

2020-2021 Ball Mums

BallSeed®





BallMums

Excellence, from Start to Finish

Ball Mums stops at nothing to find the highest-quality products in the industry, **so you can grow with confidence!**

It all starts with quality. Each variety has been chosen after **years of extensive trialing** across North America, providing the most superior genetics at all stages – from production through landscape performance.

Cindy Drumgool



Before selecting our products, the following criteria is evaluated:

outstanding genetics, vivid colors, flower color retention, uniformity, durability and flexibility, excellent growth habit, reliability in production and disease resistance. The result – **the finest garden mums in the industry with excellent keeping quality.**

The Ball Mums team delivers personalized service and customized solutions on variety selection, crop scheduling and culture information, keeping you in mind every step of the way. And, you can stay connected to your orders with **WebTrack®**, our business management solution that provides 24/7 online access to products, order shipping and tracking, scheduling and culture info, and more!



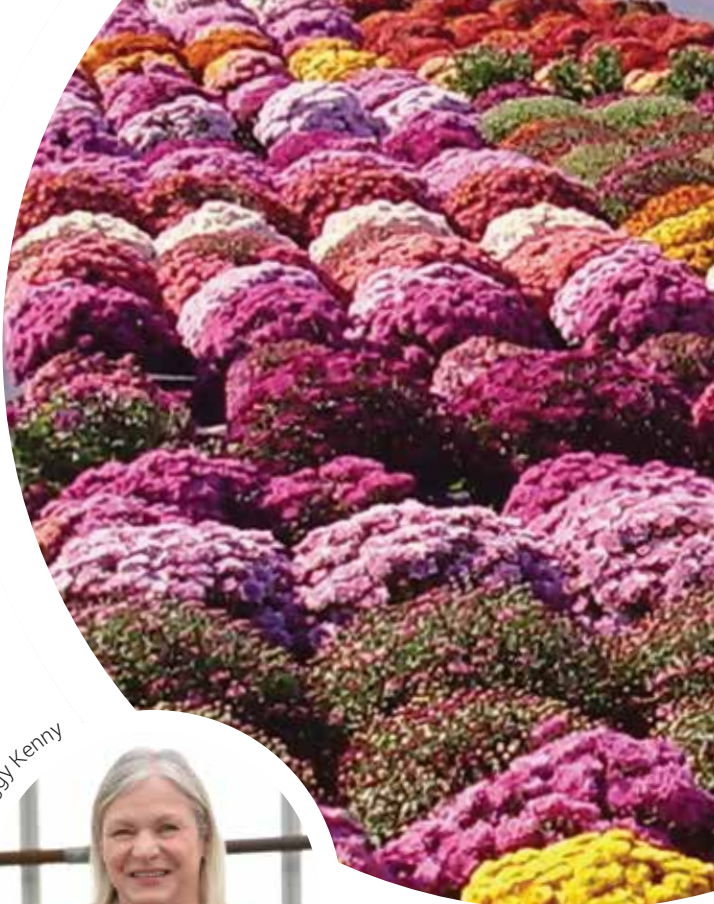


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Peggy Kenny



All of these mums are supported by Ball Seed's one-of-a-kind service and supply, connecting you with

the **leading distribution network of top suppliers** from across the country that guarantees you'll receive your orders on time and on target.

To start growing the best-quality mums, contact your Ball Seed Sales Rep today!



On the cover:
Sunset Orange



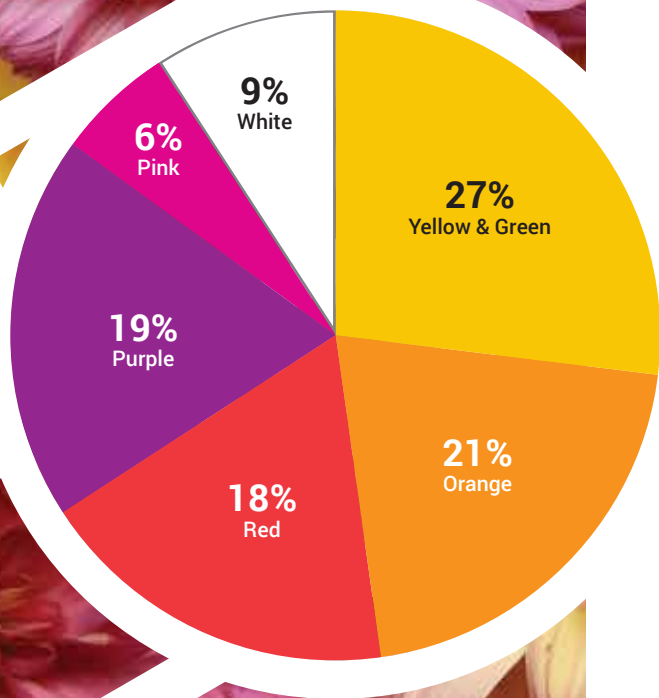
Ball Mums Guide to Color Selection

Getting your ratios right

Our customers often wonder what percentage of each color class they should grow to maximize their business. The color chart to the left reflects Ball's most recent sales nationwide, and we recommend you utilize that same ratio of colors for your annual growing program – to obtain the perfect balance of colors.

You'll find plenty of top-performing options to choose from within each group, along with all the information needed to select the best varieties for your particular market.

Check with your Ball Seed Sales Representative for regional recommendations.



Key to symbols



European (ball-shaped) habit



Performs well in Spring flowerings



Performs well in black cloth flowerings



Heat-tolerant variety (FL/TX)



Excellent for landscapes



Team's Pick

New Varieties 2020

Kizzmet Golden Yellow **page 14**

Warm, golden yellow color – perfect for Fall – features a mounded, European habit, prolific flowering and good keeping quality.



Hot Sugar Gold Bronze **page 20**

Golden bronze to orange-yellow variety with late flowering and good keeping quality. Mounded growth habit is good for landscapes.



Trickster Golden Bronze **page 23**

This trickster earns its name by changing from golden yellow to orange-bronze, depending on the temperature.



Zuma Orange **page 23**

This mounded variety features striking orange blooms and a darker, deep warm center with limited fading!

Mumma Mia Red **page 29**

A medium-tall, striking red variety with a fantastic European habit and excellent heat tolerance. Grow this one with confidence!



Skye Pink **page 38**

Bright, two-tone dark pink flowers with a very uniform, mounded habit perform great in landscapes of all sizes.



Whispered Lavender Pink **page 39**

Decorative, duplex, dark lavender-pink flowers cover this mounded, vigorous mum. Excellent keeping quality!



Ball Mums Families

Genetically connected for easy growing

Ball Mums families streamline production by delivering consistency, uniformity and ease of growing. These genetically related components are easy to grow due to similar culture programs, and their well-matched vigor, habit and timing ensure consistency you can rely on. Our mum families include some of the most popular varieties in a range of colors your customers will love.

Stellar

- Popular family flowers prolifically
- Almost perfect ball-shaped habit
- Performs well in both natural season and black cloth crops

Timing	Flower Date	Black Cloth Response					Habit	Vigor
Mid	9/19-9/22	7 Weeks					European	Medium/Short
		4"	6"	8"	10"	12"	½ Bushel	H.B.
Natural Season		●	●	●	●	●	●	★
Black Cloth		●	●	●	●			●



Yellow
page 15



Red
page 30



Purple
page 34



Pink
page 39



Flamingo

- Earlier flowering
- Excellent growth habit
- Slightly smaller and slow-to-open flowers

Timing	Flower Date	Black Cloth Response					Habit	Vigor
Mid	9/23-9/27	8 Weeks					European	Medium
		4"	6"	8"	10"	12"	½ Bushel	H.B.
Natural Season		●	●	●	●	●	●*	●
Black Cloth								

*except Neon Pink



Cranberry Red
page 28



Neon Pink
page 36



Pineapple Pink
page 37



Pink
page 37



Paradiso

- Prolific, medium-size flowers
- Branches freely with strong, yet flexible stems
- Great in black cloth and natural season

Timing	Flower Date	Black Cloth Response					Habit	Vigor
Late	9/27-9/28	7 Weeks					European	Medium/Short
		4"	6"	8"	10"	12"	½ Bushel	H.B.
Natural Season		●	●	●	●			★
Black Cloth		●	●	●				●



Yellow
page 14



Bronze
page 21



Pink
page 37



White
page 43



Morgana

- Suitable for indoor and outdoor production
- Large, two-tone flowers with dark centers and lighter outside petals
- Flowers open gradually, for a long supply window
- Excellent keeping quality

Timing	Flower Date	Black Cloth Response					Habit	Vigor
Very Late	10/7-10/9	8 Weeks					Mounded	Medium/Short To Medium
		4"	6"	8"	10"	12"	½ Bushel	H.B.
NATURAL SEASON		●	●	●			●	★
BLACK CLOTH		●	●	●	●	●		



Yellow
page 14



Orange
page 20



Red
page 28



Purple
page 33



White
page 43



Avalon

- Medium to very large flowers
- Dark green foliage and strong stems
- Slow growing, surges in Fall

Timing	Flower Date	Black Cloth Response					Habit	Vigor
Very Late	10/15-10/19	8 Weeks					Mounded*	Medium/Short To Medium
		4"	6"	8"	10"	12"	½ Bushel	H.B.
NATURAL SEASON		●	●	●	●	●		★
BLACK CLOTH		●	●	●	●			●

*Salmon has European habit



Golden Yellow
page 11



Sunny Yellow
page 11



Orange
page 18



Red
page 27



Purple
page 32



Pink
page 36



Salmon
page 36



Crème White
page 41





Ball Mums Duos

Uniform, cost-efficient combos

Ball Mums offers duos, an assortment of two-component mixtures in complimentary colors that lower your input costs by utilizing only two inputs rather than multiple. Each duo combination is selected to grow together with an even care regime, and similar habit and timing – for uniform, two-tone mum displays you can count on.

Katelli

- Outstanding color retention
- Uniform, early-flowering plants
- Best in 4 to 8-in. (10 to 20-cm) pots

Timing	Flower Date	Black Cloth Response			Habit		Vigor	
Early	9/13-9/15	6 Weeks			European		Short To Medium	
		4"	6"	8"	10"	12"	½ Bushel	H.B.
Natural Season		●	●	●				★
Black Cloth		●	●	●				●



Yellow
page 13

Bronze
page 20

Moonglow

- Excellent ball-shaped habit
- Large flowers and dark foliage on strong, flexible stems
- Performs well in both natural season and black cloth crops

Timing	Flower Date	Black Cloth Response			Habit		Vigor	
Early	9/15-9/17	7 Weeks			European		Medium	
		4"	6"	8"	10"	12"	½ Bushel	H.B.
Natural Season		●	●	●	●	●	●	●
Black Cloth		●	●	●	●			●



Yellow
page 14

White
page 42

Perfectly

- Large, two-tone flowers
- Tidy, mounded growth habit
- Best for smaller containers

Timing	Flower Date	Black Cloth Response			Habit	Vigor		
Mid	9/21-9/22	7 Weeks			Mounded	Short/Short To Medium		
		4"	6"	8"	10"	12"	½ Bushel	H.B.
Natural Season		●	●	●	●			●
Black Cloth		●	●					●



Orange
page 21

Pink
page 38

Grapeberry

- Superb landscape performance
- Long-lasting color in hot black cloth flowerings
- Branches freely with strong stems

Timing	Flower Date	Black Cloth Response			Habit	Vigor		
Late	10/4	7-8 Weeks			European	Medium/Short To Medium		
		4"	6"	8"	10"	12"	½ Bushel	H.B.
Natural Season		●	●	●	●	●	●	●
Black Cloth		●	●	●				●



