

**Cultural Information for:** Platycodon Astra Perennial  
**Common Name:** Balloon Flower  
**Botanical Name:** Platycodon grandiflorus  
**Seed Count:** 27,000 /ounce 950 /gram  
**Optimum Germination Temperature:** 68-72°F / 20-22°C  
**Optimum Growing Temperature:** 60-68°F / 16-20°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)

### Plug Production – 5 weeks 288 (12x24) tray

**Stage One** (days 1-10) Single sow seed into a 288 deep plug cell filled with a well-drained peat-based mix. Avoid using shallow plug cells. Optimum germination temperature is 68-72°F/20-22°C.

**Stage Two** (days 11-20) After emergence, reduce the temperature to 65-68°F/18-20°C and provide good air movement. Fertilize at 50-75 ppm N using a well-balanced calcium nitrate-based formulation. Apply HID lighting when the light level is less than 2,000-foot candles/22,000 lux.

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

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

### Transplanting to flower – 9-11 weeks

**Potting:** Select a well-drained peat mixture. A coarse peat mixed with 20% sharp sand is ideal. Place one plug per 4 inch/10 cm pot and 3 plugs per 6 inch/15 cm pot\*. Be careful not to bury the plugs too deep.

*\*Astra Pink has a thinner plant habit so plant 2 plugs per 4 inch/10 cm. pot and 5 plugs per 6 inch/15 cm. pot.*

**Temperature:** Optimum temperature is 68°F/20°C during the day and 60°F/16°C at night.

**Lighting:** Platycodon grows best between 3,000-5,000-foot candles / 32,000-54,000 lux. Once established, plants will tolerate higher light / full sun. For northern Europe (above latitude 45°) provide long day conditions (14-16 hours) for transplants between weeks 5 - 27 using either night interruption or day length extension.

**Fertilizer:** Constant liquid feed with balanced fertilizer at 200-300 ppm N 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.

**Growth Regulation:** Pinching the plants (1 seeded plugs) 3 weeks after potting or applying B-Nine 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 3 plants/square foot or 30 plants/square meter.

**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.*

Sow	Potting	Flower Unpinched	Flower Pinched	Total
Early Feb.	Mid March	Mid May	Late May	14-16 weeks
Mid March	Late April	Mid June	Late June	13-15 weeks
Mid April	Late May	Mid July	Late July	12-14 weeks
Late May	Early July	Early Sept.	Mid Sept.	13-15 weeks

**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 -10°F/-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 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.”*