

Growing Snapdragons for Cut Flower Production

Hensley's SEED CO. DENVER · COLORADO

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WELCOME

Chat questions will be collected for Q&A throughout the presentation.

Please submit questions before we begin the Q&A. Once Q&A begins, we may not see new questions.

All audience chat messages are private.

the original research farm

Trial site in USDA zone 5b

- **200 Acres Managed**
- **11 Farm Sites**
- **80+ Acres Consisting of:**
  - **Trial Crops**
  - **Breeding & Seed Production**
  - **Cover Crops**



the original research farm

Trial site in USDA zone 5b

3,225 Varieties planted and evaluated at our farm

30 miles Bed feet sown for our trials

175+ New varieties selected for the 2026 season

Note: Additional trialing occurs on partner farms across the country. The varieties planted and miles of bed feet listed above only represent the portion of trialing conducted on our home farm.





PRESENTED BY THE HENSLEY’S TEAM

From Cottage Garden Favorite to Cut Flower Staple

- Native to the Mediterranean region and North Africa
- A favorite garden crop for centuries.
- Breeding work starting in the 1950’s led to the development of modern varieties for cut flower production.
- Ongoing breeding work continues to provide high-quality varieties for cut flower growers.



Dependable & Diverse

- Functions as a line or spike flower
- Diverse flower forms and wide range of colors
- Opportunities for season extension
- Active breeding – so many new varieties! So many colors!



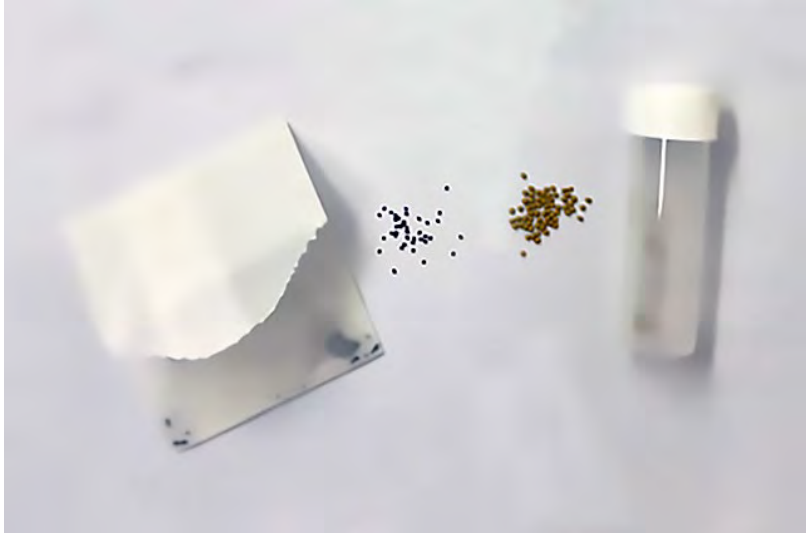
Growing Environment

- A cool-season flower – prefers moderate to cool growing conditions
- Grown as an annual but can be winter-hardy in mild climates
- Can be grown in open field and protected culture
- Can tolerate light frosts



Seed Starting

- Tiny seed! Pelleted options available for some varieties.
- Hand-seeders may be helpful with small seeds







