



## Delphinium Guardian F<sub>1</sub> Series

(*Delphinium elatum*)

Cut Flowers Culture (revised 02/25/20)

Guardian is an F<sub>1</sub> hybrid *delphinium elatum* that delivers programmable and reliable yields of stems.

### General Information

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

### Germination

| Seed Form | Recommended Plug Size | Seeds/Cell | Plug Crop Weeks | Days to Germinate | Initial Media pH/EC         | Cover Seed |
|-----------|-----------------------|------------|-----------------|-------------------|-----------------------------|------------|
| RAW       | 288                   | 1          | 5-6             | 5-6               | 5.8-6.2 pH<br>0.75 mmhos/cm | Yes        |

### Plug Production

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

### Propagation Key Tips

Autumn: greenhouse 13 weeks, field 16 weeks. Spring: greenhouse 11 weeks, field 13 weeks. Treat cut stems with an ethylene-inhibiting agent. In temperate areas such as coastal California, plugs are generally transplanted into the field August through October, and February to early May. Autumn transplants will flower the following Spring (February onward); Spring transplants flower late Spring.

### Growing on to Finish

| Growing on Temperature   | Target Media pH/EC             | Fertilizer                       | Daylength            |
|--|--------------------------------|----------------------------------|----------------------|
| <b>Autumn:</b><br>(day) 68-71°F (20-22°C)<br>(night) 60-65°F (16-18°C)<br><b>Spring:</b><br>(day) 68-71°F (20-22°C)<br>(night) 60-65°F (16-18°C)<br><b>Summer:</b><br>(day) 68-71°F (20-22°C)<br>(night) 60-65°F (16-18°C) | 5.8-6.5 pH<br>1.3-1.5 mmhos/cm | 100 to 175 ppm N - 0.7 to 1.2 EC | Facultative Long Day |

## Crop Scheduling

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| Crop Type | Season | Density  | Crop Time   |
|-----------|--------|--|-------------|
| -         | Autumn | 4 plants/ft <sup>2</sup> (43 plants/m <sup>2</sup> ) | 13-16 weeks |
| -         | Spring | 4 plants/ft <sup>2</sup> (43 plants/m <sup>2</sup> ) | 11-13 weeks |
| -         | Summer | 4 plants/ft <sup>2</sup> (43 plants/m <sup>2</sup> ) | 11-13 weeks |

### Finishing Key Tips

Autumn: greenhouse 13 weeks, field 16 weeks. Spring: greenhouse 11 weeks, field 13 weeks. Treat cut stems with an ethylene-inhibiting agent. In temperate areas such as coastal California, plugs are generally transplanted into the field August through October, and February to early May. Autumn transplants will flower the following Spring (February onward); Spring transplants flower late Spring.

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

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Blue



Lavender



White



Mixture



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WITH PANAMERICAN SEED®

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