

Campanula Champion, II, Pro

Crop	Campanula
Series	Champion, Champion Pro, Champion II
Botanical name	<i>Campanula medium</i>
Plant type	Annual
Seed type	Pelleted
Seed count	700 seeds / gr
Germination	20°C - 7-10 days light favored
Growing	13-15°C
Optimum pH	5.8-6.2

Plug Culture: 5 weeks (288 cell tray)

Stage 1 (days 1-10) Single sow pelleted seed into a 288-plug tray using a sterile and well-drained media. Cover the seed lightly with vermiculite and maintain high humidity and sufficient moisture to break the pellet. Optimum germination temperature is 18-20°C. For the highest germination, maintain an even temperature of 20°C for four days after sowing.

Stage 2 (days 11-21) After the seedlings emerge, place the plug trays in a bright and cool greenhouse with good air circulation. Fertilize with 100 ppm nitrogen using a well-balanced fertilizer. Maintain moderate air temperatures, 20-22°C, to avoid stress and prevent rosette*.

Stage 3 (days 22-34) Seedlings are beginning to fill in the plug tray. Fertilize as needed to maintain strong growth using a well-balanced fertilizer. The use of calcium nitrate-based fertilizer is beneficial in helping to build strong and healthy transplants.

Stage 4 (day 35) Seedlings should now have 2-3 true leaves and are now ready to transplant into cut flower beds. Campanula medium as a species has a tap root structure and root bound plants will not produce a

healthy and strong plant. In order to maximize stem length do not delay transplanting.

*induced dormancy caused by stressing the plugs (uneven moisture, excess fertilizer, chemical damage, delayed transplanting, a day temperature above 28°C, a night temperature above 25°C, or insufficient lighting during flower bud initiation. Maintain optimum temperatures and transplant on time.

Transplanting to finish: 14-16 weeks

Site preparation: Select a bed with good drainage and a soil that is high in organic matter. For best results provide full sun and good ventilation.

Plant Spacing:

10-15 cm apart (*single stem harvest / plant)

*single stem production will crop more quickly and is recommended for greenhouse production.

Note: After transplant do not allow the plants to dry out in order to prevent tip burn.

Temperature: Ideal growing temperature is 13-15°C.

Fertilizer: Campanula is not a heavy feeder. Use a well-balanced calcium nitrate-based feed to maintain healthy growth. A lack of boron will cause distortion and tip abortion. A lack of iron will cause tip burn on the leaves.

Support: Campanula Champion, Champion Pro, Champion II series grows 60-90 cm tall, but support is recommended to avoid damage to plants during windy periods; especially for single stem production.

Lighting: Campanula is a long day responsive plant and will require lighting for winter flowering, recommend to use lighting for year round production for more even flowering timing. Light the plants around 2 weeks after transplanting, using "mum

lighting” for total 16-17 hours day length for minimum 3 weeks. Recommended to extend the day length after sunset until harvesting.

Crop Time: In general, Campanula Champion, Champion Pro, Champion II series flowers in 100-120 days from sowing using the above culture although it is depending on the temperature / climate.

Harvesting: Cut stems when a top bud is open. Dip stems in 38°C temperature water to reduce latex flow and then place in lukewarm water with a bactericide (chlorine tablets). Keep the stems in a cool spot in an upright position to avoid stem bending.

Storage: Cut stems can be stored upright at 2°C either wet or dry for 1 week; however, longer storage will reduce the vase life.

All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on Asian conditions such as in Japan and Sakata cannot be held responsible for any crop damage related to the information given herein. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best.