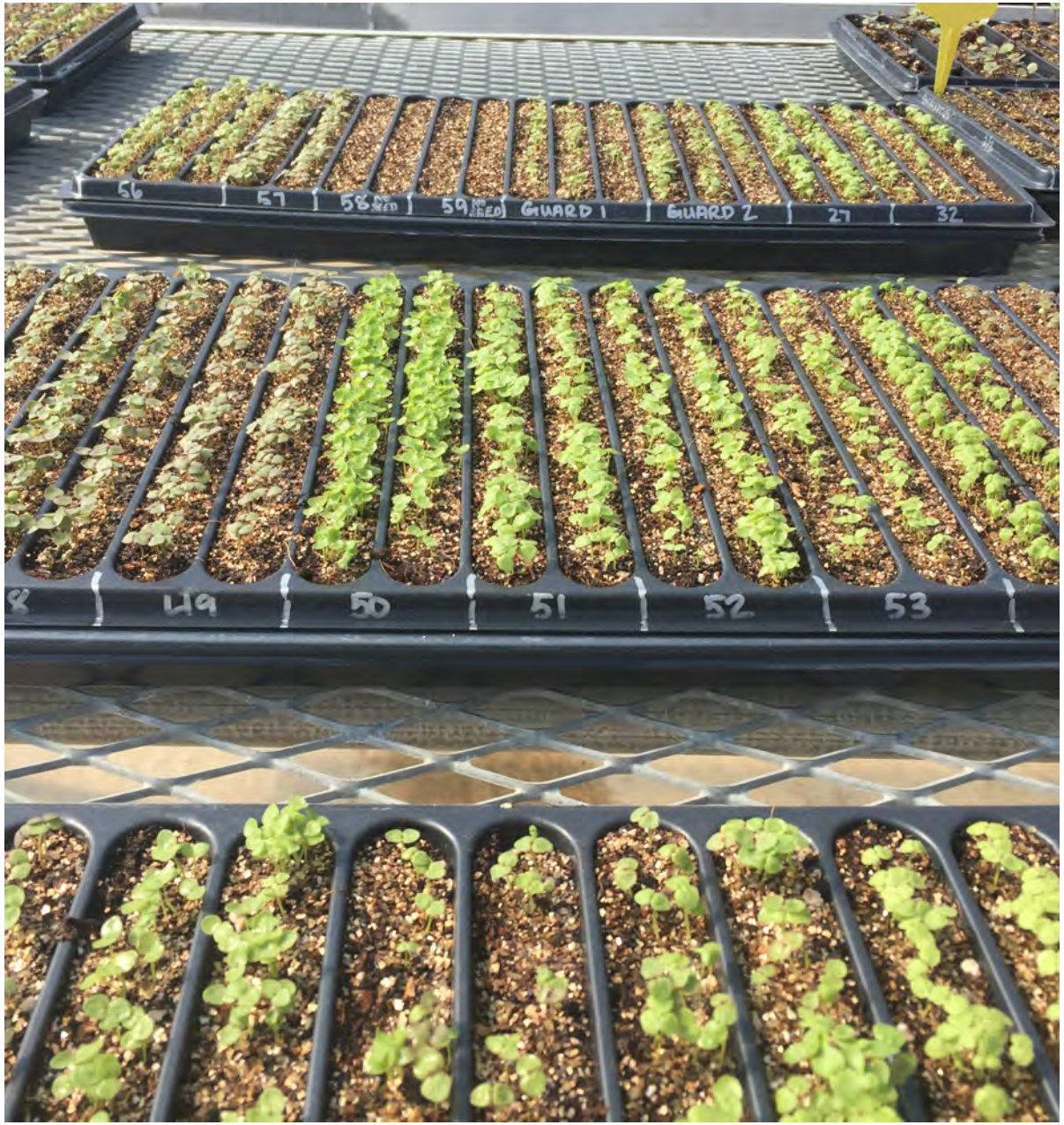
Seed Starting

DAYS TO GERMINATION: 7-14 days at 70-75°F (21-24°C)

SOW: 8-10 weeks before planting out

- Tiny seeds – cover lightly with vermiculite
- Mist lightly when watering to avoid dislodging seed
- We sow into 128s but have also sown into 20-row flats and bumped up.




56
57
58
59
GUARD 1
GUARD 2
27
32
48
49
50
51
52
53

Seedlings

- After seedlings have 3-5 sets of true leaves, grow on at 50°-55° F at night and 60° F during the day.
- Seedlings can be sensitive to high salts and ammonium levels.
- Plant when seedlings are well-developed but not root-bound
- Harden off before transplanting






SNAP 5/ JL
SNAP 6/ JL
SNAP 7/ JL

Planting

- Grow best in cool weather and can tolerate a light frost.
- We use white on black plastic mulch to keep root zone cooler and reduce weed pressure.
- Drip irrigation recommended.
- Spacing can vary but typically plant 4–6” between plants and 6–12” between rows
- Provide trellis support at transplanting
  - Important to keep plants growing vertically







