

## Snapdragon Maryland F<sub>1</sub> Series

(*Antirrhinum majus*)

Cut Flowers Culture (revised 11/04/19)

(Group 1,2)

**Stem Length:** 39 to 60 in./99 to 152 cm

**Planting density:** 6 to 10 plants/ft.<sup>2</sup> (64 to 106 plants/m<sup>2</sup>); high-density planting under high-light or field situation

**Best for:** Greenhouse, high tunnel

**Plug crop time:** 4 to 5 weeks

**Transplant to finish:** 8 to 10 weeks; less than optimal crop season may affect finishing time for a duration of up to 18 weeks; refer to the PanAmerican Seed Product Information Guide at panamseed.com for details

- Energy-efficient series is your best choice for cool-season, low-light and low-temperature conditions.
- Group with other Group 1,2 varieties (Cool, Purple Twist and Red Delilah) for Autumn, Winter and Spring programs.
- Well-defined flower spikes are produced on sturdy, clean stems.

### General Information

Exposure	Bloom Season	Height	Spread	Spacing
Sun	Early Spring, Spring, Late Spring, Summer, Late Summer, Autumn, Winter	39-60 in. (99-152 cm)	-	-

### Germination

Seed Form	Recommended Plug Size	Seeds/Cell	Plug Crop Weeks	Days to Germinate	Initial Media pH/EC	Cover Seed
RAW	406	1	4-5	4-5	5.5-6.0 pH 0.75 mmhos/cm	Light cover

### Plug Production

	Stage 1	Stage 2	Stage 3	Stage 4
<b>Moisture</b>	Level 4	Level 3-4	Level 3-4	Level 3
<b>Temperature</b>	65-70°F (18-21°C)	60-65°F (16-18°C)	60-65°F (16-18°C)	60°F (16°C)
<b>Light</b>		1,000-2,500 f.c. (10,800-26,900 Lux)	1,000-2,500 f.c. (10,800-26,900 Lux)	2,500-5,000 f.c. (26,900-53,800 Lux)
<b>Fertilizer</b>		Less than 100 ppm N - Less than 0.7 EC	100 to 175 ppm N - 0.7 to 1.2 EC	100 to 175 ppm N - 0.7 to 1.2 EC

### Fertilizer Notation

Snapdragons are very sensitive to high salts and high ammonium levels.

### Propagation Key Tips

Avoid high media pH (>6.5), as this can cause iron and boron deficiency. Tip abortion of the seedlings can be caused by boron deficiency, high EC and excessive moisture accumulation on the growing tip, followed by poor air circulation. Incorporate a preventative fungicide program for Downy Mildew control.

### Growing on to Finish

Growing on Temperature	Target Media pH/EC	Fertilizer	Daylength
<b>Before flower development:</b> (day) 55-70°F (13-21°C) (night) 45-55°F (7-13°C)	5.8-6.2 pH 1.5-2.0 mmhos/cm	175 to 225 ppm N - 1.2 to 1.5 EC	-

## Crop Scheduling

Crop Type	Season	Density	Crop Time
-	Autumn	6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	8-18 weeks
-	Spring	6-10 plants/ft <sup>2</sup> (65-108 plants/m <sup>2</sup> )	8-18 weeks

### Fertilizer Notation

Phosphorus and calcium are usually incorporated into the growing medium prior to planting, and the other nutrients are supplied with a soluble fertilizer during growth. Super phosphate incorporated at 5 pounds/100 ft.<sup>2</sup> (2 grams/m<sup>2</sup>) should supply sufficient phosphorus. If soil tests show calcium is low, incorporate limestone (if the pH is low), or gypsum (if pH is acceptable), both at 5 pounds/100 ft.<sup>2</sup> (250 grams/m<sup>2</sup>).

Irrigate with clear water after transplanting. Begin fertilizing at the second watering.

Use a low ammonium fertilizer at 150 to 200 ppm. Use constant fertilization, with an occasional clear-water leaching.

High moisture or fertility levels will cause excessive side shoots.

### Common Problems

Insects: Aphids, Thrips Diseases: Downy Mildew, Botrytis, Rust, Powdery Mildew Other: High media pH, Iron or Boron deficiency, excessive side shoots

### Finishing Key Tips

Group 1: Night: 45 to 50°F (7 to 10°C), Day: 50 to 55°F (10 to 13°C). 1,000 to 1,500 foot-candles. Group 2: Night: 50 to 55°F (10 to 13°C), Day: 55 to 60°F (13 to 16°C). 1,500 to 3,000 foot-candles. Two support nets are the minimum, but three are preferred. Mesh sizes of 4 x 4 in. (10 x 10 cm) to 6 x 6 in. (15 x 15 cm) are most commonly used. Place the first level at 4 to 6 in. (10 to 15 cm) above the soil level. Place the second level at 6 in. (15 cm) above the first level. Raise the upper level of the support nets as the stems lengthen.

NOTE: Growers should use the information presented here as guidelines only. PanAmerican Seed recommends that growers conduct a trial of products under their own conditions. Crop times will vary depending on the climate, location, time of year, and greenhouse environmental conditions. It is the responsibility of the grower to confirm the treatment is available in their region as well as read and follow all the current label directions relating to the products. Nothing herein shall be deemed a warranty or guaranty by PanAmerican Seed of any products listed herein. PanAmerican Seed's terms and conditions of sale shall apply to all products listed herein.

## Variety Pictures



Appleblossom



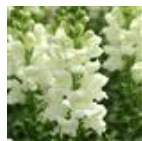
Bright Yellow



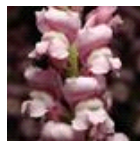
Dark Orange



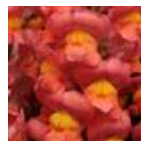
Flamingo



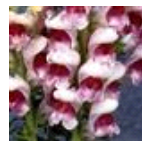
Ivory White



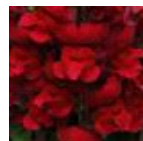
Lavender



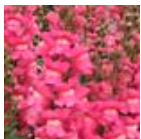
Orange



Plumblossom



Red



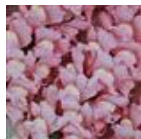
Rose



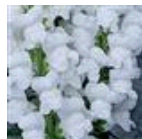
Royal



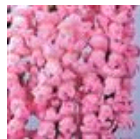
Shell Pink



True Pink



White



Yosemite Pink

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