Red
page 28

Purple
page 32

Pop Eye

- Large, decorative, duplex flowers
- Prolific flowering
- Dark green foliage on strong, flexible stems

Timing	Flower Date	Black Cloth Response			Habit	Vigor		
Very Late	10/6	8 Weeks			Mounded	Medium		
		4"	6"	8"	10"	12"	½ Bushel	H.B.
Natural Season		●	●	●	●	●		●
Black Cloth		●	●	●				●



Orange
page 22

Pink
page 38

Ball Mums Duos *cont.*

Majesty

- Extraordinary flower count
- Excellent growth habit
- Rich, saturated color

Timing	Flower Date	Black Cloth Response				Habit	Vigor	
Very Late	10/9	7 Weeks				European	Medium	
		4"	6"	8"	10"	12"	½ Bushel	H.B.
Natural Season		●	●	●	●	●	●	●
Black Cloth		●	●	●	●	●	●	●



Red
page 28

Purple
page 32

Dove

- Prolific and uniform flowering
- Flexible stems on a spherical plant
- Slow in black cloth, but with excellent habit and production

Timing	Flower Date	Black Cloth Response				Habit	Vigor	
Very Late	10/11	7-8 Weeks				European	Medium	
		4"	6"	8"	10"	12"	½ Bushel	H.B.
Natural Season		●	●	●	●			★
Black Cloth		●	●	●	●			●



Yellow
page 11

White
page 42

Skyfall Collection



Skyfall is an opportunity to retail a premium product – ideal for late-season garden mum production. With a more rounded, spreading shape than traditional mums, this collection works great in 7 to 11-in. (18 to 20-cm) hanging baskets. Features a decorative flower form and great performance in black cloth flowerings. Plus, you can utilize the range of colors to create beautiful tricolor combinations!

Available Colors: Pink, Purple, Red, White, Yellow

Spacing: 10-20 in. (25-51 cm)

Height: 8-14 in. (20-36 cm)

Width: 20-30 in. (51-76 cm)



TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
Very Late	10/15 - 10/23	9 Weeks	Mounded, Compact	Short

Growing Protocol*

Region	Culture type	HB Size	Stick week	Prop. period in weeks	Transplant week (3 PPP / HB)	Start Short Day period	Finish Week
North	Black-out	10"	19-26	3	22-29	29-36	35-43
		11"	18-25	3	21-28	29-36	36-43
	Natural	10"	25-26	3	28-29		43
		11"	24-25	3	27-28		43
South-West	Black-out	10"	19-26	3	22-29	29-36	35-43
		11"	18-25	3	21-28	29-36	36-43
	Natural	10"	25-26	2	27-28		40-41
		11"	26	2	28		40-41
South-East	Black-out	10"	19-26	3	22-29	29-36	35-43
		11"	18-25	3	21-28	29-36	36-43
	Natural	10"	23-27	3	26-31		45
		11"	22-26	3	25-29		45

* Recommendations according to experiences with growers in the mentioned regions in 2016.

Ball Mums Yellow & Green

Avalon Golden Yellow

Avalon Sunny Yellow

Buttercup Yellow

Dove Yellow

Gold Cup Yellow

Gold Riot Yellow

Gold Rush Yellow

Goldcrest Yellow

Goldmine Yellow

Honeyblush Yellow

Katelli Yellow

Key Lime

New Kizzmet Golden Yellow

Moonglow Yellow

Morgana Yellow

Paradiso Yellow

Stellar Yellow

Sundance Yellow

Sunny Day Yellow

Sunrise Yellow

Yellow Tang

Yellowstone

Zinger Yellow

27%

of your mums
program



Avalon Golden Yellow

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

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. For more information on the Avalon family, see page 5.

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



Avalon Sunny Yellow

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/19	8 WEEKS	MOUNDED	MEDIUM

Takes Avalon Yellow to the next level with a tighter habit and better flower form. Medium-to-large flowers with a bright, clear yellow color grow up to 2 in. (5 cm) on dark green foliage. Sunny Yellow branches freely, with very strong stems. For more information on the Avalon family, see page 5.

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



Buttercup Yellow

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 container sizes. Earlier, stronger and more uniform than Goldcrest Yellow.

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



Dove Yellow (PPAF)

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

An excellent European habit with prolific and uniform flowering, as well as flexible stems. Flowers a week after Starburst White in the Fall to maintain a high-quality sequence of varieties through early October. Slow in black cloth, but with excellent habit and production. A sport of Dove White. For more information on the Dove duo, see page 8.

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



Gold Cup Yellow

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

Golden yellow decorative in the color range of Yellow Tang or Goldmine. Well-petalled flowers grow up to 2 in. (5 cm). Develops into a fine spherical plant with excellent flower count. 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	●	●	●				●



Gold Riot Yellow

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/9	8 WEEKS	EUROPEAN	MEDIUM

Prolific flowering like Yellow Tang, with a rich, golden yellow flower color. Medium-to-large, 2-in. (5-cm) 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. *Excellent keeping quality.*

	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	10/1	7 WEEKS	EUROPEAN	MEDIUM

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. (20-cm) 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	MOUNDED	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
VERY EARLY	9/9	6 WEEKS	EUROPEAN	MEDIUM/TALL

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

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



Honeyblush Yellow

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

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

A bright yellow sport 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 to 8-in. (10 to 20-cm) pots. For more information on the Katelli duo, see page 6.

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



Key Lime

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

A unique color in garden mums! Key Lime displays chartreuse/green, small to medium-sized flowers. It develops into a freely branching plant with tremendous flower count. The perfect "decorator" choice for Fall displays.

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

● - suggested ★ - highly recommended



New Kizzmet Golden Yellow

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/13	8 WEEKS	EUROPEAN	MEDIUM

Warm, golden yellow color is deeper than others of this type, and perfect for Fall. Features a European habit, prolific flowering and good keeping quality. Mounded growth habit is good for landscapes; showed no heat delay during trials.

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



Moonglow Yellow

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. For more information on the Moonglow duo, see page 6.

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



Morgana Yellow (PPAF)

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

Yellow variety within this large-flowered family – suitable for indoor and outdoor production. Medium-vigor series features two-tone flowers with dark centers surrounded by lighter outside petals. Flowers open gradually, for a long supply window. *Excellent keeping quality.* For more information on the Morgana family, see page 5.

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



Paradiso Yellow

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

A cheery, prolific-flowering yellow. Like others in the Paradiso family, this 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. For more information on the Paradiso family, see page 5.

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



Stellar Yellow

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

Medium-yellow decorative is comparable in color to Grandeur Yellow, with superior uniformity. Grows into an almost-perfect ball shape and flowers prolifically. Performs well throughout North America in both natural season and black cloth crops. For more information on the Stellar family, see page 4.

	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

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. *Excellent keeping quality.*

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



Sunny Day Yellow (PP24,670)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/16	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

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY EARLY	9/7	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	●	●	●				●

● - suggested ★ - highly recommended



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. *Excellent keeping quality.*

	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	9/21	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	●	●	●	●			●



Zinger Yellow (PPAF)

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

Bright, clean yellow blooms and dark green foliage on strong, flexible stems. Very good decorative flower form. Classic, 1.75-in. (4-cm) flowers are extremely prolific. Spherical growth habit and branches freely. Grower friendly variety! Upgrades Yellowstone variety.

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



Honeyblush Yellow

Ball Mums Orange & Bronze

Autumn Envy Bronze
Autumn Glow Bronze
Avalon Orange
Blazing Orange
Copper Coin Bronze
Emberglow Orange

Fireglow Bronze
Harvest Bronze
Hot Spot Bronze
New Hot Sugar Gold Bronze
Katelli Bronze
Morgana Orange

Mumosa Orange
Orange Zest
Paradiso Bronze
Perfectly Orange
Petit Orange
Pop Eye Orange

Pumpkin Pie Orange
Sunset Orange
New Trickster Golden Bronze
Twilight Bronze
New Zuma Orange



21%
of your mums
program



Autumn Envy Bronze (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY EARLY	9/8	6 WEEKS	MOUNDED	SHORT

The best early, two-tone bronze decorative mum. Large-flowered variety features fully petalled, 2-in. (5-cm), showy blooms for great Fall color! Earlier to flower than Katelli Bronze.

	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 pot sizes. 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	10/16	8 WEEKS	MOUNDED	MEDIUM

Terrific two-tone color, large flowers and an excellent mounded habit. Grows slowly until early September, when it surges for a beautiful finish – a great wrap up to the Fall season. Handles heavy Fall rains and light frost. Try it in black cloth crops. For more information on the Avalon family, see page 5.

	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 container sizes for Spring, Summer and Fall flowerings. Great in landscapes. *Excellent keeping quality.*

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



Copper Coin Bronze

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

Rich orange flowers with bronze/chocolate center petals stand out at the peak of Fall! High flower count and great uniformity. Large flowers, 2 in. (5 cm) in diameter. Performed well in both Summer black cloth flowering trials and outdoor natural season trials.

	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 Yellow. Not for black cloth or Spring-flowering crops.

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



Fireglow Bronze

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/23	8 WEEKS	EUROPEAN	MEDIUM

Beautiful, traditional Fall color and a perfect decorative flower form. Fireglow Bronze features outstanding flower size – 2.25 in. (6 cm) – 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 (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/1	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	●	●	●				●

● - suggested ★ - highly recommended



Hot Spot Bronze

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

Large, decorative flowers highlighted with orange-red center petals and butterscotch surrounding petals. Plants develop into large, full mounds with strong stems, dark foliage and good flexibility. In high temperatures, the flower color is more yellow than two-toned.

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



New Hot Sugar Gold Bronze

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

Golden bronze to orange-yellow – color is more orange in cooler temps. Late flowering with good keeping quality. Mounded growth habit is good for landscapes.

	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	9/15	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. (20-cm) and smaller pots. Takes the heat! Excellent keeping quality. For more information on the Katelli duo, see page 6.

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



Morgana Orange (PPAF)

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

Orange variety within this large-flowered family – suitable for indoor and outdoor production. Medium-vigor series features two-tone flowers with dark centers surrounded by lighter outside petals. Flowers open gradually, for a long supply window. Excellent keeping quality. For more information on the Morgana family, see page 5.

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



Mumosa Orange (PPAF)

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

A rich, fluorescent, two-tone orange-coral flower color. Offers medium-sized, 1.5-in. (4-cm), fully petalled blooms on strong, flexible stems. Mounded growth habit and branches freely. Upgrades the uniformity of Orange Zest, and offers better flower color and flower form than Petit Orange.

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



Orange Zest

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/25	8 WEEKS	MOUNDED	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. *Excellent keeping quality.*

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



Paradiso Bronze

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

Classic bronze color on a nicely spherical growth habit. Paradiso Bronze has medium-size, decorative flowers, medium green foliage, free branching and strong, flexible stems. A slightly mounded plant. For more information on the Paradiso family, see page 5.

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



Perfectly Orange

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

Large flowers and great orange color. This color sport 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. For more information on the Perfectly duo, see page 7.

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

● - suggested ★ - highly recommended



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	●	●	●	●	●	●	●



Pop Eye Orange

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/6	8 WEEKS	MOUNDED	MEDIUM

Large, duplex flowers have a light green disc, dark bronze center and warm-orange distal petals. Plants have strong, flexible stems and dark foliage. Durable even in heavy rains. A color sport of Pop Eye Pink with similar mounded habit. For more information on the Pop Eye duo, see page 7.