Pinching

Branching production

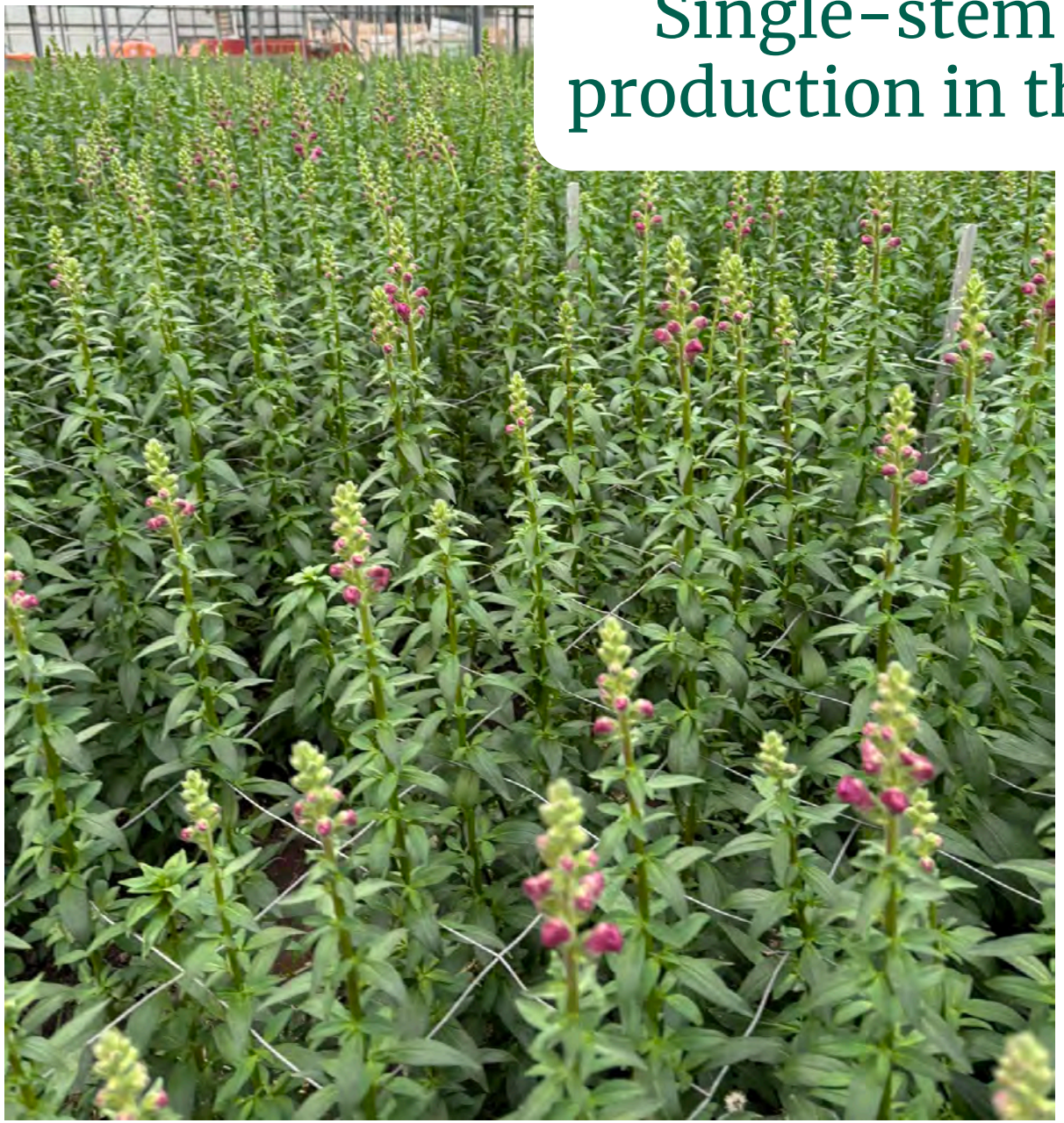
- We pinch when seedlings are 3–4” tall and have 3–4 sets of true leaves
- Will yield multiple stems per plant
- Delays flowering by a couple of weeks
- Requires slightly wider spacing: 6–12”

