

## Snapdragon Solstice™

(*Antirrhinum majus*)

### Germination

#### Stage 1 Time of radical emergence

- Use a well-drained, disease-free seedling medium with a pH of 5.5 to 5.8 and EC less than 0.75 mmhos/cm (2:1 extraction).
- Germination: 64 to 68°F (18 to 20°C)
- Timing: 4 to 8 days
- Soil temperature: 64 to 68°F (18 to 20°C)
- Moisture: Medium
- Light: Not required
- Cover: Lightly with vermiculite

### Plug Production

#### Stage 2 Stem and cotyledons emerge

- Timing: 7 to 14 days
- Soil temperature: 65 to 70°F (18 to 21°C)
- Moisture: Reduce moisture levels once radicle emergence occurs. Allow the soil to dry out slightly before watering. Irrigate early in the day so that foliage is dry by nightfall.
- Light: 450 to 1,500 f.c. (5,000 to 16,000 Lux)
- Fertilizer: 50 to 75 ppm N from 14-0-14 or calcium/potassium nitrate feed once per week when cotyledons are fully expanded. Alternate feed with clear water. Maintain water alkalinity at 60-100 ppm and ammonium levels at less than 10 ppm.
- Soil pH: 5.5 to 5.8
- Soil EC: <0.75 mmhos/cm

#### Stage 3 Growth and development of true leaves

- Timing: 14 days
- Soil temperature: 62 to 65°F (17 to 18°C)
- Moisture: To promote root growth and control shoot growth, allow the soil to dry between irrigations, but avoid wilting.
- Light: 1,000 to 2,500 f.c. (11,000 to 27,000 Lux)
- Fertilizer: 100 to 150 ppm of 20-10-20 alternating with 14-0-14 or other calcium/potassium nitrate fertilizer, every two or three irrigations. Supplement with magnesium one to two times during this stage using magnesium sulfate (16 oz./100 gal.) or magnesium nitrate. Do not mix magnesium sulfate with calcium nitrate as precipitate will form.
- Soil pH: 5.5 to 5.8
- Soil EC: <1.0 mmhos/cm
- Plant Growth Regulators: Use DIF whenever possible. A-Rest sprayed 3 and 4 weeks after sowing at 10 ppm is effective in controlling height.

#### Stage 4 Plants are ready for transplant or shipping

- Timing: 7 days
- Soil temperature: 60 to 62°F (16 to 19°C)
- Moisture: Allow soil to dry thoroughly between irrigations, but avoid wilting.
- Light: 1,000 to 2,500 f.c. (11,000 to 27,000 Lux)
- Fertilizer: 100 to 150 ppm N from 14-0-14 or calcium/potassium nitrate feed as needed. Avoid ammonium fertilizers in Stage 4.
- Soil pH: 5.5 to 5.8
- Soil EC: <0.75 mmhos/cm

### Growing On to Finish

- Use a well-drained disease-free soilless medium with a medium initial nutrient charge and a pH of 5.5 to 6.2.
- Temperature: 45 to 55°F (10 to 13°C) nights and 55 to 70°F (13 to 22°C) days. Avoid night temperatures above 55°F (13°C) as this will reduce stem strength. The best time to grow Snapdragons is Autumn through early Spring, when cooler growing conditions can be maintained.
- Moisture: Allow soil to dry slightly between waterings, but avoid wilting.
- Light: Keep light levels as high as possible while maintaining recommended temperature.
- Fertilizer: Every other irrigation, apply 150 ppm N from 15-0-15, alternating with 20-10-20. Alternate feed with clear water.
- Soil pH: 5.5 to 6.2
- Soil EC: 1.0 mmhos/cm (using 1:2 extraction). Provide good airflow at the plant level.
- Controlling Height:
- Once plants are rooted to the sides of the containers they can be allowed to dry slightly prior to irrigation.
- Withhold fertilizer, especially phosphorous and ammonium-form N.
- Snapdragons are responsive to day/night temperature differential (DIF) and are shorter with a negative DIF.
- When grown as recommended under cool temperatures and high light, no growth regulators should be needed. B-Nine, Bonzi and Sumagic are effective in controlling height in snapdragons, but may delay flowering and will lead to less uniform flowering time.

## **Common Problems**

**Insects:** Thrips, aphids

**Diseases:** Downy mildew, Botrytis, powdery mildew

## **Green Thumb Tips**

### **For the Grower**

- Good choice for producing in Jumbo packs, pots and gallon containers.
- Produce in Autumn through early Spring when cooler growing conditions can be maintained.

### **For the Retailer**

- Partial shading is beneficial to Solstice snapdragons in the retail setting.
- Keep plants on the dry side, but do not allow to wilt before watering.

### **For the Home Gardener**

- Grow Solstice snapdragons in full sun.
- Excellent as cutflowers---after cutting, fertilize plants lightly to encourage new blooms.