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



Pumpkin Pie Orange

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

Striking color mimics Fall foliage and pumpkins – excellent for Fall decorations! Easy to size up; prolific and uniform. Good flower color in the South; butterscotch color in hot black cloth flowerings. Note: Plant it late to take advantage of its natural vigor. *Excellent keeping quality in northern states.*

	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	9/27	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	●	●	●	●	●	●	●



New Trickster Golden Bronze

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/23	8 WEEKS	MOUNDED	MEDIUM

Mid-season, golden yellow to orange-bronze blooms. More golden in high heat and changes from one color to the other, depending on temperature, but doesn't change as it ages – hence the Trickster name. Large, mounded habit is fantastic in landscapes; performed well in black cloth flowering trials.

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

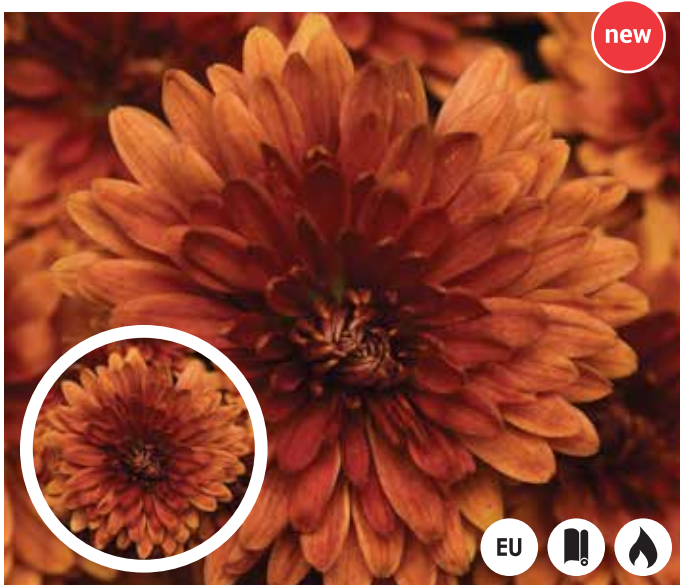


Twilight Bronze (PP20,933)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/10	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	●	●					



New Zuma Orange

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

Striking, early-flowering, orange blooms with a darker, deep warm center. Very good keeping quality with limited fading; did not show heat delay. Mounded growth habit. Performed well in black cloth trials.

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



Petit Orange

● - suggested ★ - highly recommended

Landscape

Keeping quality
you can count on

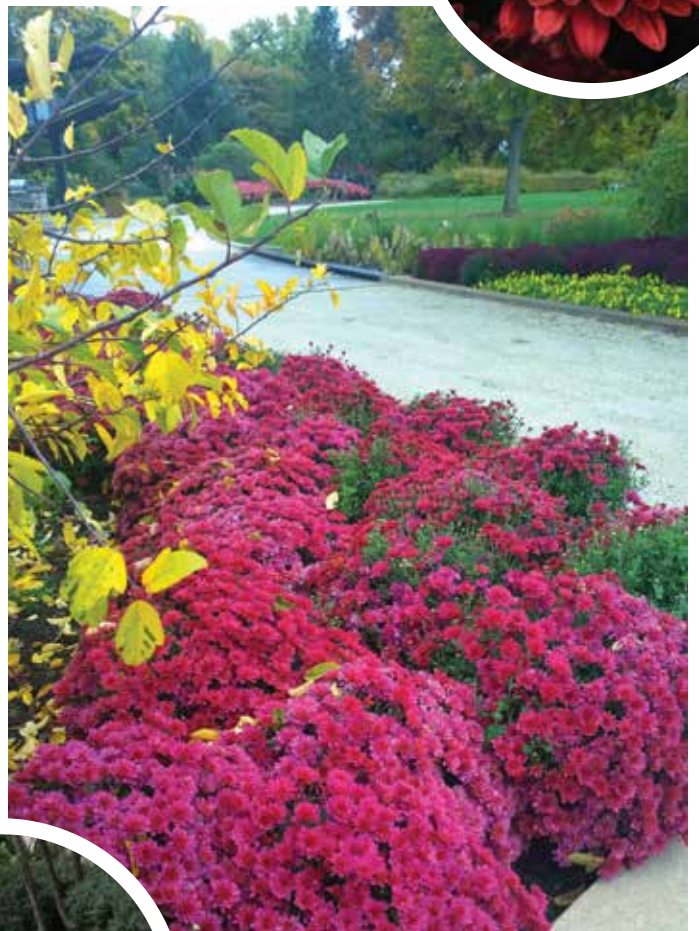
Ball Mums offers a full assortment of mum varieties that have been trialed and proven for their excellence in the landscape. These mums offer vibrant color all season long, as well as superior heat, rain and frost tolerance. They are chosen for their “keeping quality”, which guarantees they will last longer and later in the landscape, creating exceptional value for your customers!





Here are our choices for the best of the best in landscape mums, organized by color.

Yellow & Green	Orange & Bronze	Red	Purple	Pink	White
Avalon Golden Yellow	Autumn Envy Bronze	Cranbury Red	Avalon Purple	Avalon Pink	Aspen White
Avalon Sunny Yellow	Avalon Orange	Eternal Red	Grapeberry Purple	Avalon Salmon	Avalon Crème White
Gold Riot Yellow	Blazing Orange	Five Alarm Red	Majesty Purple	Carousel Pink	Butter N' Cream White
Gold Rush Yellow	Copper Coin Bronze	Flamingo Cranberry Red	Morgana Purple	Flamingo Neon Pink	Celestial White
Goldcrest Yellow	New Hot Sugar Gold Bronze	Grapeberry Red	Pizzazz Purple	Flamingo Pineapple Pink	Morgana White
Goldmine Yellow	Katelli Bronze	Majesty Red	Plumberry Purple	Flamingo Pink	Starburst White
Honeyblush Yellow	Morgana Orange	Morgana Red	Poppin Purple	Jazzberry Pink	
New Kizzmet Golden Yellow	Orange Zest	New Mumma Mia Red	Venus Purple	Pink Frenzy	
Morgana Yellow	Petit Orange	Radiant Red		New Skye Pink	
Sundance Yellow	Pumpkin Pie Orange	Red Hots			
Sunny Day Yellow	New Trickster Golden Bronze	Red Ryder			
Sunrise Yellow					
Yellow Tang					
Yellowstone					
Zinger Yellow					



Ball Mums Red

Avalon Red
Cranbury Red
Eternal Red
Five Alarm Red

Flamingo Cranberry Red
Grapeberry Red
Majesty Red
Morgana Red

New Mumma Mia Red
Radiant Red
Red Hots
Red Rover

Red Ryder
Stellar Red



18%
of your mums
program



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Avalon Red (PP24,021)

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

The red decorative of the Avalon family. Large flowers offer 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! For more information on the Avalon family, see page 5.

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



Cranbury Red (PPAF)

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

Solid bright red flower color – may have the best color retention of all available early, red varieties. Flowers after Five Alarm Red. Features fully petalled, large, 2-in. (5-cm) flowers. Good spherical, mounded growth habit. Very dark green foliage. *Excellent keeping quality.*

	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	10/14	8 WEEKS	MOUNDED	MEDIUM

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	●	●					



top seller

Five Alarm Red (PP19,791)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
EARLY	9/11	6 WEEKS	MOUNDED	MEDIUM

Our earliest-to-flower red decorative for Fall has superb color and good color retention. Flowering uniformity is average. Some early crown buds help with early sales. Best in 6-in. (15-cm) 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	●	●	●	●	●	●	

● - suggested ★ - highly recommended



Flamingo Cranberry Red (PP23,367)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/27	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. For more information on the Flamingo family, see page 4.

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



Grapeberry Red (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/4	8 WEEKS	EUROPEAN	MEDIUM

Sangria-red color with large, 2-in. (5-cm) flowers. A sport of Grapeberry Purple that flowers just after Red Ryder and close to Red Rover. Strong, mounded growth habit and branches freely with strong stems. Offers better-sized plants than Red Rover. For more information on the Grapeberry duo, see page 7.

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



Majesty Red

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

Excellent performance into the early part of peak October sales. Red Majesty should outperform every red variety within its natural season, with far more uniform flowering and flowers per plant, and a more perfect European growth habit. A color sport of Majesty Purple. For more information on the Majesty duo, see page 8.

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



Morgana Red (PPAF)

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

Red variety within this large-flowered family – suitable for indoor and outdoor production. Medium-vigor series features two-tone flowers with dark centers surrounded by lighter outside petals. Flowers open gradually, for a long supply window. Excellent keeping quality. For more information on the Morgana family, see page 5.

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



New Mumma Mia Red

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/23	8 WEEKS	EUROPEAN	MEDIUM/TALL

A medium-tall, mounded habit and striking red color – good for landscapes. Demonstrates a fantastic European habit, excellent landscape performance with heat tolerance and no heat delay. Grow this one with confidence!

	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/TALL

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. (20-cm) and larger containers. Use PGR in black cloth crops. *Excellent keeping quality.*

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



Red Hots

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/19	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	10/6	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.

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

● - suggested ★ - highly recommended



Red Ryder

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. *Excellent keeping quality.*

	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	SHORT

A prolific, medium-red sport of Stellar Purple. 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. For more information on the Stellar family, see page 4.

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

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Ball Mums Purple

Amphion Lavender Purple

Avalon Purple

Grapeberry Purple

Majesty Purple

Morgana Purple

Paintbox Purple

Pizzazz Purple

Plumberry Purple

Poppin Purple

Stellar Purple

Venus Purple

Wicked Purple



19%

of your mums
program



Amphion Lavender Purple (PP13,271)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/27	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 Lavender Purple features dark foliage, flexible stems and a spherical European habit.

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



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Avalon Purple (PP24,024)

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

A superb Fall season-ending display! Avalon Purple features large, regal purple, decorative flowers with excellent color retention on classically mounded plants. Well-matched to all the other Avalons. For more information on the Avalon family, see page 5.

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



Grapeberry Purple

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/4	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, classic growth habit and extremely prolific flowering. Great color in hot black cloth flowerings. *Excellent keeping quality.* For more information on the Grapeberry duo, see page 7.

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



Majesty Purple

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. For more information on the Majesty duo, see page 8.

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



Morgana Purple (PPAF)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/9	8 WEEKS	MOUNDED	MEDIUM

Purple variety within this large-flowered family – suitable for indoor and outdoor production. Medium-vigor series features two-tone flowers with dark centers surrounded by lighter outside petals. Flowers open gradually, for a long supply window. *Excellent keeping quality.* For more information on the Morgana family, see page 5.

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



Paintbox Purple

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

A "wow" color – lively, bright, saturated deep pink with very good color retention! Large, 2-in. (5-cm), very well-petaled flowers are uniform and prolific. Excellent spherical habit in Fall natural season crops. Performed well in our black cloth trials.

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



Pizzazz Purple

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



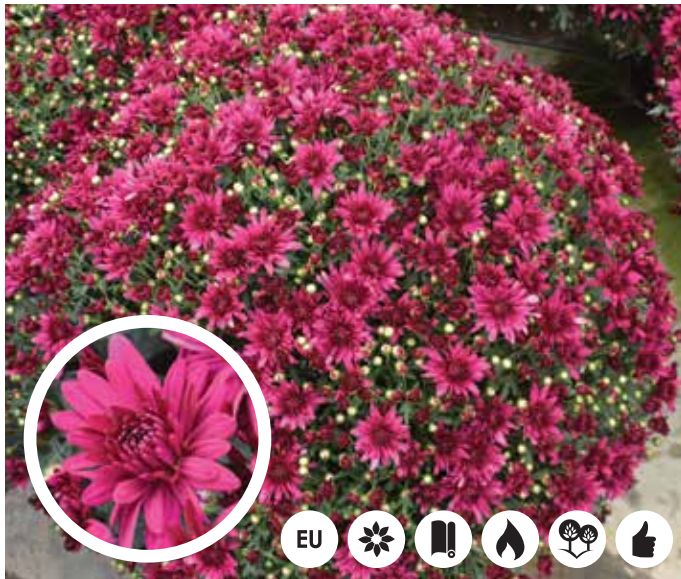
Plumberry Purple

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

Well-placed, deep regal purple flowers engulf the canopy. Plumberry's large, 2.5-in. (6-cm) 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. *Excellent keeping quality.*

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

● - suggested ★ - highly recommended



Poppin Purple (PPAF)

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

Large, 2-in. (5-cm), dark purple, duplex flowers with very dark green foliage on strong, flexible stems. Offers deeper purple color and larger flowers than Stellar Purple; easier to size up. Excellent spherical growth habit and good to very good keeping quality.