Single Stem Production

- No pinching
- Yields one stem per plant
- Tighter spacing: 4” x 4”



Single-stem snapdragon production in the Netherlands





Harvesting

- Harvest when the lower ⅓ to ½ of the flower spike is open
- Typically, when 5-7 florets are open
- For optimum storage, place in buckets of clean water in a cooler at 32–40° F
- Important to keep stems vertical after harvesting to prevent curving of stems
- Once curved, stems will remain curved









Variety Selection

Color, Flower Forms, and Groups



Single-Flowering



Double-Flowering



Traditional

Single-Flowering

- Also called “open-faced” or “peloric”
- Have a single flower that opens to reveal the center of the bloom
- Series: Chantilly 1-2



Double-Flowering

- Also called “Azalea”
- Have multiple layers of petals giving a full, ruffly look to the blooms
- Series:
  - Madame Butterfly (3-4) *1970 All-America Selections Winner*
- New series in Groups 1-2
  - Legend Double 1
  - Frappe Double 2
  - Snapstar 2



Traditional

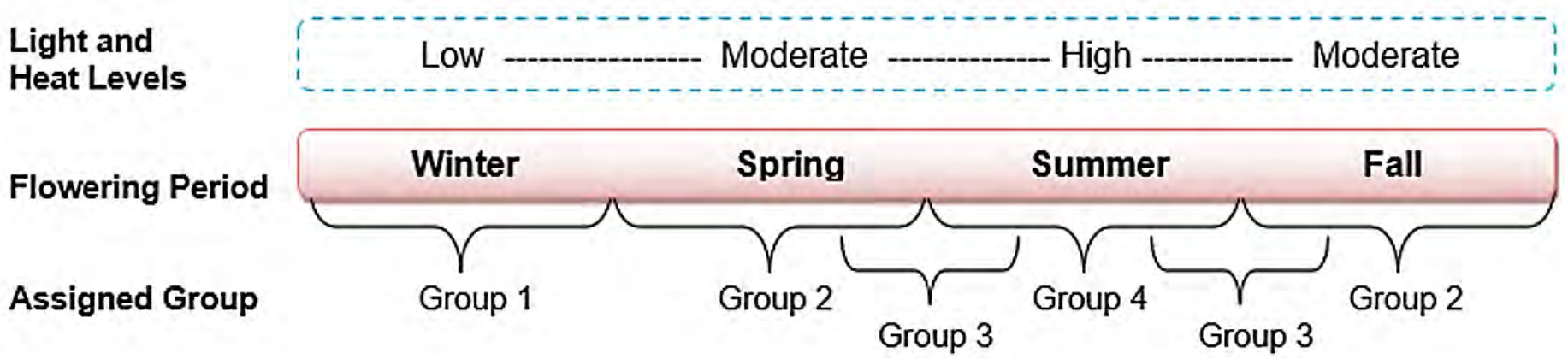
- The most common or classic snapdragon
- This petal shape is the source of the name “snapdragon”. When the florets are pinched from the side, it gives the appearance of a dragon’s mouth snapping open.
- Offers the most diversity in color and options for season extension.
- Series:
  - Many!
  - Groups 1-4 with a range of colors in all groups.



Snapdragon Groups

- Snapdragons are highly responsive to daylength and temperature.
- Modern varieties have been bred for optimal performance under specific growing conditions and seasons.
- Plant breeders assign group numbers to varieties to indicate the best seasonal slotting for optimal variety performance.
- Seasonal Slotting
  - Choosing the right group/variety for the season and climate in which you are growing.





Snapdragon Groups

- The lower the group number, the more suited the variety is for growing under cooler, lower-light conditions.
- The higher the group number, the better suited the variety is for growing under higher light, longer days and warmer temperatures.
- Group number is more an indication of speed to flower than an indicator of cold hardiness or heat tolerance.

Cool Season Groups 1, 1–2, 2

Bred for optimal performance under short days, low light and cool temperatures.

