

syngenta flowers



Syngenta Flowers, Inc. is proud to introduce our 2017 Chrysanthemum program. As the industry leader, The Yoder® brand of Chrysanthemums is recognized for innovation. Built upon a tradition of excellence in breeding and production, it continues to be regarded by growers, retailers, and consumers as best in class. Today, Syngenta Flowers prides itself in supporting the industry and its growers with a complete clean stock program, vibrant assortment, the best technical support, and strong grower partnerships to ensure our reputation continues as a consistent and trusted supplier.

Our program is focused and built upon making North American growers successful. From our ever growing assortment of high performance families, to exciting new individual varieties, we continue to innovate and bring new choices to complete your programs.

Our shaded program charts will help you build an assortment for those earlier ship weeks. The Fresh-All-Fall program provides you with a system for Natural Season production planning. By grouping our varieties by color palette and response time, we have simplified your program to ensure you can deliver staged color all season long. The strength of our families make us your first choice for designing exciting combination programs that can work throughout the season.

Our assortment of pot mums will excite retailers and consumers. The novel colors and flower forms provide you with many options for weekly and special event programs.

This season we are proud to introduce several new families and varieties for your programs. Our goal is to offer you the best varieties and solutions. We want to thank you for your continued support and trust in us.

On the front cover: Patty[™] Purple
On the inside frront cover: Nikki[™] Dark Pink
On the back cover: Milton[™] Combo

Meet Your Mum Breeders



Mark Smith

CROPS

Garden mums. I have also had a hand in breeding other crops including Asters, Hibiscus, Lantana, Leucanthemum and various perennials.

NUMBER OF YEARS BREEDING

19 years

GREATEST ACCOMPLISHMENTS

Consulting one on one with growers to select varieties that have become a staple of grower's programs, such as Elena™ Gold and Beverly™ Bronze. Building on the family concept in mums to allow for easy mum combos throughout the fall natural season such as the Jacqueline™ family and Wanda™ family.

PERSONAL ACTIVITIES

I enjoy being in my yard, cooking and traveling with my wife of 20 years.



Wendy Bergman

CROPS

Yoder® Pot Chrysanthemums, Madinia™ Dipladinia, Bandana® Lantana, Sidekick™ Ipomoea, Bombay® Scaevola, Arabesque™ Penstemon

NUMBER OF YEARS BREEDING

20+ years

GREATEST ACCOMPLISHMENTS

Developing successful flower breeding programs from the ground up. My greatest reward is seeing a shopper pick up something I've bred and put it in their cart.

PERSONAL ACTIVITIES

Family, quilting, gardening and the great outdoors.

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New Varieties Garden Mums



Arlette™ Purple

Purple/Dark Pink / Dec / Sm-Med / S-M N = 36.5, Very Early / S = 37, Very Early / 6.5Variety 70067053



Ashley™ Red

Red / Dec / Sm-Med / M N = 40.5, Mid-Late / S = 41, Mid-Late / 7 Variety 70067019



Beverly™ Orange

Orange/Bronze / Dec / Med / M-L N = 38.5, Early-Mid / S = 39, Early-Mid / 6.5Variety 70067020



Christina™ Red

Red / Dec / Med / M N = 39, Mid / S = 39.5, Mid / 7.5Variety 70056068



Keeley™ Orange

Orange/Bronze / Dec / Med / S-M N = 36.5, Very Early / S = 37.5, Early / 7 Variety 70067047



Nikki™ Dark Pink

Purple/Dark Pink / Dec / Med / M N = 41, Late / S = 42, Late / 7.5 Variety 70067025



Nikki™ Orange

Orange/Bronze / Dec / Med / M N = 41, Late / S = 42, Late / 7.5 Variety 70067024



Nikki™ Yellow

Yellow/Gold / Dec / Med / M N = 41, Late / S = 42, Late / 7.5 Variety 70067027

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety

NEW VARIETIES 3

New Varieties

Garden Mums



Patty[™] Pomegranate

Red / Dec / Med / M-L N = 37.5, Early / S = 38.5, Early-Mid / 7 Variety 70067017



Rhonda™ Bronze

Orange/Bronze / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067036



Rhonda™ Pink

Pink/Lavender / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067039



Rhonda™ Purple

Purple/Dark Pink / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067038



Rhonda™ Red

Red / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067033



Rhonda™ White

White / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70072189



Rhonda™ Yellow

Yellow/Gold / Dec / Sm / M-L N=42, Very Late / S=43, Very Late / 8.5Variety 70072192



Yvette™ Orange Bicolor

Orange/Bronze / Dec / Sm / M N = 40, Mid-Late / S = 41, Mid-Late / 7 Variety 70066392



New Varieties Pot Mums





Yellow / Dsy / Med / 8 / S Variety 70065613



Estes Park™ Purple Bicolor

Purple / Dsy Bicolor / Med / 8 / M Variety 70065637



Springdale™ Purple

Purple / Dsy / Med-Lg / 7.5 / M Variety 70065612



LaBelle™ Dark Pink Bicolor

Pink / Dsy Bicolor / Med / 7.5 / S Variety 70065620



Clearview™ White

White / Dsy / Med / 7.5 / M Variety 70065632



Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number



New variety





Garden Mums

Yoder Garden Mums from Syngenta Flowers have a long history of outstanding performance for growers, retailers, and consumers. Whether grown as stand-alone varieties or in combination baskets and planters, growers can be confident Yoder Garden Mums will deliver a consistently beautiful crop.

Yoder Garden Mums can be grown using natural season or blackcloth production methods, which makes them a good fit with other seasonal crops grown in a protected environment or outdoors.

Yoder Garden Mums give growers the ability to stage color throughout the selling season. With proven varieties to choose from, growers are able to group their production by color and response time.

Growers can build their core natural-season program with Yoder Select Garden Mum varieties. With our Fresh-All-Fall table, growers can be sure they will be able to offer retailers and consumers a wide assortment of colors, flower forms and sizes sure to satisfy the most discerning buyer. All varieties have been trialed across North America so growers, retailers, and consumers can be confident Yoder Garden Mums will perform to the highest expectations wherever they are produced and displayed.

Starting with clean vegetative cuttings, Yoder Garden Mum varieties make it easy to produce consistent crops year round. Breeding of Yoder Garden Mums is focused on the development of key families that are well matched for flower timing, plant form and final size.

Garden Mum Families

Yoder Garden Mum families are the starting point for a successful mum program.

Families are bred in order for growers to produce a range of colors under a similar cultural program. Families are well matched for habit, vigor, and uniform timing across all colors. Several of our families will work for both Natural Season and Blackcloth production. When selecting for combinations recipes, the families are an ideal choice because all varieties within a family time and grow well together in mixed pots.



Jacqueline™ Yellow

Yellow/Gold / Dec / Sm-Med / M N = 37, Early / S = 38, Early / 6.5Variety 70038574



Jacqueline™ Orange Fusion

Orange/Bronze / Dec / Sm-Med / M N = 37.5, Early / S = 38, Early / 6.5Variety 70018841



Jacqueline™ Pink

Purple/Dark Pink / Dec / Sm-Med / M N = 37.5, Early / S = 38, Early / 6.5 Variety 70038575



Early natural season family with great plant flexibility for a wide range of container sizes

- · Can be used in both blackcloth and natural season programs, and coastal California
- Perfectly round plant habit for a great show of color
- Great choice for combination programs



Jacqueline™ Peach Fusion

Pink/Lavender / Dec / Sm-Med / S-M N = 37.5, Early / S = 38, Early / 6.5Variety 70018868



Jacqueline™ Pearl

White / Dec / Sm-Med / M N = 37, Early / S = 38, Early / 6.5 Variety 70018828



Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety

Ursula Family

Early season family for both natural season and blackcloth production

- Reliable flower timing and color retention with tolerance to temperature variations
- Works well in smaller to medium sized containers
- Attractive color mix for spring production



Ursula™ Sunny Yellow

Yellow/Gold / Dec / Med / S **N** = 37, Early / **S** = 38, Early / 6.5

Variety 70018628



Ursula™ Fancy Orange

Orange/Bronze / Dec / Med / S ${f N}=37,$ Early / ${f S}=37.5$ Early / ${f 6.5}$ Variety 70018840



Ursula™ Lavender

Pink/Lavender / Dec / Med / S-M **N** = 37.5, Early / **S** = 38, Early / 6.5
Variety 70018633





Ursula™ Jazzy Coral

Pink/Lavender / Dec / Med / S $\label{eq:N} \textbf{N}=37, \text{Early / } \textbf{S}=37.5, \text{Early / } 6.5$ Variety 70036120



Gigi™ Gold

Yellow/Gold / Dec / Sm / S $\mathbf{N} = 38$, Early-Mid / $\mathbf{S} = 38.5$, Early-Mid / 7 Variety 70018847



Gigi™ Dark Pink

Purple/Dark Pink / Dec / Sm / S N = 38, Early-Mid / S = 38.5, Early-Mid / 7 Variety 70038552



Gigi™ Yellow



Gigi™ Snow

White / Dec / Sm / S $\mathbf{N} = 38, \text{Early-Mid} / \mathbf{S} = 38.5, \text{Early-Mid} / 7$ Variety 70018902



Gigi™ Orange



Gigi™ Coral

Pink/Lavender / Dec / Sm / S ${\bf N} = 38, {\rm Early-Mid} \, / \, {\bf S} = 38.5, {\rm Early-Mid} \, / \, 7$ Variety 70038550

Gigi Family

Cute, petite flowers that make a big statement in the fall

- Controlled habit and plant strength with a great show of flowers that never needs netting
- Mix and match colors within the Gigi family to create containers that correspond with the changing of the seasons
- Great choice for a wide range of small to medium containers, window boxes, color bowls, and mixed combinations
- Excellent performance for blackcloth programs

Danielle Family

Early-mid season family that can be produced under blackcloth and natural season

- · Works well in larger containers
- Growers well with Chelsey and Beverly families

Beverly Family

- The deep, striking colors of the Beverly family work well for landscape plantings
- Plants have the vigor for larger pots
- An early-mid season flowering family that can also work in blackcloth production
- · Grows well with Chelsey and Danielle family



Danielle™ Purple

Purple/Dark Pink / Dec / Sm / M N = 38, Early-Mid / S = 38.5, Early-Mid / 6.5Variety 70021407



Danielle™ Red

Red / Dec / Sm / M N = 38, Early-Mid / S = 38.5, Early-Mid / 6.5Variety 70021406



Beverly™ Bronze

Orange/Bronze / Dec / Med / M-L N = 38.5, Early-Mid / S = 39, Early-Mid / 6.5Variety 70056069



Beverly™ Orange

Orange/Bronze / Dec / Med / M-L N = 38.5, Early-Mid / S = 39, Early-Mid / 6.5Variety 70067020

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety

Chelsey[™] Yellow

Yellow/Gold / Dec / Med / E-M ${\bf N} = 38, \mbox{Early-Mid / } {\bf S} = 38.5, \mbox{Early-Mid / } 6.5$ Variety 70038562



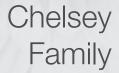
Chelsey™ Pink

Pink/Lavender / Dec / Med / E-M ${\bf N}=38.5, \, {\rm Early-Mid} \, / \, {\bf S}=39, \, {\rm Early-Mid} \, / \, 6.5$ Variety 70038561



Chelsey™ White

White / Dec / Med / E-M $\mathbf{N} = 38, \text{Early-Mid / } \mathbf{S} = 38.5, \text{Early-Mid / } 6.5$ Variety 70038560



A versatile early-mid season garden mum

- Ideal flower size, round plant habit and uniform flowering
- Mix and match any color except coral in this family to create unique fall combinations for retail displays
- Pairs well with Danielle and Beverly families in blackcloth and natural season programs



Chelsey™ Coral

Pink/Lavender / Dec / Med / M ${\bf N}=39, {\rm Mid} / {\bf S}=39.5, {\rm Mid} / 6.5$ Variety 70038563



Wanda Family

A mid season family that fits into any garden mum program

- Strong and rich colors hold up well through the season
- Works well in combinations
- Natural season timing falls between Chelsey and Cheryl families



Wanda™ Red

$$\label{eq:med_loss} \begin{split} & \text{Red / Dec / Med-Lg / M} \\ & \textbf{N} = 39, \text{Mid / } \textbf{S} = 40, \text{Mid / } 6.5 \\ & \text{Variety 70038636} \end{split}$$



Wanda™ Lavender

$$\label{eq:local_problem} \begin{split} & \text{Pink/Lavender / Dec / Med-Lg / M} \\ & \textbf{N} = 38.5, \, \text{Mid / } \textbf{S} = 39.5, \, \text{Mid / } 6.5 \\ & \text{Variety 70018871} \end{split}$$



Wanda™ Purple

 $\label{eq:number_purple} $$\operatorname{Purple/Dark\ Pink\ /\ Dec\ /\ Med-Lg\ /\ M}$$ $$N=39, Mid\ /\ S=40, Mid\ /\ 6.5$$$$ Variety\ 70021410$$



Cheryl™ Golden

Yellow/Gold / Dec / Med / M **N** = 40.5. Mid-Late / **S** = 41. Mid-Late / 7 Variety 70038554



Cheryl™ Sparkling Yellow

Yellow/Gold / Dec / Med / S-M **N** = 40.5, Mid-Late / **S** = 40.5, Mid-Late / 7 Variety 70018867



CheryI™ Spicy Orange

Orange/Bronze / Dec / Med / M **N** = 40.5, Mid-Late / **S** = 41, Mid-Late / 7 Variety 70018620



Mid-late family with bold colors for any crop

- A complete color family that holds up well under higher temperatures
- Good for blackcloth production
- · Perfect natural season flowering response



CheryI™ Jolly Red

Red / Dec / Med / S-M **N** = 40.5, Mid-Late / **S** = 41, Mid-Late / 7 Variety 70018852



Cheryl™ Pink

Pink/Lavender / Dec / Med / M-L N = 40, Mid-Late / S = 41.5, Mid-Late / 7 Variety 70018536



Cheryl™ Regal Purple

Purple/Dark Pink / Dec / Med / S-M **N** = 40.5, Mid-Late / **S** = 41, Mid-Late / 7 Variety 70018609



Cheryl™ Frosty White

White / Dec / Med / M-L N = 40.5, Mid-Late / S = 41, Mid-Late / 7 Variety 70018845

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety

Nikki Family

The start of a new late season garden mum family for both blackcloth and natural season production

- Attractive flower size and colors
- Sturdy round plants with frost tolerance for late season longevity
- Great option for late season three-color combos





Nikki™ Dark Pink

Purple/Dark Pink / Dec / Med / M **N** = 41, Late / **S** = 42, Late / 7.5
Variety 70067025





Nikki™ Orange

Orange/Bronze / Dec / Med / M
N = 41, Late / S = 42, Late / 7.5
Variety 70067024





Nikki™ Yellow

Yellow/Gold / Dec / Med / M

N = 41, Late / S = 42, Late / 7.5

Variety 70067027





Rhonda™ Yellow

Yellow/Gold / Dec / Sm / M-L N = 42, Very Late / S = 43, Very Late / 8.5Variety 70072192



Rhonda™ Bronze

Orange/Bronze / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067036



Rhonda™ Red

Red / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067033



Rhonda™ Pink

Pink/Lavender / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067039



Rhonda™ Purple

Purple/Dark Pink / Dec / Med / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067038



Rhonda™ White

White / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70072189

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety

Rhonda Family

Full color family for the very end of the fall garden mum season

- Needed vigor provides growers with the opportunity to shorten crop time even in larger containers
- Best choice for color longevity at the end of the season
- Proven frost tolerance to carry you through to the end of the season



Garden Mum Combinations

Consumers love to express themselves with color and there is no better way of doing that than with Yoder Garden Mum combinations.

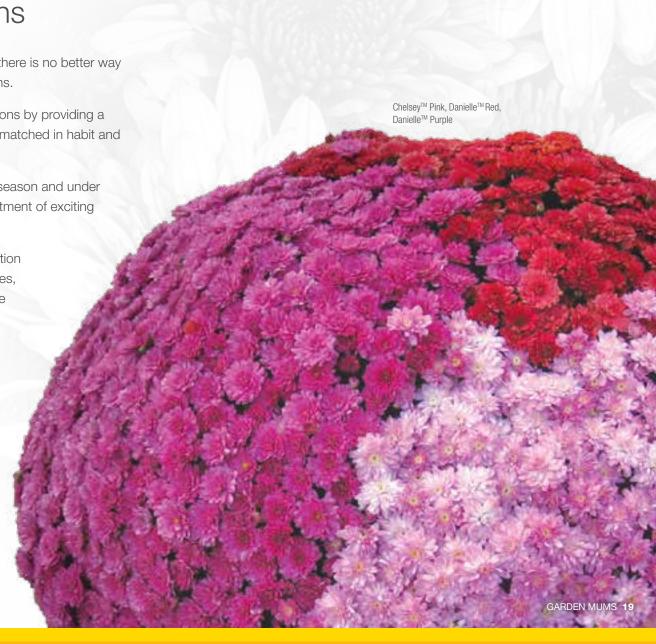
Syngenta has responded to the popularity of combinations by providing a wide choice of varieties within our families that are well matched in habit and flower response timing.

We have families that can work throughout the natural season and under blackcloth, so you can continue to deliver a fresh assortment of exciting mixes throughout the fall season.

Knowing they have access to the expertise and production experience of Syngenta Flowers technical representatives, growers can be confident they can consistently produce colorful, high quality garden mum combos throughout the season



Chelsey™ / Beverly™ combo





COMBO NAME	COMBO RECIPE	VARIETY NUMBER		COMBO NAME	COMBO RECIPE	VARIETY NUMBER
A Trace Of Fall™	Gigi™ Gold	70018847		Apple Cider™ Mix	Cheryl™ Golden	70038554
	Gigi™ Orange	70038551			Cheryl™ Jolly Red	70018852
	Gigi™ Coral	70038550			Cheryl™ Regal Purple	70018609
Autumn Morning™	Gigi™ Dark Pink	70038552		Mountain Drive™ Mix	Cheryl™ Jolly Red	70018852
	Gigi™ Coral	70038550			Cheryl™ Pink	70018536
	Gigi™ Snow	70018902			Cheryl™ Regal Purple	70018609
Acorn Lane™	Gigi™ Gold	70018847		Autumn Color™ Mix	Ursula™ Sunny	70018628
	Gigi™ Orange	70038551			Ursula™ Fancy Orange	70018840
	Gigi™ Dark Pink	70038552			Ursula™ Lavender	70018633
Mumberry™ Mix	Chelsey™ Yellow	70038562		Harvest Fusion™ Mix	Jacqueline™ Yellow	70038574
	Beverly™ Bronze	70056069	400		Jacqueline™ Orange Fusion	70018841
	Danielle™ Red	70021406	CONTRACT OF	1	Jacqueline™ Pink	70038575
Promise™ Mix	Danielle™ Red	70021406	1	Fall Berry™ Mlx	Wanda™ Red	70038636
C	Chelsey™ Pink	70038561	Neith		Wanda™ Lavender	70018871
	Danielle™ Purple	70021407	500		Wanda™ Purple	70021410
Southern Harvest™ Mix	Cheryl™ Golden	70038554	24	Festival Fun™ Mix	Nikki™ Yellow	70067027
	Cheryl™ Spicy Orange	70018620	WE .		Nikki [™] Orange	70067024
	Cheryl™ Jolly Red	70018852	1 P		Nikki™ Dark Pink	70067025
Front Door™ Mix	Cheryl™ Pink	70018536	3. E	Color My Fall™ Mix	Rhonda™ Yellow	70072192
	Cheryl™ Regal Purple	70018609	1		Rhonda™ Bronze	70067036
	Cheryl™ Frosty	70018845	15		Rhonda™ Red	70067033
Pumpkin Patch™ Mix	Cheryl™ Golden	70038554	arrest.	Fall Creations™ Mix	Rhonda™ Pink	70067039
	Cheryl™ Spicy Orange	70018620	师 公		Rhonda™ Purple	70067038
	Cheryl™ Regal Purple	70018609	16 1	4	Rhonda™ White	70072189

Yellow/Gold

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	under se	tiones.	Carrie Crawer	Sit Re	ign . Re	da Tes	N Rec	an and	des	Spills Spills	S Shack	coast	7.75	š / 8	: /		In Society Window
VARIETY	100	40,	/ No.	4011	Kall	Kall	Kall	Migh	Ship	- col.	Plan	Coo	1,30	3,00	Pairo	Hor	Will
Bernadette™ Yellow		Anm	Med/Lg	Week 37	Early	Week 38	Early	L	6.5 Weeks					•	•		
Bethany™ Yellow		Dec	Sm/Med	Week 40.5	Mid-Late	Week 41.5	Late	S/M	7 Weeks					•			
Brittany™ Yellow	Yes	Dec	Med/Lg	Week 36.5	Very Early	Week 37	Very Early	M	6.5 Weeks					•	•	•	
Chelsey™ Yellow	Yes	Dec	Med	Week 38	Early-Mid	Week 38.5	Early-Mid	M/L	6.5 Weeks	•	•	•		•	•	•	
Cheryl™ Golden	Yes	Dec	Med	Week 40.5	Mid-Late	Week 41	Mid-Late	М	7 Weeks	•	•	•	•	•	•	•	
Cheryl™ Sparkling Yellow	Yes	Dec	Med	Week 40.5	Mid-Late	Week 40.5	Mid-Late	S/M	7 Weeks	•	•	•	•	•			
Dawn™ Yellow		Dec	Med	Week 37.5	Early	Week 38	Early	M	6.5 Weeks	•	•	•		•			
Elena™ Gold	Yes	Dec	Med	Week 37.5	Early	Week 37.5	Early	S/M	7 Weeks	•	•	•	•	•	•	•	•
Gigi™ Gold		Dec	Sm	Week 38	Early-Mid	Week 38.5	Early-Mid	S	7 Weeks	•	•	•	•	•		•	•
Gigi™ Yellow		Dec	Sm	Week 38	Early-Mid	Week 38.5	Early-Mid	S	7 Weeks	•	•	•	•	•		•	•
Hankie™ Yellow	Yes	Dsy	Med	Week 39.5	Mid	Week 40	Mid	L	7.5 Weeks		•			•	•		
Jacqueline™ Yellow	Yes	Dec	Sm/Med	Week 37	Early	Week 38	Early	M	6.5 Weeks		•		•	•	•	•	•
Makayla™ Yellow	Yes	Dec	Med	Week 41	Late	Week 41.5	Late	M	7 Weeks					•	•	•	
Mary™ Yellow		Dec	Med/Lg	Week 39	Mid	Week 39.5	Mid	M/L	6.5 Weeks					•	•		
Michelle™ Gold	Yes	Dsy	Med	Week 36	Very Early	Week 36.5	Very Early	M	6 Weeks	•	•	•		•		•	
Mildred™ Yellow		Dec	Lg	Week 41.5	Late	Week 42	Late	M/L	7.5 Weeks		•			•	•	•	•
Monica™ Sunny Yellow		Anm	Lg	Week 39	Mid	Week 39.5	Mid	M/L	7 Weeks	•	•	•		•	•	•	
Nikki™ Yellow	Yes	Dec	Med	Week 41	Late	Week 42	Late	M	7.5 Weeks		•	•		•	•	•	
Okra™ Yellow		Dec	Sm/Med	Week 38.5	Early-Mid	Week 39.5	Mid	M/L	8 Weeks			•		•		•	
Olga™ Yellow		Dec	Med	Week 38	Early-Mid	Week 38.5	Early-Mid	M/L	6.5 Weeks			•		•	•		
Rhonda™ Yellow	Yes	Dec	Sm	Week 42	Very Late	Week 43	Very Late	M/L	8.5 Weeks					•	•	•	
Stephany™ Yellow	Yes	Dec	Med/Lg	Week 42.5	Very Late	Week 43	Very Late	S	7.5 Weeks				•	•		•	•
Ursula™ Sunny Yellow		Dec	Med	Week 37	Early	Week 38	Early	S	6.5 Weeks	•	•	•	•	•	•	•	•
Wilma™ Yellow	Yes	Dec	Med	Week 39	Mid	Week 40	Mid	М	6.5 Weeks			•		•		•	
Yolanda™ Yellow	Yes	Dec	Med/Lg	Week 38	Early-Mid	Week 39	Early-Mid	S/M	6.5 Weeks	•	•		•	•		•	•

Key: VIGOR (S) Small mounding | (S/M) Small-Medium mounding | (M) Medium mounding (M) | (M/L) Medium-Large mounding | (L) Large mounding FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy



Bernadette™ Yellow

Yellow/Gold / Anm / Med-Lg / L N=37, Early / S=38, Early / 6.5Variety 70018821



Bethany™ Yellow

Yellow/Gold / Dec / Sm-Med / S-M **N** = 40.5, Mid-Late / **S** = 41.5, Late / 7 Variety 70018822



Brittany™ Yellow

Yellow/Gold / Dec / Med-Lg / M N = 36.5, Very Early / S = 37, Very Early / 6.5Variety 70049738



Chelsey™ Yellow

Yellow/Gold / Dec / Med / M-L N = 38, Early-Mid / S = 38.5, Early-Mid / 6.5Variety 70038562



Cheryl™ Golden

Yellow/Gold / Dec / Med / M **N** = 40.5, Mid-Late / **S** = 41, Mid-Late / 7 Variety 70038554



Cheryl™ Sparkling Yellow

Yellow/Gold / Dec / Med / S-M **N** = 40.5, Mid-Late / **S** = 40.5, Mid-Late / 7 Variety 70018867



Dawn™ Yellow

Yellow/Gold / Dec / Med / M N = 37.5, Early / S = 38, Early / 6.5Variety 70018833



Elena™ Gold

Yellow/Gold / Dec / Med / S-M N = 37.5, Early / S = 37.5, Early / 7 Variety 70018837

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety



Gigi™ Gold

Yellow/Gold / Dec / Sm / S N = 38, Early-Mid / S = 38.5, Early-Mid / 7 Variety 70018847



Gigi™ Yellow

Yellow/Gold / Dec / Sm / S N = 38, Early-Mid / S = 38.5, Early-Mid / 7 Variety 70038553



Hankie™ Yellow

Yellow/Gold / Dsy / Med / L N = 39.5, Mid / S = 40, Mid / 7.5Variety 70018848



Jacqueline™ Yellow

Yellow/Gold / Dec / Sm-Med / M N = 37, Early / S = 38, Early / 6.5 Variety 70038574



Makayla™ Yellow

Yellow/Gold / Dec / Med / M N = 41, Late / S = 41.5, Late / 7 Variety 70049747



Mary[™] Yellow

Yellow/Gold / Dec / Med-Lg / M-L N = 39, Mid / S = 39.5, Mid / 6.5Variety 70038577



Michelle™ Gold

Yellow/Gold / Dsy / Med / M N = 36, Very Early / S = 36.5, Very Early / 6Variety 70018648



Mildred™ Yellow

Yellow/Gold / Dec / Lg / M-L N = 41.5, Late / S = 42, Late / 7.5 Variety 70021409

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety



Monica™ Sunny Yellow

Yellow/Gold / Anm / Lg / M-L ${f N}=39$, Mid / ${f S}=39.5$, Mid / 7 Variety 70018859



Nikki™ Yellow

Yellow/Gold / Dec / Med / M ${f N}=41$, Late / ${f S}=42$, Late / 7.5 Variety 70067027



Okra™ Yellow

Yellow/Gold / Dec / Sm-Med / M-L ${f N}=38.5$, Early-Mid / ${f S}=39.5$, Mid / 8 Variety 70018596



Olga™ Yellow

 $\label{eq:lows} \begin{tabular}{ll} Yellow/Gold / Dec / Med / M-L \\ N = 38, Early-Mid / S = 38.5, Early-Mid / 6.5 \\ Variety 70038581 \\ \end{tabular}$



Rhonda™ Yellow

Yellow/Gold / Dec / Sm / M-L $\bf N$ = 42, Very Late / $\bf S$ = 43, Very Late / 8.5 Variety 70072192



Stephany™ Yellow

Yellow/Gold / Dec / Med-Lg / S $\bf N=42.5$, Very Late / $\bf S=43$, Very Late / $\bf 7.5$ Variety 70062016



Ursula™ Sunny Yellow

Yellow/Gold / Dec / Med / S $\label{eq:New} \textbf{N} = 37, \text{Early / } \textbf{S} = 38, \text{Early / } 6.5$ Variety 70018628



Wilma™ Yellow

Yellow/Gold / Dec / Med / M ${f N}=39, {f Mid} / {f S}=40, {f Mid} / 6.5$ Variety 70018874



Yolanda™ Yellow

Yellow/Gold / Dec / Med-Lg / S-M **N** = 38, Early-Mid / **S** = 39, Early-Mid / 6.5