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



Stellar Purple

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

One of our top-selling purples, with phenomenal flower counts, great color and excellent uniformity. Can be used in black cloth and natural season flowerings. Cuttings can bud prematurely, but benefit from early Florel applications and proper fertilizer levels. For more information on the Stellar family, see page 4.

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



Venus Purple (PP14,378)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	10/4	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	●	●	●	●	●	●	●



Wicked Purple (PPAF)

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

Intense, rich flower color with fully petalled, 1.5-in. (4-cm), decorative flowers. Prolific on a nice spherically mounded growth habit. Very dark green foliage and branches freely. Presents larger flowers than Pizzazz Purple. Very grower friendly.

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

Ball Mums Pink

Avalon Pink

Avalon Salmon

Carousel Pink

Flamingo Neon Pink

Flamingo Pineapple Pink

Flamingo Pink

Jazzberry Pink

Paradiso Pink

Perfectly Pink

Pink Frenzy

Pop Eye Pink

New Skye Pink

Stellar Pink

Temptation Pink

New Whispered Lavender Pink

Wild Child Pink

6%

of your mums
program



Avalon Pink (PP22,659)

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

The "mother" of the Avalon family offers very large flowers with fine keeping qualities and sturdy, mounded plants. Grows slowly through the Summer, then pushes through September for an outstanding end to the natural Fall season. For more information on the Avalon family, see page 5.

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



Avalon Salmon

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/16	8 WEEKS	EUROPEAN	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. For more information on the Avalon family, see page 5.

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



Carousel Pink (PPAF)

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

Bright and cheerful, two-tone pink flower color. Decorative variety features fully petalled, medium-sized, 1.5-in. (4-cm) flowers. Extremely prolific and very uniform. Good mounded growth habit, with small, dark green foliage and strong, flexible stems.

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



Flamingo Neon Pink

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

Earlier flowering and brighter color than Flamingo Pink, but with slightly smaller flowers and less vigor. Flamingo Neon Pink is best for 8-in. (20-cm) and smaller containers. Slow, with marginal uniformity in black cloth. For more information on the Flamingo family, see page 4.

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



Flamingo Pineapple Pink (PP23,484)

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
MID	9/23	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, but slightly earlier flowering. For more information on the Flamingo family, see page 4.

	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
MID	9/26	8 WEEKS	EUROPEAN	MEDIUM

A popular variety with bright coral-pink color, reliable growth habit and long-lasting flowers. Best for natural season flowering, but with the cool flower color, it is sometimes used in northern black cloth crops. For more information on the Flamingo family, see page 4.

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



Jazzberry Pink

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

One of the most prolific, striking pink garden mums ever bred for North American sales! Amazing bud count! Extremely prolific and exceptionally uniform, with medium to medium-small blooms. Medium to dark green foliage and strong, flexible stems. Perfect sphere habit and complete flower coverage.

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



Paradiso Pink

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

Another perfect pink to the Ball mum collection. Ideal for color combinations, especially in black cloth and natural season. Its European habit, medium-size blooms and prolific flowering match the rest of the family. For more information on the Paradiso family, see page 5.

	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	9/22	7 WEEKS	MOUNDED	MEDIUM/SHORT

Large, two-tone flowers and a tidy growth habit. Perfectly Pink perfectly fills the mid-September market for pink garden mums. For more information on the Perfectly duo, see page 7.

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



Pink Frenzy (PP25,012)

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

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. Apply late PGR to control peduncle stretch.

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



Pop Eye Pink

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/6	8 WEEKS	MOUNDED	MEDIUM

Unique, eye-catching color pattern comes to life! Tricolor display has a magenta-purple ring of color surrounding a bright green disc, with a lively pink on the petals. Large, decorative duplex flowers create a showy display at retail. Prolific and uniform, with dark green foliage. For more information on the Pop Eye duo, see page 7.

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



New Skye Pink

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

Produces bright, two-tone dark pink flowers mid-season with a very uniform, mounded growth habit. Medium-vigor variety will perform great in landscapes of all sizes. *Excellent keeping quality.*

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



top seller



Stellar Pink

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

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 flowered a couple days behind in our trials. For more information on the Stellar family, see page 4.

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



Temptation Pink (PPAF)

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

Large, 1.5-in. (4-cm), medium-pink blooms with slight duplex form when fully open. Temptation Pink has larger flowers, fuller plants and better color retention than Stellar Pink. Well-placed flowers engulf the canopy. Branches freely and is very grower friendly. Excellent spherical growth habit.

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



new

New Whispered Lavender Pink

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

Stunning decorative, duplex, dark lavender-pink flowers cover this mounded, vigorous mum. Mid-season variety has a uniform habit. No noticeable heat delay. *Excellent keeping quality.*

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



Wild Child Pink (PPAF)

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

Beautiful, eye-catching, two-tone pink, decorative flowers and dark green foliage on strong, flexible stems. Large, 1.8-in. (5-cm), uniform blooms feature a full, mounded growth habit. Grower friendly and sizes up easily, with good to very good keeping quality. Upgrades Perfectly Pink and Stellar Pink.

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

● - suggested ★ - highly recommended

Ball Mums White

Alpine White

Aspen White

Avalon Crème White

Bridal White

Butter N' Cream White

Celestial White

Dove White

Moonglow White

Morgana White

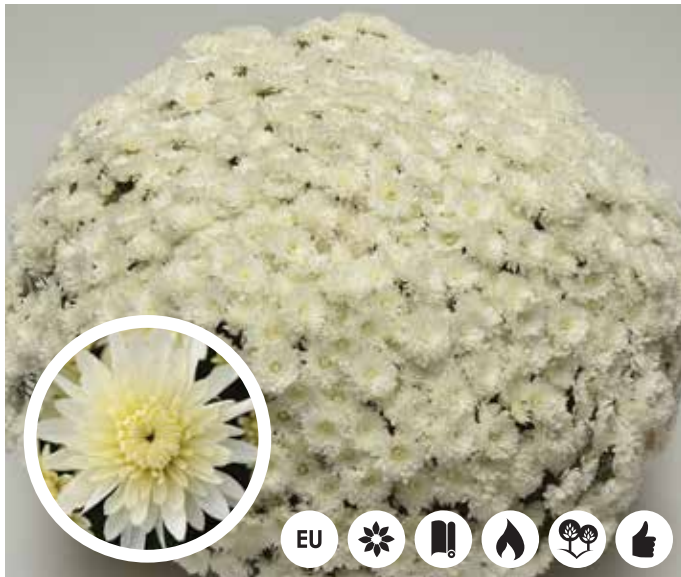
Paradiso White

Starburst White



9%

of your mums
program



Alpine White (PPAF)

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

Clean white, 3/4 to 1-in. (2 to 3-cm) decorative flowers in a classic European shape. Good uniformity with prolific flowering response in the Fall. Good performance in our black cloth trials with a high flower count. In our trials, kept its pure white color, with no signs of pinking, deep into October.

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



Aspen White (PP21,205)

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

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	●	●	●				●



Avalon Crème White

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/19	8 WEEKS	MOUNDED	MEDIUM

Beautiful Avalon Crème White 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. For more information on the Avalon family, see page 5.

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



Bridal White

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

One of the purest, brightest white garden mums! Prolific, uniform and covered with blooms. Larger decorative flowers than any other white garden mum. Robust, spherical habit with dark green foliage. Performed well in trials for Spring and Summer, black cloth and natural season flowering.

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

● - suggested ★ - highly recommended



Butter N' Cream White

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
LATE	9/29	8 WEEKS	EUROPEAN	MEDIUM

Clean white decorative, with a hint of ivory in center of young flowers. Flowers after Celestial White and Starburst White; easy to grow and size up. Fine spherical growth habit. Solid performance in deep South natural season crops. *Excellent keeping quality.*

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



Celestial White

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 White. Slight ivory center upon opening, then pure white.

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



Dove White

TIMING	FLOWER DATE	BLACK CLOTH RESPONSE	HABIT	VIGOR
VERY LATE	10/11	8 WEEKS	EUROPEAN	MEDIUM

Features European traits of prolific and uniform flowering, flexible stems and spherical plant habit. One of the most outstanding growth habits and responses on the market today. Slow, but excellent habit and production in black cloth. For more information on the Dove duo, see page 8.

	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. 'Sister' to Moonglow Yellow. For more information on the Moonglow duo, see page 6.

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



Morgana White

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

White variety within this large-flowered family – suitable for indoor and outdoor production. Medium-vigor series features two-tone flowers with dark centers surrounded by lighter outside petals. Flowers open gradually, for a long supply window. *Excellent keeping quality.* For more information on the Morgana family, see page 5.

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



Paradiso White

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

Abundant, clean white blooms burst forth on medium green foliage. Like its family mates, Paradiso White flowers prolifically and branches freely, with strong, flexible stems. Ideal for black cloth and natural season growing. For more information on the Paradiso family, see page 5.

	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	9/20	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	●	●	●				●



