buttercup Yellow.....5	Petit Orange.....17
Celestial White.....36	Pink Frenzy.....25
NEW Crimson Blush.....29	Pizzazz Purple.....25
Dandelion Wine.....5	NEW Plumberry.....25
Dove White.....36	Pumpkin Pie.....17
Echo Bronze.....14	Purple Majesty.....25
Emberglow Orange.....14	Radiant Red.....30
Eternal Red.....29	Red Hots.....31
Eureka Yellow.....6	Red Rover.....31
Fame Red.....30	Red Ryder.....32
NEW Fireglow.....14	Roadrunner Bronze.....18
Five Alarm Red.....30	NEW Skyfall Series.....38
Flamingo Cranberry.....30	Sparkle White.....37
Flamingo Neon.....22	Starburst White.....37
Flamingo Pineapple.....22	Stellar Pink.....26
Flamingo Pink.....23	Stellar Purple.....26
Florina Yellow.....6	Stellar Red.....32
Gold Ball.....6	Stellar Yellow.....10
Gold Cup.....6	Sundance Yellow.....10
NEW Gold Riot.....7	Sunny Day.....10
Gold Rush Yellow.....7	Sunrise Yellow.....10
Goldcrest Yellow.....7	Sunset Orange.....18
Goldmine Yellow.....7	Twilight Bronze.....18
Grandeur Yellow.....8	Venus Purple.....26
	Yellow Tang.....11
	Yellowstone.....11

## 2016 Drops and Substitutions

DROPPED VARIETY	SUGGESTED SUBS FOR BLACK CLOTH CROPS	SUGGESTED SUBS FOR NATURAL SEASON CROPS
Amata Pink	Perfectly Pink, Pink Frenzy	Pink Frenzy, Flamingo Pink, Paradiso Pink
Early Autumn Bronze	Katelli Bronze, Harvest Bronze	Echo Bronze, Katelli Bronze
Goldfinch Yellow	Sunny Day, Yellow Tang	Gold Riot, Yellow Tang, Gold Ball
Grandeur Red	Red Rover, Red Hots	Red Hots, Radiant Red, Stellar Red
Grandeur White	Celestial White, Moonglow White	Moonglow White, Aspen White
Maia Coral	Pink Frenzy	Flamingo Pink, Pink Frenzy
Manakin Red	Radiant Red, Red Ryder	Red Ryder, Radiant Red
Red Alert	Red Hots, Red Rover	Red Ryder, Blooming Beauty Red, Red Rover



On the cover: NEW Key Lime

# BALL MUMS

Maximize profits and customer satisfaction with the best selection of garden mums anywhere...nearly 100 trialed and tested varieties, backed by solid culture information and outstanding customer service to help you achieve 100% growing and selling success!

BallSeed®

Order at [ballseed.com/webtrack](http://ballseed.com/webtrack).

Talk to us.

Ball Seed: 800 879-BALL

Ball ColorLink®: 800 686-7380

Visit [ballseed.com](http://ballseed.com) for current Terms & Conditions of Sale.

©2015 Ball Horticultural Company 15508

♻️ Printed in the U.S. on 10% post-consumer recycled paper with soy-based inks. ™ denotes a trademark of and ® denotes a registered trademark of Ball Horticultural Company in the U.S., unless otherwise noted. It may also be registered in other countries.

100%  
RELIABLE