



Crop	Platycodon
Series	Astra
Botanical name	<i>Platycodon grandiflorus</i>
Plant type	Annual
Seed type	Raw
Seed count	950 seeds/ gr
Germination	20°C - 7-10 days light favored
Growing	16-20°C
Optimum pH	5.8-6.2

Plug Culture: 5 weeks (288 cell tray)

Stage 1 (days 1-10) Single sow seed into deep plug cells filled with a well-drained peat-based mix. Avoid using shallow plug cells. Optimum germination temperature is 20-22°C.

Stage 2 (days 11-20) After emergence, reduce the temperature to 18-20°C and provide good air movement. Fertilize at 50-75 ppm nitrogen using a well-balanced calcium nitrate based formulation. If light intensity is insufficient, apply HID lighting.

Stage 3 (days 21-30) Maintain optimum air temperature and increase the fertilizer rate to 150 ppm nitrogen. Allow the plants to dry slightly between irrigations to maintain a healthy root system. An application of plant growth regulators at 2,500 ppm / 0.25% may be needed.

Stage 4 (days 31-35) The seedlings should have well formed roots and are approaching transplant stage. Transplant on a timely basis to avoid plant stretch.

Transplanting to finish: 9-11 weeks

Potting: Select a well-drained peat mixture. A coarse

peat mixed with 20% sharp sand is ideal. Place one seedling per 10 cm pot and 3 seedlings per 15 cm pot*. Be careful not to bury the seedlings too deep.

*Astra Pink has a thinner plant habit so plant 2 seedlings per 10 cm pot and 5 seedlings per 15 cm pot.

Temperature: Optimum temperature is 20°C during the day and 16°C at night.

Lighting: Once established, plants will tolerate higher light / full sun.

Fertilizer: Constant liquid feed with balanced fertilizer at 200-300 ppm nitrogen promotes good root development. Reduce rate to half after flower buds are visible. Be sure to allow the plants to dry slightly between watering as excessive moisture causes root rot. However, do not allow the plants to wilt as excess drying leads to yellowing of the leaves.

Plant growth regulators: Pinching the plants (1 seeded seedlings) 3 weeks after potting or applying plant growth regulators at 1,000 ppm / 0.1% 1-2 times per week or as needed is effective. Applications of growth regulator can continue until the first flower opens. Astra Pink is less vigorous and only needs regulation in the final plant stage, if at all.

Watering: Provide even moisture and do not allow plants to become too dry; especially during chemical growth regulation, as this will result in yellowing of the foliage.

Spacing: Pots can be pot tight until the leaves touch, about 4 weeks after transplanting. Then space at 30 plants/m².

Timing: Astra will flower in 100-114 days*. The early development is slow. Plants may be pinched for a fuller look when the roots are ringing the bottom of the

pot.

*Allow an additional 7-10 days crop time for pinched plants.

Note: Platycodon Astra may be produced for spring sales or year-round as an indoor pot plant. It may also be sown in early summer for fall sales. It is best to sow seed at least 12 weeks prior to first frost to allow the plants to establish in the garden before winter. In general Astra is hardy to -23°C.

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.