● - suggested ★ - highly recommended

Ball Garden Mums A-Z Quick Reference

Variety	Page	Color	Flowering Form	Growth Habit	Vigor	Timing	Flower Date	Team Picks	Heat Tolerance TX/FL	Pacific NW	Coastal CA	Landscape	Mixed Combos	4"	6"	8"	10"	12"	½ Bushel	Hanging Baskets	Spring Flowering	Black Cloth												
																						Response (Wks)	Recommend	4"	6"	8"	10"	12"	½ Bushel	Hanging Baskets				
Alpine White	41	White	Decorative	European	Medium	Very Late	10/7	●	●	●	★		●	●	●						●	●	7 Wk	●	●	●	●							
Amphion Lavender Purple	32	Purple	Daisy	European	Medium	Late	9/27		●	●	●			●	●	●	●	●	●	●	●		6 Wk	●	●	●	●	●	●					●
Aspen White	41	White	Decorative	Mounded	Medium	Early	9/12		●	●	●			●	●	●	●				●		6 Wk	●	●	●	●						●	
Autumn Envy Bronze	18	Bronze	Decorative	Mounded	Short	Very Early	9/8	●	●			★			●	●	●				●		6 Wk	●		●	●	●						
Autumn Glow Bronze	18	Bronze	Decorative	Mounded	Medium	Late	10/2	●	★	★	★			●	●	●	●	●	●	●	●		7 Wk	●	●	●	●	●	●					●
Avalon Crème White	41	White	Decorative	Mounded	Medium	Very Late	10/19		●	●	●	★		★	●	●	●	●	●	●	★		8 Wk	●	●	●	●	●						●
Avalon Golden Yellow	11	Yellow	Decorative	Mounded	Medium/Short	Very Late	10/15		●	●	●	●		★	●	●	●	●	●	●	★		8 Wk	●	●	●	●	●						●
Avalon Orange	18	Orange	Decorative	Mounded	Medium	Very Late	10/16	●	●	●	●	★		★	●	●	●	●	●	●	★		8 Wk	●	●	●	●	●						●
Avalon Pink	36	Pink	Decorative	Mounded	Medium/Short	Very Late	10/16	●	●	●	●	★		★	●	●	●	●	●	●	★		8 Wk	●	●	●	●	●						●
Avalon Purple	32	Purple	Decorative	Mounded	Medium/Short	Very Late	10/16	●	●	●	●	★		★	●	●	●	●	●	●	★		8 Wk	●	●	●	●	●						●
Avalon Red	27	Red	Decorative	Mounded	Medium/Short	Very Late	10/15			●	●			★	●	●	●	●	●	●	★		8 Wk	●	●	●	●	●						●
Avalon Salmon	36	Coral/Salmon	Decorative	European	Medium	Very Late	10/16		●	●	●	●		★	●	●	●	●	●	●	★		8 Wk	●	●	●	●	●						●
Avalon Sunny Yellow	11	Yellow	Decorative	Mounded	Medium	Very Late	10/19	●	●	●	●	★		★	●	●	●	●	●	●	★		8 Wk	●	●	●	●	●						●
Blazing Orange	18	Orange	Decorative	Mounded	Medium	Very Late	10/12	●	★	●	●	★			●	●	●	●	●	●	●		7 Wk	●	●	●	●	●	●					●
Bridal White	41	White	Decorative	European	Medium/Tall	Early	9/15	●	★	★	●				●	●	●	●	●		●		6 Wk	●	●	●	●	●	●	●			●	
Butter N' Cream White	42	White	Decorative	European	Medium	Late	9/29	●	★	●	★	★			●	●	●	●	●		●		8 Wk	★	●	●	●	●	●					●
Buttercup Yellow	11	Yellow	Decorative	European	Medium	Early	9/13			★				●	●	●	●	●	●	●			7 Wk	NO										
Carousel Pink	36	Pink	Decorative	Mounded	Medium	Mid	9/26	●			●				●	●	●	●			●		7 Wk	●		●	●	●						
Celestial White	42	White	Decorative	European	Medium	Mid	9/20	●		●	★	★			●	●	●	●	●		●		6 Wk	●	●	●	●	●						●
Copper Coin Bronze	19	Bronze	Decorative	European	Medium	Late	9/30	●	★	★	★	★				●	●	●	●		★		7 Wk	★	●	●	●							●
Cranbury Red	27	Red	Decorative	Mounded	Medium	Early	9/17	●	●			★			●	●	●	●			●		7 Wk	●		●	●	●	●					
Dove White	42	White	Decorative	European	Medium	Very Late	10/11	●	●	★	●				●	●	●	●			★		8 Wk	●	●	●	●	●						●
Dove Yellow	11	Yellow	Decorative	European	Medium	Very Late	10/11	●	●	●	●				●	●	●	●			★		7 Wk	●	●	●	●	●						●
Emberglow Orange	19	Orange	Decorative	European	Medium	Very Late	10/16		●						●	●	●	●	●	●	●		8 Wk	NO										
Eternal Red	27	Red	Decorative	Mounded	Medium	Very Late	10/14		●		●	●			●	●	●				●		8 Wk	●	●	●								
Fireglow Bronze	19	Bronze	Decorative	European	Medium	Mid	9/23	●	★	★	●				●	●	●	●	●	●	★		8 Wk	NO										
Five Alarm Red	27	Red	Decorative	Mounded	Medium	Early	9/11		★	●	●	●			●	●	●	●	●	●	●		6 Wk	●	●	●	●	●	●					●
Flamingo Cranberry Red	28	Red	Decorative	European	Medium	Mid	9/27	●		●	●	★			●	●	●	●	●	●	●		8 Wk	NO										
Flamingo Neon Pink	36	Pink	Decorative	European	Medium	Mid	9/26	●	●	●	●	★			●	●	●	●	●	●	●		8 Wk	NO										
Flamingo Pineapple Pink	37	Pink	Decorative	European	Medium	Mid	9/23			★	●	★			●	●	●	●	●	●	●		8 Wk	NO										
Flamingo Pink	37	Pink	Decorative	European	Medium	Mid	9/26	●	●	★	●	★			●	●	●	●	●	●	●		8 Wk	NO										
Gold Cup Yellow	12	Yellow	Decorative	European	Medium	Mid	9/26	●	●		●				●	●	●				●		7 Wk	●	●	●	●							●

Ball Garden Mums A-Z Quick Reference *Cont.*

Variety	Page	Color	Flowering Form	Growth Habit	Vigor	Timing	Flower Date	Team Picks	Heat Tolerance TX/FL	Pacific NW	Coastal CA	Landscape	Mixed Combos	4"	6"	8"	10"	12"	½ Bushel	Hanging Baskets	Spring Flowering	Black Cloth									
																						Response (Wks)	Recommend	4"	6"	8"	10"	12"	½ Bushel	Hanging Baskets	
Gold Riot Yellow	12	Yellow	Decorative	European	Medium	Very Late	10/9	●	★		★	●		●	●	●	●	●	●	●	★	●	8 Wk	★	●	●	●	●		●	
Gold Rush Yellow	12	Yellow	Decorative	European	Medium	Late	10/1		●	●	●	★			●	●	●	●	●				7 Wk	●		●	●	●	●	●	
Goldcrest Yellow	12	Yellow	Decorative	Mounded	Medium	Early	9/14		●		●	●		●	●	●	●	●	●		●		7 Wk	●	●	●	●	●	●	●	
Goldmine Yellow	13	Yellow	Decorative	European	Medium/Tall	Very Early	9/9		★	★	●	●			●	●	●	●	●		●		6 Wk	●		●	●	●	●	●	
Grapeberry Purple	32	Purple	Decorative	European	Medium/Short	Late	10/4	●	●	●	●	★		●	●	●	●	●	●		●		7 Wk	●	●	●	●		●		
Grapeberry Red	28	Red	Decorative	European	Medium	Late	10/4	●	●	●	●	★		●	●	●	●	●	●		●		8 Wk	●	●	●	●		●		
Harvest Bronze	19	Bronze	Decorative	European	Short	Late	10/1		●	●	●			●	●	●	●				●		7 Wk	●	●	●	●		●		
Honeyblush Yellow	13	Yellow	Decorative	European	Medium	Mid	9/23	●	★	●	★	★		●	●	●	●	●	●		★		7 Wk	NO							
Hot Spot Bronze	20	Bronze	Decorative	Mounded	Medium	Early	9/18								●	●	●	●	●				7 Wk	●	●	●	●	●			
New Hot Sugar Gold Bronze	20	Bronze	Decorative	Mounded	Medium	Late	9/28					●		●	●	●	●	●	●		●		8 Wk	NO							
Jazzberry Pink	37	Pink	Decorative	European	Medium/Short	Very Late	10/7	●	★		●	★		●	●	●	●				●		7 Wk	NO							
Katelli Bronze	20	Bronze	Decorative	European	Short	Early	9/15	●	★	●	●	●		●	●	●					★		6 Wk	★	●	●	●		●		
Katelli Yellow	13	Yellow	Decorative	European	Medium	Early	9/13		●	●				●	●	●					●		6 Wk	●	●	●	●		●		
Key Lime	13	Green	Decorative	European	Medium/Tall	Late	9/27		●	●				●	●	●	●				●		7 Wk	●	●	●	●		●		
New Kizzmet Golden Yellow	14	Yellow	Decorative	European	Medium	Early	9/13					●		●	●	●	●	●	●		●		8 Wk	NO							
Majesty Purple	32	Purple	Decorative	European	Medium	Very Late	10/9	●	●	●	★	★		★	●	●	●	●	●		●		7 Wk	★	●	●	●	●	●	●	
Majesty Red	28	Red	Decorative	European	Medium	Very Late	10/9	●	●	●	★	★		★	●	●	●	●	●		●		7 Wk	●	●	●	●	●	●	●	
Moonglow White	42	White	Decorative	European	Medium	Early	9/15		★	●	●			●	●	●	●	●	●		●		7 Wk	●	●	●	●	●		●	
Moonglow Yellow	14	Yellow	Decorative	European	Medium	Early	9/17		●	●	●			●	●	●	●	●	●		●		7 Wk	★	●	●	●	●		●	
Morgana Orange	20	Orange	Decorative	Mounded	Medium	Very Late	10/8		●		●	●		●	●	●			●		★		8 Wk	●	●	●	●	●	●		
Morgana Purple	33	Purple	Decorative	Mounded	Medium	Very Late	10/9		●		●	●		●	●	●			●		★		8 Wk	●	●	●	●	●	●		
Morgana Red	28	Red	Decorative	Mounded	Medium	Very Late	10/8		●		●	●		●	●	●			●		★		8 Wk	●	●	●	●	●	●		
Morgana White	43	White	Decorative	Mounded	Medium/Short	Very Late	10/7		●		●	●		●	●	●			●		★		8 Wk	●	●	●	●	●	●		
Morgana Yellow	14	Yellow	Decorative	Mounded	Medium/Short	Very Late	10/8		●		●	●		●	●	●			●		★		8 Wk	●	●	●	●	●	●		
New Mumma Mia Red	29	Red	Decorative	European	Medium/Tall	Mid	9/23		●			●			●	●	●	●	●				8 Wk	●		●	●	●			
Mumosa Orange	21	Orange	Decorative	European	Medium	Mid	9/25	●	●						●	●	●	●			●		7 Wk	●		●	●	●	●		
Orange Zest	21	Orange	Decorative	Mounded	Medium	Mid	9/25		★		●	★		●	●	●	●	●	●		●		8 Wk	NO							
Paintbox Purple	33	Purple	Decorative	Mounded	Medium	Late	10/2	●	★		★			●	●	●	●	●			★		7 Wk	●	●	●	●	●			
Paradiso Bronze	21	Bronze	Decorative	European	Medium/Short	Late	9/28				●	●		★	●	●	●	●			★		7 Wk	★	●	●	●		●		
Paradiso Pink	37	Pink	Decorative	European	Medium/Short	Late	9/27				●	●		★	●	●	●	●			★		7 Wk	★	●	●	●		●		
Paradiso White	43	White	Decorative	European	Medium/Short	Late	9/27		●	●	●			★	●	●	●	●			★		7 Wk	★	●	●	●		●		
Paradiso Yellow	14	Yellow	Decorative	European	Medium/Short	Late	9/27				●	●		★	●	●	●	●			★		7 Wk	★	●	●	●		●		
Perfectly Orange	21	Orange	Decorative	Mounded	Short	Mid	9/21		●	●	●			●	●	●	●	●			●		7 Wk	●	●	●			●		