Variety 70018875





Orange/Bronze

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VARIETY Ashley™ Dark Orange	Yes	Dec	Sm/Med	Week 40	Mid-Late	Week 40.5	Mid-Late	M	7 Weeks	/ str	Alia	/ cor	/ N.W	•	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Har	Mir	
Aubrey™ Orange		Dec	Med	Week 38.5	Early-Mid	Week 39	Early-Mid	M	7.5 Weeks					•	•			
Beverly™ Bronze	Yes	Dec	Med	Week 38.5	Early-Mid	Week 39	Early-Mid	M/L	6.5 Weeks	•	•	•		•	•	•		
Beverly™ Orange	Yes	Dec	Med	Week 38.5	Early-Mid	Week 39	Early-Mid	M/L	6.5 Weeks		•	•		•	•	•		
Cheryl™ Spicy Orange	Yes	Dec	Med	Week 40.5	Mid-Late	Week 41	Mid-Late	M	7 Weeks	•	•	•	•	•	•	•		
Electra™ Amber Imp.	Yes	Dec	Med	Week 37	Very Early	Week 37.5	Early	M/L	6.5 Weeks			•		•	•			
Fiona™ Coral Orange	Yes	Dec	Med	Week 37.5	Early	Week 37.5	Early	S/M	7 Weeks			•	•	•			•	
Fiona™ Nutty Bronze		Dec	Med	Week 38	Early	Week 38	Early	S/M	7 Weeks				•	•			•	
Gigi™ Orange		Dec	Sm	Week 38	Early-Mid	Week 38.5	Early-Mid	S	7 Weeks	•	•	•	•	•		•	•	
Hailey™ Orange	Yes	Dec	Sm/Med	Week 39.5	Mid	Week 40.5	Mid-Late	S/M	7 Weeks		•		•	•	•	•	•	
Hannah™ Orange		Dec	Med	Week 37.5	Early	Week 37	Very Early	M/L	6.5 Weeks			•		•	•			
Jacqueline™ Orange Fusion	Yes	Dec	Sm/Med	Week 37.5	Early	Week 38	Early	M	6.5 Weeks		•		•	•	•	•	•	
Keeley™ Orange	Yes	Dec	Med	Week 36.5	Very Early	Week 37.5	Early	S/M	7 Weeks				•	•			•	
Makenna™ Orange	Yes	Dec	Med/Lg	Week 41	Late	Week 41	Mid-Late	M	7 Weeks					•	•	•		
Miranda™ Orange		Dec	Med/Lg	Week 38	Early-Mid	Week 39	Early-Mid	S/M	7 Weeks	•	•	•	•	•		•	•	
Nikki™ Orange	Yes	Dec	Med	Week 41	Late	Week 42	Late	М	7.5 Weeks		•	•		•	•	•		
Rhonda™ Bronze	Yes	Dec	Sm	Week 42.5	Very Late	Week 43.5	Very Late	M/L	8.5 Weeks					•	•	•		
Stacy™ Dazzling Orange	Yes	Dsy	Med/Lg	Week 38	Early-Mid	Week 39.5	Mid	M	7 Weeks			•		•	•	•		
Stephany™ Bronze	Yes	Dec	Med/Lg	Week 42.5	Very Late	Week 43	Very Late	S	7.5 Weeks				•	•		•	•	
Ursula™ Fancy Orange		Dec	Med	Week 37	Early	Week 37.5	Early	S	6.5 Weeks	•	•	•	•	•		•	•	
Ursula™ Jazzy Coral		Dec	Med	Week 37	Early	Week 37.5	Early	S	6.5 Weeks	•	•	•	•	•		•	•	
Yvette™ Orange Bicolor	Yes	Dec	Sm	Week 40	Mid-Late	Week 41	Mid-Late	M	7 Weeks		•	•	•	•		•	•	

Key: VIGOR (S) Small mounding | (S/M) Small-Medium mounding | (M) Medium mounding (M) | (M/L) Medium-Large mounding | (L) Large mounding FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy



Ashley™ Dark Orange

Orange/Bronze / Dec / Sm-Med / M N = 40, Mid-Late / S = 40.5, Mid-Late / 7 Variety 70018819



Aubrey™ Orange

Orange/Bronze / Dec / Med / M N = 38.5, Early-Mid / S = 39, Early-Mid / 7.5Variety 70021415



Beverly™ Bronze

Orange/Bronze / Dec / Med / M-L N = 38.5, Early-Mid / S = 39, Early-Mid / 6.5Variety 70056069



Beverly™ Orange

Orange/Bronze / Dec / Med / M-L N = 38.5, Early-Mid / S = 39, Early-Mid / 6.5Variety 70067020



CheryI™ Spicy Orange

Orange/Bronze / Dec / Med / M N = 40.5, Mid-Late / S = 41, Mid-Late / 7 Variety 70018620



Electra™ Amber Imp.

Orange/Bronze / Dec / Med / M-L N = 37, Very Early / S = 37.5, Early / 6.5 Variety 70063265



Fiona™ Coral Orange

Pink/Lavender / Dec / Med / S-M N = 37.5, Early / S = 37.5, Early / 7 Variety 70018842



Fiona™ Nutty Bronze

Orange/Bronze / Dec / Med / S-M N = 38, Early / S = 38, Early / 7Variety 70038578

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety



Improved variety



Gigi™ Orange

Orange/Bronze / Dec / Sm / S N = 38, Early-Mid / S = 38.5, Early-Mid / 7 Variety 70038551



Keeley™ Orange

Orange/Bronze / Dec / Med / S-M N = 36.5, Very Early / S = 37.5, Early / 7 Variety 70067047



Hailey™ Orange

Orange/Bronze / Dec / Sm-Med / S-M **N** = 39.5, Mid / **S** = 40.5, Mid-Late / 7 Variety 70038582



Hannah™ Orange

Orange/Bronze / Dec / Med / M-L N = 37.5, Early / S = 37, Very Early / 6.5 Variety 70018647



Jacqueline™ Orange Fusion

Orange/Bronze / Dec / Sm-Med / M N = 37.5, Early / S = 38, Early / 6.5Variety 70018841



Makenna™ Orange

Orange/Bronze / Dec / Med-Lg / M N = 41, Late / S = 41, Mid-Late / 7 Variety 70038627



Miranda™ Orange

Orange/Bronze / Dec / Med-Lg / S-M N = 38, Early-Mid / S = 39, Early-Mid / 7 Variety 70018858



Nikki™ Orange

Orange/Bronze / Dec / Med / M N = 41, Late / S = 42, Late / 7.5 Variety 70067024

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp.





New variety Memory Improved variety





Orange/Bronze / Dec / Sm / M-L $\bf N$ = 42.5, Very Late / $\bf S$ = 43.5, Very Late / 8.5 Variety 70067036



Ursula™ Fancy Orange

Orange/Bronze / Dec / Med / S **N** = 37, Early / **S** = 37.5 Early / 6.5
Variety 70018840



Stacy™ Dazzling Orange

Orange/Bronze / Dsy / Med-Lg / M ${\bf N}=38$, Early-Mid / ${\bf S}=39.5$, Mid / 7 Variety 70018548



Ursula™ Jazzy Coral

$$\label{eq:linear_problem} \begin{split} & \text{Pink/Lavender / Dec / Med / S} \\ & \textbf{N} = 37, \text{Early / } \textbf{S} = 37.5, \text{Early / } 6.5 \\ & \text{Variety } 70036120 \end{split}$$



Stephany™ Bronze

Orange/Bronze / Dec / Med-Lg / S **N** = 42.5, Very Late / **S** = 43, Very Late / 7.5

Variety 70063273



Yvette™ Orange Bicolor

Orange/Bronze / Dec / Sm / M
N = 40, Mid-Late / S = 41, Mid-Late / 7
Variety 70066392



Red right total 7.25 61 304 diggi VARIETY Aideen™ Red Fire Yes Dec Sm/Med Week 37 Very Early Week 37 Very Early S/M 6.5 Weeks • Ashley™ Red Mid-Late M 7 Weeks Yes Dec Sm/Med Week 40.5 Mid-Late Week 41 . Bonnie™ Red Dsy Med Week 37 Early Week 37.5 Early S/M 6.5 Weeks • Med Brandi™ Burgundy Dec Week 39 Mid Week 39.5 Mid M 7 Weeks Cheryl™ Jolly Red Week 41 Mid-Late S/M Yes Dec Med Week 40.5 Mid-Late 7 Weeks • • • Christina™ Red Yes Dec Med Week 39 Mid Week 39.5 Mid M 7.5 Weeks . Danielle™ Red Yes Dec Sm Week 38 Early-Mid Week 38.5 Early-Mid M 6.5 Weeks • • • • • . Edana™ Red Yes Med Week 40.5 Mid-Late Week 41.5 Late S/M 7 Weeks Dsy Emelda™ Red S Yes Sm Week 41 Late Week 42 Late 7.5 Weeks Dup . • . • Helen™ Maroon Dec Med Week 37.5 Early Week 39 Early-Mid M/L 6.5 Weeks Hestia™ Hot Red Week 37 Week 38 Early M 6.5 Weeks Dec Med Early • • • . • S Kathleen™ Dark Red Week 42.5 Very Late 7.5 Weeks Yes Dec Sm/Med Week 42 Very Late Patty™ Pomegranate Yes Dec Med Week 37.5 Early Week 38.5 Early-Mid M/L 7 Weeks • . • • Raquel™ Ruby Red Med Week 40 Mid-Late Week 41 Mid-Late 7 Weeks Dec L • Rhonda™ Red M/L

VIGOR (S) Small mounding | (S/M) Small-Medium mounding | (M) Medium mounding (M) | (M/L) Medium-Large mounding | (L) Large mounding FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy

Week 43.5

Week 39.5

Week 40

Very Late

M

M

Mid

Mid

8.5 Weeks

7 Weeks

6.5 Weeks

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Tabitha™ Scarlet

Wanda™ Red

Yes

Yes

Yes

Dec

Dec

Dec

Sm

Med

Med/Lq

Week 42.5

Week 37.5

Week 39

Very Late

Early

Mid



Aideen™ Red Fire

Red / Dec / Sm-Med / S-M N = 37, Very Early / S = 37, Very Early / 6.5Variety 70021416



Ashley™ Red

Red / Dec / Sm-Med / M N = 40.5, Mid-Late / S = 41, Mid-Late / 7 Variety 70067019



Bonnie™ Red

Red / Dsy / Med / S-M N = 37, Early / S = 37.5, Early / 6.5 Variety 70018824



Brandi™ Burgundy

Red / Dec / Med / M N = 39, Mid / S = 39.5, Mid / 7 Variety 70018644



CheryI™ Jolly Red

Red / Dec / Med / S-M **N** = 40.5, Mid-Late / **S** = 41, Mid-Late / 7 Variety 70018852



Christina™ Red

Red / Dec / Med / M N = 39, Mid / S = 39.5, Mid / 7.5Variety 70056068



Danielle™ Red

Red / Dec / Small / M N = 38, Early-Mid / S = 38.5, Early-Mid / 6.5Variety 70021406



Edana™ Red

Red / Dsy / Med / S-M N = 40.5, Mid-Late / S = 41.5, Late / 7 Variety 70021418

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety



Improved variety



Emelda™ Red

Red / Dup / Sm / S N = 41, Late / S = 42, Late / 7.5 Variety 70063272



Helen™ Maroon

Red / Dec / Med / M-L N = 37.5, Early / S = 39, Early-Mid / 6.5 Variety 70018574



Hestia™ Hot Red

Red / Dec / Med / M N = 37, Early / S = 38, Early / 6.5 Variety 70021417



Kathleen™ Dark Red

Red / Dec / Sm-Med / S N=42, Very Late / S=42.5, Very Late / 7.5Variety 70038584



Patty™ Pomegranate

Red / Dec / Med / M-L N = 37.5, Early / S = 38.5, Early-Mid / 7 Variety 70067017



Raquel™ Ruby Red

Red / Dec / Med / L **N** = 40, Mid-Late / **S** = 41, Mid-Late / 7 Variety 70018605



Rhonda™ Red

Red / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067033



Tabitha™ Scarlet

Red / Dec / Med / M N = 37.5, Early / S = 39.5, Mid / 7 Variety 70018658

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp.





New variety Memory Improved variety



Orange/Bronze / Dsy / Med-Lg / M
N = 39, Mid / S = 40, Mid / 6.5
Variety 70038636





Key: VIGOR (S) Small mounding | (S/M) Small-Medium mounding | (M) Medium mounding (M) | (M/L) Medium-Large mounding | (L) Large mounding FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy



Alisha™ Dark Pink

Purple/Dark Pink / Dsy / Med / S-M N = 39.5, Mid / S = 40, Mid / 7 Variety 70018818



Arlette™ Purple

Purple/Dark Pink / Dec / Sm-Med / S-M N = 36.5, Very Early / S = 37, Very Early / 6.5Variety 70067053



Beth™ Violet

Purple/Dark Pink / Dec / Med / M N = 37.5, Early / S = 39, Early-Mid / 6.5 Variety 70018523



Cheryl™ Regal Purple

Purple/Dark Pink / Dec / Med / S-M **N** = 40.5, Mid-Late / **S** = 41, Mid-Late / 7 Variety 70018609



Danielle™ Purple

Purple/Dark Pink / Dec / Small / M N = 38, Early-Mid / S = 38.5, Early-Mid / 6.5Variety 70021407



Emelda™ Purple

Purple/Dark Pink / Dup / Sm / S N = 41, Late / S = 42, Late / 7.5 Variety 70038572



Gigi™ Dark Pink

Purple/Dark Pink / Dec / Sm / S N = 38, Early-Mid / S = 38.5, Early-Mid / 7Variety 70038552



Jacqueline™ Pink

Purple/Dark Pink / Dec / Sm-Med / M N = 37.5, Early / S = 38, Early / 6.5Variety 70038575

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety



Improved variety



Nikki™ Dark Pink

Purple/Dark Pink / Dec / Med / M N = 41, Late / S = 42, Late / 7.5 Variety 70067025



Rhonda™ Purple

Purple/Dark Pink / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067038



Patty™ Purple

Purple/Dark Pink / Dec / Med / M-L N = 37.5, Early / S = 38.5, Early-Mid / 7 Variety 70049774



Wanda™ Purple

Purple/Dark Pink / Dec / Med-Lg / M N = 39, Mid / S = 40, Mid / 6.5 Variety 70021410

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp.





New variety Memory Memo





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Chelsey™ Coral Chelsey™ Pink Cheryl™ Pink		Dec Dec Dec	Med Med Med	Week 39 Week 38.5 Week 41	Mid Early-Mid Mid-Late	Week 39.5 Week 39 Week 41.5	Mid Early-Mid Mid-Late	M/L M/L M/L	6.5 Weeks 6.5 Weeks 7 Weeks	•	•	•	· ·	•	•	•	Jin States	Day Of
Chelsey™ Coral Chelsey™ Pink Cheryl™ Pink Gigi™ Coral	Yes Yes	Dec Dec Dec	Med Med Med Sm	Week 39 Week 38.5 Week 41 Week 38	Mid Early-Mid Mid-Late Early-Mid	Week 39.5 Week 39 Week 41.5 Week 38.5	Mid Early-Mid	M/L M/L M/L S	6.5 Weeks 6.5 Weeks 7 Weeks 7 Weeks	•	•	•		•	•	•	British William	Din No.
Chelsey™ Coral Chelsey™ Pink Cheryl™ Pink Gigi™ Coral Jacqueline™ Peach Fusion	Yes	Dec Dec Dec Dec Dec	Med Med Med Sm Sm/Med	Week 39 Week 38.5 Week 41 Week 38 Week 37.5	Mid Early-Mid Mid-Late Early-Mid Early	Week 39.5 Week 39 Week 41.5 Week 38.5 Week 38	Mid Early-Mid Mid-Late Early-Mid Early	M/L M/L M/L S S/M	6.5 Weeks 6.5 Weeks 7 Weeks 7 Weeks 6.5 Weeks	•	•	•	•	•	•	•		Sept.
Chelsey™ Coral Chelsey™ Pink Cheryl™ Pink Gigi™ Coral Jacqueline™ Peach Fusion Marsha™ Pink	Yes Yes Yes	Dec Dec Dec Dec Dec Dec Dec	Med Med Med Sm Sm/Med Med	Week 39 Week 38.5 Week 41 Week 38 Week 37.5 Week 38	Mid Early-Mid Mid-Late Early-Mid Early-Mid Early	Week 39.5 Week 39 Week 41.5 Week 38.5 Week 38 Week 37.5	Mid Early-Mid Mid-Late Early-Mid Early-Mid Early	M/L M/L M/L S S/M	6.5 Weeks 6.5 Weeks 7 Weeks 7 Weeks 6.5 Weeks 6.5 Weeks	•	•	•	•	•	•	•	•	A CONTRACTOR OF THE CONTRACTOR
Chelsey™ Coral Chelsey™ Pink Cheryl™ Pink Gigi™ Coral Jacqueline™ Peach Fusion Marsha™ Pink Rhonda™ Pink	Yes Yes Yes	Dec Dec Dec Dec Dec Dec Dec Dec	Med Med Med Sm Sm/Med Med Sm	Week 39 Week 38.5 Week 41 Week 38 Week 37.5 Week 38 Week 42.5	Mid Early-Mid Mid-Late Early-Mid Early-Mid Early Early-Mid VLate	Week 39.5 Week 41.5 Week 38.5 Week 38 Week 37.5 Week 43.5	Mid Early-Mid Mid-Late Early-Mid Early Early VLate	M/L M/L S S/M M M/L	6.5 Weeks 6.5 Weeks 7 Weeks 7 Weeks 6.5 Weeks 6.5 Weeks 8.5 Weeks	•	•	•	•	•	•	•	•	Right St.
Chelsey™ Coral Chelsey™ Pink Cheryl™ Pink Gigi™ Coral Jacqueline™ Peach Fusion Marsha™ Pink Rhonda™ Pink Stacy™ Pink	Yes Yes Yes Yes	Dec Dec Dec Dec Dec Dec Dec Dec Dec Dsy Dec	Med Med Med Sm Sm/Med Med Sm Med/Lg	Week 39 Week 38.5 Week 41 Week 38 Week 37.5 Week 38 Week 42.5 Week 38	Mid Early-Mid Mid-Late Early-Mid Early Early-Mid VLate Early-Mid	Week 39.5 Week 39 Week 41.5 Week 38.5 Week 38 Week 37.5 Week 43.5 Week 39	Mid Early-Mid Mid-Late Early-Mid Early Early VLate Early-Mid	M/L M/L S S/M M M/L M/L N/L M/L N/L M/L M	6.5 Weeks 7 Weeks 7 Weeks 6.5 Weeks 6.5 Weeks 6.5 Weeks 8.5 Weeks 7 Weeks	•	•	•	•	•	•	•	•	A CONTRACTOR OF THE CONTRACTOR
Chelsey™ Coral Chelsey™ Pink Cheryl™ Pink Gigi™ Coral Jacqueline™ Peach Fusion Marsha™ Pink Rhonda™ Pink Stacy™ Pink Susan™ Coral Pink	Yes Yes Yes	Dec Dec Dec Dec Dec Dec Dec Dsy Dec Dsy Spdr	Med Med Med Sm Sm/Med Med Sm Med Lg	Week 39 Week 38.5 Week 41 Week 38 Week 37.5 Week 38 Week 42.5 Week 38 Week 40	Mid Early-Mid Mid-Late Early-Mid Early Wid Early-Mid VLate Early-Mid Mid-Late	Week 39.5 Week 39 Week 41.5 Week 38.5 Week 38 Week 37.5 Week 43.5 Week 40.5	Mid Early-Mid Mid-Late Early-Mid Early Early VLate Early-Mid Mid-Late	M/L M/L S S/M M M/L L	6.5 Weeks 6.5 Weeks 7 Weeks 7 Weeks 6.5 Weeks 6.5 Weeks 8.5 Weeks 7 Weeks 6.5 Weeks	•	•	•	•	•	•	•	•	ob comments of the comments of
Chelsey™ Coral Chelsey™ Pink Cheryl™ Pink Gigi™ Coral Jacqueline™ Peach Fusion Marsha™ Pink Rhonda™ Pink Stacy™ Pink	Yes Yes Yes Yes	Dec Dec Dec Dec Dec Dec Dec Dec Dec Dsy Dec	Med Med Med Sm Sm/Med Med Sm Med/Lg	Week 39 Week 38.5 Week 41 Week 38 Week 37.5 Week 38 Week 42.5 Week 38	Mid Early-Mid Mid-Late Early-Mid Early Early-Mid VLate Early-Mid	Week 39.5 Week 39 Week 41.5 Week 38.5 Week 38 Week 37.5 Week 43.5 Week 39	Mid Early-Mid Mid-Late Early-Mid Early Early VLate Early-Mid	M/L M/L S S/M M M/L M/L N/L M/L N/L M/L M	6.5 Weeks 7 Weeks 7 Weeks 6.5 Weeks 6.5 Weeks 6.5 Weeks 8.5 Weeks 7 Weeks	•	•	•	•	•	•	•	•	a de la companya de l

Key: VIGOR (S) Small mounding | (S/M) Small-Medium mounding | (M) Medium mounding (M) | (M/L) Medium-Large mounding | (L) Large mounding FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy



Chelsey™ Coral

Pink/Lavender / Dec / Med / M-L N = 39, Mid / S = 39.5, Mid / 6.5Variety 70038563



Chelsey™ Pink

Pink/Lavender / Dec / Med / M-L N = 38.5, Early-Mid / S = 39, Early-Mid / 6.5Variety 70038561



Cheryl™ Pink

Pink/Lavender / Dec / Med / M-L **N** = 40, Mid-Late / **S** = 41.5, Mid-Late / 7 Variety 70018536



Gigi™ Coral

Pink/Lavender / Dec / Sm / S N = 38, Early-Mid / S = 38.5, Early-Mid / 7Variety 70038550



Jacqueline™ Peach Fusion

Pink/Lavender / Dec / Sm-Med / S-M N = 37.5, Early / S = 38, Early / 6.5Variety 70018868



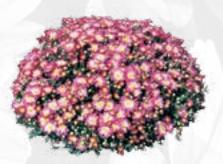
Marsha™ Pink

Pink/Lavender / Dsy / Med / M N = 38, Early-Mid / S = 37.5, Early / 6.5 Variety 70018854



Rhonda™ Pink

Pink/Lavender / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70067039



Stacy™ Pink

Pink/Lavender / Dsy / Med-Lg / M
N = 38, Early-Mid / S = 39, Early-Mid / 7 Variety 70018623

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety



Improved variety



Susan™ Coral Pink

Pink/Lavender / Spdr / Lg / L N = 40, Mid-Late / S = 40.5, Mid-Late / 6.5Variety 70049769



Wanda™ Lavender

Pink/Lavender / Dec / Med-Lg / M N = 38.5, Mid / S = 439.5, Mid / 6.5Variety 70018871



Ursula™ Lavender

Pink/Lavender / Dec / Med / S-M N = 37.5, Early / S = 38, Early / 6.5Variety 70018633













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	' '	/	410	4011	4.011	Call for	KallAte	light	shade.	Spill	ohack.	Cass	1,75	300	Polite	Halie	Wind	
Bertha™ White	Yes	Dec	Med/Lg	Week 37	Early Early	Week 37.5	L all Res	iitgat M	cynthe control of the	Spini	Hack	Cost	ALC , its i	3,00	Priil	Hame	Wind	
Bertha™ White Chelsey™ White				Week 37 Week 38	Early Early-Mid	Week 37.5 Week 38.5	Early Early-Mid	M M/L	6.5 Weeks 6.5 Weeks				,,,,				Wift	
	Yes	Dec	Med/Lg	Week 37	Early	Week 37.5	Early	M	6.5 Weeks	•			, r.ts.	•	•	•	Wifte	
Chelsey [™] White	Yes Yes	Dec Dec	Med/Lg Med	Week 37 Week 38	Early Early-Mid	Week 37.5 Week 38.5	Early-Mid	M M/L	6.5 Weeks	•	•	•		•	•	•	Wifte	
Chelsey™ White Cheryl™ Frosty White	Yes Yes Yes	Dec Dec Dec	Med/Lg Med Med	Week 37 Week 38 Week 40.5	Early Early-Mid Mid-Late	Week 37.5 Week 38.5 Week 41	Early Early-Mid Mid-Late	M M/L M/L	6.5 Weeks 6.5 Weeks 7 Weeks	•	•	•	•	•	•	•		A 180
Chelsey [™] White Cheryl [™] Frosty White Edith [™] White	Yes Yes Yes	Dec Dec Dec Anm	Med/Lg Med Med Med/Lg	Week 37 Week 38 Week 40.5 Week 36.5	Early Early-Mid Mid-Late Very Early	Week 37.5 Week 38.5 Week 41 Week 36.5	Early Early-Mid Mid-Late Very Early	M M/L M/L S/M	6.5 Weeks 6.5 Weeks 7 Weeks 7 Weeks	•	•	•	•	•	•	•	•	1000
Chelsey™ White Cheryl™ Frosty White Edith™ White Gigi™ Snow	Yes Yes Yes Yes	Dec Dec Anm Dec	Med/Lg Med Med Med/Lg Sm	Week 37 Week 38 Week 40.5 Week 36.5 Week 38	Early Early-Mid Mid-Late Very Early Early-Mid	Week 37.5 Week 38.5 Week 41 Week 36.5 Week 38.5	Early Early-Mid Mid-Late Very Early Early-Mid	M M/L M/L S/M S	6.5 Weeks 7 Weeks 7 Weeks 7 Weeks 7 Weeks	•	•	•	•	•	•	•	•	
Chelsey™ White Cheryl™ Frosty White Edith™ White Gigi™ Snow Jacqueline™ Pearl	Yes Yes Yes Yes Yes	Dec Dec Anm Dec Dec	Med/Lg Med Med Med/Lg Sm Sm/Med	Week 37 Week 38 Week 40.5 Week 36.5 Week 38 Week 37	Early Early-Mid Mid-Late Very Early Early-Mid Early	Week 37.5 Week 38.5 Week 41 Week 36.5 Week 38.5 Week 38	Early Early-Mid Mid-Late Very Early Early-Mid Early	M M/L M/L S/M S	6.5 Weeks 7 Weeks 7 Weeks 7 Weeks 7 Weeks 6.5 Weeks	•	•	•	•	•	•	•	•	A STATE OF
Chelsey™ White Cheryl™ Frosty White Edith™ White Gigi™ Snow Jacqueline™ Pearl Makenzie™ White	Yes Yes Yes Yes Yes Yes Yes	Dec Dec Anm Dec Dec Dec	Med/Lg Med Med Med/Lg Sm Sm/Med Med	Week 37 Week 38 Week 40.5 Week 36.5 Week 38 Week 37 Week 39.5	Early Early-Mid Mid-Late Very Early Early-Mid Early-Mid	Week 37.5 Week 38.5 Week 41 Week 36.5 Week 38.5 Week 38 Week 40.5	Early Early-Mid Mid-Late Very Early Early-Mid Early Mid-Late	M M/L M/L S/M S M	6.5 Weeks 7 Weeks 7 Weeks 7 Weeks 6.5 Weeks 6.5 Weeks 6.5 Weeks	•	•	•	•	•	•	•	•	
Chelsey™ White Cheryl™ Frosty White Edith™ White Gigi™ Snow Jacqueline™ Pearl Makenzie™ White Mildred™ White	Yes Yes Yes Yes Yes Yes Yes Yes Yes	Dec Dec Anm Dec Dec Dec Dec	Med/Lg Med Med Med/Lg Sm Sm/Med Med Lg	Week 37 Week 38 Week 40.5 Week 36.5 Week 38 Week 37 Week 39.5 Week 41.5	Early Early-Mid Mid-Late Very Early Early-Mid Early-Mid Late	Week 37.5 Week 38.5 Week 41 Week 36.5 Week 38.5 Week 38 Week 40.5 Week 42	Early Early-Mid Mid-Late Very Early Early-Mid Early Mid-Late Late	M	6.5 Weeks 7 Weeks 7 Weeks 7 Weeks 6.5 Weeks 6.5 Weeks 6.5 Weeks 7.5 Weeks	•	•	•	•	•	•	•	•	
Chelsey™ White Cheryl™ Frosty White Edith™ White Gigi™ Snow Jacqueline™ Pearl Makenzie™ White Mildred™ White Rhonda™ White	Yes	Dec Dec Dec Anm Dec Dec Dec Dec Dec	Med/Lg Med Med Med/Lg Sm Sm/Med Med Lg Sm	Week 37 Week 38 Week 40.5 Week 36.5 Week 38 Week 37 Week 39.5 Week 41.5 Week 42.5	Early Early-Mid Mid-Late Very Early Early-Mid Early Mid Late Very Late	Week 37.5 Week 38.5 Week 41 Week 36.5 Week 38.5 Week 40.5 Week 42 Week 43.5	Early Early-Mid Mid-Late Very Early Early-Mid Early Mid-Late Late Very Late	M	6.5 Weeks 7 Weeks 7 Weeks 7 Weeks 6.5 Weeks 6.5 Weeks 6.5 Weeks 7.5 Weeks 8.5 Weeks	•	•	•	•	•	•	•	•	A MAN N

Key: VIGOR (S) Small mounding | (S/M) Small-Medium mounding | (M) Medium mounding (M) | (M/L) Medium-Large mounding | (L) Large mounding FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy



Bertha™ White

White / Dec / Med-Lg / M N = 37, Early / S = 37.5, Early / 6.5Variety 70038580



Chelsey™ White

White / Dec / Med / M-L N = 38, Early-Mid / S = 38.5, Early-Mid / 6.5Variety 70038560



Cheryl™ Frosty White

White / Dec / Med / M-L **N** = 40.5, Mid-Late / **S** = 41, Mid-Late / 7 Variety 70018845



Edith™ White

White / Anm / Med-Lg / S-M N = 36.5, Very Early / S = 36.5, Very Early / 7 Variety 70038579



Gigi™ Snow

White / Dec / Sm / S N = 38, Early-Mid / S = 38.5, Early-Mid / 7Variety 70018902



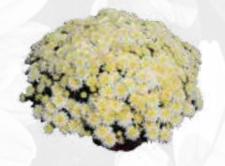
Jacqueline™ Pearl

White / Dec / Sm-Med / M N=37, Early / S=38, Early / 6.5Variety 70018828



Makenzie[™] White

White / Dec / Med / M **N** = 39.5, Mid / **S** = 40.5, Mid-Late / 6.5 Variety 70049795



Mildred™ White

White / Dec / Lg / M-L N = 41.5, Late / S = 42, Late / 7.5Variety 70018857

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number



New variety



Improved variety



Rhonda™ White

White / Dec / Sm / M-L N = 42.5, Very Late / S = 43.5, Very Late / 8.5Variety 70072189



Vanna™ Snow

Pink/Purple / Dsy / Med / M N = 37.5, Early / S = 38, Early / 7Variety 70018870



Shannon™ White

Pink/Purple / Dec / Med-Lg / L N = 36.5, Very Early / S = 36.5, Very Early / 6 Variety 70056059



Wilma™ White

Lavender/Purple / Dec / Med / M **N** = 39, Mid / **S** = 40, Mid / 6.5 Variety 70018873

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp.





