

**Cultural Information for:** Snapdragon Speedy Sonnet Annual

**Common Name:** Snapdragon

**Botanical Name:** Antirrhinum majus

**Seed Count:** 198-255,000/ounce 7,000-9,000 /gram

**Optimum Germination Temperature:** 65°F / 18°C

**Optimum Growing Temperature:** 55-60°F / 13-16°C

**Optimum pH:** 5.8 – 6.2

**EC – Plug:** 0.26 – 0.75 mmhos/cm (1:2) / 0.76 – 2.0 (SME)

**EC – Finishing:** 0.76 – 1.25 mmhos/cm (1:2) / 2.1 – 3.5 (SME)

## Seedling Culture – 4 weeks (405 15 x 27 tray)

### **Stage 1 - Sowing to Radicle Emergence (days 1-7)**

Select a well-drained media with a low or no starter charge. Maintain a soil temperature of 65°F/18°C. Maintain even moisture in the seedling flats without over saturating it. Either sow uncovered (chamber) or with a light coating of coarse vermiculite (greenhouse). Antirrhinum seedlings are very sensitive to soluble salts so do not overfertilize. Keep ammonium levels at less than 5 ppm.

### **Stage 2 - Stem and Cotyledon Emergence (days 8-14)**

Maintain soil temperature between 60-65°F/16-18°C and sufficient moisture levels once radicle emergence occurs. Maintain even moisture but not saturated for best rooting. Provide bright light up to 1,500 foot-candles/16,000 lux. Once the cotyledons are fully expanded, begin fertilizing with 50-75 ppm N using a well-balanced calcium and potassium nitrate-based fertilizer. Antirrhinum seedlings are very sensitive to high salt and ammonium levels. If the media contains a starter charge additional liquid fertilization may not be necessary at this stage. Watering early in the day will help to prevent disease.

### **Stage 3 – Development of True Leaves (days 15-28)**

To produce the best root growth, keep soil temperature between 55- 60°F/13-16°C and allow the soil to dry thoroughly between irrigations, (do not allow seedlings to wilt). Increase fertilizer to 100-150 ppm N from a well-balanced calcium and potassium nitrate-based fertilizer. The use of Cal/Mag Specials, like 15-5-15, is ideal as antirrhinum seedlings require adequate levels of magnesium. Attempt to maintain approximately a ratio of 4: potassium: 2 calcium: 1 magnesium in the fertilizer for the best growth. If necessary, or as a preventative, apply fungicides to control pythium and/or rhizoctonia.

**Note:** Overhead watering on sunny days can cause tip burn unless moisture left on the growing tip is removed. Using a leaf blower is one option to remove water droplets.

### **Stage 4 – Plants Ready for Transplanting (day 30)**

Seedlings have two pairs of leaves and are now ready for transplanting into flats and pots. **Do not delay transplanting!** If absolutely necessary, plugs can be stored at 36-39°F/2-4°C under fluorescent lights at 250 foot-candles/2,700 lux for 10 hours per day. In order to prevent botrytis, treat with a fungicide.

## Transplanting

**Media:** Well drained general purpose with good aeration.

**Flats and Pots:** Speedy Sonnet is best produced green in packs or sold in color in 4 inch/10 cm. pots or gallons.

**Temperature:** Maintain day temperature at 60-65°F/16-18°C and nights at 47-48°F/8-9°C.

**Fertilizer:** Apply a well-balanced calcium nitrate-based formulation. Avoid ammonium-based fertilizers which promote weak and stretchy plants.

**Pinching:** Not necessary

**Growth Regulators:** Bonzi® (pacloburazol), Cycocel® (ancymidol) and B-Nine® (daminozide) are all effective but maintaining optimum temperatures and watering practices provides the best control.

**Insects:** Red spider (especially in hot and dry weather), aphids

**Diseases:** Powdery or downy mildews

**Scheduling:** Snapdragon Speedy Sonnet is less sensitive to day-length than is the Sonnet series and is used in sunny mild winter areas, such as California and Florida, for late fall through winter sales. In general, Speedy Sonnet is sown for flowering from mid-November to mid-April.

Sow	Minimum temp.*	Flowering
Late August to Early Sept.	47-48°F / 8-9°C	Mid to late Nov.
Mid-September	47-48°F / 8-9°C	Mid to late Dec.
Late Sept. – Early Oct.	47-48°F / 8-9°C	Late Feb. to early-March
Early to Mid Oct.	47-48°F / 8-9°C	Late Feb. to early-March
Late Oct. to Mid-Nov.	47-48°F / 8-9°C	Late-Feb. to Early March
Early to Mid-Dec.	47-48°F / 8-9°C	Early to Mid-April

\*minimum night-time temperature on the growing point

**Note:** Sowing January to Mid-August is not recommended.

*“All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North American conditions and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best.”*