

**Family:** Scrophulariaceae  
**Use:** Outdoor containers, pot and pack, suitable for borders and beds.  
**Plant type:** Annual  
**Height in pot:** 10-15 cm (4-6 in.)  
**Garden height:** 25-30 cm (10-12 in.)

**Seed count:** 6,200-6,500 seeds/gram (176,000-184,000 seeds/oz)  
 Seed count varies by variety and seed lot.  
**Seed form:** Raw.

**Germination:**

Media pH 5.5 to 5.8  
 High pH (>6.2) may cause interveinal leaf chlorosis due to iron deficiency.  
 EC 0.5-0.75  
 Ammonium based fertilizers are not recommended. Use calcium based fertilizers instead.

**Stage 1: radicle emergence**

Temperature: 18-22°C (64-72°F)  
 Radicle emerge will occur in 3-4 days. Keep media wet. Do not cover. Seeds need light for a uniform germ. Antirrhinum is very susceptible to high salt levels in all stages.

**Stage 2: expanding stem and cotyledons**

Keep media moist, temperature can be lowered to 18°C (64°F). Reduce moisture levels to obtain optimum root penetration and to prevent fungal diseases. Prevent wet foliage after nightfall. A broad spectrum fungicide may be applied to prevent damping off. Under low light conditions supplementary lighting is advised to promote compact strong seedlings. Extending day length to 14 hours, 4.000-10.000 lux (400-1000 foot candles) will promote early flowering.

**Stage 3: development of first true leaves**

Temperature days 18°C (64°F) EC 0.5-0.75  
 Allow media to dry between watering. Wet, cold and low light conditions may result in tip abortion.

**Stage 4: finishing/holding stage**

Plugs are ready for transplant or shipping. Temperature can be dropped to 16-18°C (60-64°F); lower temperatures and wet conditions may result in poor growth and leaf chlorosis. Allow media to dry between watering but avoid wilting. EC 0.75. Do not exceed levels of over 1.0 to prevent root problems.

**Growing on:**

After 5-6 weeks plants can be transplanted. It will take 5-6 weeks to finish in the pack. Allow an extra week for 4-inch pots.

Media: a well-drained, porous media is best to prevent over watering.

pH 5.5-5.8. Never over 6.2

EC. 0.75-1.50

Moisture: allow media to dry between watering, do not allow plants to wilt severely, this will result in yellow leaves and serious setback in growth.

Light: Optimum light level is 18.000-22.000 lux (1800-2200 foot candles). Long days (>14 hrs) will promote early flowering.

**Growth regulators:**

Antirrhinum responds to: Daminozide, (Dazide, B-nine) Chlormequat (Cycocel) and paclobutrazol (Bonzi).

**Pests:**

Spider mites, Thrips, Aphids and Whitefly  
 Control: common insecticides can be used, check for labelled products.

**Diseases:**

Botrytis blight, Rhizoctonia, Rust, Pythium, Powdery and Downy mildew.

Control: Use labelled fungicides to prevent and/or cure problems. Avoid cool and wet conditions.

**Schedule:**

Sowing	Potting	Flowering
wk 3	wk 9	wk 16-17
wk 6	wk 11	wk 18-19
Wk 9	wk 14	wk 20-21

**General:**

Antirrhinum has a very sensitive root system. Prevent over watering and cold media (< 15°C/58°F). Do not allow plants to wilt severely. Cold and wet conditions will result in slow development combined with root problems and slow uptake of nutrients, followed by chlorosis of the leaves. The use of ammonium-based fertilizers may result in thin, elongated roots which are more susceptible to soil born fungi. Avoid overhead watering; allow foliage to dry during daytime to prevent disease problems.