New variety Memory Memo







With its glossy green leaves and large daisy flowers, Montauk daisy is a real eye-catcher at retail, and is a simple addition to your existing garden mum program

- Excellent for summer production
- The Montauk Daisy is a programmable perennial that behaves like a mum
- Showy flowers and very glossy foliage make it a consumer favorite
- Not recommended for cool weather production and needs to be pinched



Montauk Daisy

White / Dsy / Lg ${\bf N} = 39.5$, Mid / ${\bf S} = 39.5$, Mid / 7 Variety 70018157

Key: Color group / Flower form / Flower size / Plant vigor Northern resp. Week, Northern resp. group / Southern resp. Week, Southern resp. group / Shade resp. Variety number





Family

ramily	16	Off	No.	/ 84	/ QI	MI
SPRING SELECTIONS						
GIGI™ 7 Weeks	Gigi™ Yellow Gigi Gold	Gigi™ Orange	Kathleen™ Dark Red ■	Gigi™ Dark Pink	Gigi™ Coral	Gigi™ Snow
CHERYL™ 7 Weeks	Cheryl™ Golden Cheryl™ Sparkling Yellow	Cheryl™ Spicy Orange	Cheryl™ Jolly Red ▼ Brandi™ Burgundy ▲	Cheryl™ Regal Purple ▼	Cheryl™ Pink	Cheryl™ Frosty White
URSULA™ 6.5 Weeks	Ursula™ Sunny Yellow	Ursula™ Fancy Orange Ursula™ Jazzy Coral	Tabitha™ Scarlet Hestia™ Hot Red		Ursula™ Lavender	Makenzie™ White
NANDA™ et al 6.5/7 Weeks	Yolanda™ Yellow Elena™ Gold ■	Miranda™ Orange ▼ Beverly™ Bronze ▲	Wanda™ Red Hestia™ Hot Red	Wanda™ Purple	Wanda™ Lavender	Makenzie™ White
CHELSEY™ et al 6.5 Weeks	Chelsey [™] Yellow Dawn [™] Yellow	Beverly™ Bronze	Danielle™ Red ▼ Hestia™ Hot Red	Danielle™ Purple ▼	Chelsey™ Pink Chelsey™ Coral	Chelsey™ White Bertha™ White
DAISY 6.5/7 Weeks	Michelle™ Gold Monica™ Sunny Yellow		Bonnie™ Red ▼ Edana™ Red ▼	Alisha™ Dark Pink ▼	Marsha™ Pink	Edith™ White Vanna™ Snow
SPECIAL					Susan™ Coral Pink	
BLACKCLOTH						
GIGI™ 7 Weeks	Gigi™ Yellow Gigi™ Gold	Gigi™ Orange Hailey™ Orange	Aideen™ Red Fire ▲ Kathleen™ Dark Red ■	Gigi™ Dark Pink	Gigi™ Coral	Gigi™ Snow
CHERYL™ 7 Weeks	Cheryl™ Golden Cheryl™ Sparkling Yellow	Cheryl™ Spicy Orange	Cheryl™ Jolly Red ▼ Brandi™ Burgundy ▲	Cheryl™ Regal Purple ▼	Cheryl™ Pink	Cheryl™ Frosty White ▲
URSULA™ 6.5 Weeks	Ursula™ Sunny Yellow Yolanda™ Yellow	Ursula™ Fancy Orange Ursula™ Jazzy Coral	Aideen™ Red Fire Tabitha™ Scarlet ▲		Ursula™ Lavender	Makenzie™ White
JACQUELINE™ 6.5 Weeks	Jacqueline™ Yellow	Jacqueline™ Orange Fusion ●	Tabitha™ Scarlet	Jacqueline™ Pink	Jacqueline™ Peach Fusion ●	Jacqueline™ Pearl
WANDA™ 6.5 Weeks	Elena™ Gold ▼ Dawn™ Yellow ■	Miranda™ Bronze ▼	Wanda [™] Red Hestia [™] Hot Red ▲	Wanda™ Purple	Wanda™ Lavender	Bertha™ White ▲
NIKKI™ 7.5 Weeks	Nikki™ Yellow Mildred™ Yellow ▲	Nikki™ Orange		Nikki™ Dark Pink		Mildred™ White ▲
CHELSEY™ 6.5 Weeks	Chelsey™ Yellow	Beverly™ Bronze Beverly™ Orange	Danielle™ Red ▼ Hestia™ Hot Red	Danielle™ Purple ▼	Chelsey™ Pink Chelsey™ Coral ●	Chelsey™ White Bertha™ White
DAISY 6.5 + 7 Weeks	Michelle™ Gold ■ Monica™ Sunny Yellow		Bonnie™ Red Edana™ Red	Alisha™ Dark Pink ■	Marsha™ Pink ▲	Edith™ White Vanna™ Snow
	1	1	1			

- Will likely flower a bit slower than the rest of the varieties in this group
- ▲ Will likely need more growth regulators than other varieties in this group
- ▼ Likely need less growth regulators than other varieties in this group
- Color will fade in hot greenhouses
- Not recommended for 2.5 or 3.0 gal pots in blackcloth

Response listed is for plants between stage 2 and 3. Plan to ship about 1 week earlier. Groups listed in order of vigor from most compact to most vigorous, followed by dasies

Response Week	ACLIGN	Flori	et fro kall Resi	Offingt.	Flori	et for Kall Rest	RED	Flour	e feel feel feel fee
FRESH-ALL-FALL: NORTH									
VERY EARLY	Michelle™ Gold ⊙	Dsy	Week 36	Keeley™ Orange ® ③	Dec	Week 36.5	Aideen™ Red Fire ♡	Dec	Week 37
Week 37 and earlier	Brittany™ Yellow ⊙	Dec	Week 36.5	Electra™ Amber Imp. ⊙	Dec	Week 37			
	Ursula™ Sunny Yellow	Dec	Week 37	Ursula™ Fancy Orange	Dec	Week 37	Bonnie™ Red	Dsy	Week 37
	Jacqueline™ Yellow ூ	Dec	Week 37	Ursula™ Jazzy Coral	Dec	Week 37	Hestia™ Hot Red	Dec	Week 37
EARLY	Bernadette™ Yellow	Anm	Week 37	Fiona [™] Coral Orange 🏵	Dec	Week 37.5	Helen™ Maroon	Dec	Week 37.5
Week 37 to Week 37.5	Elena™ Gold ⊙	Dec	Week 37.5	Hannah™ Orange	Dec	Week 37.5	Patty [™] Pomegranate ™ ♡	Dec	Week 37.5
	Dawn™ Yellow	Dec	Week 37.5	Jacqueline™ Orange Fusion ⊙	Dec	Week 37.5	Tabitha™ Scarlet ⊙	Dec	Week 37.5
				Fiona™ Nutty Bronze	Dec	Week 38			
	Yolanda™ Yellow ⊙	Dec	Week 38	Gigi™ Orange	Dec	Week 38	Danielle™ Red ⊙	Dec	Week 38
	Gigi™ Yellow	Dec	Week 38	Miranda™ Orange	Dec	Week 38			
EARLY-MID	Gigi™ Gold	Dec	Week 38	Stacy™ Dazzling Orange 🏵	Dsy	Week 38			
Week 38 to Week 38.5	Olga™ Yellow	Dec	Week 38	Beverly™ Bronze ⊙	Dec	Week 38.5			
	Chelsey [™] Yellow ⊙	Dec	Week 38	Beverly [™] Orange ⊙	Dec	Week 38.5			
	Okra™ Yellow	Dec	Week 38.5	Aubrey™ Orange 🏵	Dec	Week 38.5			
	Monica™ Sunny Yellow	Anm	Week 39	Hailey™ Orange ூ	Dec	Week 39.5	Brandi [™] Burgundy	Dec	Week 39
MID	Mary™ Yellow	Dec	Week 39				Christina™ Red N Y	Dec	Week 39
Week 38.5 to Week 39.5	Wilma™ Yellow ூ	Dec	Week 39				Wanda™ Red ⊙	Dec	Week 39
	Hankie [™] Yellow ⊙	Dsy	Week 39.5						
	Cheryl™ Sparkling Yellow ூ	Dec	Week 40.5	Ashley™ Dark Orange ⊙	Dec	Week 40	Raquel™ Ruby Red	Dec	Week 40
MID-LATE	Cheryl™ Golden 🏵	Dec	Week 40.5	Yvette [™] Orange Bicolor ⊙	Dec	Week 40	Ashley™ Red ® 愛	Dec	Week 40.5
Week 40 to Week 41	Bethany™ Yellow	Dec	Week 40.5	Cheryl™ Spicy Orange ⊙	Dec	Week 40.5	Cheryl™ Jolly Red ⊙	Dec	Week 40.5
							Edana™ Red 🏵	Dsy	Week 40.5
	Makayla™ Yellow 🏵	Dec	Week 41	Makenna™ Orange 🏵	Dec	Week 41	Emelda™ Red ♡	Dup	Week 41
LATE Neek 41 to Week 41.5	Nikki™ Yellow 🐧 🏵	Dec	Week 41	Nikki™ Orange \ \	Dec	Week 41			
WIOON TI LO WOON TI.O	Mildred™ Yellow ூ	Dec	Week 41.5						
VERY LATE	Rhonda™ Yellow ② ⊙	Dec	Week 42	Stephany™ Bronze ⊙	Dec	Week 42.5	Kathleen™ Dark Red ⊙	Dec	Week 42
Week 42 and later	Stephany™ Yellow ⊙	Dec	Week 42.5	Rhonda™ Bronze ② ⊙	Dec	Week 42.5	Rhonda™ Red ® ♡	Dec	Week 42.5

Key: FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy Response listed is for plants between stage 2 and 3. Plan to ship about 7-14 days earlier.

New for 2017

PHETE THE PHETE	Clar	set forth kall hee	one like Lakingth	cios	estorii valikesi	ers this with	Class	of tariff to all
						<u> </u>		
Arlette™ Purple ® ⊙	Dec	Week 36.5				Shannon™ White ♥	Dec	Week 36.5
						Edith™ White ♡	Anm	Week 36.5
Jacqueline™ Pink Imp 🏵	Dec	Week 37.5	Ursula™ Lavender	Dec	Week 37.5	Bertha™ White ⊙	Dec	Week 37
Patty™ Purple ♡	Dec	Week 37.5	Jacqueline™ Peach Fusion ⊙	Dec	Week 37.5	Jacqueline™ Pearl ♡	Dec	Week 37
Beth™ Violet	Dec	Week 37.5				Vanna™ Snow ⊙	Dsy	Week 37.5
Gigi™ Dark Pink	Dec	Week 38	Marsha™ Pink	Dsy	Week 38	Gigi™ Snow	Dec	Week 38
Danielle™ Purple ♡	Dec	Week 38	Gigi™ Coral	Dec	Week 38	Chelsey™ White ♡	Dec	Week 38
			Stacy™ Pink ⊙	Dsy	Week 38			
			Chelsey™ Pink ⊙	Dec	Week 38.5			
Wanda™ Purple ⊙	Dec	Week 39	Wanda™ Lavender ⊙	Dec	Week 38.5	Wilma™ White ♡	Dec	Week 39
Alisha™ Dark Pink	Dsy	Week 39.5	Chelsey™ Coral	Dec	Week 39	Makenzie [™] White ⊙	Dec	Week 39.5
Cheryl™ Regal Purple ♡	Dec	Week 40.5	Susan™ Coral Pink ♡	Spdr	Week 40	Cheryl™ Frosty White ❤	Dec	Week 40.5
			Cheryl™ Pink ⊙	Dec	Week 41			
Emelda™ Purple ③	Dup	Week 41				Mildred™ White ⊙	Dec	Week 41.5
Nikki™ Dark Pink © ⊙	Dec	Week 41						
Rhonda™ Purple ® ⊗	Dec	Week 42.5	Rhonda™ Pink N ⊙	Dec	Week 42.5	Rhonda™ White N ♡	Dec	Week 42.5



	Triliam		Ref Fro Fall Res	Offiner.	Flori	er fro kall Rest	ALD	Flori	et for kall Res
FRESH-ALL-FALL: SOUTH									
VERY EARLY	Michelle™ Gold ூ	Dsy	Week 36	Hannah™ Orange	Dec	Week 37	Aideen™ Red Fire 🏵	Dec	Week 37
Week 37 and earlier	Brittany™ Yellow ⊙	Dec	Week 36.5						
	Elena™ Gold ⊙	Dec	Week 37.5	Ursula™ Jazzy Coral	Dec	Week 37.5	Bonnie™ Red	Dsy	Week 37.5
	Ursula™ Sunny Yellow	Dec	Week 38	Fiona™ Coral Orange ♡	Dec	Week 37.5	Hestia™ Hot Red	Dec	Week 38
PARIV	Jacqueline™ Yellow ூ	Dec	Week 38	Keeley [™] Orange N Y	Dec	Week 37.5			
EARLY Week 37 to Week 37.5	Bernadette™ Yellow	Anm	Week 38	Electra™ Amber Imp. ⊙	Dec	Week 37.5			
	Dawn™ Yellow	Dec	Week 38	Ursula™ Fancy Orange	Dec	Week 37.5			
				Jacqueline™ Orange Fusion ♡	Dec	Week 38			
				Fiona™ Nutty Bronze	Dec	Week 38			
	Gigi™ Yellow	Dec	Week 38.5	Gigi™ Orange	Dec	Week 38.5	Patty [™] Pomegranate ® ③	Dec	Week 38.5
	Gigi™ Gold	Dec	Week 38.5	Miranda™ Orange	Dec	Week 39	Danielle™ Red ⊙	Dec	Week 38.5
EARLY-MID Week 38 to Week 38.5	Chelsey™ Yellow ❤	Dec	Week 38.5	Beverly™ Bronze N Y	Dec	Week 39	Helen™ Maroon	Dec	Week 39
WOOK OO to WOOK OO.O	Olga™ Yellow	Dec	Week 38.5	Beverly™ Orange ⊙	Dec	Week 39			
	Yolanda™ Yellow ூ	Dec	Week 39	Aubrey™ Orange	Dec	Week 39			
	Okra™ Yellow	Dec	Week 39.5	Stacy™ Dazzling Orange ③	Dsy	Week 39.5	Tabitha™ Scarlet 🏵	Dec	Week 39.5
	Monica™ Sunny Yellow	Anm	Week 39.5				Brandi [™] Burgundy	Dec	Week 39.5
MID Week 38.5 to Week 39.5	Mary™ Yellow	Dec	Week 39.5				Christina™ Red ® ♡	Dec	Week 39.5
WOOK 30.3 to Wook 33.3	Wilma™ Yellow ⊙	Dec	Week 40				Wanda™ Red ூ	Dec	Week 40
	Hankie™ Yellow ூ	Dsy	Week 40						
	Cheryl™ Sparkling Yellow ⊙	Dec	Week 40.5	Hailey™ Orange ⊙	Dec	Week 40.5	Ashley™ Red ® ♡	Dec	Week 41
	Cheryl™ Golden ⊙	Dec	Week 41	Ashley [™] Dark Orange ⊙	Dec	Week 40.5	Cheryl™ Jolly Red ⊙	Dec	Week 41
MID-LATE Week 40 to Week 41				Yvette [™] Orange Bicolor № ♡	Dec	Week 41	Raquel™ Ruby Red	Dec	Week 41
WOOK 40 to Wook 41				Cheryl™ Spicy Orange ூ	Dec	Week 41			
				Makenna™ Orange 🏵	Dec	Week 41			
	Bethany™ Yellow	Dec	Week 41.5	Nikki™ Orange N ♡	Dec	Week 42	Edana™ Red 🏵	Dsy	Week 41.5
LATE	Makayla™ Yellow ூ	Dec	Week 41.5				Emelda™ Red ♡	Dup	Week 42
Week 41 to Week 41.5	Nikki™ Yellow © ⊙	Dec	Week 42						
	Mildred™ Yellow ⊙	Dec	Week 42						
VERY LATE	Stephany™ Yellow ூ	Dec	Week 43	Stephany™ Bronze ⊙	Dec	Week 43	Kathleen™ Dark Red ⊙	Dec	Week 42.5

New for 2017

Key: FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy Response listed is for plants between stage 2 and 3. Plan to ship about 7-14 days earlier.

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			,	, ,				
Arlette™ Purple N Y	Dec	Week 36.5				Shannon™ White ⊙	Dec	Week 36.
						Edith™ White ♡	Anm	Week 36.
Jacqueline™ Pink Imp. ⊙	Dec	Week 38	Marsha™ Pink	Dsy	Week 37.5	Bertha™ White ⊙	Dec	Week 37.
			Ursula™ Lavender	Dec	Week 38	Jacqueline™ Pearl ⊙	Dec	Week 37.
			Jacqueline [™] Peach Fusion 🏵	Dec	Week 38	Vanna™ Snow ⊙	Dsy	Week 38
Patty [™] Purple ூ	Dec	Week 38.5	Gigi™ Coral	Dec	Week 38.5	Gigi™ Snow	Dec	Week 38.
Gigi™ Dark Pink	Dec	Week 38.5	Stacy™ Pink 🏵	Dsy	Week 39	Chelsey™ White ூ	Dec	Week 38.
Danielle™ Purple ூ	Dec	Week 38.5	Chelsey™ Pink ⊙	Dec	Week 39			
Beth™ Violet	Dec	Week 39						
Wanda™ Purple ூ	Dec	Week 40	Wanda™ Lavender 🏵	Dec	Week 39.5	Wilma™ White ♡	Dec	Week 40
Alisha™ Dark Pink	Dsy	Week 40	Chelsey™ Coral	Dec	Week 39.5			
Cheryl™ Regal Purple ூ	Dec	Week 41	Susan™ Coral Pink ❤	Spdr	Week 40.5	Makenzie [™] White ♡	Dec	Week 40.
			Cheryl™ Pink ூ	Dec	Week 41.5	Cheryl™ Frosty White ⊙	Dec	Week 41
Emelda™ Purple ⊙	Dup	Week 42				Mildred™ White ♡	Dec	Week 42
Nikki™ Dark Pink ۞ ⊙	Dec	Week 42						
Rhonda™ Purple ③ ⊙ ⊙	Dec	Week 43.5	Rhonda™ Pink ® ③	Dec	Week 43.5	Rhonda™ White ® ூ	Dec	Week 43.5



	ALES 2	Response	actather size	tot sale	and the state of t	dights starts		surpe last viet	int Languet	
COACTAL CALLEGE	Res tridis		,	Katsa	Tellon.	diality.	At the state of th	PHIPIT	Pink"	White
COASTAL CALIFOR URSULA™ GROUP	7.5 Weeks	6.5 Weeks	Sm	Aug Sep	Ursula™ Sunny Yellow Ursula™ Jazzy Coral	Ursula™ Fancy Orange	Aideen [™] Red Fire Tabitha [™] Scarlet ▲		Ursula™ Lavender	Edith™ White ← Bertha™ White ▲
GIGI™ GROUP	8.5 Weeks	7 Weeks	Sm	Aug Sep	Gigi ™Yellow Gigi™ Gold	Gigi™ Orange	Aideen [™] Red Fire ▲	Gigi™ Dark Pink	Gigi™ Coral	Gigi™ Snow
CHERYL™ GROUP	10.5 Weeks	7.5 Weeks	Sm-Med	Sep Oct	Cheryl™ Sparkling Yellow Cheryl™ Golden	Cheryl™ Spicy Orange	Cheryl™ Jolly Red ■▼	Cheryl™ Regal Purple ■ ▲	Cheryl™ Pink ■	Cheryl™ Frosty White
WANDA™ / WILMA™ GROUP	8.5 Weeks	7 Weeks	Med	Aug Sep Oct	Wilma™ Yellow Elena™ Gold ■ ▼	Miranda™ Orange ▼ Beverly™ Bronze ■	Wanda™ Red Tabitha™ Scarlet	Wanda™ Purple	Wanda™ Lavender	Makenzie [™] White ▼ Wilma [™] White
CHELSEY™ GROUP	8.5 Weeks	7 Weeks	Med	Aug Sep Oct	Chelsey™ Yellow Dawn™ Yellow	Beverly™ Bronze ■ Hannah™ Orange	Hestia [™] Hot Red Danielle [™] Red ■	Danielle™ Purple ■	Chelsey™ Pink Chelsey™ Coral	Chelsey™ White
EARLY Large Pots	5.5 Weeks	6 Weeks	Lg	Aug Sep	Ursula™ Sunny Yellow Olga™ Yellow ■	Hannah™ Orange ▲ ★ Electra™ Amber Imp.	Aideen™ Red Fire		Ursula™ Lavender	Bertha™ White
REGULAR Large Pots	7 Weeks	6.5 Weeks	Lg	Aug Sep Oct	Chelsey™ Yellow Elena™ Gold ▼	Beverly™ Bronze ■	Wanda [™] Red ▼ Brandi [™] Burgundy	Wanda™ Purple ▼	Chelsey™ Pink Chelsey™ Coral	Chelsey™ White
LATE Large Pots	8.5 Weeks	7.5 Weeks	Lg	Sep Oct	Cheryl™ Golden	Cheryl™ Spicy Orange Fiona™ Coral Orange	Cheryl™ Jolly Red ■ ▼	Cheryl™ Regal Purple ■ ▼	Cheryl™ Pink ■	Mildred™ White
DAISIES	8 Weeks	7 Weeks	Sm-Med	Aug Sep Oct	Michelle™ Gold	Stacy [™] Dazzling Orange	Bonnie™ Red	Alisha™ Dark Pink ■	Stacy [™] Pink	Edith [™] White
	9 Weeks	7.5 Weeks			Monica™ Sunny Yellow ■		Edana™ Red ■			Vanna Snow

- Will likely flower a bit slower than the rest of the varieties in this group
- ▲ Will likely need more growth regulators than other varieties in this group
- ▼ Likely need less growth regulators than other varieties in this group
- ★ Best with a net in large containers
- For late season crops only

Response listed is for plants between stage 2 and 3. Plan to ship about 1 week earlier. Groups listed in order of vigor from most compact to most vigorous, followed by dasies



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GARDEN MUMS AT-A-G	GLANCE												
Aideen™ Red Fire	⊗		Red	Dec	Sm/Med	S/M	Week 35	Week 37	Very Early	Week 35	Week 37	Very Early	6.5 Weeks
Alisha™ Dark Pink			Purple/Dark Pink	Dsy	Med	S/M	Week 37.5	Week 39.5	Mid	Week 38	Week 40	Mid	7 Weeks
Arlette™ Purple ©	⊗		Purple/Dark Pink	Dec	Sm/Med	S/M	Week 34.5	Week 36.5	Very Early	Week 35	Week 37	Very Early	6.5 Weeks
Ashley™ Dark Orange	⊗	Ashley	Orange/Bronze	Dec	Sm/Med	М	Week 37.5	Week 40	Mid-Late	Week 38.5	Week 40.5	Mid-Late	7 Weeks
Ashley™ Red ®	⊗	Ashley	Red	Dec	Sm/Med	М	Week 38	Week 40.5	Mid-Late	Week 39	Week 41	Mid-Late	7 Weeks
Aubrey™ Orange			Orange/Bronze	Dec	Med	М	Week 37	Week 38.5	Early-Mid	Week 37.5	Week 39	Early-Mid	7.5 Weeks
Bernadette™ Yellow			Yellow/Gold	Anm	Med/Lg	L	Week 35	Week 37	Early	Week 36	Week 38	Early	6.5 Weeks
Bertha™ White	⊗		White	Dec	Med/Lg	М	Week 35	Week 37	Early	Week 35.5	Week 37.5	Early	6.5 Weeks
ethany™ Yellow			Yellow/Gold	Dec	Sm/Med	S/M	Week 38.5	Week 40.5	Mid-Late	Week 39.5	Week 41.5	Late	7 Weeks
eth™ Violet			Purple/Dark Pink	Dec	Med	М	Week 35	Week 37.5	Early	Week 36.5	Week 39	Early-Mid	6.5 Weeks
everly™ Bronze	8	Beverly	Orange/Bronze	Dec	Med	M/L	Week 36.5	Week 38.5	Early-Mid	Week 37.5	Week 39	Early-Mid	6.5 Weeks
everly™ Orange ®	⊗	Beverly	Orange/Bronze	Dec	Med	M/L	Week 36.5	Week 38.5	Early-Mid	Week 37.5	Week 39	Early-Mid	6.5 Weeks
onnie™ Red			Red	Dsy	Med	S/M	Week 35	Week 37	Early	Week 35.5	Week 37.5	Early	6.5 Weeks
randi™ Burgundy			Red	Dec	Med	М	Week 36.5	Week 39	Mid	Week 37	Week 39.5	Mid	7 Weeks
rittany™ Yellow	⊗		Yellow/Gold	Dec	Med/Lg	М	Week 34.5	Week 36.5	Very Early	Week 35	Week 37	Very Early	6.5 Weeks
helsey™ Coral		Chelsey	Pink/Lavender	Dec	Med	M/L	Week 37.5	Week 39	Mid	Week 38	Week 39.5	Mid	6.5 Weeks
helsey™ Pink	⊗	Chelsey	Pink/Lavender	Dec	Med	M/L	Week 37	Week 38.5	Early-Mid	Week 37.5	Week 39	Early-Mid	6.5 Weeks
helsey™ White	⊗	Chelsey	White	Dec	Med	M/L	Week 36.5	Week 38	Early-Mid	Week 37	Week 38.5	Early-Mid	6.5 Weeks
helsey™ Yellow	8	Chelsey	Yellow/Gold	Dec	Med	M/L	Week 36.5	Week 38	Early-Mid	Week 37	Week 38.5	Early-Mid	6.5 Weeks
heryl™ Frosty White	⊗	Cheryl	White	Dec	Med	M/L	Week 38	Week 40.5	Mid-Late	Week 39	Week 41	Mid-Late	7 Weeks
heryl™ Golden	9	Cheryl	Yellow/Gold	Dec	Med	М	Week 38	Week 40.5	Mid-Late	Week 39	Week 41	Mid-Late	7 Weeks
heryl™ Jolly Red	8	Cheryl	Red	Dec	Med	S/M	Week 38	Week 40.5	Mid-Late	Week 39	Week 41	Mid-Late	7 Weeks
heryl™ Pink	(Cheryl	Pink/Lavender	Dec	Med	M/L	Week 38.5	Week 41	Mid-Late	Week 39.5	Week 41.5	Mid-Late	7 Weeks
heryl™ Regal Purple	0	Cheryl	Purple/Dark Pink	Dec	Med	S/M	Week 38	Week 40.5	Mid-Late	Week 39	Week 41	Mid-Late	7 Weeks
Cheryl™ Sparkling Yellow	8	Cheryl	Yellow/Gold	Dec	Med	S/M	Week 38	Week 40.5	Mid-Late	Week 38.5	Week 40.5	Mid-Late	7 Weeks

