

## Campanula Campana F<sub>1</sub> Series

(*Campanula medium*)

Cut Flowers Culture (revised 10/31/23)

Top-quality professional cut flower series is a low-energy crop, suitable for Summer or Winter production. See Technical Resources at [panamseed.com/cutflowers](http://panamseed.com/cutflowers) for daylength requirements. Well-matched across the series for timing and habit, Campana delivers strong stems, good foliage and excellent uniformity.

### General Information

| Cultivation Type   | Usage           | Stem Length             | Timing Group |
|--------------------|-----------------|-------------------------|--------------|
| Greenhouse, Tunnel | Line, Secondary | 30-34 in.<br>(76-86 cm) | N/A          |

### 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 |
|-----------|-----------------------|------------|-----------------|--------------------------------------|-----------------------------|------------|
| PEL       | 288                   | 1          | 7-8             | 4-5                                  | 5.8-6.5 pH<br>0.75 mmhos/cm | No         |

### Plug Production

|                    | Stage 1                                   | Stage 2                                   | Stage 3                              | Stage 4                              |
|--------------------|---|---|--------------------------------------|--------------------------------------|
| <b>Moisture</b>    | Level 4                                   | Level 3-4                                 | Level 3-4                            | Level 3-4                            |
| <b>Temperature</b> | 68-72°F<br>(20-22°C)                      | 68-72°F<br>(20-22°C)                      | 60-65°F<br>(16-18°C)                 | 60-65°F<br>(16-18°C)                 |
| <b>Light</b>       | Light                                     | 370-2,500 f.c.<br>(4,000-26,900 Lux)      | 370-2,500 f.c.<br>(4,000-26,900 Lux) | 370-5,000 f.c.<br>(4,000-53,800 Lux) |
| <b>Fertiliser</b>  | Less than 100 ppm N<br>(Less than 0.7 EC) | Less than 100 ppm N<br>(Less than 0.7 EC) | 100 to 175 ppm N<br>(0.7 to 1.2 EC)  | 100 to 175 ppm N<br>(0.7 to 1.2 EC)  |

### Propagation Key Tips

Qualitative long-day plant. To ensure sufficient vegetative growth and stem length, provide short-day conditions in plug stage (<11 hours) from approximately 1.5 to 2 weeks after sowing.

### Growing on to Finish

| Target Media pH/EC (1:2)       | Fertiliser                          | Daylength            |
|--------------------------------|-------------------------------------|----------------------|
| 5.5-6.0 pH<br>0.7-1.0 mmhos/cm | 175 to 225 ppm N<br>(1.2 to 1.5 EC) | Facultative Long Day |

### Daylength Notation

Plants need long day (>14 hours daylength) for flower initiation.

### Crop Scheduling

| Cultivation Type | Support     | Temperature                                   | Density                          | Crop Time  |
|------------------|-------------|---|----------------------------------|------------|
| Greenhouse       | Recommended | 16-21°C/60-70°F (day) 13-16°C/55-60°F (night) | 6-8 plants/ft² (65-86 plants/m²) | 8-12 weeks |

### Fertiliser Notation

Campana needs adequate nutrition to reach the desired length. Apply standard mix fertiliser with micro-elements included at level 175 to 224 ppm N (1.2 to 1.5 EC) constantly with irrigation water at the first 4 weeks after transplant. Then, reduce EC in irrigation water to 1.0 to 1.2 EC (145 to 175 ppm N).

## Chemical Sensitivity

Do not use growth regulators.

## Common Problems

Insects: Aphids, Thrips, Leaf Miners Diseases: Fusarium, Rhizoctonia, Ramularia, Rust, Downy Mildew

## Finishing Key Tips

To ensure sufficient vegetative growth and stem length, use short day grown plugs. Best practices for producing cut flower Campanula Campana must be followed to assure best stem length and strength, and to control the timing of bud set. When transplanting under long or increasing daylength, make sure plants have short days (<13 hours) for 4 to 5 weeks, using black cloth where needed. Follow that with natural long days (>14 hours) for production finish. When transplanting under short days, give plants natural short days (13 hours) for 4 to 5 weeks, followed by daylength extension to long days (>14 hours) for production finish. Mum lighting from 10 p.m. to 2 a.m. can be used. Maintain a medium moisture level. To reach sufficient stem length, Campanula medium needs adequate moisture and fertilisation. Dry growing conditions will cause early flowering and reduced stem length. However, overwatering will cause weaker stems and root systems, which will cause plants to fall over.

## Harvest

Harvest stems when two to three flowers are fully open.

## Post Harvest

Using cool water, use a hydrating solution upon harvest. Move to a holding solution and store at 2°C (37°F). Avoid ethylene exposure; an ethylene-inhibiting treatment is recommended.

## Vase Life

Commercial preservative is recommended. Vase life up to 10 days.

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

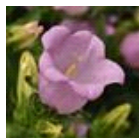
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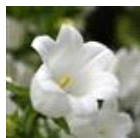
Deep Blue



Lilac



Pink



White



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