

Delphinium Delphina™

syngenta® flowers

Culture Guide

Botanical name: *Delphinium elatum*

Product form: Seed

Containers: Quarts, Gallons

Habit: Upright

Vernalization: Not required (First Year Flowering)

Garden Specifications

Garden Height: 14–18" (30–35 cm) tall

Garden Width: 6–10" (15–25 cm) wide

Exposure: Full sun

USDA zone: 4–8

AHS zone: 6–1

Product use: Containers, Landscapes

Germination

Stages 1 & 2

Germination time: 5–8 days

Media temp: 68–72 °F (20–22 °C)

Chamber: Optional

Light: Not required for germination

Seed cover: Yes

Moisture level: 4 - WET: Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.

Rec. tray size: 128–cell tray

Seeds per cell: 2–3

Young Plant Production

Stage 3 & 4

Temperature

Day: 64–66 °F (19–20 °C)

Night: 64–66 °F (18–19 °C)

Average daily temperature: 65 °F (18.5 °C)

Lighting

Day extension lighting: Beneficial to 14 hours

Light intensity: 200–250 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ for the first two weeks after sowing or until true leaf development occurs. Light levels can be increased up to 600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ as rooting increases and the seedling matures.

Day length response: Facultative long day

Daily light integral: 10–12 $\text{mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$

Media pH: 6.1–6.5

Media EC: SME 0.5 to 0.75 mS/cm



Delphina™ Light Blue
White Bee

Fertilizer: 50–75 ppm N

Moisture level: Media should be allowed to dry between irrigations. Alternate between moisture level 3 and 4.

3 - MOIST: Soil is brown in color, strongly squeezing the soil will extract a few drops of water, and trays are light with no visible bend.

4 - WET: Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.

Pinching: No

Plant growth regulators (PGRs): If needed, sprays of B-Nine® WSG (daminozide) at 1,500–3,700 ppm, or a Bonzi® (paclobutrazol) spray at 3–5 ppm to tone plugs.

Plug grow time: 7–8 weeks in a 128–cell tray

Comments: Once germinated, grow plugs at cool temperatures for best quality.

Bulking and Vernalization

Vernalization: Not required (First Year Flowering)

Finishing

Temperature

Day: 66–68 °F (19–20 °C)

Night: 56–58 °F (13–14 °C)

Average daily temperature: 63 °F (17 °C)

Lighting

Day extension lighting: Beneficial to 14 hours

Light intensity: 800–1,200 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$

Day length response: Facultative long day

Daily light integral: 14–16 $\text{mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$



Delphina™ Light Blue
White Bee

Transplanting: Transplant directly into the finished container. Place the rooting media slightly above the level of media in the container. Make sure that the root ball is covered and that the plug is situated in the center of the pot.

Media pH: 6.1–6.5

Media EC: SME EC: 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm

Fertilizer: 75–125 ppm N

Pinching: No. Pinching is not recommended or needed.

Plant growth regulators (PGRs): If needed, spray applications of Bonzi® at 10–15 ppm of Sumagic® at 5–10 ppm are effective early in the crop cycle. Apply a Bonzi® drench at 2–3 ppm to hold size.

Tech tip: Be careful not to overwater to Delphina™. If keep too wet the plants tend to show fertility deficiency symptoms.



Try Chrysal Alesco®, a postharvest foliar spray, to protect ethylene sensitive crops during shipping and retail.

Moisture level: Media should be allowed to dry between irrigations. Alternate between moisture level 1 and 3.

1 - DRY: Soil is tan to gray in color, trays are extremely light, and soil pulls away from sides of container.

3 - MOIST: Soil is brown in color, strongly squeezing the soil will extract a few drops of water, and trays are light with no visible bend.

Common pests: Aphids, Thrips, Whiteflies

Common diseases: Botrytis, Pythium, Fungal Leaf Spots

Scheduling

Size	Crop Time	Plants Per Pot
1.0 quart (4.5 to 5 inch)	9–11 weeks	1 ppp
1.25 to 2.5 quart (5.5 to 6.5 inch, trade gallon)	9–11 weeks	1–2 ppp
3.0 quart to 2.0 gallon (7.5 to 10 inch)	9–11 weeks	2–3 ppp

Estimated finish crop time is from transplant of a 128-cell tray and finished at an average daily temperature (ADT) of 65 °F (18.5 °C).

Example crop schedule for a 2.5 quart

Weeks From Transplant	Description
1 week	Transplant 1–2 plugs per pot for gallon-sized pots and finish at 65 °F (18 °C)
5 weeks	Apply plant growth regulators (PGRs) sprays of B-Nine® WSG or Bonzi® as needed to tone
8 weeks	Apply plant growth regulators (PGRs) drench of Bonzi® to hold prior to ship if needed
10 weeks	Finish

Delphina™ Pink White Bee