New for 2017

Key: VIGOR (S) Small mounding | (S/M) Small-Medium mounding | (M) Medium mounding (M) | (M/L) Medium-Large mounding | (L) Large mounding | (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy

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Variety GARDEN MUMS AT-A-		- V	/ &	/ «	/ Pic	/ *	/ *	/ 4	/ 4	/ 4	/ * *	/ *	
Cheryl™ Spicy Orange	8	Cheryl	Orange/Bronze	Dec	Med	М	Week 38	Week 40.5	Mid-Late	Week 39	Week 41	Mid-Late	7 Weeks
Christina™ Red N	· ·		Red	Dec	Med	М	Week 37	Week 39	Mid	Week 37.5	Week 39.5	Mid	7.5 Weeks
Danielle™ Purple	(Danielle	Purple/Dark Pink	Dec	Sm	М	Week 36.5	Week 38	Early-Mid	Week 37	Week 38.5	Early-Mid	6.5 Weeks
Danielle™ Red	9	Danielle	Red	Dec	Sm	М	Week 36.5	Week 38	Early-Mid	Week 37	Week 38.5	Early-Mid	6.5 Weeks
Dawn™ Yellow			Yellow/Gold	Dec	Med	М	Week 35.5	Week 37.5	Early	Week 35.5	Week 38	Early	6.5 Weeks
Edana™ Red	· ·		Red	Dsy	Med	S/M	Week 39	Week 40.5	Mid-Late	Week 40	Week 41.5	Late	7 Weeks
Edith™ White	8		White	Anm	Med/Lg	S/M	Week 35	Week 36.5	Very Early	Week 35	Week 36.5	Very Early	7 Weeks
Electra™ Amber Imp.	⊗		Orange/Bronze	Dec	Med	M/L	Week 35	Week 37	Very Early	Week 35.5	Week 37.5	Early	6.5 Weeks
Elena™ Gold	⊗		Yellow/Gold	Dec	Med	S/M	Week 35.5	Week 37.5	Early	Week 35.5	Week 37.5	Early	7 Weeks
Emelda™ Purple	8	Emelda	Purple/Dark Pink	Dup	Sm	S	Week 39	Week 41	Late	Week 40.5	Week 42	Late	7.5 Weeks
Emelda™ Red	(Emelda	Red	Dup	Sm	S	Week 39	Week 41	Late	Week 40.5	Week 42	Late	7.5 Weeks
Fiona™ Coral Orange	(Fiona	Orange/Bronze	Dec	Med	S/M	Week 35.5	Week 37.5	Early	Week 35.5	Week 37.5	Early	7 Weeks
Fiona™ Nutty Bronze		Fiona	Orange/Bronze	Dec	Med	S/M	Week 36	Week 38	Early	Week 36	Week 38	Early	7 Weeks
Gigi™ Coral		Gigi	Pink/Lavender	Dec	Sm	S	Week 36	Week 38	Early-Mid	Week 36.5	Week 38.5	Early-Mid	7 Weeks
Gigi™ Dark Pink		Gigi	Purple/Dark Pink	Dec	Sm	S	Week 36	Week 38	Early-Mid	Week 36.5	Week 38.5	Early-Mid	7 Weeks
Gigi™ Gold		Gigi	Yellow/Gold	Dec	Sm	S	Week 36	Week 38	Early-Mid	Week 36.5	Week 38.5	Early-Mid	7 Weeks
Gigi™ Orange		Gigi	Orange/Bronze	Dec	Sm	S	Week 36	Week 38	Early-Mid	Week 36.5	Week 38.5	Early-Mid	7 Weeks
Gigi™ Snow		Gigi	White	Dec	Sm	S	Week 36	Week 38	Early-Mid	Week 36.5	Week 38.5	Early-Mid	7 Weeks
Gigi™ Yellow		Gigi	Yellow/Gold	Dec	Sm	S	Week 36	Week 38	Early-Mid	Week 36.5	Week 38.5	Early-Mid	7 Weeks
Hailey™ Orange	⊗		Orange/Bronze	Dec	Sm/Med	S/M	Week 37	Week 39.5	Mid	Week 38.5	Week 40.5	Mid-Late	7 Weeks
Hankie™ Yellow	⊗		Yellow/Gold	Dsy	Med	L	Week 38	Week 39.5	Mid	Week 38.5	Week 40	Mid	7.5 Weeks
Hannah™ Orange			Orange/Bronze	Dec	Med	M/L	Week 35.5	Week 37.5	Early	Week 35	Week 37	Very Early	6.5 Weeks
Helen™ Maroon			Red	Dec	Med	M/L	Week 35	Week 37.5	Early	Week 36.5	Week 39	Early-Mid	6.5 Weeks
Hestia™ Hot Red			Red	Dec	Med	М	Week 34.5	Week 37	Early	Week 35.5	Week 38	Early	6.5 Weeks

New for 2017

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Spins	Black	Coast	1,25 dt	3,04	Patio	Handr	Winde	Roding	Markin	18MD	Teeby.	Lands	Fallin
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Variety	49	sder Ser Famili	Color	Florid	Florito	Plant	Kally	KallIn	Kalli	Kally	Kalli	Kallin	Shade
GARDEN MUMS AT-A-GI	ANCE												
Jacqueline™ Orange Fusion	8	Jacqueline	Orange/Bronze	Dec	Sm/Med	M	Week 36	Week 37.5	Early	Week 36.5	Week 38	Early	6.5 Weeks
Jacqueline™ Peach Fusion	8	Jacqueline	Pink/Lavender	Dec	Sm/Med	S/M	Week 36	Week 37.5	Early	Week 36.5	Week 38	Early	6.5 Weeks
Jacqueline™ Pearl	8	Jacqueline	White	Dec	Sm/Med	М	Week 35.5	Week 37	Early	Week 36.5	Week 38	Early	6.5 Weeks
Jacqueline™ Pink	8	Jacqueline	Purple/Dark Pink	Dec	Sm/Med	M	Week 36	Week 37.5	Early	Week 36.5	Week 38	Early	6.5 Weeks
Jacqueline™ Yellow	8	Jacqueline	Yellow/Gold	Dec	Sm/Med	M	Week 35.5	Week 37	Early	Week 36.5	Week 38	Early	6.5 Weeks
Kathleen™ Dark Red	8		Red	Dec	Sm/Med	S	Week 40	Week 42	Very Late	Week 40.5	Week 42.5	Very Late	7.5 Weeks
Keeley™ Orange ®	8		Orange/Bronze	Dec	Med	S/M	Week 34.5	Week 36.5	Very Early	Week 35.5	Week 37.5	Early	7 Weeks
Makayla™ Yellow	8		Yellow/Gold	Dec	Med	M	Week 39.5	Week 41	Late	Week 40	Week 41.5	Late	7 Weeks
Makenna™ Orange	8		Orange/Bronze	Dec	Med/Lg	M	Week 39	Week 41	Late	Week 39	Week 41	Mid-Late	7 Weeks
Makenzie [™] White	8		White	Dec	Med	M	Week 37.5	Week 39.5	Mid	Week 39	Week 40.5	Mid-Late	6.5 Weeks
Marsha™ Pink			Pink/Lavender	Dsy	Med	M	Week 36.5	Week 38	Early-Mid	Week 35.5	Week 37.5	Early	6.5 Weeks
Mary [™] Yellow			Yellow/Gold	Dec	Med/Lg	M/L	Week 37	Week 39	Mid	Week 37.5	Week 39.5	Mid	6.5 Weeks
Michelle™ Gold	8		Yellow/Gold	Dsy	Med	M	Week 34.5	Week 36	Very Early	Week 35	Week 36.5	VEarly	6 Weeks
Mildred™ White	8	Mildred	White	Dec	Lg	M/L	Week 39	Week 41.5	Late	Week 40	Week 42	Late	7.5 Weeks
Mildred™ Yellow		Mildred	Yellow/Gold	Dec	Lg	M/L	Week 39	Week 41.5	Late	Week 40	Week 42	Late	7.5 Weeks
Miranda™ Orange			Orange/Bronze	Dec	Med/Lg	S/M	Week 36	Week 38	Early-Mid	Week 37	Week 39	Early-Mid	7 Weeks
Monica™ Sunny Yellow			Yellow/Gold	Anm	Lg	M/L	Week 37	Week 39	Mid	Week 37.5	Week 39.5	Mid	7 Weeks
Nikki™ Dark Pink ®	8	Nikki	Purple/Dark Pink	Dec	Med	M	Week 39	Week 41	Late	Week 40.5	Week 42	Late	7.5 Weeks
Nikki™ Orange ®	8	Nikki	Orange/Bronze	Dec	Med	M	Week 39	Week 41	Late	Week 40.5	Week 42	Late	7.5 Weeks
Nikki™ Yellow ®	0	Nikki	Yellow/Gold	Dec	Med	M	Week 39	Week 41	Late	Week 40.5	Week 42	Late	7.5 Weeks
Okra™ Yellow			Yellow/Gold	Dec	Sm/Med	M/L	Week 36.5	Week 38.5	Early-Mid	Week 37.5	Week 39.5	Mid	8 Weeks
Olga™ Yellow			Yellow/Gold	Dec	Med	M/L	Week 36	Week 38	Early-Mid	Week 36.5	Week 38.5	Early-Mid	6.5 Weeks
Patty [™] Pomegranate ®	0	Patty	Red	Dec	Med	M/L	Week 35.5	Week 37.5	Early	Week 36.5	Week 38.5	Early-Mid	7 Weeks
Patty [™] Purple	9	Patty	Purple/Dark Pink	Dec	Med	M/L	Week 35.5	Week 37.5	Early	Week 36.5	Week 38.5	Early-Mid	7 Weeks
Raquel™ Ruby Red			Red	Dec	Med	L	Week 37.5	Week 40	Mid-Late	Week 38.5	Week 41	Mid-Late	7 Weeks

New for 2017

Key: VIGOR (S) Small mounding | (S/M) Small-Medium mounding | (M) Medium mounding (M) | (M/L) Medium-Large mounding | (L) Large mounding | (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy

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GARDEN MUMS AT-A-GL	ANCE												
Rhonda™ Bronze ®	8	Rhonda	Orange/Bronze	Dec	Sm	M/L	Week 41	Week 42.5	Very Late	Week 42	Week 43.5	Very Late	8.5 Weeks
Rhonda™ Pink ®	8	Rhonda	Pink/Lavender	Dec	Sm	M/L	Week 41	Week 42.5	Very Late	Week 42	Week 43.5	Very Late	8.5 Weeks
Rhonda™ Purple N	8	Rhonda	Purple/Dark Pink	Dec	Sm	M/L	Week 41	Week 42.5	Very Late	Week 42	Week 43.5	Very Late	8.5 Weeks
Rhonda™ Red ®	8	Rhonda	Red	Dec	Sm	M/L	Week 41	Week 42.5	Very Late	Week 42	Week 43.5	Very Late	8.5 Weeks
Rhonda™ White ®	8	Rhonda	White	Dec	Sm	M/L	Week 41	Week 42.5	Very Late	Week 42	Week 43.5	Very Late	8.5 Weeks
Rhonda™ Yellow ®	8	Rhonda	Yellow/Gold	Dec	Sm	M/L	Week 40.5	Week 42	Very Late	Week 41.5	Week 43	Very Late	8.5 Weeks
Shannon™ White	8		White	Dec	Med/Lg	L	Week 35	Week 36.5	Very Early	Week 35	Week 36.5	VEarly	6 Weeks
Stacy™ Dazzling Orange	8	Stacy	Orange/Bronze	Dsy	Med/Lg	M	Week 36	Week 38	Early-Mid	Week 37.5	Week 39.5	Mid	7 Weeks
Stacy™ Pink	8	Stacy	Pink/Lavender	Dsy	Med/Lg	M	Week 36	Week 38	Early-Mid	Week 37	Week 39	Early-Mid	7 Weeks
Stephany™ Bronze	8	Stephany	Orange/Bronze	Dec	Med/Lg	S	Week 40.5	Week 42.5	Very Late	Week 41.5	Week 43	Very Late	7.5 Weeks
Stephany™ Yellow	8	Stephany	Yellow/Gold	Dec	Med/Lg	S	Week 40.5	Week 42.5	Very Late	Week 41.5	Week 43	Very Late	7.5 Weeks
Susan™ Coral Pink	8		Pink/Lavender	Spdr	Lg	L	Week 37.5	Week 40	Mid-Late	Week 39.5	Week 40.5	Mid-Late	6.5 Weeks
Tabitha™ Scarlet	8		Red	Dec	Med	M	Week 35.5	Week 37.5	Early	Week 37	Week 39.5	Mid	7 Weeks
Ursula™ Fancy Orange		Ursula	Orange/Bronze	Dec	Med	S	Week 35.5	Week 37	Early	Week 35.5	Week 37.5	Early	6.5 Weeks
Ursula™ Jazzy Coral		Ursula	Orange/Bronze	Dec	Med	S	Week 35.5	Week 37	Early	Week 35.5	Week 37.5	Early	6.5 Weeks
Ursula™ Lavender		Ursula	Pink/Lavender	Dec	Med	S/M	Week 36	Week 37.5	Early	Week 36	Week 38	Early	6.5 Weeks
Ursula™ Sunny Yellow		Ursula	Yellow/Gold	Dec	Med	S	Week 35.5	Week 37	Early	Week 36	Week 38	Early	6.5 Weeks
Vanna™ Snow	8		White	Dsy	Med	M	Week 36	Week 37.5	Early	Week 36	Week 38	Early	7 Weeks
Wanda™ Lavender	8	Wanda	Pink/Lavender	Dec	Med/Lg	M	Week 36	Week 38.5	Mid	Week 37.5	Week 39.5	Mid	6.5 Weeks
Wanda™ Purple	8	Wanda	Purple/Dark Pink	Dec	Med/Lg	M	Week 37	Week 39	Mid	Week 38	Week 40	Mid	6.5 Weeks
Wanda™ Red	8	Wanda	Red	Dec	Med/Lg	M	Week 37	Week 39	Mid	Week 38	Week 40	Mid	6.5 Weeks
Wilma™ White	0	Wilma	White	Dec	Med	M	Week 37	Week 39	Mid	Week 38	Week 40	Mid	6.5 Weeks
Wilma™ Yellow	8	Wilma	Yellow/Gold	Dec	Med	M	Week 37	Week 39	Mid	Week 38	Week 40	Mid	6.5 Weeks
Yolanda™ Yellow	8		Yellow/Gold	Dec	Med/Lg	S/M	Week 36	Week 38	Early-Mid	Week 37	Week 39	Early-Mid	6.5 Weeks
Yvette [™] Orange Bicolor ©	8		Orange/Bronze	Dec	Sm	М	Week 38	Week 40	Mid-Late	Week 39	Week 41	Mid-Late	7 Weeks

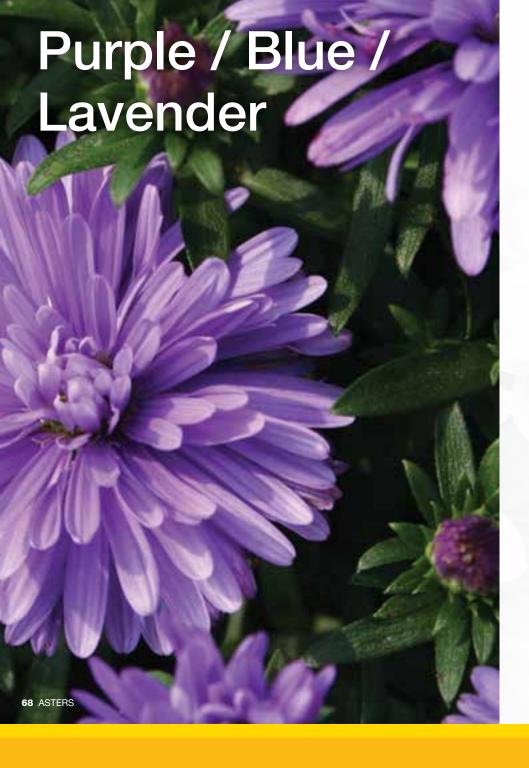
New for 2017

Key: VIGOR (S) Small mounding | (S/M) Small-Medium mounding | (M) Medium mounding (M) | (M/L) Medium-Large mounding | (L) Large mounding | (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy

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				•	•	•			Very Good	Average	Good		
				•	•	•			Very Good	Average	Good	•	•
				•	•	•			Very Good	Average	Average	•	•
				•	•	•			Very Good	Average	Good	•	•
				•	•	•			Very Good	Average	Good	•	•
				•	•				Good	Very Good	Very Good	•	•
		•		•	•	•		М	Poor	Poor	Average		
		•		•	•	•		М	Poor	Poor	Good		
			•	•		•	•		Very Good	Average	Average		
			•	•		•	•		Very Good	Average	Average	•	•
•	•	•		•				M	Very Good	Good	Average		
•	•	•	•	•	•	•		M	Average	Poor	Good	•	•
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•	•	•	•	•	•	•	•	M/S	Good	Average	Good	•	•
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Believer™ Purple

Purple / Dsy / Sm / M **N** = 37 / **S** = 35 / 4.5 Variety 70018144



Henry™ I Purple

Purple / Dbl / Med / M $\mathbf{N} = 36.5 / \mathbf{S} = 34.5 / 5$ Variety 70018152



Henry™ III Purple

Purple / Dbl / Med / M ${\bf N} = 39 / {\bf S} = 37.5 / 6$ Variety 70018153



Magic™ Purple

Purple / Dsy / Med / M ${f N} = 36 / {f S} = 34 / 4.5$ Variety 70018154



Daydream™ Lavender

Blue/Lavender / Dsy / Lg / M **N** = 36.5 / **S** = 34.5 / 4.5 Variety 70018146



Days™ Blue

Blue/Lavender / Dsy / Sm / M **N** = 37 / **S** = 35 / 4.5 Variety 70018147



Dragon™ Blue

Blue/Lavender / Dsy / Med / M **N** = 36 / **S** = 34 / 4.5 Variety 70021404



Henry™ I Blue

Blue/Lavender / Dbl / Med / M N = 36.5 / S = 34.5 / 5Variety 70018145



Blue/Lavender / Dbl / Med / M N = 39 / S = 38 / 5Variety 70018158





Pink / White 70 ASTERS



Hazy™ Dark Pink

Pink/White / Dsy / Med / M
N = 37 / S = 35.5 / 5
Variety 70018151



Henry™ I Pink

Pink/White / Dbl / Med / M **N** = 36.5 / **S** = 34.5 / 5 Variety 70036256



Henry™ III Pink

Pink/White / Dbl / Med / M ${\bf N} = 39 / {\bf S} = 37.5 / 6$ Variety 70018160



Magic™ Pink

Pink/White / Dsy / Med / M N = 36 / S = 34 / 4.5 Variety 70018161



Marie™ III Dark Pink

Pink/White / Dbl / Sm / S **N** = 38.5 / **S** = 37.5 / 4.5 Variety 70018155



Puff™ White

Pink/White / Dsy / Med / M **N** = 36 / **S** = 34 / 4.5 Variety 70018162

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	/	gelect ceite			tigue tel	in /	ite /	spins like Hotel	A Septime Septime		Shale	esponse				nd Baskets	JON BOTES	Mest Strated
Variety	40	seite ^s	Fatility	Color	Flories	ell clouder	Fall Re	Fall Re	5885011	Vigot	Shade	1.250	300	Patio	Hand	Wind	Sun	Mest Chart
ASTERS AT-A-GLANCE																		
Believer™ Purple	8			Purple	Dsy	Sm	Week 37	Week 35	Early	Med	4.5 Weeks	•	•			•		
Daydream™ Lavender				Lavender	Dsy	Lg	Week 36.5	Week 34.5	Early	Med	4.5 Weeks	•	•		•		•	•
Days™ Blue	8			Blue	Dsy	Sm	Week 37	Week 35	Early	Med	4.5 Weeks	•	•			•		
Dragon™ Blue	®			Blue	Dsy	Med	Week 36	Week 34	Very Early	Med	4.5 Weeks	•	•			•	•	•
Hazy™ Dark Pink	(v)			Pink	Dsy	Med	Week 37	Week 35.5	Early	Med	5 Weeks	•	•					
Henry™ I Blue	(v)	Royalty™	Henry™ I	Blue	Dbl	Med	Week 36.5	Week 34.5	Early	Med	5 Weeks	•	•		•	•	•	•
Henry™ I Pink	8	Royalty™	Henry™ I	Pink	Dbl	Med	Week 36.5	Week 34.5	Early	Med	5 Weeks	•	•		•	•	•	•
Henry™ I Purple	(Royalty™	Henry™ I	Purple	Dbl	Med	Week 36.5	Week 34.5	Early	Med	5 Weeks	•	•		•	•	•	•
Henry™ III Pink	8	Royalty™	Henry™ III	Pink	Dbl	Med	Week 39	Week 37.5	Late	Med	6 Weeks	•	•		•	•		
Henry™ III Purple	(v)	Royalty™	Henry™ III	Purple	Dbl	Med	Week 39	Week 37.5	Late	Med	6 Weeks	•	•		•	•		
Magic™ Pink	8		Magic™	Pink	Dsy	Med	Week 36	Week 34	Very Early	Med	4.5 Weeks	•	•		•	•	•	•
Magic [™] Purple	®		Magic™	Purple	Dsy	Med	Week 36	Week 34	Very Early	Med	4.5 Weeks	•	•		•	•	•	•
Marie™ III Dark Pink		Royalty™		Pink	Dbl	Sm	Week 38.5	Week 37.5	Late	Short	4.5 Weeks	•	•			•		
Peter™ III Blue		Royalty™		Blue	Dbl	Med	Week 39	Week 38	Late	Med	5 Weeks	•	•			•		
Puff™ White	()			White	Dsy	Med	Week 36	Week 34	Very Early	Med	4.5 Weeks	•	•		•	•	•	•

Key: FLOWER FORM (Dbl) Double | (Dsy) Daisy
VIGOR (Short) Short | (Med) Medium | (Tall) Tall





Syngenta breeders are developing Yoder Pot Mums with pizzazz. Unique colors, different flower forms, and an endless possibility of mixed combos are creating excitement for this traditional crop.

Yoder Pot Mums can be produced year round and offer growers many options to satisfy changing consumer habits and lifestyles. Yoder Pot Mums are a versatile crop that can be grown as a single color or in mixed combos to match specific seasons, holidays, and design trends.

With their striking flower colors and types, it's easy for growers and retailers to offer Yoder Pot Mums in both conventional and unique container sizes and designs. This allows growers and retailers to develop marketing programs to match specific consumer needs.

Yoder Pot Mums are sturdy plants that have been bred to hold up to the rigors of shipping and handling for the grower and continue to look good on the retail shelf. Once in the home setting, Yoder Pot Mums provide consumers with a long lasting, beautiful product that is a great value.

Yoder Pot Mums offer a wide range of colors that are well suited for single color and mixed combos. Families that are well matched for flower form, plant habit, and flower timing, make it easy for growers to produce unique combos that are sure to delight retailers and consumers.

Pot Mum Families

Syngenta breeders have made pot mum production easy for growers. Our families are well matched for flower form, plant habit, finish size, and flower timing. Growers can use these varieties for single-color programs or for creating unique color combinations.

The Yoder Pot Mum families offer a variety of colors suitable for year round, seasonal, and holiday sales. Colors range from springtime pastels and rich fall colors to unique electric shades that should excite consumers regardless of age and lifestyle.

Some Yoder Pot Mum families have been designated as Yoder Select™. These varieties have been identified by Syngenta breeders as the best performing varieties and are considered to be "must have" plants. Yoder Pot Mum families chosen as Yoder Select provide growers, retailers and consumers with consistent performance for every variety in the family.



MiltonTM Bronze Bicolor
Orange/Bronze / Dsy Bicolor / Med / M / 7.5
Variety 70065649



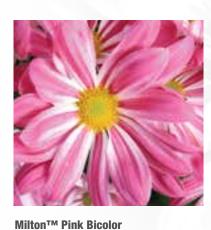
MiltonTM Pink
Pink/Lavender / Dsy / Med / M / 7.5
Variety 70065640

Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number





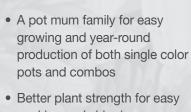
Orange/Bronze / Dsy / Med / M / 7.5 Variety 70065641



Pink/Lavender / Dsy Bicolor / Med / M / 7.5 Variety 70065647



Pink/Lavender / Dsy / Med / M / 7.5



Milton

Family

packing and shipping

Exciting bicolors to spice up combinations



Blush Family

Large pastel flowers for that burst of spring color

- Brightens retail to signal spring is here
- Perfect for Easter and Mother's Day combination containers
- Popular daisy form that comes in traditional flower colors



Blush™ Apricot Salmon / Dsy / Med-Lg / S / 8 Variety 70018670



Blush™ Sunny Yellow/Gold / Dsy / Med-Lg / S / 8 Variety 70018720



Blush™ Orange Orange/Bronze / Dsy / Med-Lg / S / 8 Variety 70018599



Blush™ Yellow Yellow/Gold / Dsy / Med-Lg / S / 8 Variety 70018640



Blush™ White White / Dsy / Med-Lg / S / 8 Variety 70018637



Blush™ Dark Pink Pink/Lavender / Dsy Bicolor / Med-Lg / S / 8 Variety 70018543



Blush™ Pink Pink/Lavender / Dec / Med-Lg / S / 8 Variety 70018602





DelanoTM Red
Red / Dec / Med-Lg / M / 8.5
Variety 70018608



Purple / Dec / Med-Lg / M / 8.5 Variety 70018551



Pink/Lavender / Dec Bicolor / Med-Lg / M / 8.5 Variety 70018621

Delano Family

A pot mum for all seasons

- Colors well suited for any holiday season
- Decorative flowers up to five inches in diameter
- Strong spreading growth habit
- Best grown as a pinched disbud for maximum flower size



Hilo Family

Unique colors for the new generation of potted plant consumers

- Electric colors well suited for any consumer
- An eye-catching addition to any seasonal retail line-up
- Times and pairs well with the Pueblo[™] family to create interesting combos
- Recommended for CBR and ZBR production

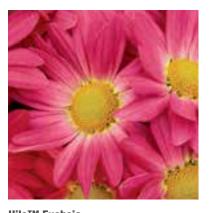


HiloTM Tangerine
Orange/Bronze / Dsy / Med / M / 8.5

Variety 70046053



Pink/Lavender / Dsy / Med / M / 8.5 Variety 70018947



HiloTM Fuchsia

Purple / Dec / Med / M / 8.5

Variety 70046052



Pueblo Family



Pueblo™ Yellow

Yellow/Gold / Dsy / Med-Sm / M / 8 Variety 70053323



Pueblo™ Cinnamon

Orange/Bronze / Dsy / Med-Sm / M / 8.5 Variety 70018952



Pueblo™ Orange

Orange/Bronze / Dsy / Med-Sm / M / 8.5 Variety 70018708

Rich fall color

- Outstanding family for fall daisy sales
- Great in combinations for fall and holiday promotions
- Partners well with Hilo family for striking combinations, suited to any season





Pot Mum Combos

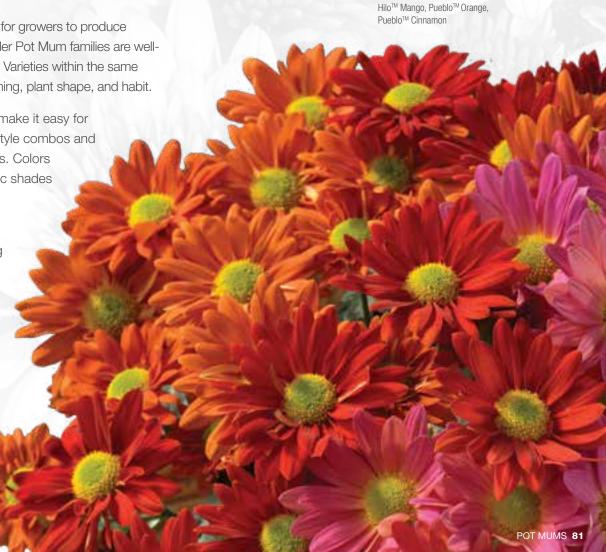
Combinations are all the rage with consumers. Go into any retail garden center, supermarket, or retail florist and you're sure to see a wide assortment of combos containing a variety of plant material, including blooming and foliage plants.