Ball Garden Mums A-Z Quick Reference *Cont.*

Variety	Page	Color	Flowering Form	Growth Habit	Vigor	Timing	Flower Date	Team Picks	Heat Tolerance TX/FL	Pacific NW	Coastal CA	Landscape	Mixed Combos	4"	6"	8"	10"	12"	½ Bushel	Hanging Baskets	Spring Flowering	Black Cloth										
																						Response (Wks)	Recommend	4"	6"	8"	10"	12"	½ Bushel	Hanging Baskets		
Perfectly Pink	38	Pink	Decorative	Mounded	Medium/Short	Mid	9/22		●	●	●		●	●	●	●				●		7 Wk	●	●	●						●	
Petit Orange	22	Orange	Duplex	European	Medium	Mid	9/25		●	●	●	★		●	●	●	●	●	●	●	●	●	7 Wk	★	●	●	●	●	●	●	●	●
Pink Frenzy	38	Pink	Decorative	Mounded	Medium/Tall	Mid	9/26	●	★		★	●			●	●	●	●	●	●		●	7 Wk	●		●	●	●	●	●	●	
Pizzazz Purple	33	Purple	Decorative	European	Medium	Late	9/30		●	●	●	●		●	●	●	●	●	●	●		●	7 Wk	●	●	●	●	●	●		●	
Plumberry Purple	33	Purple	Decorative	Mounded	Medium	Late	9/30	●	●	●	●	★		●	●	●	●	●	●	●		●	7 Wk	★	●	●	●	●	●		●	
Pop Eye Orange	22	Orange	Duplex	Mounded	Medium	Very Late	10/6	●	●		●		★	●	●	●	●	●	●	●		●	8 Wk	●	●	●	●					
Pop Eye Pink	38	Pink	Duplex	Mounded	Medium	Very Late	10/6		●		●		★	●	●	●	●	●	●	●		●	8 Wk	●	●	●	●					
Poppin Purple	34	Purple	Duplex	European	Medium	Mid	9/24	●	●			★			●	●	●	●				●	7 Wk	●		●	●	●	●			
Pumpkin Pie Orange	22	Orange	Decorative	European	Medium	Very Late	10/9	●	●	●	★	●			●	●	●	●	●	●		●	7 Wk	●	●	●	●	●	●			
Radiant Red	29	Red	Decorative	European	Medium/Tall	Mid	9/25	●	★		●	★			●	●	●	●	●	●			7 Wk	●		●	●	●	●	●	●	
Red Hots	29	Red	Decorative	Mounded	Medium	Mid	9/19	●	★	★	●	★		●	●	●	●	●	●	●		●	7 Wk	●	●	●	●	●			●	
Red Rover	29	Red	Decorative	European	Medium	Very Late	10/6		●	●	●			●	●	●	●	●	●	●	★	●	7 Wk	●	●	●	●				●	
Red Ryder	30	Red	Decorative	European	Medium	Late	9/28	●	★	★	★	★		●	●	●	●	●	●	●	★		8 Wk	★		●	●	●			●	
New Skye Pink	38	Pink	Decorative	European	Medium	Mid	9/23					●		●	●	●	●	●	●	●		●	7 Wk	NO								
Starburst White	43	White	Decorative	European	Medium/Short	Mid	9/20	●	★		●	●		●	●	●	●	●	●	●		●	7 Wk	★	●	●	●				●	
Stellar Pink	39	Pink	Decorative	European	Medium	Mid	9/21	●	★	●	●		★	●	●	●	●	●	●	●	★		7 Wk	★	●	●	●	●			●	
Stellar Purple	34	Purple	Decorative	European	Medium	Mid	9/20	●	★	★	●		★	●	●	●	●	●	●	●	★		7 Wk	★	●	●	●	●			●	
Stellar Red	30	Red	Decorative	European	Short	Mid	9/19		●	●	●		★	●	●	●	●	●	●	●	★		7 Wk	★	●	●	●	●			●	
Stellar Yellow	15	Yellow	Decorative	European	Medium	Mid	9/22	●	●	●	●		★	●	●	●	●	●	●	●	★		7 Wk	★	●	●	●	●			●	
Sundance Yellow	15	Yellow	Decorative	European	Medium	Late	9/30	●	★	★	●	★		●	●	●	●	●	●	●		●	8 Wk	●	●	●	●	●			●	
Sunny Day Yellow	15	Yellow	Decorative	European	Medium	Very Late	10/16	●	●	●	★	●		●	●	●	●	●	●	●		●	7 Wk	●	●	●	●	●			●	
Sunrise Yellow	15	Yellow	Decorative	Mounded	Medium	Very Early	9/7	●	★		★	●		●	●	●	●	●	●	●	★		7 Wk	★	●	●	●				●	
Sunset Orange	22	Orange	Decorative	European	Medium	Late	9/27	●	●	★	●			●	●	●	●	●	●	●		●	7 Wk	★	●	●	●	●	●	●	●	●
Temptation Pink	39	Pink	Duplex	European	Medium	Mid	9/22		●						●	●	●	●				●	7 Wk	●		●	●	●	●	●	●	
New Trickster Golden Bronze	23	Bronze	Decorative	Mounded	Medium	Mid	9/23		●			●		●	●	●	●	●	●	●		●	8 Wk	●		●	●	●				
Twilight Bronze	23	Bronze	Decorative	European	Medium	Very Late	10/10		●		●			●	●	●	●					●	7 Wk	★	●	●						
Venus Purple	34	Purple	Decorative	European	Medium	Late	10/4		●	●	●	●		●	●	●	●	●	●	●		●	7 Wk	●	●	●	●	●	●	●	●	●
New Whispered Lavender Pink	39	Pink/Lavender	Duplex	Mounded	Medium	Mid	9/20							●	●	●	●					●	7 Wk	NO								
Wicked Purple	34	Purple	Decorative	Mounded	Medium	Late	9/30	●							●	●	●	●					7 Wk	●		●	●	●	●			
Wild Child Pink	39	Pink	Decorative	Mounded	Medium	Mid	9/23	●	●						●	●	●	●					7 Wk	●		●	●	●				
Yellow Tang	16	Yellow	Decorative	European	Medium	Very Late	10/9	●	★	★	★	★		●	●	●	●	●	●	●	★	●	7 Wk	★	●	●	●	●	●			●
Yellowstone	16	Yellow	Decorative	European	Medium	Mid	9/21		●	●	●	●		●	●	●	●					●	7 Wk	●	●	●	●				●	
Zinger Yellow	16	Yellow	Decorative	Mounded	Medium	Mid	9/24	●	●			★			●	●	●	●					8 Wk	●		●	●	●				
New Zuma Orange	23	Orange	Decorative	European	Medium	Early	9/18		●					●	●	●	●	●	●	●		●	8 Wk	●		●	●	●				

Keys To Producing Quality Garden Mums

Upon Arrival

Ball Garden Mum cuttings are available as both unrooted and rooted liners. All cuttings should be stuck or planted as soon as possible.

Rooted cuttings trays should be placed in the greenhouse with a minimum temperature of 60 to 62°F (16 to 17°C). Do not let the plants wilt, and try to hold for no more than 2 to 3 days. Unrooted cuttings – please refer to “Propagation of Garden Mums,” page 53.

Planting & Media

Planting is the most critical period in the production of a quality Garden Mum crop. Plant liners directly into final container whenever possible. A lighter, well-drained media is preferred. A heavier media may delay rooting, reducing the quality of the finished crop. Avoid mixes that are too light and may dry out too rapidly.

Have containers filled and moist prior to planting. Media starting pH in a soilless mix should be 5.8 to 6.4; a soil-based mix should be 6.0 to 6.5. Thoroughly water liners prior to planting, with 300 to 400 ppm N from 20-10-20, to ensure that the liner is well fed, encouraging rapid establishment.

Water immediately after planting with fertilizer, such as 20-10-20 at 300 to 400 ppm N, to charge the soil – so when roots emerge, strong growth will occur. It may be necessary to mist or syringe the newly planted cuttings for the first few days to prevent wilting.

If outdoor temperatures are cool, 50 to 59°F (10 to 15°C), it is recommended that plants be started in a greenhouse with night temperatures maintained between 60 to 69°F (16 to 21°C), with 65°F (18°C) being ideal. This allows better take-off and initial growth, which is especially important when growing early-flowering varieties. Low night temperatures at planting can promote premature flower initiation.

Garden Mums should be grown in full sun; shaded areas can produce taller, weaker plants.

Pinching

Modern varieties do not require pinching in natural-season Fall crops. Pinching is suggested for black cloth, but many growers produce black cloth crops without pinching.

Spacing

Refer to the chart on page 51 for specific spacing requirements. A key to excellent quality is to space the plants once they start touching. Spacing plants too tightly promotes weak, stretched, poor-quality plants that are more likely to experience disease problems.

Irrigation & Fertilization

A drip irrigation system is often the best choice when growing Garden Mums. 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, allowing water to drip from the container. Never let the plant wilt during the early stages of production, as wilting can limit growth and reduce the overall plant size.

Mums are heavy feeders and require large amounts of nutrients during early weeks of the plant development. The majority of nutrients in the plant at flowering are in the plant at visible bud. Therefore, feeding early is critical for strong growth. A program of regular soil testing is the best guide to determine the optimum fertilization regimen. High fertilization rates and low soil EC levels indicate that plants are taking up the nutrition. High EC levels indicate plants are not taking up the fertilizer – so reduce fertilizer rates.

Fertilizing immediately after planting is very important:

- Feed $\text{NH}_4 + \text{P}$ (20-10-20, 20-20-20) during the early crop development (weeks 1-4). A rate of 250 to 350 ppm N will usually work well.
- After loading the plant early, you will want to avoid too much $\text{NH}_4 + \text{P}$, or stretched plants and soft growth will result. Use NO_3 and reduced P (17-5-17, 15-4-15, 14-0-14, etc.) to tone the crop and reduce stretch.
- Once plants are at visible bud, slow the fertilizer uptake and monitor the EC to prevent salt damage to the roots.

Slow-release fertilizers, such as Osmocote, in combination with liquid feeds may also be used. Avoid excess applications of slow-release fertilizers, since they can release rapidly under high temperatures and cause the EC to spike, which damages roots. Mums can benefit from a magnesium sulfate (Epsom salt) supplement. Once plants mature, fertilizer levels should be reduced to maintenance levels.

Premature Budding & Crown Bud Formation

Night temperatures above 68°F (20°C) will delay flower initiation. As night temperatures exceed 75°F (24°C), flowering is inhibited. Several days or more of cool nights, less than 60°F (16°C), in late Spring and early Summer may trigger premature bud formation. This is not desirable and may cause the plants to finish too small.

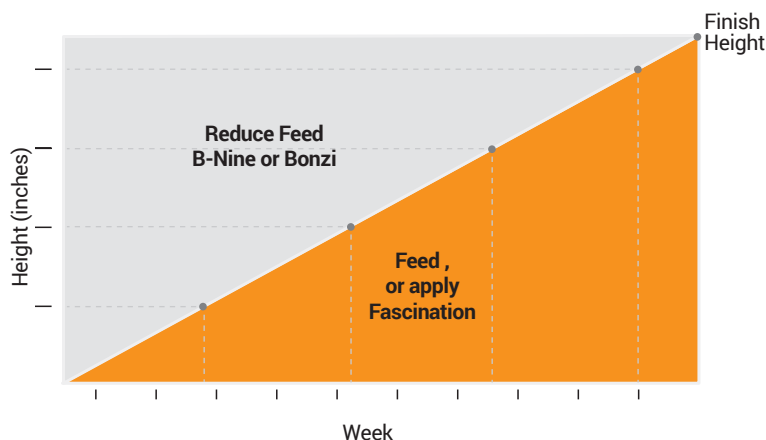
If small buds are visible in the early stages of production, plants will most often still develop normally. This can be minimized by limiting stress, applying adequate fertilizer amounts (fertility levels should be high) and not allowing plants to wilt. Early applications of 500 ppm Florel one week after planting can help minimize premature bud set by helping to promote vegetative growth; this will not abort the existing buds.

Success with Florel

- Use low-alkalinity (<60 ppm) water or increase Florel rate.
- Reduce spray solution to pH <4 before adding Florel.
- Don't pour Florel into the tank – use a funnel or put Florel in a bag and empty into the tank.
- Sprench to cover the plants.
- Spray early or late day, as slow drying time maximizes uptake and response.

