

Cultural Information for:	Campanula Heavenly Blue pots	Annual
Common Name:	Cup and Saucer	
Botanical Name:	Campanula rapunculus	
Seed Count:	23,000 /ounce	800 /gram
Optimum Germination Temperature:	65-68°F / 18-20°C	
Optimum Growing Temperature:	55-60°F / 13-15°C	

Sakata's Campanula Heavenly Blue is a great cut flower variety as it flowers without vernalization (cold temperature). This new gene has enabled cut flower growers to offer Campanula flowers from early winter through late spring. Heavenly Blue also makes a unique pot plant and is very economical to produce.

Plug Culture – 5 weeks (288 / 12 x 24 tray)

Stage One (day 1-10) Single sow pelleted seed into a **288** plug tray using a sterile and well-drained media with a pH of 5.8 to 6.2. Cover the seed lightly with vermiculite and maintain high humidity and sufficient moisture to melt the pellet. Optimum germination temperature is 65-68°F/18-20°C. For the highest germination, maintain an even temperature of 68°F/20°C for four days after sowing.

Stage Two (day 11-21) After the seedlings emerge, place the plug flats in a bright and cool greenhouse with good air circulation. Apply a light feed of 100 ppm Nitrogen using a well-balanced fertilizer. Maintain moderate air temperatures, 68-72°F/20-22°C, to avoid stress and prevent rosetting.

Stage Three (day 22-34) Seedlings are beginning to fill in the plug tray. Fertilize as needed to maintain a media EC of 0.7 to 1.0 mmhos (2:1 dilution) using a well-balanced fertilizer. The use of Calcium Nitrate-based fertilizer is beneficial in helping to build strong and healthy transplants.

Stage Four (day 35) Seedlings should now have 2-3 true leaves and are now ready to transplant into pots.

Note: *Avoid long day condition in the plug stage, (> 12 hours of photo period from March to September) by using black cloth.*

Transplant to flowering – 14 weeks

Weeks 6-8

Put one plant per 6 inch/15cm pot using a well-drained organic media. Grow the plants at 68°F for three weeks to establish the

plants. Fertilize the pots weekly with 150 ppm of a well-balanced Calcium Nitrate-based fertilizer. Ideal EC is 0.7-1.0 mmhos (2:1 dilution).

Weeks 9-11

The plants should now be established and ready for bud initiation. Drop the temperature to 50-55°F/10-12°C and provide long day treatment for 3 weeks (total 16 hour day length). Night interruption from 10 pm to 2 am works well using incandescent (mum) lighting.

Weeks 12-14

Maintain cool temperatures of 50-55°F/10-12°C, but stop day length manipulation (turn off the lights). This will help keep the plants more compact and promote better branching. Drench the pots with 3-5 ppm of Bonzi (paclobutrazol) with 50 cc per pot 5-7 days after stopping long day treatment. Use lower rates in northern areas or under lower temperatures and light levels.

Weeks 15-18

Raise the temperature to 59°F/15°C. Additional growth regulator may be applied if necessary.

Week 19

Pots should begin flowering. Pots can be sold with a few open flowers as the buds will open nicely indoors; especially if placed near a lamp or bright window.

*Scheduling: Sowing from August to February for flowering from January to June**

****Sowing schedule is totally dependent upon the ability to maintain optimum temperatures. In mid to late spring the longer photoperiod, higher light levels and warmer temperatures will accelerate flowering.***

"All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North American conditions and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best."