Syngenta has bred families of Yoder Pot Mums that make it simple for growers to produce combos for year-round, seasonal and holiday sales. Varieties in Yoder Pot Mum families are well-matched for use in combo containers of multiple sizes and shapes. Varieties within the same Yoder Pot Mum family have similar production schedules, flower timing, plant shape, and habit.

With a wide range of colors and flower forms, Yoder Pot Mums make it easy for growers to mix and match varieties to produce both traditional style combos and chic color combinations that will excite even the youngest buyers. Colors range from springtime pastel and rich fall colors to unique electric shades that should excite consumers of all ages and lifestyles.

With so many colors and flower forms to choose from, growers have the option of designing their own combos. When designing combos, consider mixing in Yoder Pot Mum stand-alone varieties. These stand-alone varieties can be matched with family varieties to create unique and different looks.

Growers can tap into the expertise and experience of Syngenta technical representatives to identify potential new combos that will do best under their production conditions. All Yoder Pot Mums have been trialed under North American production conditions, so growers have access to the information they need to make the best combo variety choices for their location and customers.

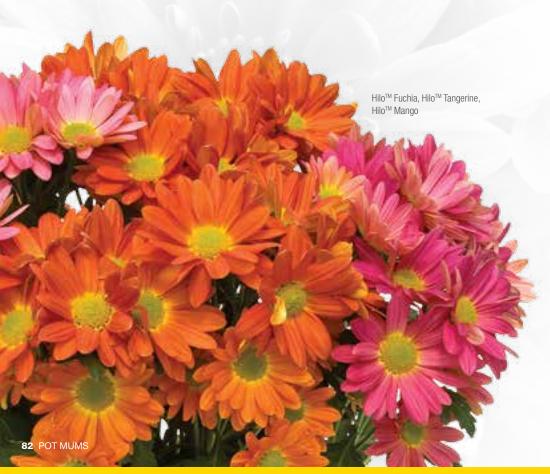




Milton™ Dark Pink, Milton™ Orange, Milton™ Pink Bicolor



 $\begin{array}{l} \text{Milton}^{\text{TM}} \; \text{Pink, Milton}^{\text{TM}} \; \text{Pink Bicolor,} \\ \text{Oakville}^{\text{TM}} \; \text{Yellow} \end{array}$



Oakville™ Yellow, Milton™ Dark Pink, Shasta™ White



Hilo™ Mango, Pueblo™ Orange, Pueblo™ Cinnamon

Pot Mum Combos

COMBO NAME	SEASON	COMBO RECIPE	VARIETY NUMBER	COMBO NAME	SEASON	COMBO RECIPE	VARIETY NUMBER
umpkin Spice™	Autumn	Pueblo™ Orange	70018708	Sunny Blossom™	Easter / Mother's Day	Blush™ Apricot	70018670
		Pueblo™ Cinnamon	70018952			Blush™ Dark Pink	70018543
		Pueblo™ Yellow	70053323			Blush™ White	70018637
Harvest's Glory™	Autumn	Point Pelee™	70018719			Blush™ Sunny Yellow	70018640
		Hollister™ Yellow	70018694			Blush™ Pink	70018602
		Auburn™ Orange	70018671	Spring Passion™	Easter / Mother's Day	Milton™ Pink	70065640
		Auburn™ Red	70018607			Milton™ Pink Bicolor	70065647
Autumn Breeze™	Autumn	Durango™ Honey	70021402			Milton™ Dark Pink	70065639
		Durango™ Bronze	70018904	Fruit Smoothie™	Any	Hilo™ Mango	70018947
		Durango™ Yellow	70046048			Hilo™ Fuchsia	70046052
Winter's Passion™	Valentine's Day	Irvine™ Red	70018709	1 march 1 marc		Hilo™ Tangerine	70046053
		Irvine™ Regal Purple	70018711	Shades of Sunset™	Fleurette	Lucienne™ Yellow	70021403
		Juneau™ White	70018696			Fifi™ Hot Pink	70024094
	·		A.M.			Chantal [™] Hot Red	70024095
			La Villa	Saturday Brunch™	Fleurette	Lucienne™ Yellow	70021403
			- The state of the	16		Fifi™ Hot Pink	70024094
		100				Sylvie™ White	70024134
					Con V		

Single Stem

Single stem pot mums are unique, huge flowers that add dramatic, high-impact color at retail. Considered a more traditional flower form, these mums are popular during holidays and can diversify any indoor program year round.

Similar to pinched pot mums, single-stem varieties are grown with similar culture specification, including: spacing, rooting media, watering, fertilization and temperatures.

Single stem varieties

- Golden Gate™
- Nob Hill
- Pittsburgh™ Purple
- Seaside[™] White
- Shanghai™ Red



Golden Gate™

Yellow/Gold / Incurve / Med-Lg / 7.5 / T Variety 70018690





Pittsburgh™ Purple

Purple / Spider / Lg / 8 / M Variety 70024131



Shanghai™ Red

Red / Incurve / Med-Lg / 8.5 / M Variety 70024086



Seaside™ White

White / Spider / Med-Lg / 8 / S Variety 70035731





Yellow/Gold

										(CBR)	18FA		Season	ene
		COM	pare meet ind		eite /			the first Republic	all oud Ref	Aethor Aethor	all stem	Property of the state of the st	ied les l'	Air S
VARIETY	Flori	a kolin Rici	gents like	titone	, ,	så / ¿	is di	de Oute	1 street V	THE PROPERTY OF THE PROPERTY O	right steet.	Ac.	See of the	getSu
Bloomfield™ Yellow	Dec	7	S	Med-Lg	•	•	•	•	•		•	•		
Blush™ Sunny	Dsy	8	S	Med-Lg	•	•	•	•	•					
Blush™ Yellow	Dsy	8	S	Med-Lg	•	•	•	•	•					2
Brighton™ Yellow	Dsy	8	M	Med-Sm	•	•		•	•					
Butterfield™ Yellow	Dsy	8	M	Med	•	•		•	•					
Chesapeake™ Yellow	Dsy	8.5	M	Med-Lg	•	•	•	•	•		•		•	9
Chowchilla™ Yellow	Dsy	8	S	Med	•	•		•	•		•	•	•	
Covington™ Yellow	Dec	7.5	S	Med	•	•	•	•	•		•	•		
Durango™ Honey	Dec	8.5	S	Med	•	•	•	•	•		•		•	
Durango™ Yellow	Dec	8.5	S	Med	•	•	•	•	•		•		•	
Emporia™ Golden	Dsy Spoon	8	M	Med-Lg	•	•		•	•		•			
Golden Gate™	Incurve	7.5	Т	Lg	•	•	•			•				
Hollister™ Yellow	Dsy	7.5	M	Med	•	•		•	•		•	•	•	80
Key Largo™ Golden	Anm	8	S	Med-Sm	•	•		•	•					
Kingsville™ Yellow	Dec	8	S	Med	•	•	•	•	•					n
Lemon Springs™	Anm	8	M	Med	•	•		•	•			•		
Manhattan™ Yellow	Dec	8.5	S	Med	•	•	•	•						
New York™ Dazzling Yellow	Dec Bicolor	8	M	Med	•	•		•	•		•	•		
Oakville™ Yellow	Dsy	7	M	Med	•	•		•	•		•	•	•	Ø.
Providence™ Yellow	Dec	8	M	Med	•	•	•	•	•		•	•		
Pueblo™ Yellow	Dsy	8	M	Med-Sm	•	•		•	•		•		•	
Vyron™ Yellow	Dsy	9	T	Med-Sm		•		•	•					

Key: FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy | Incurve



Yellow/Gold / Dec / Med-Lg / 7 / S Variety 70024073



Yellow/Gold / Dsy / Med / 8 / M Variety 70018529



Pellow/Gold / Dsy / Med-Lg / 8 / S Variety 70018720



Yellow/Gold / Dsy / Med-Lg / 8.5 / M Variety 70018537



BlushTM Yellow
Yellow/Gold / Dsy / Med-Lg / 8 / S
Variety 70018640



Yellow/Gold / Dsy / Med / 8 / S
Variety 70065613



BrightonTM Yellow Yellow/Gold / Dsy / Med-Sm / 8 / M Variety 70018674



CovingtonTM Yellow

Yellow/Gold / Dec / Med / 7.5 / S

Variety 70018541

Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number





Durango™ Honey

Yellow/Gold / Dec / Med / 8.5 / S Variety 70021402



Kingsville™ Yellow

Yellow/Gold / Dec / Med / 8 / S Variety 70018699



Durango™ Yellow

Yellow/Gold / Dec / Med / 8.5 / S Variety 70046048



Lemon Springs™

Yellow/Gold / Anm / Med / 8 / M Variety 70024078



Golden Gate™

Yellow/Gold / Incurve / Lg / 7.5 / T Variety 70018690



Manhattan™ Yellow

Yellow/Gold / Dec / Med / 8.5 / S Variety 70018589



Hollister™ Yellow

Yellow/Gold / Dsy / Med / 7.5 / M Variety 70018694



Oakville™ Yellow

Yellow/Gold / Dsy / Med / 7 / M Variety 70053701

Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number



New variety



Yellow/Gold / Dec / Med / 8 / M Variety 70018652



Yellow/Gold / Dsy / Med-Sm / 9 / T Variety 70018728



Yellow/Gold / Dsy / Med-Sm / 8 / M Variety 70053323



Orange / Bronze Ter tid ted river liber. 104 VARIETY Auburn™ Orange Dsy 7.5 M Med Blush™ Orange Dsy Med-Lg Chatham™ Orange Dec 8 S Med-Sm Durango™ Bronze Dec 8.5 S Med Emporia™ Orange Dsy Spoon 8 M Med-Lg Hilo™ Tangerine Dsy 8.5 Med Milton™ Bronze Bicolor Dsy Bicolor 7.5 M Med Milton™ Orange Dsy 7.5 M Med Newport™ Bronze Bicolor Dec Bicolor 8 M Med • • Pelee™ Dsy Bicolor 8.5 Med-Lg Pueblo™ Cinnamon Dsy 8.5 M Med-Sm • • Pueblo™ Orange Dsy 8.5 Med-Sm Reno™ Bronze Dsy 8.5 Med-Sm Key: FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy | Incurve 90 POT MUMS



AuburnTM Orange
Orange/Bronze / Dsy / Med / 7.5 / M
Variety 70018671



Emporia™ Orange

Orange/Bronze / Dsy Spoon / Med-Lg / 8 / M

Variety 70035746



Orange/Bronze / Dsy / Med-Lg / 8 / S Variety 70018599



Orange/Bronze / Dsy / Med / 8.5 / M Variety 70046053



Chatham™ Orange
Orange/Bronze / Dec / Med-Sm / 8 / S
Variety 70018702



Orange/Bronze / Dsy Bicolor / Med / 7.5 / M Variety 70065649



Durango™ Bronze
Orange/Bronze / Dec / Med / 8.5 / S
Variety 70018904



MiltonTM Orange
Orange/Bronze / Dsy / Med / 7.5 / M
Variety 70065641

Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number





Newport™ Bronze Bicolor

Orange/Bronze / Dec Bicolor / Med / 8 / M Variety 70053400



Pueblo™ Orange

Orange/Bronze / Dsy / Med-Sm / 8.5 / M Variety 70018708



PeleeTM

Orange/Bronze / Dsy Bicolor / Med-Lg / 8.5 / M Variety 70018705



Reno™ Bronze

Orange/Bronze / Dsy / Med-Sm / 8.5 / M Variety 70018612





New variety



Pueblo™ Cinnamon

Orange/Bronze / Dsy / Med-Sm / 8.5 / M Variety 70018952





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Auburn™ Red	Dsy	7.5	M	Med	•	•		•	•		•		•		B 2	110	
Baton Rouge™ Red Bicolor	Dsy Bicolor	8	S	Med-Sm	•	•		•	•			•					
China Doll™ Red Delano™ Red	Dec Dec	7.5 8.5	M	Med-Lg Med-Lg	•	•	•	•	•		•	•					
Encino™ Red Imp.	Dsy Spoon	8.5	M	Med Med	•	•		•	•			•			17 h. 16		
Fire Island™ Red Bicolor	Dsy Bicolor	8.5	M	Med	•	•	•	•	•		•				384		
Hudson Bay™ Red Bicolor	Dsy Bicolor	8	S	Med	•	•		•	•				A				
Irvine™ Red	Dsy	8	M	Med	•	•		•	•		•				Real Property lies	100	
Outrageous™ Red	Dsy	7.5	M	Med-Lg	•	•		•	•		•	•			-	100	
Point Pelee™	Dsy Bicolor	8	M	Med	•	•		•	•		•			3			
Red Springs™	Anm	7.5	M	Med	•	•		•	•		•	•	100	5			
Santa Cruz™ Red Bicolor	Dsy Bicolor	8	Т	Med-Sm	•	•		•	•		•						
	Incurve	8.5	M	Med-Lg	•	•	•	•		•	•						
Shanghai™ Red								1									



Red / Dsy / Med / 7.5 / M Variety 70018607



Baton Rouge™ Red Bicolor Red / Dsy Bicolor / Med-Sm / 8 / S Variety 70018672



China Doll™ Red Red / Dec / Med-Lg / 7.5 / M Variety 70035688



Delano™ Red Red / Dec / Med-Lg / 8.5 / M Variety 70018608



Encino™ Red Imp. Red / Dsy Spoon / Med / 8.5 / M Variety 70059422



Red / Dsy Spoon / Med / 8.5 / M Variety 70018561



Red / Dsy Bicolor / Med / 8 / S Variety 70018695



Red / Dsy / Med / 8 / M Variety 70018709

Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number





New variety Memory Memo



OutrageousTM Red
Red / Dsy / Med-Lg / 7.5 / M
Variety 70046043



Red / Dsy Bicolor / Med-Sm / 8 / T Variety 70018715



Red / Dsy Bicolor / Med / 8 / M Variety 70018719



Shanghai™ Red

Red / Incurve / Med-Lg / 8.5 / M

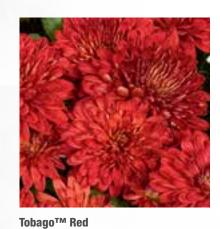
Variety 70024086







Red SpringsTM
Red / Anm / Med / 7.5 / M
Variety 70035741



Red / Dec / Med / 8.5 / M Variety 70018662





Pink / Lavender

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VARIETY	Filing	Ares.	parse Heet lies	cions	a site	, the state of the	ipat es	ite out Resid	A STORY OF THE PROPERTY OF THE	to Buld Reficial	tigle stem	Ber Selection, S	egi vi
Apple Valley™ Pink Bicolor	Dsy Bicolor	7.5	M	Med-Lg	•	•	•	•	•				/
Blush™ Dark Pink	Dsy	8	S	Med-Lg	•	•	•	•	•				
Blush™ Pink	Dsy	8	S	Med-Lg	•	•	•	•	•				
Chatham™ Dark Pink	Dec	8	S	Med-Sm	•	•		•	•		•		
Deep Presidio™ Pink	Dec	7.5	Т	Med-Lg	•	•	•	•	•		•	•	•
Delano™ Spring Pink Bicolor	Dec Bicolor	8.5	М	Med-Lg		•	•						•
Grandview™ Light Pink	Dsy	8	М	Med-Lg	•	•		•	•		•	•	•
Grandview™ Pink	Dsy	8	М	Med-Lg	•	•		•	•		•	•	•
Hilo™ Mango	Dsy	8.5	М	Med		•		•	•		•		
LaBelle™ Dark Pink Bicolor	Dsy Bicolor	7.5	S	Med	•	•		•	•		•		•
Milton™ Dark Pink	Dsy	7.5	М	Med	•	•		•	•		•	•	•
Milton™ Pink	Dsy	7.5	М	Med	•	•		•	•		•	•	•
Milton™ Pink Bicolor	Dsy Bicolor	7.5	М	Med	•	•		•	•		•		•
New York™ Bold Lavender	Dec Bicolor	8	М	Med	•	•		•	•		•	•	
Newark™ Pink Bicolor	Dec Bicolor	8	М	Med	•	•		•	•		•	•	
Roanoke™ Dark Pink	Dsy	7.5	М	Med	•	•		•	•		•		
Roanoke™ Pink	Dsy	7.5	М	Med	•	•		•	•		•		
Starling™ Pink	Dsy Spoon	7.5	М	Med	•	•		•	•		•		•

Key: FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy | Incurve



Apple ValleyTM Pink Bicolor
Pink/Lavender / Dsy Bicolor / Med-Lg / 7.5 / M
Variety 70018669



BlushTM Dark Pink
Pink/Lavender / Dsy / Med-Lg / 8 / S
Variety 70018543



BlushTM Pink

Pink/Lavender / Dsy / Med-Lg / 8 / S

Variety 70018602



Chatham™ Dark Pink

Pink/Lavender / Dec / Med-Sm / 8 / S

Variety 70018683



Presidio™ Deep Pink
Pink/Lavender / Dec / Med-Lg / 7.5 / T
Variety 70018550



Pink/Lavender / Dec Bicolor / Med-Lg / 8.5 / M Variety 70018621



Pink/Lavender / Dsy / Med-Lg / 8 / M Variety 70053404



GrandviewTM Pink
Pink/Lavender / Dsy / Med-Lg / 8 / M
Variety 70065651

Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number





Hilo™ Mango Pink/Lavender / Dsy / Med / 8.5 / M Variety 70018947



LaBelle™ Dark Pink Bicolor Pink/Lavender / Dsy Bicolor / Med / 7.5 / S Variety 70065620



Milton™ Dark Pink Pink/Lavender / Dsy / Med / 7.5 / M Variety 70065639



Milton™ Pink Pink/Lavender / Dsy / Med / 7.5 / M Variety 70065640



Milton™ Pink Bicolor Pink/Lavender / Dsy Bicolor / Med / 7.5 / M Variety 70065647



New York™ Bold Lavender Pink/Lavender / Dec Bicolor / Med / 8 / M Variety 70018673



Newark™ Pink Bicolor Pink/Lavender / Dec Bicolor / Med / 8 / M Variety 70046071



Roanoke™ Dark Pink Pink/Lavender / Dsy / Med / 7.5 / M Variety 70018685

Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number



New variety



Pink/Lavender / Dsy / Med / 7.5 / M

Variety 70018614



Starling™ Pink

Pink/Lavender / Dsy Spoon / Med / 7.5 / M Variety 70053520



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Delano™ Purple Essex™ Purple Estes Park™ Purple Bicolor	Dec	8.5 7.5 8	M	Med-Lg	/	•	•			the state of the s	ĺ			teres in the state of the state	
Delano™ Purple Essex™ Purple	Dec Dsy	8.5 7.5	M M	Med-Lg Med-Lg	/	•	•	•	•	ob de la companie de	•	•	•	the state of the s	
Delano™ Purple Essex™ Purple Estes Park™ Purple Bicolor	Dec Dsy Dsy Bicolor	8.5 7.5 8 7.5 8.5	M M M S	Med-Lg Med-Lg Med	•	•	•	•	•	de la	•	•	•	telegiste, militaria	
Delano™ Purple Essex™ Purple Estes Park™ Purple Bicolor Fairbanks™ Purple Spoon	Dec Dsy Dsy Bicolor Dsy Spoon	8.5 7.5 8 7.5	M M M S	Med-Lg Med-Lg Med Med	•	•	•	•	•	A Light Republic Spirit	•	•	•	terete in the state of the stat	
Delano™ Purple Essex™ Purple Estes Park™ Purple Bicolor Fairbanks™ Purple Spoon Hilo™ Fuchsia	Dec Dsy Dsy Bicolor Dsy Spoon Dsy	8.5 7.5 8 7.5 8.5	M M M S	Med-Lg Med-Lg Med Med Med	•	•	•	•	•	de de la companya de	•	•	•	teres in the state of the state	
Delano™ Purple Essex™ Purple Estes Park™ Purple Bicolor Fairbanks™ Purple Spoon Hilo™ Fuchsia Irvine™ Regal Purple	Dec Dsy Dsy Bicolor Dsy Spoon Dsy Dsy	8.5 7.5 8 7.5 8.5 8.8	M M M S M	Med-Lg Med-Lg Med Med Med Med Med	•	•	•	•	•	e de la constant de l	•	•	•	teleper in the state of the sta	
Delano™ Purple Essex™ Purple Estes Park™ Purple Bicolor Fairbanks™ Purple Spoon Hilo™ Fuchsia Irvine™ Regal Purple Jamestown™ Regal Purple	Dec Dsy Dsy Bicolor Dsy Spoon Dsy Dsy Dec	8.5 7.5 8 7.5 8.5 8.8	M M M S M	Med-Lg Med-Lg Med Med Med Med Med Med Med Med Med-Sm	•	•	•	•	•		•	•	•	telegiste in the state of the s	
Delano™ Purple Essex™ Purple Estes Park™ Purple Bicolor Fairbanks™ Purple Spoon Hilo™ Fuchsia Irvine™ Regal Purple Jamestown™ Regal Purple Pittsburgh™ Purple	Dec Dsy Dsy Bicolor Dsy Spoon Dsy Dsy Dsy Dsy Dec Spider	8.5 7.5 8 7.5 8.5 8 8	M M M S M M	Med-Lg Med-Lg Med Med Med Med Med Med Med Lg	•	•	•	•	•		•	•	•	teretaria de la companya de la compa	
Delano™ Purple Essex™ Purple Estes Park™ Purple Bicolor Fairbanks™ Purple Spoon Hilo™ Fuchsia Irvine™ Regal Purple Jamestown™ Regal Purple Pittsburgh™ Purple Purple Springs™	Dec Dsy Dsy Bicolor Dsy Spoon Dsy Dsy Dec Spider Anm Spoon	8.5 7.5 8 7.5 8.5 8 8 8 8	M M S M M S M T	Med-Lg Med-Lg Med Med Med Med Med Med Med Med-Sm Lg Med	•	•	•	•	•		•	•	•	teres in the state of the state	



DelanoTM Purple
Purple / Dec / Med-Lg / 8.5 / M
Variety 70018551



EssexTM Purple

Purple / Dsy / Med-Lg / 7.5 / M

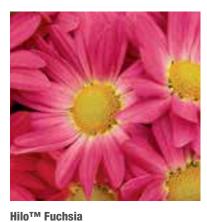
Variety 70018688



Estes Park™ Purple Bicolor
Purple / Dsy Bicolor / Med / 8 / M
Variety 70065637



Purple / Dsy Spoon / Med / 7.5 / S Variety 70059977



Purple / Dec / Med / 8.5 / M Variety 70046052



Purple / Dsy / Med / 8 / M Variety 70018711



Purple / Dec / Med-Sm / 8 / S Variety 70018712



PittsburghTM Purple
Purple / Spider / Lg / 8 / M
Variety 70024131

Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number





Purple Springs™

Purple / Anm Spoon / Med / 7.5 / T Variety 70035706



Springdale™ Purple

Purple / Dsy / Med-Lg / 7.5 / M Variety 70065612



Rockport™ Purple

Purple / Dsy / Med / 8 / M Variety 70018714



Williamsburg™ Purple

Purple / Dec / Med / 8 / M Variety 70059425

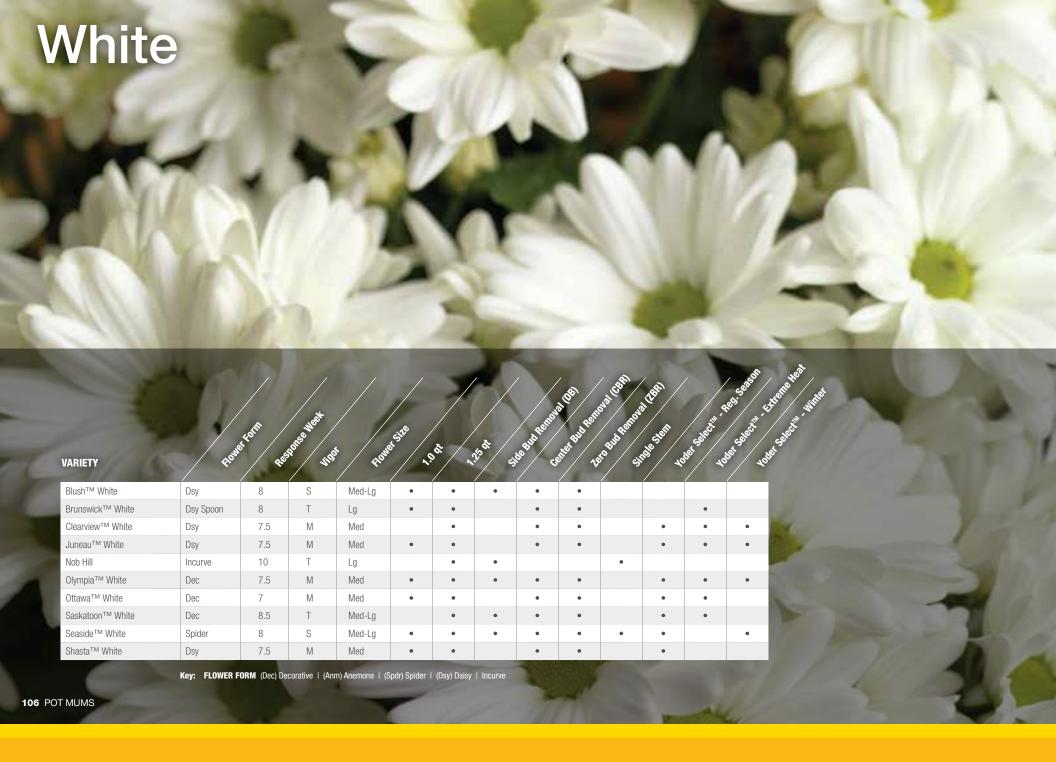
Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number



New variety







Pot Mums



BlushTM White
White / Dsy / Med-Lg / 8 / S
Variety 70018637



BrunswickTM White
White / Dsy Spoon / Lg / 8 / T
Variety 70018645



ClearviewTM White
White / Dsy / Med / 7.5 / M
Variety 70065632



Juneau™ White

White / Dsy / Med / 7.5 / M

Variety 70018696



Nob Hill
White / Incurve / Lg / 10 / T
Variety 70039167



White / Dec / Med / 7.5 / M Variety 70018598



White / Dec / Med / 7 / M Variety 70018651



White / Dec / Med-Lg / 8.5 /T Variety 70024141

Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number



POT MUMS 107

Pot Mums



Seaside™ White

White / Spider / Med-Lg / 8 / S Variety 70035731



Shasta™ White

White / Dsy / Med / 7.5 / M Variety 70035734









Salmon / Dsy / Med-Lg / 8 / S Variety 70018670



Green / Dup / Med / 8 / M Variety 70018692

Key: Color group / Flower form / Flower size / Resp. week / Plant vigor Variety number





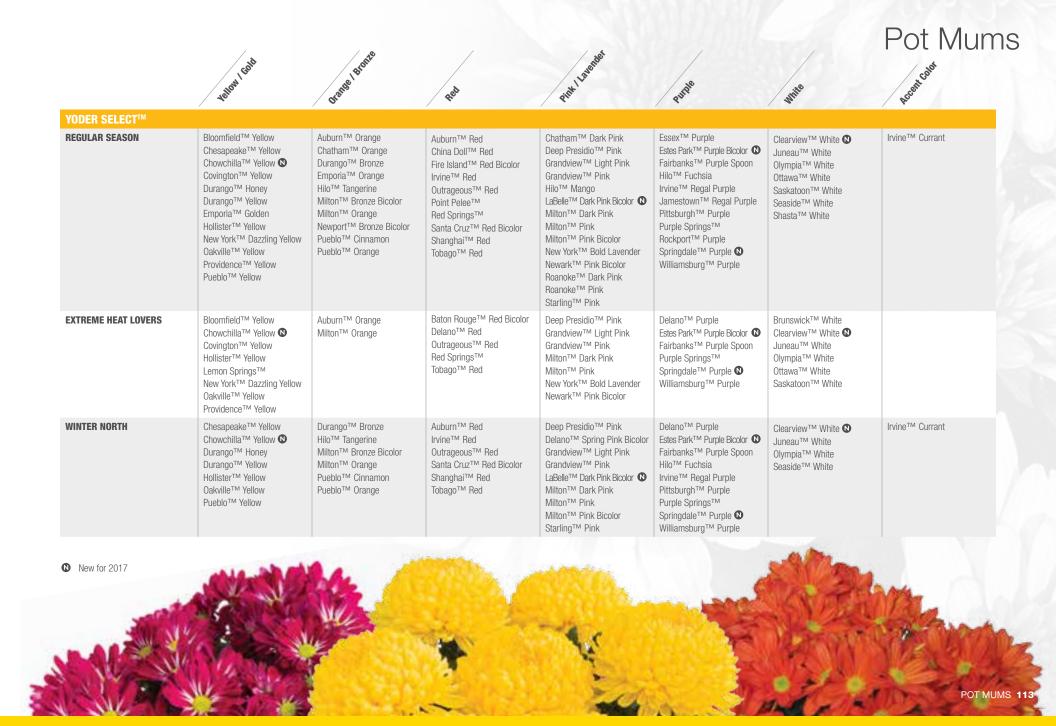
Coral / Dsy / Med / 8 / M Variety 70018679



