

Dianthus Rockin'™

(*Dianthus x barbatus interspecific*)

Germination

Approximate pellet count: 6,300 to 7,800 pellets/oz.
(225 to 275 pellets/g)

Media

Use a well-drained, disease-free soilless media with a pH of 5.8 to 6.2 and an EC of 0.5 to 0.75 mmhos/cm (2:1 extraction).

Sowing

Plug Tray Size:

Can be produced in a 288 or similar size plug tray. Cover the seed with a medium layer of coarse grade vermiculite at sowing.

Stage 1 – Germination takes approximately 3 to 5 days

Germination temperature: 64 to 68°F (18 to 20°C)

Light: Light is optional for germination.

Media moisture: Keep the media medium-wet (level 4) during germination.

Relative humidity: Maintain 95 to 97% relative humidity until cotyledons emerge.

Plug Production

Stage 2

Temperature: 65 to 70°F (18 to 21°C)

Light: Can be up to 2,500 f.c. (26,900 Lux). DLI 5 to 8 moles·m⁻²·d⁻¹

Media moisture: Reduce the media moisture slightly (level 4 to 3) to allow the roots to penetrate into the media.

Fertilizer: Apply fertilizer at rate 1 (less than 100 ppm N/less than 0.7 mS/cm EC) with a nitrate-form fertilizer with low phosphorous. Maintain a media pH of 5.8 to 6.2 and EC at 0.5 to 0.7 mS/cm (1:2 extraction).

Stage 3

Temperature: 60 to 65°F (15 to 18°C)

Light: Can be up to 2,500 f.c. (26,900 Lux). DLI 8 to 10 moles·m⁻²·d⁻¹

Media moisture: Moisture level can be reduced to medium to medium dry (level 3 to 2). Do not allow the seedlings to wilt.

Fertilizer: Increase the fertilizer rate to 2 (100 to 175 ppm N/ 0.7 to 1.2 mS/cm EC). Maintain a media pH of 5.8 to 6.2 and EC at 0.7 to 1.0 mS/cm (1:2 extraction).

Stage 4

Temperature: 55 to 60°F (13 to 15°C)

Light: Can be up to 5,000 f.c. (54,000 Lux). DLI >10 moles·m⁻²·d⁻¹

Media moisture: Maintain wet/dry cycle. Do not allow the seedlings to wilt.

Fertilizer: Keep the fertilizer rate to 2 (100 to 175 ppm N/ 0.7 to 1.2 mS/cm EC). Maintain a media pH of 5.8 to 6.2 and EC at 0.7 to 1.0 mS/cm (1:2 extraction).

Growing On to Finish

Growth Regulators

One to two applications of paclobutrazol (Bonzi, Piccolo) 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 (DLI <5 moles·m⁻²·d⁻¹), a paclobutrazol (Bonzi, Piccolo) 5 ppm (1.25 ml/l, 0.4% formulation) spray at radicle emergence stage will help in controlling hypocotyl stretch.

Northern Europe: Start with 2 ppm (0.5 ml/l, 0.4% formulation) paclobutrazol (Bonzi, Piccolo) spray at 2 weeks after sowing, and then if necessary, build up concentration to 4 ppm and 6 ppm at 3 and 4 weeks after sowing, respectively.

Growing On to Finish

Media

Use a well-drained, disease-free soilless media with a

pH of 5.8 to 6.2 and an EC of 0.75 mmhos/cm.

Temperature

Days: 60 to 72°F (15 to 22°C)

Nights: 50 to 60°F (11 to 15 °C)

Light

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. Growing under low light conditions (<5 moles·m⁻²·d⁻¹) could significantly delay flowering.

Irrigation

Maintain optimal media moisture, i.e., not too wet or too dry.

Fertilizer

Starting 1 week after transplant, apply fertilizer once a week at rate 3 (175 to 225 ppm N/1.2 to 1.5 mS/cm), from a nitrate-form fertilizer with low phosphorus.

Photoperiod

Rockin' Red Dianthus is a facultative/quantitative long day plant. It will take slightly longer to flower under short days than long days and can flower all year.

Growth Regulators

As with other Dianthus, Rockin' Red is responsive to multiple foliar sprays of paclobutrazol (Bonzi, Piccolo) 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 (Florel) 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 2 to 3 weeks after transplant. Once plants show first colour, a paclobutrazol (Bonzi, Piccolo) 20 ppm (5.0 ml/l 0.4% active ingredient) spray can be effective to control plant final height.

Northwestern Europe: Apply paclobutrazol (Bonzi) as foliar spray at 2 to 3 weeks after transplant. Start with 8 ppm (2.0 ml/l 0.4% active ingredient). Repeat weekly with 4 ppm higher dose, built-up each week as needed, up to 16 to 20 ppm (4.0 to 5.0 ml/l 0.4% active ingredient) until visible bud stage.

Pinching

Pinching can also reduce apical dominance for Rockin' Red. It may delay crop time by 1 to 2 weeks.

Container Size

Quart: 1 plug per pot

1-gallon (18-cm) pot: 1 to 3 plugs per pot

3-gallon: 4 plugs per pot

Crop Scheduling

Winter to Spring program:

Sow to transplant (288/264-cell plug tray): 5 to 6 weeks

Transplant to finish: 9 to 11 weeks

Fall finishing program:

Sow to transplant (288/264-cell plug tray): 4-5 weeks

Transplant to finish: 8 to 9 weeks

Common Problems

Insects: Thrips, mites

Garden and Landscape Information

- Rockin' Red Dianthus is hardy to USDA Hardiness Zone 4B (-20°F/ -29°C minimum temperatures).
- Plant in partial to full sun after all danger of frost has passed.
- Space plants at 12 in. (30 cm) apart in well-drained soil.
- It is also a great item for Autumn programs.

Note: Growers should use the information presented here as a starting point. Crop times will vary depending on the climate, location, time of year, and greenhouse environmental conditions. Chemical and PGR recommendations are only guidelines. It is the responsibility of the applicator to read and follow all the current label directions for the specific chemical being used in accordance with all regulations.

