



# Campanula Pristar™

## Culture Guide



**Botanical name:** *Campanula carpatica*

**Product form:** Seed

**Containers:** Quarts, Gallons

**Habit:** Mounding

**Vernalization:** Not required (First Year Flowering)

### Garden Specifications

**Garden Height:** 8–12" (20–30 cm) tall

**Garden Width:** 6–10" (15–25 cm) wide

**Exposure:** Part sun–Full sun

**USDA zone:** 3–9

**AHS zone:** 9–1

**Product use:** Containers, Landscapes

### Germination

Stages 1 & 2

**Germination time:** 7–10 days

**Media temp:** 65–70 °F (18–21 °C)

**Chamber:** Optional

**Light:** Required for germination

**Seed cover:** No

**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:** 288–cell tray

**Seeds per cell:** 3–4

### Young Plant Production

Stage 3 & 4

#### **Temperature**

**Day:** 62–64 °F (17–18 °C)

**Night:** 62–64 °F (17–18 °C)

**Average daily temperature:** 63 °F (17.5 °C)

#### **Lighting**

**Day extension lighting:** Not necessary

**Light intensity:** 200–250  $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$  for the first two weeks after sticking or until root 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 cutting matures.

**Day length response:** Obligate long day

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

**Media pH:** 5.8–6.2

**Media EC:** SME 0.5 to 0.75 mS/cm

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**Fertilizer:** 75–125 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, spray B-Nine® WSG (daminozide) at 1,500–3,750 ppm.

**Plug grow time:** 8–9 weeks in a 288–cell tray

**Comments:** Grow plants under short day conditions (less than 12 hours) to allow sufficient time for young plants to bulk.

### Bulking and Vernalization

**Vernalization:** Not required (First Year Flowering)

### Finishing

#### **Temperature**

**Day:** 62–64 °F (17–18 °C)

**Night:** 60–62 °F (16–17 °C)

**Average daily temperature:** 61 °F (16 °C)

#### **Lighting**

**Day extension lighting:** Necessary to 14 hours

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

**Day length response:** Obligate long day

**Daily light integral:** 12–14  $\text{mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$



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**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:** 5.8–6.2

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

**Fertilizer:** 125–175 ppm N

**Pinching:** No. Pinching is not recommended or needed.

**Plant growth regulators (PGRs):** If needed, spray applications of Bonzi® (paclobutrazol) at 10–15 ppm, or B-Nine® at 2,500–3,750 ppm, or Altercel™ (chlormequat chloride) at 750 ppm. PGR applications are more effective if applied early in the crop cycle.

**Tech tip:** Grow under short days during plug stage and 3–4 weeks in finished production to bulk plants prior to flowering; flowering occurs approximately 6–8 weeks after long day treatments begin. Natural flower timing is June through July.

**Moisture level:** Media should be allowed to dry between irrigations. Alternate between moisture level 2 and 4.

**2 - MEDIUM:** Soil is light brown in color, no water can be extracted from soil, and soil will crumble apart.

**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.

**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)	10–12 weeks	1–2 ppp
1.25 to 2.5 quart (5.5 to 6.5 inch, trade gallon)	10–12 weeks	2–3 ppp

Estimated finish crop time is from transplant of a 288-cell tray and finished at an average daily temperature (ADT) of 61 °F (16 °C).

## Example crop schedule for a 1.0 quart

Weeks From Transplant	Description
1 week	Provide cool nights and high light
4 weeks	Force flower initiation by providing day lengths greater than 14 hours or 4 hours of night interruption lighting
8 weeks	PGR spray of B-Nine® WSG or Bonzi® as needed to tone
10 weeks	Finish



Pristar™ Deep Blue