Green / Dec / Med-Sm / 8 / M Variety 70053324







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Variety	Color	calarter	tioner s	Res	panse likest light	40	soling did ity rate	.3/ 7.5	odi 1	sdi sid	s Bud Renn	ited b	so did Reference	igle stern	Jet Selecti	det St	de selecti litter	Best in	Best F
POT MUMS AT-A-GLAN	CE	/	/	/	/ -		/	/	/	/	/	/	/	/	/	/	/	/	/
Apple Valley™ Pink Bicolor	Pink	Pink/Lavender	Dsy Bicolor	7.5	М	VG	Med-Lg	•	•	•	•	•					Mar-Oct	Nov-May	Year-round
Auburn™ Orange	Orange	Orange/Bronze	Dsy	7.5	M	VG	Med	•	•		•	•		•	•	•	Year-round	Oct-Jun	Year-round
Auburn™ Red	Red	Red	Dsy	7.5	M	G	Med	•	•		•	•		•		•	Year-round	Nov-May	Year-round
Baton Rouge™ Red Bicolor	Red	Red	Dsy Bicolor	8	S	VG	Med-Sm	•	•		•	•			•		Year-round	Year-round	Year-round
Bloomfield™ Yellow	Yellow	Yellow/Gold	Dec	7	S	VG	Med-Lg	•	•	•	•	•		•	•		Mar-Dec	Year-round	Year-round
Blush™ Apricot	Salmon	Accent Color	Dsy	8	S	VG	Med-Lg	•	•	•	•	•					Sep-Jun	Nov-May	Year-round
Blush™ Dark Pink	Pink	Pink/Lavender	Dsy	8	S	VG	Med-Lg	•	•	•	•	•					Sep-Jun	Nov-May	Year-round
Blush™ Orange	Orange	Orange/Bronze	Dsy	8	S	VG	Med-Lg	•	•	•	•	•					Sep-Jun	Oct-May	Year-round
Blush™ Pink	Pink	Pink/Lavender	Dsy	8	S	VG	Med-Lg	•	•	•	•	•					Sep-Jun	Nov-May	Year-round
Blush™ Sunny	Yellow	Yellow/Gold	Dsy	8	S	VG	Med-Lg	•	•	•	•	•					Oct-May	Oct-May	Year-round
Blush™ White	White	White	Dsy	8	S	VG	Med-Lg	•	•	•	•	•					Year-round	Year-round	Year-round
Blush™ Yellow	Yellow	Yellow/Gold	Dsy	8	S	VG	Med-Lg	•	•	•	•	•					Year-round	Year-round	Year-round
Brighton™ Yellow	Yellow	Yellow/Gold	Dsy	8	М	VG	Med-Sm	•	•		•	•					Apr-Nov	Oct-May	Apr-Nov
Brunswick™ White	White	White	Dsy Spoon	8	T	G	Lg	•	•		•	•			•		Mar-Dec	Year-round	Year-round
Butterfield™ Yellow	Yellow	Yellow/Gold	Dsy	8	M	G	Med	•	•		•	•					Apr-Nov	Oct-May	Mar-Nov
Chatham™ Dark Pink	Pink	Pink/Lavender	Dec	8	S	Е	Med-Sm	•	•		•	•		•			Mar-Nov	Oct-Jun	Mar-Nov
Chatham™ Orange	Bronze	Orange/Bronze	Dec	8	S	Е	Med-Sm	•	•		•	•		•			Mar-Nov	Oct-Jun	Mar-Nov
Chesapeake™ Yellow	Yellow	Yellow/Gold	Dsy	8.5	M	VG	Med-Lg	•	•	•	•	•		•		•	Year-round	Oct-Jun	Year-round
China Doll™ Red	Red	Red	Dec	7.5	М	G	Med-Lg	•	•	•	•	•		•			Mar-Nov	Nov-Jun	Year-round
Chowchilla™ Yellow N	Yellow	Yellow/Gold	Dsy	8	S		Med	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Clearview™ White N	White	White	Dsy	7.5	М		Med		•		•	•		•	•	•	Year-round	Year-round	Year-round
Covington™ Yellow	Yellow	Yellow/Gold	Dec	7.5	S	VG	Med	•	•	•	•	•		•	•		Apr-Oct	Oct-May	Apr-Oct
Deep Presidio™ Pink	Pink	Pink/Lavender	Dec	7.5	Т	VG	Med-Lg	•	•	•	•	•		•	•		Year-round	Year-round	Year-round
Delano™ Purple	Purple	Purple	Dec	8.5	M	G	Med-Lg		•	•					•	•	Year-round	Year-round	Year-round
Delano™ Red	Red	Red	Dec	8.5	M	G	Med-Lg		•	•					•		Year-round	Year-round	Year-round
Delano™ Spring Pink Bicolor	Pink	Pink/Lavender	Dec Bicolor	8.5	M	G	Med-Lg		•	•						•	Year-round	Oct-Jun	Year-round
Durango™ Bronze	Bronze	Orange/Bronze	Dec	8.5	S	G	Med	•	•	•	•	•		•		•	Year-round	Nov-Jul	Year-round
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POT MUMS AT-A-GLANCI	E																		
Durango™ Honey	Golden	Yellow/Gold	Dec	8.5	S	G	Med	•	•	•	•	•		•		•	Year-round	Dec-Jul	Year-round
Durango™ Yellow	Yellow	Yellow/Gold	Dec	8.5	S	G	Med	•	•	•	•	•		•		•	Year-round	Nov-Jul	Year-round
Emporia™ Golden	Golden	Yellow/Gold	Dsy Spoon	8	M	VG	Med-Lg	•	•		•	•		•			Mar-Dec	Nov-May	Year-round
Emporia™ Orange	Orange	Orange/Bronze	Dsy Spoon	8	M	VG	Med-Lg	•	•		•	•		•			Mar-Dec	Nov-May	Year-round
Encino™ Red Imp.	Red	Red	Dsy Spoon	8.5	M	Е	Med	•	•		•	•					Year-round	Nov-May	Year-round
Essex™ Purple	Purple	Purple	Dsy	7.5	M	Е	Med-Lg	•	•	•	•	•		•			Mar-Nov	Nov-Jun	Mar-Nov
Estes Park™ Purple Bicolor N	Purple	Purple	Dsy Bicolor	8	M		Med		•		•	•		•	•	•	Year-round	Year-round	Year-round
Fairbanks™ Purple Spoon	Purple	Purple	Dsy Spoon	7.5	S		Med	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Fire Island™ Red Bicolor	Red	Red	Dsy Bicolor	8.5	M	VG	Med	•	•	•	•	•		•			Sep-Jun	Oct-Jun	Year-round
Golden Gate™	Yellow	Yellow/Gold	Incurve	7.5	Т	VG	Lg	•	•	•			•				Mar-Nov	Year-round	Year-round
Grandview™ Light Pink	Pink	Pink/Lavender	Dsy	8	М		Med-Lg	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Grandview™ Pink	Pink	Pink/Lavender	Dsy	8	M		Med-Lg	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Green Valley™	Green	Accent Color	Dup	8	M	VG	Med	•	•		•	•					Oct-Jun	Nov-Jun	Year-round
Hilo™ Fuchsia	Purple	Purple	Dsy	8.5	M	VG	Med		•		•	•		•		•	Year-round	Nov-Jun	Year-round
Hilo™ Mango	Pink	Pink/Lavender	Dsy	8.5	M	VG	Med		•		•	•		•			Year-round	Nov-Jun	Year-round
Hilo™ Tangerine	Orange	Orange/Bronze	Dsy	8.5	M	VG	Med		•		•	•		•		•	Year-round	Nov-Jun	Year-round
Hollister™ Yellow	Yellow	Yellow/Gold	Dsy	7.5	M	G	Med	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Hudson Bay™ Red Bicolor	Red	Red	Dsy Bicolor	8	S	VG	Med	•	•		•	•					Mar-Nov	Nov-Jun	Mar-Nov

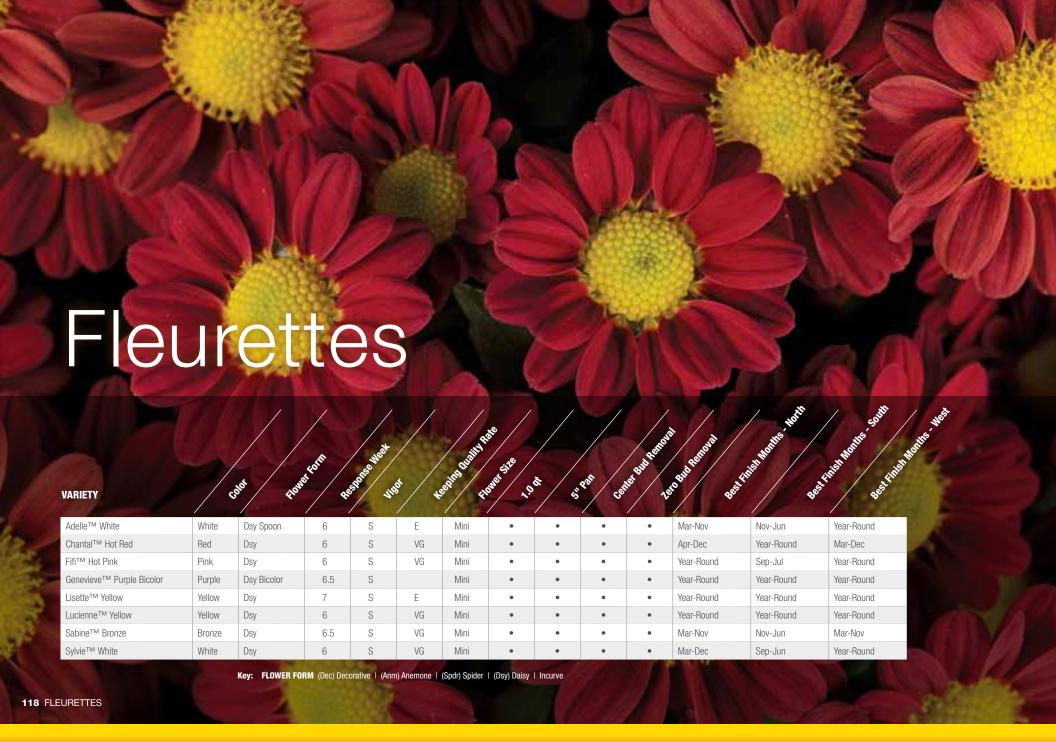


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POT MUMS AT-A-GLANCI	E																		
rvine™ Currant	Coral	Accent Color	Dsy	8	М	VG	Med	•	•		•	•		•		•	Year-round	Dec-Jun	Year-round
rvine™ Red	Red	Red	Dsy	8	M	VG	Med	•	•		•	•		•		•	Year-round	Dec-Jun	Year-round
rvine™ Regal Purple	Purple	Purple	Dsy	8	M	VG	Med	•	•		•	•		•		•	Year-round	Dec-Jun	Year-round
Jamestown™ Regal Purple	Purple	Purple	Dec	8	S	VG	Med-Sm	•	•		•	•		•			Mar-Nov	Nov-Jun	Mar-Dec
Juneau™ White	White	White	Dsy	7.5	M	VG	Med	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Key Largo™ Golden	Golden	Yellow/Gold	Anm	8	S	G	Med-Sm	•	•		•	•					Mar-Nov	Nov-Jun	Mar-Nov
Kingsville™ Yellow	Yellow	Yellow/Gold	Dec	8	S	Е	Med	•	•	•	•	•					Mar-Nov	Nov-Jun	Year-round
_aBelle™ Dark Pink Bicolor N	Pink	Pink/Lavender	Dsy Bicolor	7.5	S		Med	•	•		•	•		•		•	Year-round	Nov-Jun	Year-round
_emon Springs™	Yellow	Yellow/Gold	Anm	8	M	Е	Med	•	•		•	•			•		Year-round	Year-round	Year-round
_imerick™ Lime	Green	Accent Color	Dec	8	M		Med-Sm	•	•		•	•					Year-round	Nov-Jun	Year-round
Manhattan™ Yellow	Yellow	Yellow/Gold	Dec	8.5	S	G	Med	•	•	•	•						Year-round	Nov-Jun	Year-round
Milton™ Bronze Bicolor	Bronze	Orange/Bronze	Dsy Bicolor	7.5	M		Med	•	•		•	•		•		•	Year-round	Year-round	Year-round
Milton™ Dark Pink	Pink	Pink/Lavender	Dsy	7.5	M		Med	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Milton™ Orange	Orange	Orange/Bronze	Dsy	7.5	М		Med	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Milton™ Pink	Pink	Pink/Lavender	Dsy	7.5	M		Med	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Milton™ Pink Bicolor	Pink	Pink/Lavender	Dsy Bicolor	7.5	М		Med	•	•		•	•		•		•	Year-round	Year-round	Year-round
New York™ Bold Lavender	Pink	Pink/Lavender	Dec Bicolor	8	M	G	Med	•	•		•	•		•	•		Mar-Dec	Year-round	Year-round
New York™ Dazzling Yellow	Golden	Yellow/Gold	Dec Bicolor	8	М	G	Med	•	•		•	•		•	•		Mar-Dec	Year-round	Year-round
Newark™ Pink Bicolor	Pink	Pink/Lavender	Dec Bicolor	8	M		Med	•	•		•	•		•	•		Mar-Nov	Year-round	Year-round
Newport™ Bronze Bicolor	Bronze	Orange/Bronze	Dec Bicolor	8	М		Med	•	•	•	•	•		•			Mar-Nov	Oct-Jul	Year-round
Nob Hill	White	White	Incurve	10	T		Lg		•	•			•				May-Oct	Nov-Apr	Apr-Dec
Dakville™ Yellow	Yellow	Yellow/Gold	Dsy	7	M		Med	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Olympia™ White	White	White	Dec	7.5	M	Е	Med	•	•	•	•	•		•	•	•	Year-round	Year-round	Year-round
Ottawa™ White	White	White	Dec	7	M	Е	Med	•	•		•	•		•	•		Apr-Oct	Year-round	Mar-Nov
Outrageous™ Red	Red	Red	Dsy	7.5	M		Med-Lg	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Pelee™	Bronze	Orange/Bronze	Dsy Bicolor	8.5	M	G	Med-Lg	•	•	•	•	•					Year-round	Oct-Jun	Year-round
Pittsburgh™ Purple	Purple	Purple	Spider	8	M	Е	Lg		•	•	•	•	•	•		•	Oct-Jun	Oct-Jun	Year-round
Point Pelee™	Red	Red	Dsy Bicolor	8	M	VG	Med	•	•		•	•		•			Mar-Nov	Oct-Jun	Year-round
Providence™ Yellow	Yellow	Yellow/Gold	Dec	8	M	G	Med	•	•	•	•	•		•	•		Mar-Nov	Year-round	Mar-Dec
Pueblo™ Cinnamon	Bronze	Orange/Bronze	Dsy	8.5	M	VG	Med-Sm	•	•		•			•		•	Year-round	Nov-Jun	Year-round

Key: FLOWER FORM (Dec) Decorative | (Anm) Anemone | (Spdr) Spider | (Dsy) Daisy | Incurve

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Variety	Calar	color teri	tighet k	offi Res	onse West Vidor	4	espirate transfer tra	Site 15	d /2	is di sid	S Bud Refus	na let de la	O Bud Refus	Hall Stell	The see of	Ared to	See Hear Hear Hear Hear Hear Hear Hear He	de Horits Herit	Best High Best High Hard
POT MUMS AT-A-GLAN	ICE																		
Pueblo™ Orange	Orange	Orange/Bronze	Dsy	8.5	M	VG	Med-Sm	•	•		•	•		•		•	Year-round	Nov-Jun	Year-round
Pueblo™ Yellow	Yellow	Yellow/Gold	Dsy	8	M	VG	Med-Sm	•	•		•	•		•		•	Year-round	Nov-Jun	Year-round
Purple Springs [™]	Purple	Purple	Anm Spoon	7.5	Т	Е	Med		•		•	•		•	•	•	Year-round	Year-round	Year-round
Red Springs™	Red	Red	Anm	7.5	M		Med	•	•		•	•		•	•		Mar-Nov	Oct-Jul	Year-round
Reno™ Bronze	Bronze	Orange/Bronze	Dsy	8.5	M	G	Med-Sm	•	•		•	•					Oct-May	Nov-May	Year-round
Roanoke™ Dark Pink	Pink	Pink/Lavender	Dsy	7.5	M	G	Med	•	•		•	•		•			Mar-Nov	Nov-May	Year-round
Roanoke™ Pink	Pink	Pink/Lavender	Dsy	7.5	М	G	Med	•	•		•	•		•			Mar-Dec	Nov-May	Year-round
Rockport™ Purple	Purple	Purple	Dsy	8	M	VG	Med	•	•		•	•		•			Apr-Nov	Oct-May	Mar-Dec
Santa Cruz™ Red Bicolor	Red	Red	Dsy Bicolor	8	Т	VG	Med-Sm	•	•		•	•		•		•	Oct-Jun	Nov-Jun	Year-round
Saskatoon™ White	White	White	Dec	8.5	T	VG	Med-Lg		•	•	•	•		•	•		Mar-Dec	Year-round	Year-round
Seaside™ White	White	White	Spider	8	S		Med-Lg	•	•	•	•	•	•	•		•	Mar-Dec	Year-round	Year-round
Shanghai™ Red	Red	Red	Incurve	8.5	M	VG	Med-Lg	•	•	•	•		•	•		•	Year-round	Nov-Jun	Year-round
Shasta™ White	White	White	Dsy	7.5	M		Med	•	•		•	•		•			Mar-Nov	Nov-Jun	Year-round
Springdale™ Purple N	Purple	Purple	Dsy	7.5	M		Med-Lg	•	•		•	•		•	•	•	Year-round	Year-round	Year-round
Starling™ Pink	Pink	Pink/Lavender	Dsy Spoon	7.5	M		Med	•	•		•	•		•		•	Year-round	Year-round	Year-round
Tobago™ Red	Red	Red	Dec	8.5	M	Е	Med	•	•		•	•		•	•	•	Oct-Jun	Nov-Jun	Year-round
Vyron™ Yellow	Yellow	Yellow/Gold	Dsy	9	Т	Е	Med-Sm		•		•	•					Oct-Jun	Nov-May	Apr-Nov
Williamsburg™ Purple	Purple	Purple	Dec	8	M		Med	•	•		•	•			•	•	Year-round	Year-round	Year-round





Fleurettes



LisetteTM YellowYellow / Dsy / Mini / S / 7
Variety 70018586



Bronze / Dsy / Mini / S / 6.5 Variety 70024137



SylvieTM White
White / Dsy / Mini / S / 6
Variety 70024134



FifiTM Hot Pink
Pink / Dsy / Mini / S / 6
Variety 70024094



LucienneTM Yellow

Yellow / Dsy / Mini / S / 6

Variety 70021403



AdelleTM White
White / Dsy Spoon / Mini / S / 6
Variety 70018667



Red / Dsy / Mini / S / 6 Variety 70024095



GenevieveTM Purple Bicolor
Purple / Dsy Bicolor / Mini / S / 6.5
Variety 70046047





Garden Mums are easy to grow when basic guidelines are followed. Simply plant rooted cuttings and feed. Today's varieties do all the work when you provide the appropriate feed. Below is a list of the points for successfully growing any garden mum crop.

- Plant (rooted) or stick (unrooted) cuttings as soon as they arrive and always plant or stick cuttings into moist media. For natural-season East Coast and Midwest crops, planting rooted cuttings outside in mid- to late June, or even early July, saves growing time and reduces premature budding caused by the cool nights of late May and early June.
- Start the liquid feed program in the first three days after stick for unrooted cuttings and at the time of planting for rooted cuttings.
- Maintain the level of fertilizer in the root zone with a constant liquid feed program and be sure to refeed after rain so the plants always have fertilizer during the growing phase.
- Pinches are not required for most crops. One pinch may be beneficial if your cuttings have stretched due to delayed planting, if large propagation cells were used, or if you are in a low humidity growing area.
- Space pots so plants will not touch when they reach the desired finished size.
- Monitor the feed levels in the pot and in the irrigation line to prevent problems before they show up in the plant.
- Take notes on procedures used, any problems seen and weather conditions to allow for adjustments and planning for a better crop next year.

RECOMMENDED CULTURAL PRACTICES

On Receipt of Cuttings

Plant (rooted) or stick (unrooted) garden mum cuttings immediately. If the cuttings cannot be planted immediately, they may be stored for one or two days in a cooler at 33–40 $^{\circ}$ F / 0.5–4.4 $^{\circ}$ C, but this is not recommended.

Rooting Unrooted Cuttings

Rooting hormone increases uniformity. The easiest way to apply hormone is to spray cuttings after stick with 200 ppm IBA (indole-3-butyric acid). If spraying IBA, spray in the early morning the day after stick to allow the mist program to be turned off for one to two hours and then resume mist after cuttings begin to wilt. An alternate method is to apply 1,000–1,500 ppm IBA in powder or liquid form to the bottom 1/8"–1/4" of cuttings before sticking.

Always stick cuttings into moist root media. The longer you plan to hold the cutting in the cell tray before planting, the bigger the cell should be. Unrooted cuttings can also be stuck directly into the finishing container, which requires more propagation space.

Allowing plants to become over-rooted, dried out, crowded and/or under-fertilized serves to compromise plant growth and sets the stage for severe budding very early in the crop. Proper care initially is crucial for easy, high-quality finished crops. Plant the cuttings as soon as possible after rooting so quality is not compromised.

Ideal light levels are 3,500–4,000 foot candles, but mum cuttings can be rooted in full sun with adjustments to the misting frequency. Rooting medium temperature should be 70–74 °F / 21–24 °C. Maintain air temperature of 70–85 °F / 21–29 °C. Use longday lighting year round to reduce budding during rooting (see Photoperiod Control section). Fertilization during propagation also reduces rooting time. Apply a complete N-P-K fertilizer containing 165–200 ppm of nitrogen approximately two or three times a week starting on the third day after stick or when callus starts to form.

Misting guidelines: Use of an environmental controller to vary the mist based on weather and the stage of root development is ideal. More traditional mist time clocks can also be used. In most cases, mist can be off 10 days after stick and with a 100-cell tray, cuttings can be ready to plant in 14 days. Overall, less mist is better at all stages of development since water-logged media slows the rooting process. There is no need to mist a turgid cutting. Mist during daylight hours throughout the rooting process and during the night for the first three to four days to help keep cuttings turgid. You will find it is possible to shut the mist system off in the morning and wait until cuttings first start to wilt before turning the mist back on. This will reduce the amount of mist at the least stressful part of the day and decrease overall time needed in propagation.

Planting

Always plant the cuttings into moist growing media. Planting a garden mum cutting into dry media reduces initial growth and future potential. Plant cuttings deep enough to cover the root ball and part of the base of the stem. With today's well drained growing mixes, disease issues from planting deeper are not seen. Planting deeper can be done on taller cuttings, but is not necessary or recommended on regular size cuttings. Deep planting will reduce overall growth.

Liquid fertilization at planting time gets the plant off to a vigorous start. Immediately after planting, water-in freshly planted cuttings with a complete N-P-K fertilizer containing 200–300 ppm of nitrogen. Allowing garden mum cuttings to wilt inhibits their establishment, future branching and overall growth. It may be beneficial to mist or syringe the plants for the first few days, or until the plants are fully turgid and the roots are absorbing water.

Budded Cuttings

Garden mums are very reproductive. At times, some buds may be present when cuttings are received. When producing garden mums, this must be expected. With the free branching varieties of today, small buds on the cuttings will have little to no effect on the finished plant.

To prevent garden mum cuttings from becoming prematurely reproductive, it is necessary to keep them actively growing. Therefore, it is essential to provide the plant with optimum moisture and fertility levels. Use night interruption lighting

Culture GARDEN MUMS

during propagation and before the start of short days with blackcloth crops to help prevent premature bud initiation (see Photoperiod Control section). This should be done even during natural long-day periods. Varieties that naturally come into flower in late August and early September, initiate flower buds in mid- to late July. The natural daylength in mid- to late July is similar to the natural daylength in mid- to late May. Relying on only natural daylength in May can lead to flowering plants at the end of June.

Many areas of North America experience very cool nights in May and June, which may cause cuttings to initiate buds prematurely. It is best to avoid exposure of the cuttings to these low night temperatures (see Temperature section). If you can keep the plants actively growing with fertilizer and water, in most cases the cuttings can grow over any premature buds that are set.

Growing Media

For mum production, the growing medium should retain adequate water after irrigation but also drain sufficiently to provide aeration during rainy weather. Many growers use peat-based mixes commonly used for bedding plants and baskets. Some growers prefer heavier bark-based mixes. Of the two types of growing media, bark-based mixes are more porous and might require 20% more nitrogen with the feed program. In either case, be sure that the growing mix is well drained with 12–18% air-filled pore space. The pH range should be 5.8–6.2. If a very lightweight mix is used, large plants can be top heavy and prone to tipping over in windy conditions. If this is a problem, use a growing mix that contains a heavier component (like bark) to provide weight and stability to the pots.

Containers

There are a variety of container sizes used in garden mum production. Cell packs, handle baskets and 3–1.25 qt pots are widely used for spring sales. For summer and fall sales 1.25–3.0 qt plastic and fiber pots are used, along with 1.0–2.0 gal nursery containers. Many growers find demand for large pot sizes such as 1.5 gal, 2.5 gal and 3.0 gal pots as well as different pot colors and styles. As a general rule, the larger the container, the larger the finished plant will be. We recommend using new containers each year. Reused

containers must be properly cleaned and sanitized to prevent possible crop disease issues.

There is also the potential to "upgrade" traditional pots with pot covers put on at the time of retail delivery. Seasonal themes such as Jack-o'-lanterns or bushel baskets are available. Pot covers add market value at a low cost and do not require any adjustments to your current growing process.

Temperature

Once the cuttings are in the final container, keep night temperatures above 62–65 °F to allow growth and reduce the potential for budding. Night temperatures in the 50-59 °F range can cause garden mum bud initiation and potential development even under long day conditions. Plant outdoor crops in mid- to late June after the night temperatures are above 60 °F. This will allow for more growth than planting in late May because of a lack cold night temperatures and premature bud initiation.

Fertilization

Fertilization is the key to success with any garden mum crop. Mums demand fertilizer and providing this early solves headaches that could occur later in the crop. Fertilization rates vary depending upon the type of media, fertilizer used and application frequency. Growers can utilize a watersoluble fertilizer, a controlled release fertilizer, or even a combination of the two depending on preference. Lack of fertility during the vegetative development phase (first half of the crop) will adversely affect plant size and quality. High ammonium levels can help overcome crown-budding but can also delay flowering. During the flowering phase, nutrient demand drops and fertility can be reduced.

Water-Soluble Fertilizer (WSF) Usage

The first five weeks of the crop is critical, so check your feed system and injectors before you plant the cuttings. Growers should use a complete N-P-K fertilizer with trace elements. The best fertilizer product to use will depend more on your water quality than any preference by the mum. During the first half of the crop cycle EC values of 2.0–3.5 mS/cm (SME extract) or 2.5-4.5 mS/cm (pour through extract) should be maintained. We have traditionally recommended



a high level of fertilizer (200-300 ppm N) from a constant liquid feed program to get the plants started. Some growers use an ammonium-based fertilizer for the first two weeks, and then switch to a higher-nitrate fertilizer. Fertilizer rates can be reduced once the plant body has been built and/or once there is a need to irrigate more than once a day. It is better to maintain constant feed at half the rate than use a feed-then-water program when irrigating twice a day. The application rate might have to be adjusted to accommodate weather conditions or the degree of leaching that occurs.