- **Flower faster** than groups 3-4 under these conditions.
- **Reduces production time** in shoulder seasons while still providing high quality blooms and stems.
- **If grown under high light/warm temps** will flower even faster but will result in thin, short stems and poorly formed flower spikes.
- **Popular Series:**
  - Antibes 1, Cool 1-2, Maryland 2, Avignon 2



Moderate/Warm Season Groups 2–3, 3

Bred for optimal performance under medium to long days, moderate light levels and warm temperatures.

- **Group 3s** are some of the most flexible for seasonal slotting.
  - Faster to flower than Groups 3–4, 4
  - Still produce quality blooms under higher light, warmer temps
- **Popular Series:**
  - Cannes 2-3
  - Monaco 3



Warm Season Groups 3–4, 4, 4–5

Bred for optimal performance under long days, high light levels and warm temperatures.

- **Slow rate of growth** compared to lower groups.
  - Results in tall, sturdy stems and well-formed flowers under high light, long days.
- Often **too slow to bloom** for shoulder season and winter production.
- **Popular Series:**
  - Potomac 3–4, Opus 3–4, Orleans 3–4, Toulon 4–5



Want to try a new variety and not sure where to start?

CONSIDER:

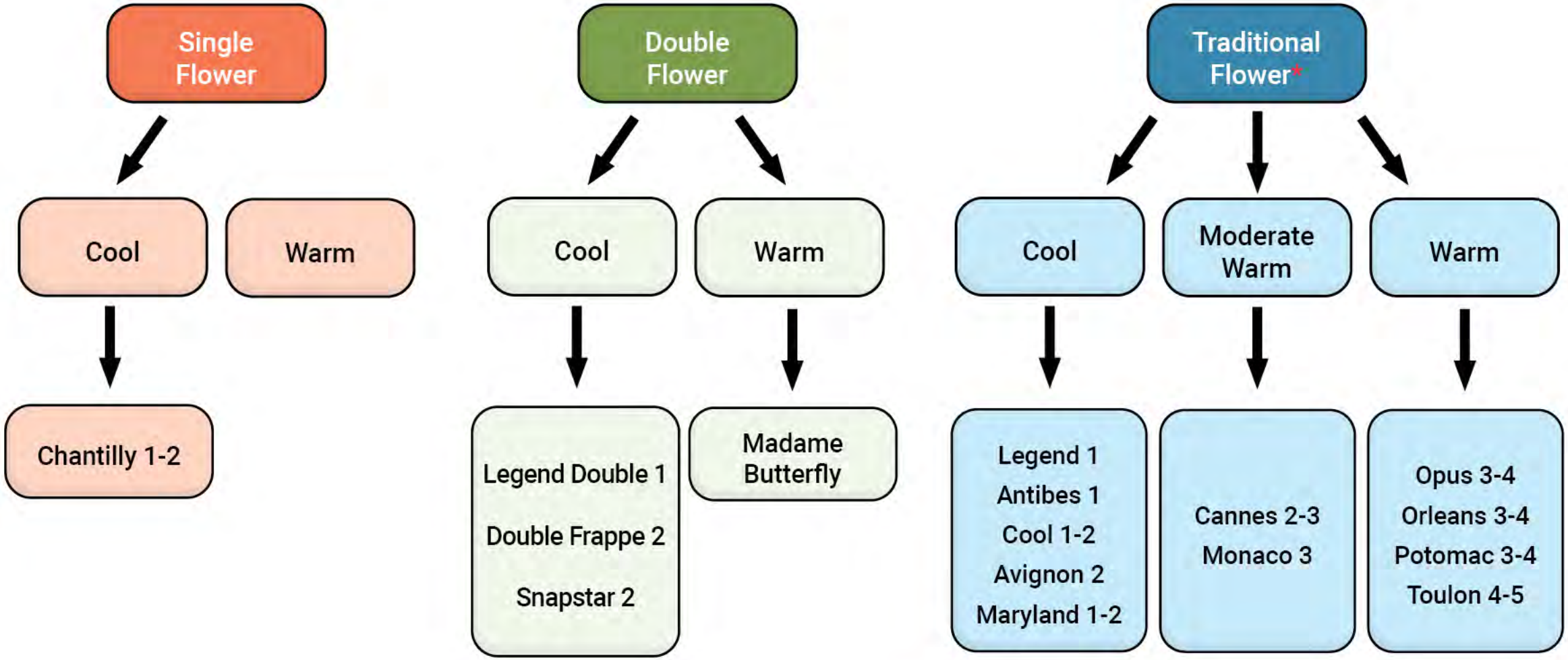
Flower Form
What does your target market want most?

