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| Cultural Information for: | Campanula Champion Pots | Annual |
| Common Name: | Cup and Saucer | |
| Botanical Name: | Campanula medium | |
| 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 Champion series 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. The Champion series is also highly suitable for pot plant production and is very economical to produce. Ideal for Valentine's Day, Easter and Mother's Day, Campanula Champion is sure to ring bells with consumers.

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

Stage One (days 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 (days 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. **Maintain short day conditions, (less than 11 hours) to prevent pre-mature flower bud initiation.**

Stage Three (days 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.

Transplanting to flowering

Days 36-56 (3 weeks)

Put one plant per 6 inch/15 cm pot using a well-drained organic media. Grow the plants at 68°F/20°C 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).

Note: It is necessary to maintain short day conditions (less than 11 hours) from sowing until at least 3 weeks after transplanting. The plants should be fully rooted with 8-10 true leaves covering the pot prior to flower bud initiation.

Days 57-77 (3 weeks)

The plants should be 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. ***For fuller pots and a rounder look make a soft pinch as the plants begin to elongate vertically.***

Days 78-98 (3 weeks)

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 10-20 ppm of Bonzi (paclobutrazol) with 50 cc per pot at the beginning of week 12*. Use lower rates in northern areas or under lower temperatures and light levels. Champion Blue and White Improved are slightly less vigorous than Pink and require less growth regulation. Be sure to evenly distribute the solution around the pot.

**** for pinched plants apply within 2 weeks after pinching, before elongation of the side shoots.***

Days 79-133 (5 weeks)

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

Day 134 (19 weeks after sowing)

Pots should begin flowering. Pots can be sold in the bud stage (big and puffy) 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."