An alternative to the traditional liquid feed program is a low N-P-K constant liquid feed program that is supplemented with magnesium sulfate and micronutrients. Research* and grower trials over the past several years have found that high levels of nitrogen are not necessary to drive growth. Lower levels of nitrogen, phosphorus, and potassium can be applied without sacrificing proper growth and development of the plant as long as there is an increase in the levels of micronutrients and magnesium sulfate so that they are equivalent to a standard 200–250 ppm N fertilizer program. The lower N-P-K program utilizes a complete fertilizer at 75–150 ppm N that is supplemented with 1-2 ppm iron from a complete micronutrient fertilizer package and magnesium sulfate at 25–30 ppm. The additional micronutrients and magnesium sulfate are best added through a second injector. This is a constant feed program, so every irrigation needs to include fertilizer. If bark is incorporated into your growing media, plan to use nitrogen rates at the higher end of the recommended range. After a significant rain event (.5-1" of rain), it is important to apply 200-300 ppm N feed to recharge the soil solution. This can also be done at the start of your crop if your growing media does not contain a starter fertilizer. Lower EC values in the media would be expected with this program because the plant will be more fully utilizing the nutrients being supplied.

The magnesium sulfate can also be applied every three to four weeks as a separate application at 50–75 ppm to help reduce potential precipitate issues that can occur when mixing with other fertilizer products. The required extra micronutrients can be added as a control release product that is incorporated into the growing media before the cuttings are planted. This may be an easier option for some growers to be able to reduce N-P-K levels without using two injectors to prevent precipitate problems. There are some new fertilizer products now available with increased levels of micronutrients and magnesium that may also be an option when using lower N-P-K levels.

Overall, a low N-P-K program helps to reduce fertilizer costs and simplifies irrigation in the field because the same fertilizer level is used at all stages of the crop, allowing different plant dates to utilize the same feed tank. It is suggested to trial this program before changing your entire production schedule. Dedication to monitoring the feed is one of the keys to a successful low N-P-K fertilizer program.

Controlled-Release Fertilizer (CRF) Usage

Some mum growers use CRF instead of liquid feed. Be sure to use one that contains trace elements. CRF can be incorporated into the growing medium prior to planting or top dressed after planting. If at all possible, water in the plants with a WSF to boost initial fertility. CRF release is temperature dependent, releasing faster during warmer weather. CRFs are categorized by release rate in months or days. Northern growers often use three- to four-month or five- to six-month products while Southern growers use five- to six-month or eight- to nine-month products. The recommended application rates vary by product and are listed on the labels. High application rates are required to provide adequate nutrition. Growers should take great care when selecting a CRF and its application rate, especially if there is no way to apply supplemental WSF if needed. Depending upon weather conditions, it is sometimes necessary for additional top-dress applications to avoid low fertility. Growers should regularly monitor growing medium electrical conductivity (EC). Low or decreasing EC values would indicate the need for supplemental fertility.

Water-Soluble Fertilizer/Controlled-Release Fertilizer Combination

Some growers produce mums alongside lighter feeding crops using a single injector. With this system, heavier mum fertility requirements can be accommodated by including a light to moderate CRF application to the crop. This provides continuous low to medium fertility levels supplemented by the liquid feed.

Irrigation

Proper irrigation is critical to produce high-quality garden mums. Always apply enough fertilizer solution so it soaks through the pot and up to 10% of the solution drains out of the pot to prevent soluble salts build-up.

Garden mums should never be allowed to wilt during the early stages of growth. Wilting can restrict branching and overall growth as well as contribute to premature budding. Slight wilting can be beneficial late in the crop to help harden the plant off, control height and promote more uniform flowering. Keeping plants evenly moist (not wet) can increase overall plant size even after buds are seen. This can be a useful tool if your plants look like they will finish too small.

Drip irrigation is better than overhead irrigation because drip irrigation can more uniformly water a pot especially when the plants are large in size and because overhead irrigation can promote the development of leaf spotting foliar diseases. If using overhead irrigation be sure the foliage is dry before evening hours. When using drip irrigation, it is not required to place drip emitters close to the center of the pot to ensure uniform irrigation throughout the pot.

Pulse irrigation is a useful tool to more fully irrigate pots with drip irrigation. Instead of running one long irrigation cycle, break that run time into two or three shorter segments with time in between to allow the irrigation solution to move laterally in the pot not just run out the bottom. Doing this can also allow you to time your irrigation so the pots never completely dry out which will encourage more growth and plant size.

During extremely hot periods, do not apply extra water to the pots in an attempt to lower temperatures. This leads to overwatering, root loss and chlorosis. Syringing plants reduces heat stress and lowers leaf temperatures without overwatering. With greenhouse grown crops, 25–30% shade can be used to reduce temperatures, but the reduction in light will slow the flowering response.

Pinching

In most cases, garden mums no longer require pinching, and certainly do not require multiple pinches to obtain beautiful round plants. Many of the newer varieties will actually start branching during propagation, well before you would even think about pinching. We have stopped pinching in all of our garden mum trials to allow us to introduce and recommend that best varieties for no pinch production.

Sometimes cuttings rooted in large plugs and cuttings held in small plugs too long before planting may require a pinch. Some growers may still want to give one pinch if they are located in an area of the country with low humidity or if more spread is needed on some varieties grown as a blackcloth crop.

On crops that will be pinched, the ideal would be to pinch when the plants are ready, not based on a calendar date. Plants are ready to pinch when their roots are established in the pot and they achieve 1"–1.5" / 2.5–3.8 cm of new growth. This is generally 10–14 days after planting. The top .5" of growth should be pinched out. Many growers rooting mums in trays for transplant into the final containers pinch the cuttings by machine right before transplanting to reduce labor and handling costs. When pinching, the last pinch should be given sometime in July—early in the month for crops in cool areas, and as late as August in warm regions.

Remember, with today's improved varieties there is no reason to plant a cutting in May or early June and pinch it multiple times. Excellent fall crops can be grown by planting in mid-June and not pinching. Some growers find it more economical to plant two to four weeks later with two cuttings per pot and no pinch.

Spacing

Proper spacing is important for producing garden mums with beautiful round shapes. Pots grown too close together have an upright appearance, even when the right varieties have been selected and proper fertilization is given. Space pots to allow plants to reach the desired head size without touching the adjacent plants. Finished plant head size and sale price are the main factors used to determine proper spacing.

Growth Regulators

Some garden mum varieties tend to get too big. If these varieties are needed, they can be controlled with the use of growth regulators. Effective use of all growth regulators is more of an art than a science. Stage of the crop, concentration of the plant growth regulator (PGR) used, uniformity of application, and the weather after the application all factor in to the level of control seen. Accurate records are needed to learn from crop to crop and year to year to know how to best adjust applications for a location.

If most of the varieties in your crop require growth regulators, consider a later plant date to reduce growing time and, therefore, plant size. Proper use of fertilizer and irrigation can also help control plant size later in the crop (see the Fertilizer and Irrigation sections).

B-Nine® plant growth regulator is a traditional plant growth regulator for garden mums. Typical rates are 1,000–5,000 ppm with 2,500 ppm as a normal starting point. Rates vary depending on a variety's vigor, temperature, and growth stage of the crop. Usually B-Nine plant growth regulator is not applied after the buds can be seen to avoid flower discoloration and delay.

Bonzi® plant growth regulator is also an effective tool that can be used to regulate plant growth. The active ingredient in Bonzi plant growth regulator is absorbed by roots and stems and can be applied as either a spray or drench. Spray rates range from 30–50 ppm, while drench rates range from 0.5–2 ppm. While drench applications can be applied at any point during production, foliar sprays are best used after transplanting up until the early stages of bud formation. Drench applications can be particularly helpful at the end



of the crop cycle to maintain plants at their finished size prior to shipping. Late applications using low drench rates do not appear to delay flowering. Use rates and application frequency will vary based on the vigor of the variety and the climate in which it is grown. It is always best to trial at a lower rate first, especially when growing in regions with cooler climates and for first time users.

Sumagic® is also a very effective plant growth regulator, but results have been more variable. Spray rates range from 2.5–10 ppm and drenches of only 0.1–1 ppm are used. Uptake of Sumagic plant growth regulator is similar to Bonzi plant growth regulator.

Florel[™] plant growth regulator has been promoted for several uses on garden mums: to increase branching, to prevent premature budding and to delay flower dates of the same variety. More recently, Florel plant growth regulator is being used by some growers to replace night interruption lighting during the long-day period of the crop schedule.

In our trials, we have not found Florel plant growth regulator to increase the branching of garden mums as it does in other crops. With the free-branching garden mums now available, Florel plant growth regulator is not required to have well-branched plants.

Florel plant growth regulator can be used as insurance against premature flowering and to manipulate the flower date of varieties when night interruption lighting is not possible. The key to both of these uses is to plan ahead and make Florel plant growth regulator a part of the production schedule from the beginning. Florel plant growth regulator will be less effective if applied after buds are already seen.

When using Florel plant growth regulator as insurance or to substitute for night interruption lighting, plan the first application for 8–10 days after stick for unrooted cuttings or about three days after planting for rooted cuttings. The goal is to make the first application early but to not apply to stressed cuttings. Subsequent applications can be made every 10–14 days. The last application should be made eight weeks before the desired ship date or about two

weeks before the start of short days. Spray rates of 300–500 ppm are commonly used.

Mum cuttings that are stuck or planted in May have a good chance of setting flower buds early because the natural daylength is not long enough to prevent flower initiation. If night interruption lighting (see Photoperiod Control section) is not possible, a Florel plant growth regulator program will help keep your plants vegetative.

Greenhouse vs. Outdoor Growing

A better quality fall garden mum is produced outdoors versus indoors. Temperature and humidity levels are often too high in a greenhouse. Outdoor-grown mums are tougher, more compact and generally perform better for the consumer. Fall garden mums grown indoors under natural day length may flower approximately two weeks later than those grown outdoors as warm summer night temperatures can delay flower initiation. With proper variety selection, high quality "summer shaded" garden



Stage 1 Ursula™ Lavender



Stage 2-3 Ursula™ Lavender

mums can be produced indoors before the fall season (see Blackcloth Selection).

Photoperiod Control

Long days are needed to generate vegetative growth. Sufficient long days must be provided to obtain the proper finished plant size for a given container. Artificial long days should always be provided during mum propagation, with spring-lighted/shaded crops and blackcloth garden mum programs. Artificial long days can be supplied by lighting plants from 10:00 p.m.-2:00 a.m. with 10-15 foot candles or 1.5-2.0 W/m². This can be obtained with 100 watt incandescent bulbs or 33 watt corkscrew-type compact fluorescent bulbs. A typical set up would be to have light lines 10 feet apart and incandescent bulbs placed every 10 feet down the light line. When using compact fluorescent bulbs, additional bulbs are necessary and should be spaced every five feet down the light line. Even with the additional bulbs, there should be a 33% energy savings using the compact fluorescent bulbs. For either bulb, a reflector (pie pan) is recommended to be sure the light is directed down toward the plants. Use a timer to control when the lights go on and off. Use of artificial "mum lighting" should be done even when the natural day length is greater than 12 hours, to ensure the cuttings do not initiate flower buds early.

Short days are needed for flowering. Artificial short days are provided by covering plants with an impermeable light barrier like blackcloth or 4-6 mil black plastic for at least 12 hours daily. Accomplish this by pulling blackcloth before the sun sets and opening after sunrise (7:00 p.m.-7:00 a.m.), or by pulling blackcloth early in the morning before the sun rises and opening mid- to late morning (5:00 a.m.-10:00 a.m.) to help reduce the temperature under the cloth during the night. Light intensity under the blackout must be less than two foot candles to be effective. For the most predictable timing, we recommend covering every night for at least four weeks to initiate flowers. When using blackcloth outside of the greenhouse, some growers use weed barrier cloth since it allows the passage of air and water. Blackcloth can be laid directly atop plants, but most often a support structure is used to prevent damage from windy or rainy conditions. The covering is pulled over the structure at the end of each day from either the sides or

ends of beds, and then rolled and stored in the aisles in the morning.

Combo Mum Culture

Garden mum combos are very popular and are very easy to grow. Requiring more than one cutting in a pot, they are usually grown in larger container sizes and upgraded containers. The easiest way to create a garden mum combo pot is to choose varieties from the same family. Families will be the most consistent between the colors in any crop schedule. Individual varieties can be used, but may not be consistent and reliable.

For natural-season crops, we recommend planting multicutting pots two to four weeks after your single cutting 3.0 qt pots to reduce risk of premature budding under cool night temperatures and inadequate natural day lengths.

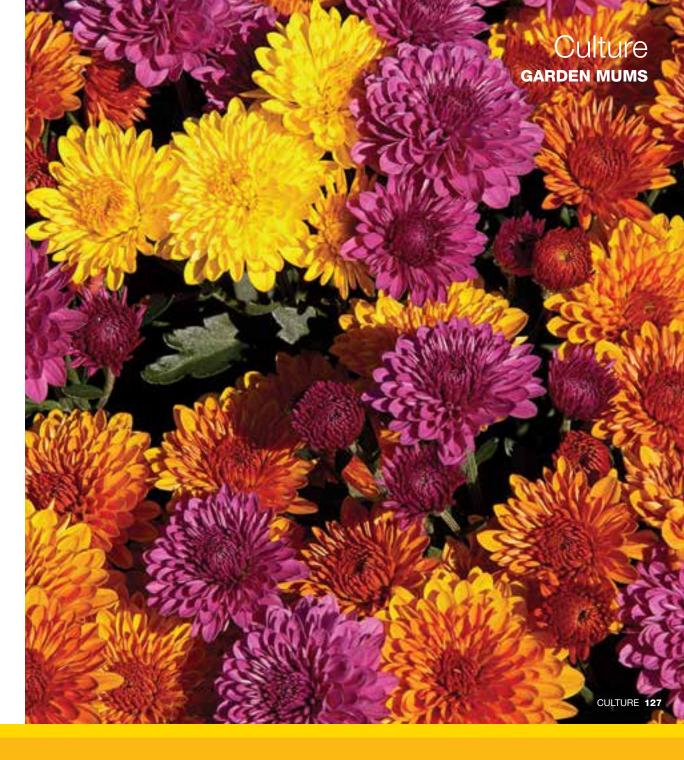
For a shaded program, expect large containers to be ready to ship faster after blackcloth is started than what you have scheduled for standard 1.25 qt crops. The same variety can flower as much as a week faster in a 3.0 gal pot versus a 1.25 qt pot going into blackcloth at the same time.

For planting multi-cutting pots, keep the cuttings closer to the center of the pot to help reduce individual plant separation at finish. In general, plant cuttings no more than two inches apart and as close as having the rootballs touch near the center of the pot. This allows the cuttings to grow together early in the crop and create a stronger plant base.

Reference our Garden Mum Combination recommendations and cultural information at www.syngentafhg.com for additional details.

Pest Control

There are several insect pests that can be a problem on garden mums which include aphids, mites, various caterpillars, leafminer, whiteflies and thrips. Fortunately, insects are not usually a significant problem, but pressure can vary from region to region. Previous scouting data can provide a history of which pests are more prevalent in your area and help provide a framework for building a preventive program for routine pests. Avid® and Mainspring® GNL



insecticides, with their broad-spectrum activity across some of the major garden mum pests, will be two important staples in your insecticide rotation program. Additional information for various pests can be found at www. syngentaflowersinc.com under Cultural Information in the Technical Support tab.

Leafminer: Leafminer pressure can vary from year to year and if not recognized in time, this pest can cause serious damage to garden mums. It is important to inspect plants upon arrival and note any active mines. Monitor the growing areas with sticky cards so you can check for adult activity. Good scouting and proper use of effective controls is the best way to protect crops that are prone to leafminer. A preventive approach is best, as once leafminer gain a foothold in the crop; it is often difficult to get them under control. This is due to the unsynchronized timing of the different life stages and the difficulty of getting good spray coverage once the crop has gained some size.

A rotation using Avid. Citation®, Mainspring GNL, and Conserve® SC Insecticides can be used to protect garden mums from leafminer as well as other pests listed on these labels. Use Citation and Avid in a block rotation of three spray applications each, then rotate to the next product. This targets the lifecycle of the pest and allows you to effectively rotate to another product to help minimize the chance of resistance. The systemic activity of Mainspring GNL insecticide provides extended protection of eight weeks (depending on the rate used) when used as a drench and will also provide protection against thrips, aphids, whiteflies and worms. This is best applied once the crop has rooted in well, in order to maximize uptake. Mainspring GNL may also be applied as a spray using a two week interval. Use Conserve insecticide at the end of the crop if needed for leafminer and thrips control. Products containing Azadiractin can be applied at the end of the week (or four to five days after a treatment of Avid, Citation or Conserve insecticides) if pressure is high and/or during the third week prior to rotating to the next product.

Disease Problems

The most common diseases found on garden mums are caused by Pythium, Fusarium, Rhizoctonia, and foliar leafspots caused by Pseudomonas cichorii (bacterial leaf spot). The first defense for disease prevention is to start clean —using clean cuttings, soil/planting media, equipment and good cultural practices that create an unsuitable environment for disease organisms.

For the field, be sure the ground is free of weeds and debris to remove any potential inoculum source from last year. Prior to placing plants in the field, clean irrigation lines by flushing with chlorinated water containing 2-3 ppm chlorine, followed by a 1 ppm chlorine rinse to clear out any debris. Please note that this may cause some clogging in the lines as algae and other debris is dislodged. Be sure to check drippers after flushing and replace those as needed. ZeroTol® algaecide/fungicide can also be used to clean and flush irrigation lines. Be sure to check the label for the instructions on applications and use rates. It is also important to check for low spots in the field that can be collection points for excess water after rain or irrigation. These areas can contribute to root rot and other disease problems. If the low spots cannot be properly leveled. raising pots up on trays in these troublesome spots can help alleviate future disease problems.

Other cultural practices that can help reduce the risk of disease include moving from a high ammonium fertilizer to one with a nitrate form of nitrogen after initial growth has begun and maintaining the soil pH at the higher end of the desired range. A sand filter and chlorination of the irrigation water if it is from a surface water source is also a good idea.

Disease Control

Infections by Fusarium sp. can cause root, stem and foliar blight on garden mums. If this disease has been a problem in the past, a preventive program using systemic and protectant fungicides can be beneficial for producing a healthy garden mum crop. A rotation using Heritage® (0.9 oz/100 gal) or Mural® fungicides (2-3oz/100 gal) as a drench four weeks after planting, followed by a Medallion® fungicide drench (2 oz/100 gal) four weeks later; then apply a Mural®

fungicide spray 7 oz/100 gal) focused on the center of the plant three weeks after the Medallion fungicide treatment will provide protection against Fusarium sp. and many other diseases such as Rhizoctonia, Rust and foliar leafspots that can affect garden mums. Please refer to the product labels for specific instructions on applications and use rates.

Pythium root rot can also be a problem in garden mum production, particularly in crops grown outside. The heat of the summer months and the periodic rains can sometimes put additional stress on the root system which can make them prone to infection. Build-up of salts in the planting media can also contribute to root problems, so monitor the EC and pH regularly to be sure it is within the proper range. Using a preventive fungicide rotation can help avoid problems that can show up in the crop and disrupt sales. Begin by drenching mums after transplanting or seven days after stick. The following products listed below have shown to be effective in controlling diseases caused by Pythium sp. For prevention, apply on a 21–28 day interval; for active infections apply on a 14-day interval. Products should be used in a rotation to avoid problems with resistance.

MOA#	FUNGICIDE	RATE (per 100 gal)
4	Subdue Maxx®	1-2 fl. oz.
3	Truban®	4-10 fl. oz.
21	Segway [®]	1.5-3 fl. oz.
11 + 7	Mural	2-3 oz

For more details on chrysanthemum disease management, see the Mum Disease Control tip sheets at www. syngentafhg.com.

Chrysanthemum White Rust (CWR) is a pest of quarantine significance in North America that can affect garden mum production. Visit www.syngentaflowersinc.com for a complete bulletin on the disease lifecycle and preventative management.

Weed Control

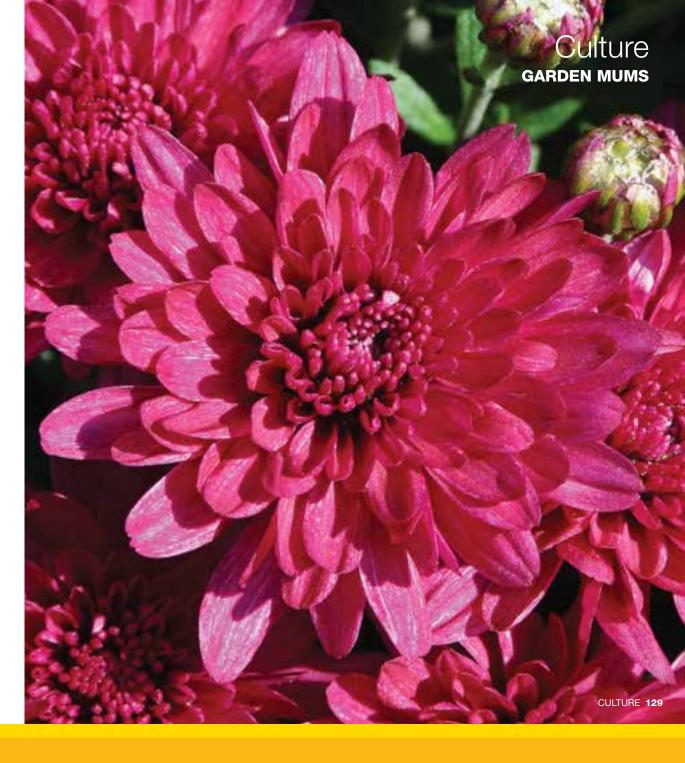
Weed control in outdoor garden mum production areas is primarily accomplished with solid or woven plastic ground cover. Use clean media in containers to prevent any weeds in the pots. Other manual methods or mulches can be used in field cultivation. There are several pre- and post-emergence chemicals available for use with mums. Barricade® 4FL or 65WG is a pre-emergent herbicide that can be helpful in reducing a broad-spectrum of broadleaf and some grassy weeds. For best results, apply to the ground/groundcover prior to setting plants in the field. Remember that both preemergence and post-emergence herbicides only control certain weeds. Read the label for weeds controlled and for use rates and application methods. Also keep in mind that damage can occur with drift or vaporization when using weed killers near growing plants.

NOTE: These suggestions are only guidelines and may have to be altered to meet individual growers needs.

*Based on a program developed by Dr. Royal Heins.

All products may not be registered for sale or use in all states. Please check with your state or local Extension Service before buying or using Syngenta products. Important: Always read and follow label instructions before buying or using Syngenta products. The instructions contain important conditions of sale, including limitations of warranty and remedy. Florel™ is a trademark of Bayer AG. ZeroTol® is a trademark of BioSafe Systems. B-Nine® is a registered trademark of Chemtura Corporation. Conserve® SC is a registered trademark of Dow AgroSciences LLC. Segway™ is a trademark of OMS Investments, Inc. Oasis® is a registered trademark of Smithers-Oasis Company. Sumagic® is a registered trademark of Smithers-Oasis Company. Sumagic® is a registered trademark of Sumitomo Chemical Co., Ltd.

Visit www.syngentafhg.com for more detailed information.



Asters are the perfect companion for garden mums. Like garden mums, they can be used in summer, fall and West Coast programs. They also have similar cultural requirements.

We grow our aster trials with the same media and fertilizer as our garden mums. Our fall and West Coast asters are grown with no pinch, just like garden mums. There are a few differences from garden mum culture, which are highlighted below.

Propagation

Aster cuttings require a bit more care than garden mum cuttings. Aster cuttings do not ship or store as well as garden mums so plan to stick unrooted cuttings as soon as they arrive. Propagation may take a few days longer than mums. Keeping the media too wet will delay rooting.

Growing Media and Fertilization

The same soilless media and the same 200–300 ppm N constant liquid feed program from a complete fertilizer used for garden mums will work for asters (see Growing Media and Fertilization sections in Garden Mum Cultural Information). The low N-P-K program also works for aster production. Maximum growth is attained when water and fertilizer are not limited, similar to garden mums.

Asters are more sensitive to salts in the root zone. Be sure solution comes out of the pot with every irrigation. If you notice foliage tip burn, you may need to leach. Monitor the pot EC to prevent damage. Target should be approximately 75% of the garden mum target, or during the first half of the crop cycle EC values of 1.5–2.7 mS/cm (SME extract) or 2.0–3.5 mS/cm (pour through extract) should be maintained.

Flowering Response

Asters flower under short days, and tend to bud easier than garden mums. Be sure to use night interruption lighting year round for propagation, as well as the long day period for forced crops (See the Photoperiod Control section in Garden Mum Cultural Information). Asters flower faster than mums once short days begin. Most varieties flower in

five weeks, compared to seven for mums. Avoid blackout periods longer than 13 hours since some varieties can abort flower buds. Artificial short days should be used from March 15 to August 15. We recommend retailing asters earlier than mums, when color is just starting to show, for better consumer longevity.

In natural-season programs, asters are primarily driven to flower by photoperiod and are not affected as much by temperature. This means asters grown in the South flower 7–10 days faster than the same variety grown in the North. And for those in the deep South, varieties can be faster by two weeks or more than the same variety in the North.

Pinching

Traditionally, fall aster crops have been pinched at least once and blackcloth flowering crops received two pinches. With the new, better-branching varieties, aster pinch requirements have been reduced. For our blackcloth trials we have been using multiple cuttings with just one pinch, and we have even started no pinch aster trials in blackcloth with good results for certain varieties. Our natural season trials have been one cutting with no pinch for more than ten years.

For blackcloth crops, the pinch should be given when roots are well developed. This is generally 10–14 days after planting a rooted cutting or 21–24 days after a direct stick. Having roots established in the pots before the pinch helps create the most branching.

Pinch off the top to leave four to six leaves on the cuttings. Rooted cuttings naturally become taller during propagation than cuttings that are direct-stuck. The first pinch on rooted cuttings will be harder than for direct-stick unrooted cuttings.

Although not suggested, if you pinch more than once, allow enough growth for three to four leaves to remain after pinching. Pinching can be done every two to three weeks. Be sure to pinch all shoots or there will be uneven growth and flowering.

Pinching is not required on natural-season crops. Pinching natural-season crops after mid-July is not recommended as the plants are too close to bud initiation and may flower too short after the pinch.

Spacing

As with garden mums, proper spacing is critical. Asters are generally smaller in size than garden mums and therefore can be grown tighter.

Height Control

With today's free branching varieties, less growth regulators are needed to control height. B-Nine® and Bonzi® plant growth regulators are used successfully and rates are similar to those for garden mums (see Growth Regulator section in Garden Mum Cultural Information). A light B-Nine application when new shoots are .75-1" long is a key to creating full plants in greenhouse blackcloth crops. Skipping this application allows the primary branches to stretch in the warm and humid environment and the secondary branches are then not able to fill in the plant body.

Pest Control

Whiteflies and thrips and occasional spider mites are the key insect pests. A rotation of Mainspring® GNL and Avid® Insecticides can be used to control these pests. For additional information on products for insect management, refer to our Mum Pest Control tip sheet at www. syngentaflowersinc.com.

Disease Control

Asters are susceptible to some different diseases than garden mums, primarily powdery mildew and rust. Some varieties are more resistant to disease than others, but disease expression is also weather dependent and varies from year to year. These diseases generally do not spread to an adjacent garden mum crop. Good cultural practices can reduce the incidence of disease. For additional information on disease management, refer to our Mum Disease Control tip sheet at www.syngentaflowersinc. com.

For outdoor aster production, we strongly recommend a preventative spray program which includes a rotation of Daconil Ultrex® Concert® II and Mural® fungicides.to control powdery mildew and rust. Scout crops regularly and apply protective fungicides when conditions are conducive for disease development. In a preventive program, sprays may be applied on a 14-day interval. Once flower buds are present, rotate Mural with a myclobutanil chemical such as Eagle® or Hoist® fungicide in place of Daconil and Concert II. Please note that applications of myclobutanil can have a growth retardant effect. Concert II is registered for outdoor use only. Do not apply Concert II to plants grown in a greenhouse.

NOTE: These suggestions are only guidelines and may have to be altered to meet individual growers needs.

All products may not be registered for sale or use in all states. Please check with your state or local Extension Service before buying or using Syngenta products.

Important: Always read and follow label instructions before buying or using Syngenta products. The instructions contain important conditions of sale, including limitations of warranty and remedy. B-Nine® is a registered trademark of Chemtura Corporation. Eagle® is a registered trademark of Dow AgroSciences, LLC. Hoist® is a registered trademark of PROKoZ, Inc.



Culture POT MUMS

Pot mums are versatile. They can be grown and marketed in almost any size and container type. There are different procedures for starting a pot mum crop, depending upon the type of cutting (rooted or unrooted) used. Once the crop is established, cultural practices are identical.