Tracking Your Crop

Mums are an easy crop to track, and it is important to determine if the crop is on schedule. To do so, simply graph a straight line between initial plant height and desired height at finish. Every week, measure 5 plants in the primary block to see if they are on track. Feed if they are below the line, or use Fascination. If they are above the line, use a PGR to slow them down.



Height Control & Growth Regulators

NOTE: We recommend an initial small-scale trial with all growth regulators.

B-Nine foliar spray applications control height and also produce darker, greener leaves and strong stems. Apply 2,500 to 5,000 ppm when breaks are 1 to 2 in. (3 to 5 cm) long to tone the plant and reduce stretch. A second application can be made two weeks later. Remember that B-Nine application after visible bud will delay flowering. Weekly applications of B-Nine up to the time of breaking color will delay the flowering by one week. Once flower color is evident, B-Nine delay is minimum, but application will enhance foliage. In greenhouse-forced Summer crops, an application of B-Nine at 5,000 ppm can be applied 14 to 21 days after pinching to control the more vigorous varieties.

Bonzi drenches of 1 to 4 ppm can provide very effective growth control, but be sure to apply the correct volume to avoid stunting. Early-crop applications require less ppm than when applied later in the crop to get the same level of control. Bonzi can also be sprayed with rates ranging from 30 to 50 ppm. Florel can be used to promote branching, prevent premature budding and delay flowering. Best applied early in the crop cycle at a rate of 300 to 500 ppm. Effectiveness varies by variety.

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. (17-cm) pot	1 to 3	6.5 to 12 in. (17 to 30 cm)
8-in. (20-cm) pot	1 to 3	16 to 20 in. (41 to 51 cm)
10-in. (25-cm) pot	1 to 3	18 to 24 in. (46 to 61 cm)
12-in. (30-cm) pot	3 to 4	22 to 26 in. (56 to 66 cm)
14-in. (36-cm) pot	4 to 5	26 to 30 in. (66 to 76 cm)
1/2 bu. basket	4 to 5	28 to 34 in. (71 to 86 cm)
1 gallon	1 to 3	9 to 16 in. (23 to 41 cm)
2 gallon	1 to 3	18 to 24 in. (46 to 61 cm)
3 gallon	2 to 3	20 to 30 in. (51 to 76 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. (41 to 51 cm)
12-in. (30-cm) color bowl	3 to 5	14 to 20 in. (36 to 51 cm)
14-in. (36-cm) color bowl	3 to 5	28 to 30 in. (71 to 76 cm)
6-in. (15-cm) hanging basket	1 to 3	14 to 16 in. (36 to 41 cm)
10-in. (25-cm) hanging basket	1 to 3	18 to 24 in. (46 to 61 cm)
12-in. (30-cm) hanging basket	2 to 4	26 to 28 in. (66 to 71 cm)

Heat Delay

The average daily temperature dictates the rate of development of a crop. High night temperatures may cause heat delay, with some varieties being more sensitive than others. Heat delay can affect the bloom date by up to 3 weeks.

Night temperatures in the July 20 to August 5 period are the most critical for natural-season mums.

Suggestions to avoid heat delay for black cloth crops:

- Start cooling very early in the morning.
- Cool at night with a pad and fan system that pulls air under the black cloth.
- When covering directly on or slightly above the plants, use black/white (Panda) film so the white side reflects the sunlight – reducing the plant temperature.
- 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 close before the sun comes up in the morning.
- Cover before sunrise versus evening.

Root Rot

The loss of roots early in the crop will significantly limit nutrient loading and plant size later in the crop cycle. Saturated soil, extreme wet-dry cycles and high salt levels will damage the roots and make them more susceptible to disease infection.

Preventative treatment for Pythium and other root diseases is recommended every 4 weeks. Failure to control root rot can result in stunted plants.

Pests & Diseases

An IPM (Integrated Pest Management) program is the best defense against the various insects and related pests that can attack a mum crop. Constant monitoring and weekly scouting will enable the grower to detect pests before they become a problem, and take appropriate action to control them. Growers should also scout for foliar diseases, including Bacterial leaf spot and Botrytis.

Chrysanthemum white rust (CWR) is a serious disease, and preventative treatments should be applied. Review the CWR control document available on BallSeed.com.

Natural-Season Fall Mums

Chrysanthemums are short-day plants and will naturally initiate flowering in mid-July. Ball Garden Mums are classified into Early, Mid, Late and Very Late flowering varieties. Refer to the A-Z Quick Reference Guide to determine the approximate flowering date for each variety.

Natural-Season Flowering	Average Natural-Flower Date
Very Early	Before Sept. 9
Early	Sept. 10 to 18
Mid	Sept. 19 to 26
Late	Sept. 27 to Oct. 4
Very Late	Oct. 5+

To produce a uniform crop, these flowering classes should be planted over a 2 to 3-week period. Plant the Early varieties the first week of the planting period, then over the following weeks plant the Mid varieties, followed by the Late and Very Late varieties.

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Keys to Producing Quality Garden Mums *cont.*

If all varieties were to be planted in the same week, then the crop time may be too long for the Mid and especially later varieties, which could then outgrow their spacing and produce poor-quality plants.

It is important to keep good records from year to year. This helps to adjust production schedules to produce consistent plant sizes, all flowering at the desired time. One cutting per pot is generally used for up to 9-in. (23-cm) pots, and 3 plants per pot for 12-in. (30-cm) pots.

The traditional Fall planting dates for natural-season crops planted from rooted cuttings:

- 4-in. (10-cm) pots in mid-July.
- 6-in. (15-cm) pots in early July.
- 8-in. (20-cm) or larger pots between the first and fourth weeks of June.

If pinching, pinch once the plant is established.

Refer to the Spacing Requirements chart for spacing required by pot size.

Fast-Crop Fall Mums

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

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

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

A 6 to 6.5-in. (15 to 17-cm) crop with 1 cutting per pot can be planted mid-July to late July.

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

Black Cloth

Controlled flowering of Summer-Fall Garden 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 below is a guide to determine the number of short days required.

Top Performing Black Cloth Varieties

Yellow & Green: Gold Riot Yellow, Moonglow Yellow, Paradiso Yellow, Stellar Yellow, Sunset Yellow, Yellow Tang

Orange & Bronze: Copper Coin Bronze, Katelli Bronze, Paradiso Bronze, Petit Orange, Sunset Orange, Twilight Bronze

Red: Red Ryder, Stellar Red

Purple: Plumberry Purple, Majesty Purple, Stellar Purple

Pink: Paradiso Pink, Stellar Pink

White: Butter N' Cream White, Paradiso White, Starburst White



These outdoor-produced black cloth Garden Mums are being forced to flower for August sales at Adam Henning Greenhouses in DeMotte, IN.

Summer Controlled-Flowering For 7-Week Response Garden Mums (6 to 6.5-in./15 to 17-cm pots)	Plant Rooted Cuttings Weeks 15 – 27	<ul style="list-style-type: none"> • For 4-in. (10-cm) pot/1 ppp programs, delay the plant and pinch date by 1 week. • For 8-in. (20-cm) pot/2 ppp programs, plant date and pinch date are 1-2 weeks earlier.
	Pinch 9 Days From Plant Date	<ul style="list-style-type: none"> • Pinch plants when established and have approximately 1 in. (3 cm) of new growth
	Shade - 12 Days From Pinch Date	
	Sell 7 Weeks From Shade Date	<ul style="list-style-type: none"> • 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.

Typical black cloth greenhouse schedule for suggested medium-vigor varieties with 7-week response times

Pot Size	PPP	Rooting Time in Plug Tray in Weeks	Pinch	Long Day Weeks After Direct Stick or Potting	Variety Response Time in Weeks	Total Crop Time from Liner	Approximate Spread at Finish	Approximate Plant Height at Finish
4 in.	1	Direct Stick	No	3	6.5 to 7	9.5 to 10 from URC	6 in.	5 in.
6 in.	1	Direct Stick	No	4	6.5 to 7	10.5 to 11 from URC	11 to 12 in.	6 to 7 in.
4 in.	1	2.5 to 3	No	1.5	6.5 to 7	8 to 8.5	6 in.	5 in.
6 in.	1	2.5 to 3	No	2.5	6.5 to 7	9 to 9.5	11 to 12 in.	6 to 7 in.
8 in.	1	2.5 to 3	No	4 to 5	6.5 to 7	10.5 to 12	13 to 14 in.	8 to 9 in.
10 in.	1	2.5 to 3	No	8 to 9	6.5 to 7	14.5 to 16	18 to 19 in.	11 to 12 in.
10 in.	3	2.5 to 3	No	5 to 6	6.5 to 7	11.5 to 13	18 to 19 in.	11 to 12 in.
12 in.	3	2.5 to 3	No	8 to 9	6.5 to 7	14.5 to 16	23 to 24 in.	13 to 14 in.

Propagation of Garden Mums

Upon Arrival

Stick immediately upon receipt for best results.

If necessary to hold cuttings, open the boxes and inspect.

Cuttings can be held at 34 to 38°F (1 to 3°C) for no more than 2 to 3 days. Leave the cuttings in the plastic wrap to prevent dehydration. If cuttings are wilted, increase the humidity in the cooler to <85%.

Media

Use soilless media that is well-drained with good aeration and moisture retention.

Maintain soil pH of 5.8 to 6.2 with an EC of less than 1.0 (mmhos/cm, SME).

Stick into moist media (4 on a 1-5 scale) and water-in so the soil is in contact with the stem.

Maintain media temperature between 70 to 74°F (21 to 23°C) using bottom heat.

50 to 100-count trays are most common.



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!

Rooting Hormone

If desired, spray 100 to 200 ppm KIBA on cuttings the morning after stick, or do a pre-stick basal dip of 1,000 to 1,500 ppm IBA.

When spraying with KIBA, it is important to apply enough volume to run down the stem. Treat in both directions to ensure uniform application on all sides of the cutting.

Recommended for slow or harder-to-root varieties.

Misting

During the first 24 hours after sticking, it is critical to apply enough mist to rehydrate the cuttings, so the leaves are no longer limp.

After the first 24 hours, use the minimum mist that will prevent wilting. Start reducing mist once callus starts to form.

Apply only enough mist to wet the foliage and slightly increase soil moisture. Saturated soil will slow rooting due to excess callus formation.

Misting schedules should be adjusted to respond to current conditions, including light, temperature, humidity and degree of rooting. Reduce mist as soon as possible, beginning with a reduction during the night and pre-dawn period. By Day 4, night mist should not be needed to maintain turgid cuttings. Discontinue mist after 10 to 14 days, when roots reach the edge to bottom of container.

- If using a mist timer, adjust the frequency and duration to apply the minimum amount without wilting: Days 1 to 4, use 5 seconds of mist every 10 to 15 minutes.
- Days 5 to 8, use 5 seconds of mist every 15 to 20 minutes.
- Days 9 to 14, use 5 seconds of mist every 25 to 30 minutes.
- If using a VPD system, use a low value for the first day to rehydrate the cutting. Then increase gradually for the next 6 days, with a rapidly increasing value for the next 7 days. The pivot to the rapid increase is when the root initials begin to form ('root-horns').

Air Temperature

70 to 80°F (21 to 27°C) is important to prevent flower initiation during rooting, and it enhances rooting.

Light Levels

Reduce the light intensity to 1,500 to 2,500 foot-candles during the first 2 days, to help rehydrate the cuttings during hot, high-light periods.

Maintain 3,500 to 4,000 foot-candles once roots begin to form. High-light intensity will produce high-quality liners.

Photoperiod Control

Night-interruption lighting is recommended year-round at 10 foot-candles (100 lux), 10 p.m. to 2 a.m., to keep the cuttings vegetative and reduce premature budding.

