

Dianthus Dynasty

(*Dianthus barbatus interspecific*)

Germination

A medium covering of coarse vermiculite is strongly recommended to help maintain high humidity around the germinating seed. Bench germination takes 6 to 7 days, but chamber germination will yield better results. Moving the sowings out of the germ chamber “on time” (day 3 to 4) is critical for quality finished plugs. If left in the germ chamber longer, the seedlings will quickly show stretch.

Light is required for germination. A fluorescent light source in the germ chamber with 10 to 100 f.c. (100 to 1,000 Lux) will work. The best quality seedlings are produced with high light levels, up to 3,000 f.c. (30,000 Lux).

Plug Production

Plug Tray Size

Use 406-cell plug trays.

Media

Use a well-drained, disease-free seedling medium with a pH of 5.8 to 6.2 and EC about 0.75 mmhos/cm (1:2 extraction).

Sowing

A medium covering of coarse vermiculite is strongly recommended to help maintain high humidity around the germinating seed. Bench germination takes 6 to 7 days, but chamber germination will yield better results. Moving the sowings out of the germ chamber “on time” (day 3 to 4) is critical for quality finished plugs. If left in the germ chamber longer, the seedlings will quickly show stretch.

Temperature

Germination: 64 to 68°F (18 to 20°C)
Cotyledon emergence: 65 to 70°F (18 to 21°C) days;
60°F (15°C) nights
True leaf expansion: 60°F (15°C) days; 55°F (13°C) nights

Light

Light is required for germination. A fluorescent light source in the germ chamber with 10 to 100 f.c. (100 to 1,000 Lux) will work.

The best quality seedlings are produced with high light

levels, up to 3,000 f.c. (30,000 Lux).

Humidity

Maintain 95 to 97% relative humidity during germination.

Fertilizer

Beginning at Stage 3, fertilize 2 times a week with 50 ppm N from 14-0-14, alternating with 20-10-20 type fertilizer. Increase the nitrogen concentration to 100 ppm after 1 week, and continue this program until the plugs are finished. Maintain the EC at 0.5 to 0.75 mmhos/cm and increase to 1.0 mmhos/cm at Stage 3 and 4. Maintain the pH at 5.8 to 6.2 throughout. If plugs are grown cooler for toning, they may show leaf purpling (caused by phosphorus deficiency) during Stage 4. To correct this, use any plug fertilizer supplying a good amount of phosphorous once or twice. NOTE: Excessive phosphorous fertilization will cause seedling stretch.

Growth Regulators

Treat 3-week-old plugs with a foliar spray of Bonzi at 6 ppm for toning. One application in the plug stage is sufficient.

Note: Transplant the plugs “on time.” Seedlings will get rootbound if held in the plug stage too long.

Stage 2 timing: 7 to 10 days

Stage 3 timing: 14 to 18 days

Stage 4 timing: 7 days

Growing On to Finish

Container Size

Dynasty dianthus is best suited to 5-in. (13-cm) containers.

Media

Use a well-drained, disease-free soilless medium with a medium initial nutrient charge and a pH of 5.8 to 6.5.

Temperature

Provide 65 to 70°F (18° to 21°C) day temperatures and 60°F (15°C) night temperatures for the first 2 weeks of greenhouse production to establish the

plants. Finish at 60 to 72°F (15 to 22°C) days, and nights in the low 50°F (11 to 12°C). Lower temperatures can be tolerated in the mature plant stage.

Light

No supplemental lighting is required.

Water

Maintain uniform moisture throughout the crop.

Fertilizer

When grown in the greenhouse, begin fertilizing the crop with 150 ppm N once a week starting a week after transplant. The plants may require additional fertilization when grown outside. Maintain an EC of 1.5 mmhos/cm and a pH of 5.8 to 6.2 after transplant until finish. If young plants show tip necrosis, it is most likely caused by a calcium deficiency. If necessary, treat with a foliar spray of calcium or a calcium nitrate fertilizer supplying 150 ppm N.

Growth Regulators

Foliar sprays of 20 ppm Bonzi can be applied 2 to 3 times to control height. The frequency of application is determined by the rate of plant growth, time of year and location. If 2 applications are used, apply 2 weeks apart beginning at 2 weeks after transplant.

For 6-in. (15-cm) or 1-gallon (8-in./20-cm standard pot) containers (1 plant per pot), apply tank mix foliar sprays of B-Nine at 5,000 ppm and Cycocel at 1,000 ppm, both at the same frequency and timing schedule as recommended for Bonzi.

Common Problems

Insects: Watch for aphid infestations during early growth stages.