Keys to Success

- Choose varieties carefully. Consult variety listings in the mum catalog and the variety charts for recommended varieties by season and region.
- Maintain optimum environmental conditions.
- Do things on time.
- Use liquid fertilizer at planting and continue feed during the first part of the crop.
- Reduce or eliminate fertilizer for the last few weeks of the crop to help optimize keeping quality.
- Use nitrate-based fertilizers during low-light/winter environments.

On Receipt of Cuttings

It is best to stick or plant cuttings upon arrival. Cuttings may be stored for no longer than three days in a cooler at 33–40 °F /1–4 °C, but this is not recommended. Inspect cuttings upon arrival for damage from heating, freezing, breakage or dehydration. Report any problems immediately; pictures are recommended.

Starting Cuttings

Unrooted Cuttings

Sticking unrooted pot mum cuttings is typically referred to as "direct sticking". Fill containers to the top with media and moisten thoroughly. Rooting hormone increases rooting uniformity. Apply 1,200–1,500 ppm IBA (indole-3-butyric acid) in powder or liquid form to the bottom .125–.25" of cutting before sticking or spray cuttings after stick (recommended) with 200 ppm IBA. When using a spray rooting hormone, use a wetting agent and spray in the early morning or after dark; resume mist after cuttings begin to wilt. Please note: hormone-treated cuttings are available at a nominal charge for your convenience.

Unrooted cuttings should be stuck into moist media approximately 1.5" deep. Allow approximately .75–1" of growth exposed above the media. After sticking, cuttings must be watered in.

A complete N-P-K fertilizer such as 20-10-20 at 250-300 ppm nitrogen is recommended for media that does not contain a fertilizer charge.

Once the cuttings are stuck and watered in, provide mist for approximately 10–14 days while the cuttings root. Misting keeps cuttings turgid and provides moisture during rooting. The duration and frequency of the misting is dependent on light intensity, temperature, humidity, etc. As a general guideline, mist for 10 seconds every 5–10 minutes for the first three to four days. Then change to every 20 minutes for the next three to four days. Reduce the frequency to every 30 minutes as the cuttings root. While cuttings should be stressed as little as possible during propagation, there is no need to mist a turgid cutting. Do not overmist, especially once the cuttings are rooted. Cuttings may stretch from too much moisture if plants are kept too wet or under mist for too many days.

To reduce stretch in propagation during the warm months, an application of B-Nine® plant growth regulator at 1,000–1,500 ppm can be combined with the rooting hormone spray or applied separately at a later stage during the propagation phase.

Rooted Cuttings

Always plant rooted pot mum cuttings in moist media. Planting a cutting into a dry medium may delay its establishment and therefore reduce its initial and future growth.

Plant the rooted cuttings deep enough to cover the roots. In a loose, well-drained media, rooted cuttings can be planted about an inch deeper. This deeper planting can anchor the plant more securely and promote better branching with only the softer growth above the soil line.

Immediately after planting, water thoroughly with a fertilizer solution to get the plant off to a vigorous start. A pot mum cutting uses liquid fertilizer from the moment it is planted. A complete N-P-K fertilizer such as 20-10-20 at 200-300 ppm nitrogen is recommended at the time of planting. It is beneficial to mist or syringe the plants frequently for the first few days or until the plants are fully turgid and the roots are absorbing water.

Cuttings Per Pot

Four or five rooted cuttings are recommended for 1.25 qt or 1.81 qt azalea pots. One to three cuttings for a 1.0 qt pot. Plant cuttings near the outside edge of the pot at a slight angle and space equally apart. This allows more light to reach the plants later and encourages increased branching action for fuller pots. No cutting is needed in the center of the pot.

Rooting Media

Pot mums require well-drained, well-aerated media, with good moisture-holding capacity to firmly anchor the root system. Pot mums are adaptable to both soil-based and soilless mixes. It is important that the rooting media be free of insects, disease causing agents, and weed seeds. Soil-based mixes should be pasteurized (steamed) before use at 160 °F / 71 °C for 30 minutes. The pH for soil-based rooting media should be 6.2–6.8. The pH for soilless root media should be 5.8–6.2.



Spacing

Pot mums must be properly spaced at all times or quality suffers. Spacing is generally determined by the desired finish plant size. Ideal spacing would have the plants just touching when the desired finish height is reached.

Photoperiodic Lighting

Pot mums generally require night lighting during the initial portion of their growing schedule. This is the long-day portion of a pot mum crop. Long days are used to maintain vegetative growth and help determine overall finished plant size. The number of long days required will vary by cultivar and pot size. Long days are needed immediately upon planting/sticking. Long-day conditions require a minimum of 10 foot candles of light at plant level during the middle of the night. Do not permit more than seven hours of continuous darkness to occur prior to or during the lighting period. Artificial long days can be supplied by lighting plants from 10:00 p.m.-2:00 a.m. with 10-15 foot candles or 1.5-2.0 W/m². This can be obtained with 100 watt incandescent bulbs or 33 watt corkscrew-type compact fluorescent bulbs. A typical set up would be to have light lines ten feet apart and incandescent bulbs placed every ten feet down the light line. When using compact fluorescent bulbs, additional bulbs are necessary and should be spaced every five feet down the light line. Even with the additional bulbs, there should be a 33% energy savings using the compact fluorescent bulbs. For either bulb, a reflector (pie pan) is recommended to be sure the light is directed down toward the plants. Use a light meter to confirm lighting requirements are met.

Watering

Pot mums require a plentiful amount of water and fertilizer. For a strong root system, allow media to dry somewhat between irrigations, but do not allow the plants to wilt. Irrigate thoroughly, allowing for some leaching.

Various methods of irrigation are used on pot mums including drip irrigation, ebb and flow benches, troughs

and capillary mats. The majority of pot mums are watered with drip irrigation or sub-irrigation techniques. The use of automated irrigation systems is recommended. Automated systems tend to promote more uniform growth and reduce labor costs.

Fertilization

Pot mums are heavy feeders, especially during their initial stages of growth. A pot mum fertilization program should begin as soon as the cuttings are planted or stuck.



Culture **POT MUMS**

Constant liquid fertilization is recommended for pot mum production. Use a complete N-P-K fertilizer that has the majority of N in the nitrate form and contains extra micronutrients such as a "Peat-Lite Special" formulations, (e.g., 20-10-20, 20-5-19, 21-5-20). A 200–300 ppm solution of N (soil root media) or 300–400 ppm solution of N (soilless root media) will produce high quality pot mums. If nonleaching fertilizer delivery systems are used, such as ebb and flow, flood floors, capillary mats, or troughs, the fertilization rate is often 25–50% lower to reduce soluble salt accumulation. Soil and foliar tests at regular intervals are recommended. Adjust fertilizer rate as needed to maintain recommended fertility levels.

Pot mums are heavy feeders for much of the crop time, so it is very important to note that fertilization should be reduced or eliminated during the final two to three weeks of the crop. Work done at the University of Florida by Dr. Terril Nell has demonstrated that pot mum longevity can be increased by 7–14 days when fertilizer applications are terminated at disbudding, or approximately three weeks before marketing the crop. If not done at the time of disbud, fertilizer should be eliminated when bud color is showing.

Target EC (saturated media extract; mS/cm = millisiemens/cm = mmhos/cm):

Establishing 0.8–1.5 mS/cm Growing 1.7–3.0 mS/cm Finishing 0.8–1.5 mS/cm

Pinching

Pot mum cuttings are pinched to encourage lateral branching to produce fuller plants with high flower count. Before a pot mum is pinched, no matter what size pot, these requirements must be met:

- The plants must be established with their root system reaching the bottom of the pot
- .75-1" of new top growth should have occurred.

Under proper environmental conditions, pot mums should be ready to pinch 12–14 days after planting in spring and summer months and 15–18 days after planting in fall and winter months. When pinching, remove the top .5–1" of new growth, allowing approximately five to seven leaves to remain on the cutting. Delayed pinching refers to the practice of pinching after short days have started.

Short days are started one week after planting and then plants are pinched three to seven days later when ready. This produces shorter plants with fewer leaves. It's commonly used to control height during early spring to midsummer production when the environment is conducive to vigorous growth.

Short Days

Pot mums initiate and develop flowers when exposed to short days. Pot mums need a minimum of 12 hours of uninterrupted, total darkness in order to initiate and develop their flowers. From approximately September 20 to March 20, the days are naturally short enough to induce flowering. Pot mum crops scheduled to flower from mid-November until late April only require natural short days.

Pot mum crops scheduled to flower from early May until early November need artificial short days in order to flower. This is accomplished by pulling blackcloth or black plastic over the crop each day to provide a minimum 12-hour period of darkness. (For example, blackcloth is pulled at 7:30 p.m. and removed at 7:30 a.m. each day.) A Mother's Day crop needs short-day treatment to ensure an on-time, uniform flowering response. The short-day treatment must be done each day from the start of short days until flower color shows in the flower buds. Missing a day means delaying the crop by a day. During summer months, it is wise to pull the blackcloth as late in the evening as possible to minimize heat build-up under the cloth. Excessive heat under the blackcloth can contribute to heat delay and reduce plant quality.

Temperature

In the propagation area, night air temperatures of 65–68 °F / 18–20 °C with soil temperatures of 68–70 °F / 20–21 °C are recommended. Day temperatures can run 5–10 °F / 2– 6 °C warmer.

As pot mums move to the finishing environment, night temperatures of $62-65~^{\circ}F$ / $17-18~^{\circ}C$, and day temperatures $67~^{\circ}F$ / $19~^{\circ}C$ if cloudy and $72~^{\circ}F$ / $22~^{\circ}C$ if sunny, are recommended.

During the final three to four weeks of development, it is beneficial to lower the night temperatures to $56-60~^{\circ}F$ / $13-16~^{\circ}C$, with day temperatures of $61-65~^{\circ}F$ / $16-18~^{\circ}C$ to enhance flower color and strengthen stems.

A large, positive difference (DIF) between day and night temperatures, with the day temperature warmer than the night, promotes longer internodes and taller plants. Plant height can be reduced if a less positive or zero DIF is practiced. A negative DIF (warmer night than day) is not recommended as leaf chlorosis, clubbiness and reduced vigor may occur.

Bud Removal

There are three types of bud removal practiced on pot mums today. These include disbud (DB) or removing the side laterals to create one larger flower, center bud removal (CBR) or removing only the center bud to create a smooth canopy with many flowers, and zero bud removal (ZBR) which has a similar look as CBR on certain varieties but no disbudding is required. All types of bud removal need to be done on time or finished quality is diminished. Consult variety listings in the most current Syngenta mum catalog for recommended bud removal by variety. See bud removal tip sheet at www.syngentafhg.com.

Crop Scheduling

An easy general guideline for the number of weeks of long days required for standard 1.25 or 1.81 qt pots is as follows:



For pot mums to be finished in November through April:

Four weeks of long days from sticking URC until blackcloth for short vigor varieties

Three weeks of long days from sticking URC until blackcloth for medium or tall vigor varieties

Two weeks of long days from sticking URC until blackcloth for single stem varieties or any variety in a smaller 1.0 qt pot

(An additional week of long days may be required in cold regions or when warm rooting temperatures cannot be maintained in the winter months).

For pot mums to be finished in May through October:

Three weeks of long days from sticking URC until blackcloth for short vigor varieties

Two weeks of long days from sticking URC until blackcloth for medium or tall vigor varieties

Two weeks of long days from sticking URC until blackcloth for single stem varieties or any variety in a smaller 1.0 qt pot

As noted in the section above on pinching, the number of days from stick to pinch will be greater for crops finishing November through April than finishing May through October. Remember to pinch cuttings when ready not just based on a certain number of days after stick.

The number of weeks of short days require before the plants are flowering will vary by variety. Variety response is listed as seven, seven-and-a-half, eight, eight-and-a-half, and nine weeks. This is the number of weeks from the start of short days (natural or artificial as described above) until the plants will be in flower.

As an example, to schedule a variety such as Emporia™ Orange (eight week response, medium vigor) to flower for the end of September (Week 39):

Need two weeks of long days from stick until short days – medium vigor finishing between May and October.

Need eight weeks of short days and they will need to be provided artificially with blackcloth – eight week variety flowering between May and early November.

- Flower Week 39
- Blackcloth Week 31
- Pinch when ready, approximately Week 31
- Direct stick Week 29

If we wanted to finish Limerick™ Lime (eight week response, medium vigor) to flower for the middle of March (week 11)

Need three weeks of long days from stick until short days – medium vigor finishing between November and April.

Need eight weeks of short days and natural daylength will be short enough – eight week variety flowering between mid-November and late April.

- Flower Week 11
- Lights Off/Natural daylength Week 3
- Pinch when ready, approximately Week 2.5
- Direct stick Week 52
- Lights On Week 52

Growth Regulators

B-Nine plant growth regulator is the most commonly used growth regulator for height control in pot mum production. The amount and timing of B-Nine plant growth regulator applications depends on the cultivar, temperatures and light intensity.

Generally, B-Nine plant growth regulator is applied about two weeks after the pinch, or when new shoots are 1.5–2" long. A second application may be needed in two or three weeks. The last application of B-Nine plant growth regulator is recommended to be no later than the center bud removal stage to avoid negative effects on flower form or color.

B-Nine plant growth regulator rates range from 2,500–5,000 ppm depending on the variety and time of year. Higher rates are used for tall-growing varieties and during the warmest, brightest growing seasons.

The following guidelines are a suggested starting point for B-Nine plant growth regulator applications on pot mums.

Number of B-Nine plant growth regulator applications:

- Short Vigor Varieties zero to one
- Medium Vigor Varieties one to two
- Tall Vigor Varieties two to three

Bonzi® and Sumagic® plant growth regulators can also be used to control growth and height of pot mums. When applying these growth regulators as a spray, uniform application techniques are much more critical than applying B-Nine, which is absorbed and moved into the plant through the foliage. The active ingredients in Bonzi and Sumagic move into the plant tissue via plant stems or roots, so thorough and uniform coverage of the stems is important for absorption and good control when applied as a spray.

Spray rates to use on a trial basis are 30–125 ppm for Bonzi and 5–10 ppm (2.5–5 ppm in low light) for Sumagic. In general, multiple spray applicationsat lower use rates will give the best results. Fewer repeat applications may be needed since these products appear to have a longer lasting growth regulator effect than B-Nine. These products may be especially useful to trial in summer when high temperatures diminish the effectiveness of B-Nine. Drench applications of Bonzi at 2 ppm can be used to hold plants at the desired height prior to shipping. In general, uniform application is important with all plant growth regulation treatments.

Florel™ plant growth regulator and Etheryl is NOT recommended for use on Yoder pot mums. Florel plant growth regulator and Etheryl can reduce growth, delay flowering, and reduce flowering uniformity, particularly during the winter months.

Culture **POT MUMS**

Pest Control

Several insects and related pests may be attracted to pot mum crops. Maintaining a clean, weed-free greenhouse is important to help minimize insect populations and eliminate hiding places. Early detection is an important factor in reducing the severity of an infestation. At times, chemical spray applications are necessary to eradicate insect populations. Some common pests for pot mums are aphids, fungus gnats, leafminers, spider mites, thrips, and whiteflies. More specific information for leafminer and thrips is listed below. It is important to use a rotation program for the insecticides to help avoid resistance. In general, wettable powder formulations are less phytotoxic than emulsifiable concentrates; however, they may leave a residue on the plants. For additional information on products for insect management, refer to the mum pest control tip sheet at www.syngentafhg.com.

Leafminer pressure can vary from year to year and if not recognized in time, this pest can cause serious damage on mums. It is important to inspect plants upon arrival and note any active mines. Monitor the growing areas with yellow sticky cards so you can check for adult activity. Good scouting and proper use of effective controls is the best way to protect crops that are prone to leafminer. A preventive approach is best, as once leafminer gain a foothold in the crop, it is often difficult to get them under control. This is due to the unsynchronized timing of the different life stages and the difficulty of getting good spray coverage once the crop has gained some size. Leafminer control is best achieved when products are applied in block rotations targeting the lifecycle of the pest, then rotating to another product with a different mode of action. This approach provides good control and helps minimize the chance of resistance. Systemic insecticides like Flagship® and Mainspring® GNL can be applied as either a foliar spray or as a drench application if extended protection for four to six weeks is needed. Drench applications should be applied once the crop has rooted in well in order to maximize uptake. A block rotation of Avid® 0.15 EC, Citation®, Mainspring and/or Flagship insecticides, with Conserve® SC

insecticide saved till the end of the crop if needed for Thrips control, should provide good control throughout the crop cycle. Products containing Azadiractin can be applied at the end of the week (or four to five days after a treatment of Avid, Citation or Conserve insecticides) if pressure is high and/or during the third week prior to rotating to the next product.

Thrips can be a problem in mum crops, particularly when the plants are beginning to bloom. It is important to inspect plants upon arrival and monitor the growing areas with blue or yellow sticky cards to assess and track populations. Good scouting and proper use of effective controls before high populations develop are the best way to protect crops. Below are two chemical control strategies based on the Thrips pressure in the greenhouse.

Thrips Rotation for Low-Moderate Populations

- 1. Avid insecticide (one to two applications)
- Mainspring insecticide (two applications on a 14-day interval)

Overture® insecticide (14-day application restriction-two applications/crop)—Need to make two applications of another MOA group before rotating back—limit to two applications/crop

- 3. Mainspring (two applications on a 14-day interval if needed)
- 4. Avid insecticide + Azadiractin

Thrips Rotation for Moderate-High Populations

- Pylon® insecticide (GH use only) (one to two applications/ crop—limited to three applications/crop) or Mesurol® pesticide (one application)
- 2. Orthene® insecticide + Pyrethroid
- Conserve insecticide (one to two applications—rotate off for four weeks before reapplying—six applications/season)
- 4. Avid insecticide + Azadiractin (one application)
 - **Check labels for plant use safety and use limits

There are also some key some key biological control products to help control Thrips in the greenhouse. They include:

- Amblyseius swirskii–Swirkskiline™ as
- Amblyseius cucumeris–Amblyline™ cu
- Orius insidiosus-Oriline™ I
- Steinernema feltiae–Exhibitline™ sf

In addition, Thripline can be a helpful tool for monitoring and control of western flower thrips (WFT). Designed to improve early detection in flowering crops,

Thripline utilizes a phermone which excites WFT, bringing them out of the flowers and plant canopy where they hide. This helps enhance detection on sticky cards and through scouting and improves their exposure to management treatments.

Disease Control

The most severe diseases of pot mums, such as verticillium wilt, fusarium wilt and chrysanthemum stunt, are controlled through culture-indexing programs conducted by large, specialized commercial propagators, such as Syngenta Flowers. Clean, vigorous, disease-free cuttings should be planted into pasteurized, well-drained rooting media. Proper environmental control of ventilation, heating, watering, etc., should control or minimize the occurrence of other pathogens, which may infect pot mums. Disease prevention is more desirable than suppression. When conditions are favorable, however, some disease organisms may attack pot mums.

Some common diseases which can infect pot mums are *Pythium*, *Rhizoctonia*, powdery mildew and *Botrytis*. For additional information on products for insect management, refer to the mum disease control tip sheet at www. syngentafhg.com.

NOTE: These suggestions are only guidelines and may have to be altered to meet individual growers needs.



General Culture

Rooting media, fertility regimens, photoperiodic response, light levels and temperatures are comparable to the requirements of pot mums.

Containers

With compact and spreading growth habits, fleurettes are ideal to grow and market in multiple container sizes. Reference the lighting guidelines table for some recommended sizes.

Pinching

Pinching is optional for fleurettes grown in 0.09–1.0 qt containers. When grown in larger containers, such as bulb pans, a pinch is necessary to help increase branching and spread. Pinching is normally done 10–14 days after sticking, once a healthy root system and adequate plant growth are evident.

Long Days

Fleurettes are best grown in shorter or smaller containers which require fewer long days. Use the lighting guidelines table for recommended long-day schedules.

GROWTH REGULATORS

B-Nine® plant growth regulator reduces the height of fleurettes. Small 0.09 qt pots may require weekly applications of B-Nine plant growth regulator for best finished results, while 5" pans may receive one or two applications. A general recommended B-Nine plant growth regulator rate is 2,500 ppm. The ideal finish height for 1.68 pt pans is 8–9", measured from the bottom of the pot to the top of the flowers. Plants may be taller or shorter depending on the season. Bonzi® and Sumagic® plant growth regulators can also be trialed as directed for pot mums.

Pest Control

Aphids, leafminer, whiteflies, thrips and occasional spider mites are the key insect pests for fleurettes. Avid and Mainspring insecticides applied early in production will limit populations of these pests from building in the crop. For additional information on products for insect management, refer to the mum pest control tip sheet at www.syngentaflowersinc.com.

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- Amblyseius cucumeri s Amblyline™ cu
- Orius insidiosus Oriline™ I
- Steinernema feltiae Exhibitline™ sf

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Disease Control

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Postharvest

Fleurettes have demonstrated excellent longevity traits in controlled keeping quality trials. Fleurettes commonly last between five and six weeks from harvest at Stage 3 of development under approximately 70 foot candles of light daily for 12 hours with 50–60% relative humidity.

Recommended Uses

All fleurettes are adapted to use in many small container programs. Small individual pots ranging from 0.09–1.0 qt and shallow pans from 1.68 pt–3.0 qt have been grown. Color combinations can also be made in multicutting pots.

Scheduling

Use the lighting guidelines chart for long days prior to going into short days for flowering.

For the most popular containers, half to all of the propagation time will occur under short days, unlike most pot mum programs.

Lighting Guidelines

CONTAINER	NUMBER OF LONG DAYS	TARGET HEIGHT
2–2.5"	0-7*	5–6"
3–3.5"	0–7*	6–7"
5" pan	7–14*	7–8"
6" pan	7–21*	8–9"
8" pan	10-24*	10 –11"

^{*} Using unrooted cuttings.

NOTE: These suggestions are only guidelines and may have to be altered to meet individual growers needs.

Agents and Distributors

AGENTS

Ball Horticultural Company 622 Town Road West Chicago, IL 60185 800-879-2255 800-234-0370 fax www.ballhort.com customerservice@ballhort.com

Express Seed Company 51051 US Highway 20 Oberlin, OH 44074 800-221-3838 440-774-2728 fax www.expressseed.com

Fred C. Gloeckner & Company, Inc. 600 Mamaroneck Avenue Harrison, NY 10528 800-345-3787 914-698-0848 fax www.fredgloeckner.com info@fredgloeckner.com

Griffin 4951 Indiana Ave., Suite 100 Lisle, IL 60532 800-323-7253 630-969-6373 fax www.griffins.com

Vaughan's Horticulture 40 Shuman Boulebard, #175 Naperville, IL 60563 855-864-3300 855-864-5790 fax www.vaughans.com

DISTRIBUTORS

BFG Plant Connection P.O. Box 479 14500 Kinsman Road Burton, OH 44021 800-883-0234 440-834-1885 fax www.bfgsupply.com web@bfgsupply.com

Bill Moore & Company, Inc. P.O. Box 1587 Brandon, FL 33509 800-237-7794 813-684-5856 fax www.billmooreco.com jillian@billmooreco.com

Bob Soos Company, LLC P.O. Box 9 Middleville, MI 49333 269-795-7890 269-795-7891 fax sales@bobsoosco.com

Eason Horticultural Resources, Inc. 939 Helen Ruth Drive Fort Wright, KY 41017 800-214-2221 859-578-2266 fax www.ehrnet.com info@ehrnet.com

Florasource, Ltd.
P.O. Box 758
San Clemente, CA 92674
949-498-1131
949-498-1196 fax
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mail@florasourceltd.com

Germania Seed Company P.O. Box 31787 5978 North Northwest Highway Chicago, IL 60631 800-380-4721 800-410-4721 fax www.germaniaseed.com mail@germaniaseed.com

Griffin Greenhouse & Nursery Supplies (Plant Department) P.O. Box 709 200 Mountain View Road Morgantown, PA 19543 610-286-0046 610-286-0012 fax www.griffins.com info1@griffinmail.com

Grimes Seeds & Plants 11335 Concord-Hambden Road Concord, OH 44077 800-241-7333 440-352-0038 fax www.grimes-hort.com sales@grimes-hort.com

Heny F. Michell Company P.O. Box 60160 225 West Church Road King of Prussia, PA 19406 800-422-4678 610-265-4208 fax www.michells.com info@michells.com

Ivy Garth Seed & Plants, Inc. 8140 Mayfield Road Chesterland, OH 44026 800-351-4025 440-729-7692 fax www.ivygarth.com sales@ivygarth.com Joseph Giannino Company 17 North Road East Kingston, NH 03827 888-948-2001 603-642-9230 fax www.josephgiannino.com jgiannino@comcast.net

JVK P.O. Box 910 1894 Seventh Street St. Catharines, ON L2R 6Z4 800-665-1642 888-733-3585 fax www.jvk.net info@ivk.net

McHutchison, Inc. 64 Mountain View Boulevard Wayne, NJ 07470 800-943-2230 866-234-8884 fax www.mchutchison.com info@mchutchison.com

Mid Atlantic Plant Company P.O. Box 7331 Newark, DE 19714 800-366-0350 302-368-1599 fax www.midatlanticplant.com midatlantic.plants@verizon.net

Norseco, Inc. 2914 Cure-Labelle Boulevard Laval, QC H7P 5R9 800-561-9693 800-567-4694 fax orders@norseco.com

Park Wholesale 1 Parkton Ave. Greenwood, SC 29647 800-845-3366 800-209-0360 fax www.parkwholesale.com info@parkseedwholesale.com Ron Iwasaki Horticultural Sales 25500 Melott Road Hillsboro, OR 97123 503-628-1969 503-628-1122 fax rtiwasaki@juno.com

The Raymond Perri Company, Inc. 8 Winding Trails Road Pine Bush, NY 12566 845-744-6801 845-744-8473 fax rpco@frontiernet.net

Vis Seed Company P.O. Box 661953 153 La Porte Street Arcadia, CA 91006 626-445-1233 626-445-3779 fax www.visseed.com hvis@visseed.com

WeHoP (Western Horticultural Products, Inc.) P.O. Box 1109 227 West Patison Port Hudlock, WA 98339 800-669-6480 360-344-3555 fax www.wehop.com info@wehop.com

W. H. Milikowski, Inc. 10 Middle River Drive Stafford Springs, CT 06076 800-243-7170 860-684-3022 fax plants@whmilikowski.com

Ordering Information

Garden Mums, Asters and Montauk Daisies Program Dates: Weeks 1–37, 2017

Spring-Season Varieties* Seasonality: Weeks 1 – 13, 2017 Natural-Season Varieties** Seasonality: Weeks 14 – 37, 2017

Royalty is included in the price of the cutting.

Pot Mums and Fleurettes Program Dates: Weeks 1 – 52, 2017

Royalty is included in the price of the cutting.

Garden Mums, Asters and Montauk Daisies: Tags will be available for \$0.028 per tag, this price includes tag freight. Ratios and no tags may be selected but choice must apply to the entire order.

Tag only orders will not be accepted. Tags available on garden mums, asters and Montauk Daisies only. Tags on these items will be automatically shipped unless otherwise specified. There is a 50% restocking fee on returned tags.

Unrooted Shipping: The freight charge is per cutting, based on the shipment size.

Production Location: Cuttings will come from Alva, Florida.

Propagation: License for propagation is required, please contact Royalty Administration International for details.

Billing: Cuttings will be billed at the time of shipping and will include separate line item charges for the cost of the tag and freight.

Cancellations: No cancellations or order reductions will be accepted within 30 days of shipping for unrooted cuttings.

- * Spring-season varieties can be found on the Spring Selections table on page 32
- ** All Yoder garden mums are considered natural-season varieties.

Order minimums

Unrooted Cuttings

Unrooted Cuttings
Order Minimum: 2,000
Variety Minimum: 100
Variety Multiples: 100
Pack per box: 2,000
(4% over pack)

Garden mum availability

Unrooted Cuttings: Available Weeks 1-37

Aster availability

Unrooted Cuttings: Available Weeks 14-37

Montauk Daisy availability

Unrooted Cuttings: Available Weeks 14-37

Pot mum & fleurettes availability

Unrooted Cuttings: Available Weeks 1-52

PROPAGATION INFORMATION

Yoder mum varieties are protected by U.S. and Canadian Plant Patents, Utility Patents, and/or the varieties are listed in the Syngenta Flowers "Flowering Only License." To order tags for propagation, contact MasterTag at 800-253-0439. Unlicensed propagation of these varieties is strictly prohibited and monitored by:

Royalty Administration International

10175 Six Mile Cypress Parkway, Suite 3 Ft. Meyers, FL 33912 800-472-4724

COPF

975 McKeown Avenue 5A-218, North Bay ON P1B 9P2, Canada 800-265-1629



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