

Production Tips for Top Performers

Campanula persicifolia

'Takion Blue' and 'Takion White'

Researchers from the Floriculture Program at Michigan State University (MSU) share research-based information on some of the top perennial performers from the past few years.

by CATHY WHITMAN and SONALI PADHYE

There are about 300 species in the genus *campanula*, most native to northern temperate regions. Many are valuable ornamentals and have become classic elements in the garden, adding a touch of grace and refinement. Species range from tiny alpiners to 5-foot-tall specimens for the back of the border. The flowers are generally bell-shaped and lavender-blue, white or pink.

Campanula persicifolia is commonly called peach-leaved bellflower because the long narrow leaves resemble those of the peach tree. It is native to Western

Asia and Europe, and forms upright spires about 3 feet tall, with many flowers of lavender-blue or white. The plants prefer cool conditions and perform best in Zones 3 to 6. *C. persicifolia* plants spread and will also self-sow quite freely in the right environment – full sun or part shade, and moist well-drained soil. They are an elegant and showy addition to any border, and also make excellent cut flowers.

We have worked with *C. persicifolia* previously and confirmed that they do require a cold treatment, or vernalization, for flowering. 'Takion Blue' and 'Takion White' are new cultivars selected for dwarf habit and good branching (Figures 1 and 2). Reportedly, they have a short vernalization requirement of four weeks at 32 to 35°F.

Materials and Methods

We received 128-cell seedlings of 'Takion Blue' and 'Takion White' with seven to 10 leaves per plant. Plugs were transplanted and forced at 68°F under one of three photoperiod conditions: nine-hour short days, 16-hour long days created with incandescent lamps or a higher light treatment of 16-hour long days created with high-pressure sodium (HPS) lamps. In the higher light treatment, plants received about 30 percent more total light per day than in the other two treatments. We also cooled plugs for

four, eight or 15 weeks in a cooler at 41°F, lighted for nine hours per day.

Results

'Takion Blue' and 'Takion White' did require cold to flower (Figure 4, page 76). Under our conditions, four and even eight weeks of cold did not result in 100 percent flowering. All plugs that had been cooled for 15 weeks flowered (Figure 5, page 76).

Both of these cultivars were day neutral, meaning that photoperiod had little effect on flowering. Plants flowered after five to six weeks at 68°F under short days or long days.

Supplemental light resulted in more sturdy stems, more lateral shoots and more inflorescences. Both cultivars had more flower buds on the main inflorescence under HPS lights, but all were quite beautiful, with between 25 and 30 flower buds on the main inflorescence.

Heights of our 'Takion Blue' and



Figure 1. *Campanula* 'Takion Blue.'

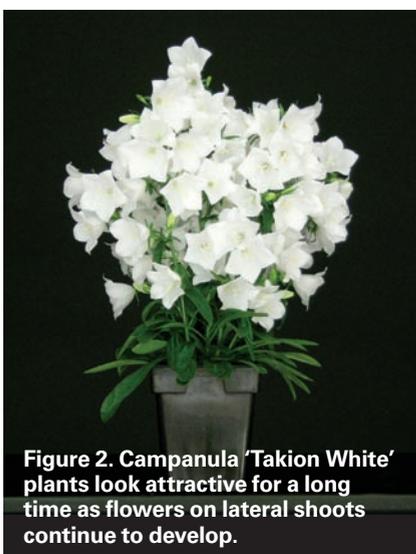


Figure 2. *Campanula* 'Takion White' plants look attractive for a long time as flowers on lateral shoots continue to develop.

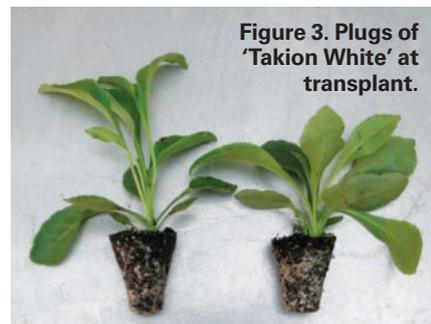


Figure 3. Plugs of 'Takion White' at transplant.

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'Takion White' plants when their first flowers opened were 15 to 17 inches under HPS lights and 18 to 22 inches under incandescent lights. Plants were only 12 to 14 inches tall when forced under nine-hour short days. 'Takion Blue' was 2 to 5 inches taller than 'Takion White' on average.

We have not tested growth retardants on *C. persicifolia* but paclobutra-

Figure 4. 'Takion White' that received zero weeks of cold and were grown at 68°F for 12 weeks.



zol (Bonzi), daminozide (B-Nine) and uniconazole (Sumagic) have been effective on other species of campanula.

Production Notes

We expected shorter durations of cold to be effective, but our plugs re-

quired 15 weeks of cold to obtain 100 percent flowering. This response is probably due to the small size of the seedlings we cooled. In many species, particularly seed-propagated, plants have a juvenility requirement – meaning individual plants are unable to flower until they've attained a certain size or age. A requirement for cold can interact with this juvenility requirement: Immature or juvenile plants are less sensitive to the cold treatment, thus a longer cold treatment is needed.

In other trials, colleagues have found that 14-week old 2 x 2 ¼-inch liners of both Takion cultivars have all flowered after eight to 10 weeks of cooling at 38 to 41°F. Also, we cooled our plugs at a slightly higher 41°F instead of the 32 to 35°F suggested, which could have affected their response.



Figure 5. 'Takion White' plants that received 15 weeks of cold at 41°F and were grown at 68°F for six weeks.

For success with 'Takion Blue' and 'Takion White,' start with larger plant material or give small plugs time to grow before cold, and provide an ample cold treatment. These varieties should be ideal for spring forcing, and are show-stoppers in the garden center. **GG**

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