

TECHNICAL GUIDE

Astilbe arendsii Astary®

Flowering

Flowering Type: FastraX perennial – first year flowering plants without vernalization. Facultative long day plant. Long days above 12 hours and high irradiance will promote flowering.

Flowering Mechanism: Flowering is affected by day length, irradiance and temperature. High light intensity and warmer temperatures shorten the total crop time.

Plug Culture

Germination: Provide optimum conditions for seedling development beginning on the day of sowing until radicle emergence. Expect radicle emergence in approximately 14 days.

Cover: Do not cover the seeds; light is required for germination.

Sowing Method: 2–3 seeds per plug.

Media: pH 5.5–6.0; EC < 0.75.

Temperature: Maintain 22–24 °C (72–76 °F) until radicle emergence. Then reduce to 20–22 °C (68–72 °F). After 4 weeks in the tray, 18 °C (64 °F) is sufficient.

Moisture: During germination, maintain a saturated (5) level. After radicle emergence, alternate between wet (4) and moist (3), allowing the media to dry back before watering. Astilbe does not tolerate drought stress well, which can lead to marginal necrosis.

Humidity: 90–100% until radicle emergence, then reduce to 40–60%. Provide proper ventilation and horizontal airflow to improve oxygen levels in the media.

Light: Light is required for germination. From stage 2, supplemental lighting is optional. A 13–14 hour day length during the plug stage promotes early root development and improves young plant uniformity. Long days and high light levels promote early flowering. Light levels may be increased up to 4,000–5,000 ft. candles (40,000–50,000 lx). Protect seedlings from direct sunlight.

Fertilizer: Maintain EC < 1.3. Begin fertilization early to improve seedling quality. Start in stage 2 with 50–100 ppm nitrogen and gradually increase to 100–150 ppm during plug production. Use a complete balanced fertilizer.

Plug Bulking and Flower Initiation: Maintain optimal vegetative conditions from cotyledon expansion to flower initiation.

Growth Regulators: Not required.

Fungicides: During extended periods of high humidity or low light intensity, apply fungicides preventively.

Growing On

Media: pH 5.5–6.0; EC 0.8–1.3.

Light: After transplanting, provide 2–3 weeks of short days to encourage compact, well-branched plants. Afterwards, high light levels and long days > 13 hours will shorten crop time and promote high-quality, uniform plants with flower initiation. Light levels up to 5,000 ft. candles (50,000 lx) may be provided.

Temperature: After transplanting, maintain an average daily temperature of 15–18 °C (59–64 °F) to encourage basal branching and compact growth. For outdoor production, ensure frost-free cultivation at 3–5 °C (37–41 °F) minimum.

Moisture: Astilbe does not tolerate drought stress, which commonly occurs in outdoor production during summer and leads to marginal necrosis with poor recovery. Alternate between wet (4) and medium (2) moisture levels.

Humidity: 40–60% humidity is ideal. Provide good ventilation and horizontal airflow to reduce humidity and allow media dry-back, improving root oxygenation.

Fertilizer: High fertilization levels are required. Feed weekly with 150–200 ppm nitrogen using a complete balanced fertilizer. Avoid excessive nitrogen to prevent iron deficiency. Ensure adequate potassium supply.

Growth Regulators: With proper temperature and moisture management, growth regulators are generally not required. If necessary, apply B-Nine (daminozide) as a spray at 2,000 ppm to control growth.

Fungicides: Apply fungicides during extended periods of low light, cool temperatures, and high humidity.

Common Diseases: Botrytis, powdery mildew, Phytophthora.

Pests: Mainly aphids and thrips.

Plug & Finished Crop Time

Plug Time

288 tray: 7-8 weeks

Finished Time (from 288 tray)

12-15 cm (5-6") pots (1*): 11-12 weeks

17-19 cm (7-8") pots (3*): 12-14 weeks

*plants per pot

Moisture Codes

Saturated (5) Water is easily observed when finger is pressed on cell. Water moves freely from the top of the plug to the bottom.

Wet (4) Media looks black and is not glistening. The media feels wet to the touch but there is very little water movement.

Moist (3) Water is not easily visible. When finger is pressed on the cell there is very little movement from top to bottom.

Medium (2) Media is not black, but now looks medium brown. There is no water movement when pressed with finger.

Dry (1) Media has changed color to a very light brown and is dry to the touch.

All information in our technical guide is based on our own trials and would therefore be as guideline only. Detailed cultivation aspects vary depending on climate, location, time of year and environmental conditions. Benary expressly disclaims any responsibility for the content of such data/information and makes no representation or warranty for the cultivation of any products listed. It is recommended that growers conduct a trial of products under their own conditions.