GROWERTALKS

Culture Notes

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Pentas: It’s Not Easy Being Green

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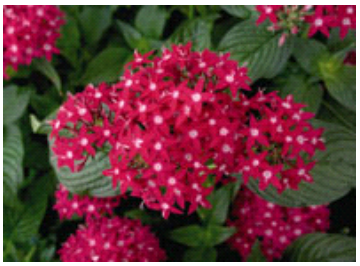

Landscapers love pentas for their extreme heat tolerance and high-impact color. Consumers love them because they attract butterflies and delight humming- birds. But how can growers keep those leaves green and lush from production through retail? At the California Spring Trials, Benary introduced new research they’ve done in conjunction with Dr. David Koranski on the best way to produce pentas. Here are their recommendations and some trouble shooting tips from the experts.

Germination: Sow seed in a media with a pH range of 6.5 to 6.8. Maintain uniform soil moisture levels around 4 to 5 and humidity levels of 95% to 98%. During Stage I, temperatures of 75F (24C) optimize germination. Water seed trays with tempered water (64F/17C) with a pH range of 6.5 to 6.8 to avoid shocking seedlings during Stage I. Do not cover the seed as light increases the germination rate and improves seedling uniformity. On day 11 to 12, begin a light feeding program with a 14-4-14 fertilizer at 60 to 75 ppm N; 10 ppm P. Continue Stage I conditions for 7 to 10 days.

Germination stages (from seed to finished young plant):
Stage I: From the time the seed is sown until radicle emergence takes place. Ends with fully developed cotyledons.
Stage II: Starts from fully developed cotyledons. Ends with the fully developed true leaf or true leaf pair.
Stage III: Starts from the fully developed true leaf or true leaf pair and ends with 80% of the young plants being marketable.
Stage IV: All young plants are ready for sale and in the process of being hardened off. This stage lasts about 7 days.

Plug culture: Reduce humidity level in the air to 75% during Stage II (7 to 10 days), approximately day 9. Increasing light levels to 1,500 to 2,000 f.c. (4 to 6 mols/day) improves seedling quality and plug uniformity. During the first 21 to 33 days, avoid wide fluctuations in the media moisture. On day 9, begin alternating the media moisture between a wet (4+} and a moist (3). This wet/dry cycle should take place within 12 to 24 hours for each cycle. During Stage III, days 23 to 33, gradually lower the temperature to 68 to 70F (19 to 21C). The media EC should be between 1.0 to 1.2. Keep the plug pH level between 6.5 to 6.8 for both Stages III and IV. During Stage IV, increase light levels to 2,000 to 2,500 f.c. (6 to 8 mols) and decrease

temperatures gradually to 66 to 68F (19 to 20C). Do not allow soils to remain saturated during plug growth.

Growing on: Transplant plugs into 4 to 6-in. (10 to 15-cm) pots or hanging baskets. Grow on at 72 to 80F (22 to 27C). Fertilize with 17-5-17 or 14-4-14 at 75 to 125 ppm N; 8 to 12 ppm P. The EC level should be kept between 1.2 to 1.5. Monitor soil pH levels and maintain a pH between 6.5 to 6.8.

Crop time:
Plugs: 6 weeks
4-in. (10-cm) pots: 9 to 12 weeks after transplanting
6-in. (15-cm) pots: 10 to 13 weeks after transplanting
Hanging baskets: 12 to 16 weeks after transplanting

Cultural hints: In the early stages of plug production, especially until day 33, avoid wide fluctuations in the media moisture levels. Lower light levels can aid in maintaining the media moisture. Pentas roots release hydrogen ions into the soils, which will drop the pH to toxic levels if not monitored and adjusted if necessary. Maintain pH levels between 6.5 to 6.8 to avoid magnesium deficiencies or iron toxicity. Low magnesium levels cause leaf puckering. If the night temperature is below 65F (18C), the crop time will be increased. Overwatering and cool temperatures below 50F (10C) can delay flowering.

> Benary offers the following pentas series in pelleted seed:
> Graffiti series—12 to 15 in. (30 to 40 cm)
> Kaleidoscope series—18 in. (45 cm)
> New Look series—10 in. (25 cm)
> Northern Lights Lavender—18 to 24 in. (45 to 58 cm)

For more information about Benary's pentas varieties or to order copies of their culture chart, visit www.benary.com. **GT**

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