

GROWERTALKS

Culture Notes

7/31/2017

Perennial Power: Dianthus Rockin' Red

Reid Snyder



Taking note of shoulder season markets is a key advantage in diversifying perennial programs, but existing crop options for premium-performing products has been limited. To widen the assortment, the breeding team at Kieft Seed worked to develop a durable dianthus with reliable overwintering. New Rockin' Red is all those things, plus a dynamite red color that will keep perennial borders vibrant for years to come.

Rockin' Red features lacy, slightly scented flowers topping full and long-lasting plants. It reliably overwinters to USDA Zone 4B (-20F/-29C minimum temperature) that assures multi-year performance. Its bloom season spans the early-spring through autumn months—and even in winter in Southern markets. In addition, special scheduling directions from culture experts at PanAmerican Seed have provided details on not only timing for key seasonal dates, but also growth

regulation recommendations to create appropriate-sized Rockin' Red for retail.

Here are a few production guides and forcing suggestions to build a strong perennial dianthus program for your customers:

Germination & propagation

Use a well-drained disease-free seedling medium with a pH of 5.8 to 6.2 and EC of about 0.75 mmhos/cm. Sow one seed per cell and cover with a medium layer of coarse-grade vermiculite at sowing. The recommended plug size is 288. (See the Perennials Forcing Guide at panamseed.com/culture for timing recommendations.)

Stage 1: Germination is approximately three to five days. Provide soil temperature at 64 to 68F/18 to 20C. Light is optional and maintain a medium-wet substrate moisture (Level 4). Relative humidity at 95% to 97% until cotyledons emerge.

Stage 2: At radicle emergence, slightly raise temperatures to 65 to 70F/18 to 21C. Light levels at this stage are 2,500 f.c. (26,900 Lux) 5 to 8 mol•m⁻²•d⁻¹. Moisture is reduced to Level 3 to 4 (medium to medium-wet substrate). Fertilizer treatment can begin at this stage: Less than 100 ppm N, less than 0.7 EC.

Stage 3: During this stage, reduce temperatures to 60 to 65F/15 to 18C. Provide light at 2,500 f.c. (26,900 Lux) 8-10 mol•m⁻²•d⁻¹. Increase the fertilizer rate to 2 (100 to 175 ppm N, 0.7 to 1.2 EC). Moisture can be reduced to medium to medium dry. Do not allow the seedlings to wilt.

Stage 4: Reduce temperature further to 55 to 60F/13 to 16C and light can be up to 5,000 f.c. (54,000 Lux) 10 mol•m⁻²•d⁻¹. Keep the fertilizer rate to 2 (100 to 175 ppm N with 0.7 to 1.2 EC).

Growth regulators

One to two applications of paclobutrazol at 4 to 6 ppm (1.0 to 1.5 ml/l, 0.4% formulation) is effective for plug height control. When grown under low light conditions, a paclobutrazol 5 ppm (1.25 ml/l, 0.4% formulation) spray at radicle emergence stage will help control hypocotyl stretch.

Growing on to finish

No vernalization is required and Rockin' Red is a long-day beneficial plant. The target media pH should be 5.8 to 6.2 with an EC of .75 mmhos/cm. Feed once a week at a rate 3 (175 to 225 ppm N with 1.2 to 1.5 EC).

Day temp: 60 to 72F (15 to 22C)

Night temp: 50 to 60F (11 to 15C)

Rockin' Red will benefit from being grown under high light levels. Grow plants under light levels as high as possible while maintaining the optimal production temperatures. Low light conditions could significantly delay flowering.

Fall Perennials Forcing Guide

Forcing Guide for First Year Flowering Perennials for 2 Major Dates in North America* (Quick Annual Cycle)												
Genus	Species	Series/Variety	USDA Hardiness Zone	Forcing for Fall (Week 36)					Plugs Per Pot			
				Ideal Sowing Week	Plug Size	Plug SD Bulking Required	Plug Grow Weeks	Finish Under Natural LD and ADT 72-75F/22-24C Grow Weeks	1 Qt.	1 Gal.	2 Gal.	3 Gal. (Fall)
Dianthus	barbatus interspecific	Rockin' Red	4-9	22	288	No	5	8	1	3	3	4

Spring Perennials Forcing Guide

Forcing Guide for First Year Flowering Perennials in North America (Quick Annual Cycle)													
Genus	Species	Series/Variety	USDA Hardiness Zone	Forcing for Spring (Week 19)					Plugs Per Pot				
				Ideal Sowing Week	Plug Size	Plug Bulk Under Natural SD or <=12 HR Grow Weeks	Supplemental LD (14 HR or NI) Required after Transplant**	Finish Under Proper Daylength (H) and ADT (J) Grow Weeks	Finish ADT	1 Qt.	1 Gal.	2 Gal.	3 Gal (Fall)
Dianthus	barbatus interspecific	Rockin' Red	4-9	1-2	288	5	No	13	60F 16C	1	3	3	4

Additional growth control

As with other dianthus, Rockin' Red is responsive to multiple foliar sprays of paclobutrazol at 15 to 20 ppm (3.75 to 5.0 ml/l, 0.4% formulation) after transplant for height control.

During early-spring production under natural low-light conditions, Rockin' Red has shown strong apical dominance that results in a main stem significantly taller than secondary lateral branches. The trial at Elburn, Illinois, has shown ethephon can significantly reduce apical dominance for Rockin' Red. Ethephon at about

300 ppm (7.7 ml/l 3.9% formulation or 0.63 ml/l 48% formulation) can be applied every other week starting two to three weeks after transplant. Once plants show first color, a paclobutazol 20 ppm (5.0 ml/l 0.4% active ingredient) spray can be an effective control for the plant's final height. **GT**

Crop Time

Container Size	Plugs Per Pot	Weeks
Quart	1	9 to 10 (Spring)
1-gal.	1 to 3	8 to 9 (Fall) 9 to 10 (Spring)
3-gal./10-in. Pot	4	8 to 9 (Fall)

Reid Snyder is a global product manager for PanAmerican Seed. He's stationed at the company's Santa Paula, California, location. For more culture recommendations, visit panamseed.com/culture.