Season
what does your environment provide?

Backups
What if your favorite variety is out of stock?



Snapdragon Decision Tree



*Not a comprehensive list. Series listed here represent some but not all of the series available in the traditional or classic flower form.

Color: are there any rules?



Notes on Color

- Color naming conventions are not always consistent across series.
- There is variation within series
  - Royals/Magentas – tend to be taller and more vigorous regardless of series
- Some colors can shift depending on time of year they are grown
  - Avignon Apricot 2
  - Antibes Apricot 1
  - Spring Tunnel vs Fall Tunnel



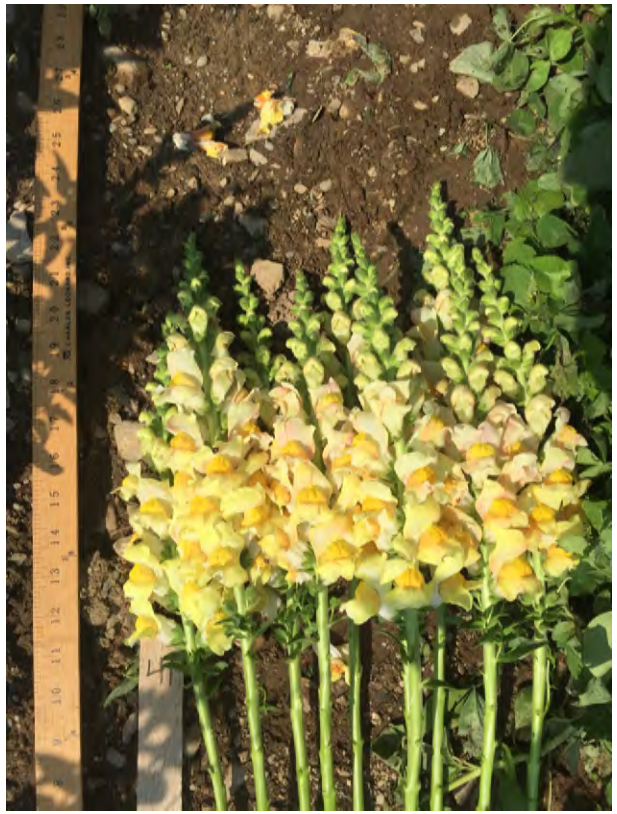
Avignon Apricot 2



May
Overwinter Tunnel



June
Tunnel



July
Field



October
Tunnel



Snapdragon Seasonal

Slotting at the original source

Snapdragon Trials

Tunnel

- Unheated
- Allows for spring and fall season extension
- Best environment for Groups 1, 1-2, 2
- Protected environment allows for longer stem lengths compared to field plantings.
- Limitations: space, heats up quickly in spring



Snapdragon Trials

Field

- SPACE – for all the colors and all the varieties
- Provides best conditions (heat, light) for Groups 3-4
- Limitations:
  - Cold ground/bed prep in spring
  - Heat in late spring/summer



2025 Snapdragon Trials

Crop	Trial Location	Estimated Weeks in Trays	Target Seeding Week	Target Transplant Week	Harvest
Snapdragon, Spring Tunnel	Tunnel, Spring	7	3	10	June, early
Snapdragon, April	Field	7	8	15	June, mid-late
Snapdragon, May	Field	7	12	19	July
Snapdragon, August	Field	6	24	30	September
Snapdragon, Fall, Early	Tunnel, Fall	6	25	31	September, mid
Snapdragon, Fall, Mid	Tunnel, Fall	6	27	33	October
Snapdragon, Fall, Late	Tunnel, Fall	6	28	34	Oct-Nov
Snapdragon, Overwinter	Tunnel, Overwinter	7	34	41	May

