GrowerFacts

PanAmerican Seed®

Delphinium Guardian F_1 Series

(Delphinium elatum)

Perennials Culture (revised 10/14/25)

Plug crop time: 6 to 7 weeks
Transplant to finish: 16 weeks

- Very uniform blooming within each variety, especially under short days.
- Works well as a tall landscape/perennial variety, as a commercial cut flower, and in potted plant programs.
- Up to 6 weeks faster from transplant to bloom than O.P. types for more turns per sq. ft./sq. m of greenhouse space.
- As a greenhouse cut flower, Guardian can be grown under the same conditions as dianthus and snapdragons.
- Produces excellent stem quality for good cut flower shipability.

General Information

Exposure	Bloom Season	Height	Spread	Spacing
Sun	Early Spring, Spring	30-39 in. (76-99 cm)	10-12 in. (25-30 cm)	10-14 in. (25-36 cm)

Germination

Seed Form	Recommended Plug Size	Seeds/Cell	Plug Crop Weeks	Days from 50% to maximum germination	Initial Media pH/EC (1:2)	Cover Seed
RAW	288	1	6-7	7-8	5.8-6.2 pH 0.75 mmhos/cm	Yes

Plug Production

	Stage 1	Stage 2	Stage 3	Stage 4
Moisture	Level 4	Level 3	Level 2	Level 2
Temperature	65-70°F (18-21°C)	65-70°F (18-21°C)	65-68°F (18-20°C)	60-65°F (16-18°C)
Light	Optional	2,000-2,500 f.c. (21,500-26,900 Lux)	2,000-2,500 f.c. (21,500-26,900 Lux)	4,000-5,000 f.c. (43,100-53,800 Lux)
Fertiliser		Less than 100 ppm N (Less than 0.7 EC)	100 to 175 ppm N (0.7 to 1.2 EC)	100 to 175 ppm N (0.7 to 1.2 EC)

Vernalisation

No

Propagation Key Tips

For forcing info: See Perennials Forcing Guide.
Best germinated in germ chamber with 95 to 97% RH in Stage 1. Maximum EC in propagation: 1.0.

Growing on to Finish

Growing on Temperature	Target Media pH/EC (1:2)	Fertiliser	Daylength
(day) 65-70°F (18-21°C) **(night)** 60°F (16°C)	5.8-6.2 pH 1.4-1.5 mmhos/cm	175 to 225 ppm N (1.2 to 1.5 EC)	Facultative Long Day

Crop Scheduling

Crop Type	Container Size	Plugs/Pot	Crop Time	Season	PGR
Annual	5"/6"/1 Gallon/15 cm	1 (ppp)	11-13 (weeks)	Summer	paclobutrazol 20 ppm Spray
Annual	5"/6"/1 Gallon/15 cm	1 (ppp)	12-16 (weeks)	Spring	paclobutrazol 20 ppm Spray

Fertiliser Notation

A week after transplant, begin fertilising with 150 ppm N once a week when growing in the greenhouse. If grown outside, additional fertiliser may be required. Maintain an EC of 1.5 and a pH of 5.8 to 6.2 after transplant until finish.

Common Problems

Insects: Watch for Fungus Gnats during plug production. Diseases: Pythium Root Rot can be a problem during Stage 1 and 2 of plug production and also after transplant. Powdery Mildew.

Finishing Key Tips

PGRs: 2 Bonzi sprays, the first approximately 3 weeks after transplant and the second approximately 2 weeks later. Possible third application may be necessary, subject to conditions. Delphinium are especially sensitive to Powdery Mildew; spray preventively if necessary. Ship and sell latest with flower spike one third open to decrease risk of petal shattering. See Cut Flower section for more details on cut flower production. Container production: PGR Bonzi (paclobutrazol) 1 or 2 applications 20 ppm spray.

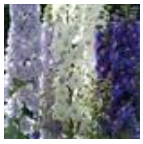
NOTE: Growers should use the information presented here as guidelines only. PanAmerican Seed recommends that growers conduct a trial of products under their own conditions. Crop times will vary depending on the climate, location, time of year, and greenhouse environmental conditions. It is the responsibility of the grower to confirm the treatment is available in their region as well as read and follow all the current label directions relating to the products. Nothing herein shall be deemed a warranty or guaranty by PanAmerican Seed of any products listed herein. PanAmerican Seed's terms and conditions of sale shall apply to all products listed herein.

Variety Pictures

Blue

Lavender

White


Mixture

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