



Crop	Antirrhinum
Series	Sonnet, Speedy Sonnet
Botanical name	<i>Antirrhinum majus</i>
Plant type	Annual
Seed type	Raw
Seed count	5,000 seeds / gr
Germination	20°C - 5-7 days light favored
Growing	13-16°C
Optimum pH	5.8-6.2

#### Plug Culture: 4 weeks (406 cell tray)

**Stage 1** (days 1-7) Select a well-drained media with a pH between 5.5 – 5.8 and little or no fertilizer. Maintain a soil temperature of 18-20°C. Maintain even moisture in the plug trays 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 over fertilize. Also, keep ammonium levels at less than 5 ppm.

**Stage 2** (days 8-14) Maintain soil temperature between 15-18°C and sufficient moisture levels once radicle emergence occurs. Maintain even moisture but not saturated for best rooting. Once the cotyledons are fully expanded, begin fertilizing with 50-75 ppm of nitrogen using a well-balanced calcium and potassium nitrate based fertilizer. If the media contains a fertilizer additional liquid fertilization may not be necessary at this stage. Watering early in the day will help to prevent disease.

**Stage 3** (days 15-28) To produce the best root growth, keep soil temperature between 13-16°C and allow the soil to dry thoroughly between irrigations, (do not allow seedlings to wilt). Increase fertilizer to 100-150 ppm of nitrogen from a well-balanced

calcium and potassium nitrate-based fertilizer. The use of calcium / magnesium 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 medium for the best growth. Avoid ammonium-based fertilizers. If necessary, or as a preventative, apply fungicides to control pythium and or rhizoctonia.

**Stage 4** (day 30) Seedlings have two pairs of leaves and are now ready for transplanting into pots. Do not delay transplanting! If absolutely necessary, seedlings can be stored at 2-4°C under fluorescent lights. In order to prevent botrytis, treat with a fungicide.

#### Transplanting to finish: 7-21 weeks

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

**Pots:** Sonnet and Speedy Sonnet are best sold in color in 10.5 cm pots or larger one.

**Temperature:** Maintain day temperature at 15-18°C and nights at 13-15°C for Sonnet. Maintain day temperature at 15-18°C and nights at 8-9°C for Speedy Sonnet.

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

**Plant Growth Regulators:** Plant regulators with active ingredients such as pacloburazol, ancymidol and daminozide are all effective but maintaining optimum temperatures and watering practices provides the best control.

**Pinching:** Not necessary

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

**Disease:** powdery or downy mildews

**Scheduling:** Sonnet requires 12 hours to initiate flower buds. Speedy Sonnet is less sensitive to day-length than is the Sonnet and is used in sunny mild winter areas. In general, Speedy Sonnet is sown for flowering from mid-November to mid-April.

**Sonnet:**

11-12 weeks from sowing in Jan - the middle of Jul

23-25 weeks from sowing in the early of Oct

16-18 weeks from sowing in the early of Dec

**Speedy Sonnet:**

11-13 weeks from sowing in the late of Aug - the early of Sep

13-15 weeks from sowing in the middle of Sep

18-20 weeks from sowing in the late of Sep – the middle of Oct

16-18 weeks from sowing in the late of Oct – the middle of Dec

*All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on Asian conditions such as in Japan and Sakata cannot be held responsible for any crop damage related to the information given herein. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best.*