Season Extension: More things to think about

- Seedling time and Days to Maturity can vary by seasonal slot.
- Light and temperature drive plant growth
  - Records are really helpful

Seedlings grow faster in summer

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Snapdragon, May	Field	7	12	19	July
Snapdragon, August	Field	6	24	30	September
Snapdragon, Fall, Early	Tunnel, Fall	6	25	31	September, mid
Snapdragon, Fall, Mid	Tunnel, Fall	6	27	33	October
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Spring Tunnel March Planting

Bloom: Early June

Conditions:

- Temps – start cool, end warm
- Light – rapidly increasing

Best For: Groups 1, 1-2, 2

Succession Planting Options:

- 1 – will flower faster in the tunnel, may see some thin stems
- 2 – flower slightly later



Field
April Planting

Bloom: Mid-Late June

Conditions:

- Temps – start cold, end warm
- Light – rapidly increasing

Best For: Groups 2, 2-3, 3

Growing Notes

- Still having frost/freezes
- Use row cover for frost protection (AG-19)
- Important to harden off well before transplant.
- Potential for excellent quality.



Field
May Planting

Bloom: July

Conditions:

- Temps – warm to hot
- Light – peak light

Best For: Groups 3-4, 4

Succession Planting Tips:

- Plant Groups 2-3, 3 alongside Groups 3-4, and 4 for staggered harvest.

Growing Notes

- Hot weather in early summer can compress flowering time across groups.



Field
July/August Planting

Not a reliable planting slot for us

Conditions:

- Temps – Hot to hotter
- Light – high to moderate

Growing Notes

- The goal was to have mid-September harvests
- High heat and pest pressure affected flower quality and performance
- Some years it works, some years it does not.
- Not worth it for us



Fall Tunnel August Planting

Bloom: Sept-Nov

Conditions:

- Temps – hot to cold
- Light – rapidly decreasing

Best for:

- Groups 1-3 for early plantings
- Groups 1, 1-2, 2 for later plantings

Growing Notes

- The later you go in the season, the more variety selection matters.
- Every variety has its limits



Overwinter October planting

Fall-planted for early spring flowering

Conditions:

- Temps: cool → freezing → moderate → hot
- Light: rapidly decreasing then increasing

Best For: Groups 1-4

Succession Tips:

- Plant from several groups for a staggered harvest in the spring

Growing Notes

- Survive winters for us if well-rooted in fall and protected with row cover (AG-70).
- Vigorous and productive plants in spring.



Series and Seasons: What works for us

Tunnel, Spring

COOL

- **Single**
  Chantilly 1-2
- **Double**
  Legend Double 1
  Double Frappe 2
  Snapstar 2
- **Traditional**
  Antibes 1
  Cool 1-2
  Avignon 2
  Maryland 1-2

Field, April

MODERATE

- **Single**
  Chantilly 1-2
- **Double**
  Legend Double 1
  Double Frappe 2
  Snapstar 2
  Madame Butterfly
- **Traditional**
  Avignon 2
  Maryland 1-2
  Cannes 2-3
  Monaco 3
  Orleans 3-4
  Opus 3-4
  Potomac 3-4
  Toulon 4-5

Field, May

WARM

- **Single**
- **Double**
  Madame Butterfly
- **Traditional**
  Cannes 2-3
  Monaco 3
  Opus 3-4
  Orleans 3-4
  Potomac 3-4
  Toulon 4-5

Field, Summer

Hot

- **Unreliable Slot for us.**
- Groups 3-5 would be the best options here.

Tunnel, Fall

HOT to COLD

- **Single**
  Chantilly 1-2
- **Double**
  Legend Double 1
  Double Frappe 2
  Snapstar 2
  Madame Butterfly
- **Traditional**
  Cool 1-2
  Avignon 2
  Maryland 1-2
  Cannes 2-3
  Monaco 3

Overwinter

COLD to HOT

- **Single**
  Chantilly1-2
- **Double**
  Legend Double 1
  Double Frappe 2
  Snapstar 2
  Madame Butterfly
- **Traditional**
  Avignon 2
  Maryland 1-2
  Cannes 2-3
  Monaco 3
  Opus 3-4
  Orleans 3-4
  Potomac 3-4

Series listed here represent some but not all of the series available for cut flower production. Series listed here represent ones that we have trialed and grown successfully in each seasonal slot. Other options may be available.

