

# GROWERTALKS

## Culture Notes

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### Spring Trials Sneak Peek Lucky Star Pentas

*Birdie Lenard-Fountain*

Traditional pentas are heat-loving, big plants (growing 4-ft. tall and 3-ft. wide) with cluster blooms that cycle into color one flush at a time. There are several series on the market today where the breeding has had success in making the size more manageable with shorter resting cycles between blooms. But there's a new player emerging on the scene: The breeder of PanAmerican Seed's new Lucky Star Pentas series (Jason Jandrew) has not only created a series with well-branched, compact habits, he's also eliminated the cyclic blooming (cyclic blooming = ugly plants at retail).



Lucky Star blooms five to seven days earlier than the current market leader. Its fast follow-up of secondary blooms means pots color up quickly and stay in color. Their high-compact vigor helps growers get to market with fewer challenges of scheduling or dealing with differential PGR rates by variety. The plants stay in saleable, full-color condition on the retail bench and in the landscape.

At California Spring Trials, PanAmerican Seed will debut six vibrant colors: Dark Red, Pink, Deep Pink, Lavender, Violet and White.

#### **Germination & propagation**

Use a well-drained, disease-free seeding medium with a pH of 6.4 to 6.6 and EC of about 0.75 mmhos/cm (1:2 extraction). Below pH 6.5, plants will stop growing and exhibit iron toxicity as foliar necrosis and calcium/magnesium deficiency as foliar puckering. The recommended plug tray is 288-cell or larger. Do not cover the seed, as light improves germination and uniformity. Non-acidified water is recommended to maintain high media pH.

Stage 1: Germination takes about six to nine days. Provide soil temperature at 75F (24C). Light levels are 10 f.c./110 Lux. Maintain moisture at medium-wet to saturated (level 4 to 5) with 100% humidity.

Stage 2: At radicle emergence, keep temperature at 75F (24C). Pentas have high-light requirements. Seedlings must receive higher light levels immediately after germination to avoid elongation and promote rapid growth. After germination, maintain light levels between 1,500 and 2,000 f.c. (4 to 6 moles/m<sup>2</sup>/day or 16,150 to 21,530 Lux).

Lower moisture to level 3 to 4, avoiding extreme shifts in moisture. Non-acidified water at this stage is still recommended. Reduce humidity to 70%. Fertilizer treatment can begin at this stage: 14-4-14 or 13-2-13 at 50 ppm N once radicles fully emerge and adjust upward to 75 ppm through end of Stage 2. Maintain EC 0.8 - 1.2 mS/cm.

Stage 3: In this stage, gradually reduce temperature to 68 to 75F (20 to 24C). Provide light up to 2,500 f.c. (6 to 8 moles/m<sup>2</sup>/day or 26,900 Lux) and drop moisture to level 2 to 4. Increase fertilizer to 75 to 100 ppm with 14-4-14 or 13-2-13. Use 20-10-20 if needed to promote leaf expansion.

PGRs are generally not required. Instead, control plug growth through the environment, nutrition and irrigation management. Minimize phosphorus fertilizer to avoid elongation of seedlings. Temperature differential (DIF) can also be used to minimize height. If necessary, B-Nine/Alar (daminozide) spray at 2,500 ppm (3.0 g/l 85% formulation or 4.0 g/l of 64% formulation) can be used. Keep plants on the dry side.

Stage 4: Reduce temperatures to 65 to 70F (18 to 21C) from maturity until transplant. Raise light to 3,500 to 5000 f.c. (10 to 12 moles/m<sup>2</sup>/day or 37,800 to 54,000 Lux) with moisture and fertilizer the same as stage 3.

### Growing on to finish

The target media pH should be 6.5 to 6.8 to minimize foliar necrosis and puckering. Pentas benefit from high-light conditions. Provide 12 to 20 moles/m<sup>2</sup>/day keeping light levels as high as possible to promote compact growth. Provide supplemental lighting when grown under low-light conditions. Warm temperatures will reduce crop time. The recommended day temperature is 68 to 75F (20 to 24C) with minimum night temperatures of 62 to 65F (17 to 18C). Low temperatures will prevent uniform flower development, delay flowering and extend crop time.

If PGRs are desired after transplant, a tank mix of B-Nine (daminozide) 2,500 ppm (3.0 g/l 85% formulation or 4.0 g/l of 64% formulation) and Cycocel (chlormequat) 500 to 750 ppm (4.2 to 6.4 ml/l 11.8% formulation or 0.7 to 1.0 ml/l 75% formulation) can be used.

Quick pH tip: To increase soil pH, apply 12 oz. hydrated lime per 100 gal. water (90 g. per 100 l) as a soil drench. Follow up with 1 tablespoon of limestone (dolomite or calcium carbonate) per pot. Do not apply hydrated lime if the medium ammonium level is above 10 ppm (1:2 extraction). **GT**

### Crop Times

| Container Size        | Plants Per Pot | Crop Time    |
|-----------------------|----------------|--------------|
| 306 Pack              | 1              | 7 to 8 weeks |
| 4-in. (10-cm) & Quart | 1              | 7 to 8 Weeks |
| 6-in. (15-cm)         | 2              | 7 to 8 Weeks |
| Gallon                | 2 to 3         | 7 to 8 Weeks |

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*Birdie Lenard-Fountain is the Senior Global Product Manager for PanAmerican Seed stationed at the company's Guadalupe, California, research facility. For more culture information, visit [www.panamseed.com](http://www.panamseed.com).*