Fertilizer

During rooting, feed 2 to 3 times a week, 1 to 3 days after stick (at 200 to 250 ppm N) or use a constant liquid feed of 100 ppm N.

Monitor the pH and EC to maintain in the appropriate range for good growth.

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Propagation of Garden Mums *cont.*

Plant Growth Regulators

B-Nine can be applied at 1,000 to 2,500 ppm. Apply first application on Day 7 after stick to reduce stretch; an additional application may be made on Day 14.

Florel can be applied at 350 to 500 ppm during propagation at Day 10 and 17. Results vary and may help prevent premature budding.

Bonzi is not recommended during propagation.

After The Cutting Is Rooted

Rooting liners can be transitioned to the finished growing-on environment.

Maintain warm night temperatures (>68°F/20°C) and long days up until April 15, when days are naturally long. Avoid low temperatures (<55°F/13°C), as this can trigger premature flowering.

Any stress at this time will reduce quality and may cause premature budding.

Do not let liners wilt or soil remain saturated, as this can increase disease infection.

Do not allow the liners to become root bound and transplant as soon as appropriate.

If left in the trays too long, the liners can become hard and may not take-off uniformly when planted.

Fertilize the liners prior to planting with 300 to 400 ppm from 20-10-20 to ensure strong growth after transplant.

Water-in immediately after transplanting with fertilizer at 300 to 400 ppm N.

Disease Management

Refer to online pesticide recommendations for appropriate chemicals for use in your location.

Chrysanthemum white rust (CWR) is a major disease that you should treat proactively to prevent infection. Refer to the CWR Grower Facts on BallSeed.com for detailed information.

Botrytis is a serious problem when excess humidity is present. Application of Pageant fungicide within 3 days of sticking provides excellent disease control and promotes more uniform rooting.

Application of a pre-transplant soil drench to the liners to manage Pythium and other soil-borne diseases will enhance rapid establishment in the final container.

Insect Management

Refer to online pesticide recommendations for appropriate chemicals for use in your location.

Mites have become a significant pest in the last several years. Monitor the plants in the propagation area, as this may be a source for mites to move onto the mum liners.

Leafminers are a common pest of mums. Begin your monitoring and spray program for adults and larvae as soon as misting stops.

Fungus gnats and shorefly larvae can cause significant root damage if populations are allowed to become established. Start with clean floors and apply bio-controls after sticking to keep populations under control.

Aphids can become a spontaneous problem in the Summer months, when large populations suddenly appear on the crop. Regular monitoring is critical to stop infestations from spreading.

Whitefly and thrips can become problems late in the crop, but seldom are serious pests during propagation.



Green Netting *Reduce shrink!*

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. (10 to 13 cm) 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. (25-cm) and smaller sizes, with each roll yielding approx. 2,200 pieces. The 23" x 3,280' size is for use on 11-in. (28-cm) 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 or 800 879-BALL.

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

Spring-Flowering Programs

See the chart below for suggested Spring Garden Mum schedules, including Light & Shade recommendations. Variety suggestions are on pages 44-49.

No Light/No Shade Program

Best results are realized with smaller containers, such as packs to 3-in. (8-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. (8-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.

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***
Week 2	Week 3	Week 2	Week 4	No	Week 11
Week 3	Week 4	Week 3	Week 5	No	Week 12
Week 4	Week 5	Week 4	Week 6	No	Week 13
Week 5	Week 6	Week 5	Week 7	No	Week 14
Week 6	Week 7	Week 6	Week 8	No	Week 15
Week 7	Week 8	Week 7	Week 9	No	Week 16
Week 8	Week 9	Week 8	Week 10	No	Week 17
Week 9	Week 10	Week 9	Week 11	No	Week 18
Week 10	Week 11	Week 10	Week 12	No	Week 19
Week 11	Week 12	Week 11	Week 13	Week 13	Week 20
Week 12	Week 13	Week 12	Week 14	Week 14	Week 21
Week 13	Week 14	Week 13	Week 15	Week 15	Week 22
Week 14	Week 15	Week 14	Week 16	Week 16	Week 23

* 5 to 6.5-in. (13 to 17-cm) containers should be planted and pinched 1 week earlier for the desired flowering date.

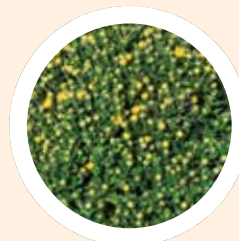
** Pinch plants when established and have approximately 1 in. (3 cm) of new growth.

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

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 in this catalog. 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 the "Cracking Color" stage. These plants are "shippable" approximately 7 to 10 days prior to the "Flower Date."

Cracking Color
(ready for ship)



Flower Date
(ready for sell)



Terms and Conditions of Sale

Acceptance of Terms

These terms and conditions shall govern orders for plants (merchandise) placed with Seller. All negotiations with sales representatives or other agents of Seller are merged herein. No modification of these terms and conditions shall be effective unless in writing signed by Seller. Placement of the order shall constitute Purchaser's acceptance of these terms and conditions. All orders are subject to acceptance by Seller at our offices in West Chicago, Illinois.

Limitation of Warranty

Seller warrants, to the extent required by law, that merchandise conforms to the description appearing in Seller's catalog and on container labels, within recognized tolerances. SELLER MAKES NO OTHER OR FURTHER WARRANTY, EXPRESS OR IMPLIED. ALL OTHER OR FURTHER WARRANTIES, INCLUDING ANY WARRANTIES OF MERCHANTABILITY, TITLE, NON-INFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED. Certain merchandise may be separately warranted by the manufacturer. Seller does not adopt or ratify any manufacturer warranties, express or implied, and Seller shall have no liability thereunder. Seller does not adopt or ratify any manufacturer warranties, express or implied, made by Purchaser upon resale of the merchandise, and Seller shall have no liability thereunder.

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PURCHASER'S SOLE AND EXCLUSIVE REMEDY SHALL BE REFUND OF THE PURCHASE PRICE. SELLER'S LIABILITY, WHETHER FOR BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, PRODUCTS LIABILITY OR ANY OTHER THEORY OF LIABILITY, IS LIMITED TO THE AMOUNT OF THE PURCHASE PRICE. UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE, OR FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES.

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ANY CLAIM WHICH PURCHASER MAY HAVE AGAINST SELLER ARISING OUT OF OR RELATING TO THE SALE OF THE MERCHANDISE SHALL BE SETTLED BY BINDING ARBITRATION IN ACCORDANCE WITH THE COMMERCIAL ARBITRATION RULES OF THE AMERICAN ARBITRATION ASSOCIATION, SAID ARBITRATION TO BE VENUED IN COOK OR DUPAGE COUNTIES, ILLINOIS. The laws of several states require arbitration, conciliation or mediation of disputes involving allegedly defective plants before legal action may be taken. Purchaser should contact the State Department Of Agriculture for information. Such laws typically require that a complaint be filed with the State Department of Agriculture in time to permit inspection of the crops or plants. If such a complaint is filed, a copy must be sent to Seller by registered or certified mail.

Governing Law, Jurisdiction & Venue

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

Indemnity

By accepting merchandise, Purchaser agrees to defend Seller, to hold it harmless and indemnify it from and against any claim or loss asserted by any or all transferees of such merchandise or users of the products of such merchandise who are not notified by Purchaser in writing of Limitation of Warranty, Limitation of Remedy, Mandatory Arbitration, Governing Law Jurisdiction and Venue, and Notice Regarding Seed-Borne Diseases in language substantially equivalent to that contained in these Terms & Conditions of Sale.

Minimum Orders

The minimum quantity for each order is 1,000 unrooted cuttings. Total orders less than 2,000 unrooted cuttings will be subject to a minimum charge of \$30.

Prices

All prices are subject to change without notice. The price in effect at time of shipment will prevail. Prices do not include installation; Seller takes no responsibility, and shall have no liability for installation.

Payment

Payment is due in invoiced currency and in accordance with the terms specified on invoice. In the event of default in the payment of any amount when due, and in addition to all other rights and remedies available to Seller, SELLER SHALL BE ENTITLED TO COLLECT A LATE CHARGE OF 2% PER MONTH (24% PER YEAR) OR THE MAXIMUM RATE ALLOWED BY LAW, WHICHEVER IS LESS, ON ALL AMOUNTS PAST DUE FROM THE DATE DUE UNTIL THE DATE PAID. A FEE OF \$25.00 WILL BE CHARGED FOR ANY RETURNED CHECK, DECLINED EFT TRANSACTION OR DECLINED BANKCARD TRANSACTION.

Freight & Handling Charges, Inspection, Damaged Goods

The freight and handling charge on Purchaser's invoice covers shipment of the merchandise to Purchaser's destination, and replacement or credit for damaged merchandise if the steps listed here are followed. PURCHASER WILL NOT REFUSE OR RETURN GOODS, OR THE RIGHT TO FILE A CLAIM IS LOST AND PURCHASER WILL STILL BE LIABLE FOR THE MATERIAL AND THE FREIGHT.

When Purchaser receives shipment:

- 1) Count all cartons.
- 2) Inspect all cartons for external damage.
- 3) Check for open or resealed cartons.
- 4) Note any damages, shortages, open or resealed cartons on the delivery receipt;

the carrier's representative must also sign the receipt. 5) Open all boxes immediately and inspect for damage due to weather related issues such as scorched, frozen or broken plants; material shortages; etc. NOTIFY SELLER IMMEDIATELY IF A SHIPMENT IS DAMAGED. Call the Ball Traffic Department at **800 879-BALL** to report the damage and receive details on what is needed to file a claim. Damaged unrooted and rooted cuttings will be replaced by Ball Seed.

Cancellation Policy

Cancellations for unrooted cuttings must be received at least thirty (30) days prior to scheduled ship date. Cancellations for liners or seed-raised plugs must be received prior to stick or sow date.

Notice & Return

No returns will be accepted. Seller shall have no liability for any defect unless notice is given promptly, not to exceed five (5) days after receipt of delivery of merchandise. Notice of defect should be addressed to Ball at **800 879-BALL**.

Delays, Shortages & Substitutions

Seller shall not be responsible for delays in delivery or for losses resulting from such delays. Seller reserves the right to make partial shipment. In the event of shortages, Seller may substitute such other, similar merchandise as is available.

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Varieties described herein may be covered by the Flowering-Only License Agreement, United States Plant Patents, Utility Patents, and/or Plant Breeders Rights. These varieties may not be reproduced without authorization. The breeder or authorized representative has the right to inspect customers' nurseries during normal business hours to assess compliance with the restrictions on use of protected varieties.

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ALL FOREIGN SHIPMENTS MUST BE SHIPPED IN COMPLIANCE WITH THE FOREIGN CORRUPT PRACTICES ACT AND THE UK BRIBERY ACT.

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Timbuk Farms, Inc.

Granville, Ohio

Van de Wetering Greenhouses, Inc.

Jamesport, New York

2019 Drops and Substitutions

Dropped Variety	Suggested substitutions for black cloth crops	Suggested substitutions for natural season crops
Eureka Yellow	Gold Cup Yellow, Paradiso Yellow	Gold Cup Yellow, Paradiso Yellow, Zinger Yellow
Fame Red	N/A	Cranbury Red, Red Hots
Gold Ball Yellow	Sundance Yellow, Morgana Yellow, Zinger Yellow	Dove Yellow, Gold Riot Yellow, Yellow Tang
Grandeur Yellow	Yellow Tang	Moonglow Yellow
Roadrunner Bronze	N/A	Katelli Bronze
Sparkle White	Paradiso White, Alpine White	Paradiso White
Avalon White	Avalon Crème White	Avalon Crème White

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