Spring Tunnel

Series to Consider

COOL

- **Single**
  Chantilly 1-2

- **Double**
  Legend Double 1
  Double Frappe 2
  Snapstar 2

- **Classic**
  Antibes 1
  Cool 1-2
  Avignon 2
  Maryland 1-2



Field – April Planting

Series to Consider

MODERATE/WARM

- **Single**
  Chantilly 1-2

- **Double**
  Legend Double 1
  Double Frappe 2
  Snapstar 2
  Madame Butterfly

- **Traditional/Classic**
  Maryland 1-2
  Avignon 2
  Cannes 2-3
  Monaco 3
  Orleans 3-4
  Opus 3-4
  Potomac 3-4
  Toulon 4-5



Field – May Planting

Series to Consider

WARM

- **Single**
- **Double**
  Madame Butterfly
- **Traditional/Classic**
  Cannes 2-3
  Monaco 3
  Opus 3-4
  Orleans 3-4
  Potomac 3-4
  Toulon 4-5



Fall Tunnel

Series to Consider

Season: HOT to COLD

- **Single**
  Chantilly 1-2

- **Double**
  Legend Double 1
  Double Frappe 2
  Snapstar 2
  Madame Butterfly 3-4 } Best in early plantings.

- **Classic**
  Cool 1-2
  Avignon 2
  Maryland 1-2
  Cannes 2-3 } Best in early plantings.
  Monaco 3



Overwinter

Series to Consider

Season: all of them

- **Single**
  Chantilly 1-2

- **Double**
  Legend Double 1
  Double Frappe 2
  Snapstar 2
  Madame Butterfly 3-4

- **Traditional/Classic**
  Maryland 1-2
  Avignon 2
  Cannes 2-3
  Monaco 3
  Opus 3-4
  Orleans 3-4
  Potomac 3-4

Plant from multiple groups for a staggered spring harvest



Series and Seasons: What works for us

Tunnel, Spring

COOL

- **Single**
  Chantilly 1-2
- **Double**
  Legend Double 1
  Double Frappe 2
  Snapstar 2
- **Traditional**
  Antibes 1
  Cool 1-2
  Avignon 2
  Maryland 1-2

Field, April

MODERATE

- **Single**
  Chantilly 1-2
- **Double**
  Legend Double 1
  Double Frappe 2
  Snapstar 2
  Madame Butterfly
- **Traditional**
  Avignon 2
  Maryland 1-2
  Cannes 2-3
  Monaco 3
  Orleans 3-4
  Opus 3-4
  Potomac 3-4
  Toulon 4-5

Field, May

WARM

- **Single**
- **Double**
  Madame Butterfly
- **Traditional**
  Cannes 2-3
  Monaco 3
  Opus 3-4
  Orleans 3-4
  Potomac 3-4
  Toulon 4-5

Field, Summer

Hot

- **Unreliable Slot for us.**
- Groups 3-5 would be the best options here.

Tunnel, Fall

HOT to COLD

- **Single**
  Chantilly 1-2
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Overwinter

COLD to HOT

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Q&A



RESOURCES

Original-source Snapdragon Varieties

Snapdragon Groups Explained

Snapdragons - Key Growing Information

Snapdragon Production Tech Sheet

Introduction to Overwintering Flowers

Growing resources

Book: Floral Standards - Seattle Wholesale Growers Market

Book: Specialty Cut Flowers - Allan Armitage and Judy Laushman

Book: Postharvest Handling of Cut Flowers and Greens

Dr. John Dole - NCSU Cut Flowers

Dr. Melanie Stock, Utah State University Cut Flowers

ASCFG – Association of Specialty Cut Flower Growers



Thank You

We hope you enjoyed our presentation

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