

Figure 1.



'Sunny Border Blue' makes an attractive flowering potted plant.

SPECIES: VERONICA LONGIFOLIA

'SUNNY BORDER BLUE'

COMMON NAME: SPEEDWELL

by ERIK S. RUNKLE, ROYAL D. HEINS, ARTHUR CAMERON, and WILL CARLSON

VERONICA is in the *Scrophulariaceae*, or snapdragon, family and contains more than 250

species of herbaceous annuals or perennials. *Veronica longifolia* is native to Europe and Asia but has naturalized in North America. It is a clump-forming perennial that grows 2-4 feet tall with white, pink, or deep-blue flowers. The cultivar 'Sunny Border Blue' has dense violet-blue spikes of flowers that rise above attractive, dark-green, opposite leaves. In 1993, 'Sunny Border Blue' was named Perennial Plant of the Year

by the Perennial Plant Association. We have found that it makes an attractive flowering potted plant that can be enjoyed first indoors and later outdoors (Figure 1).

Flower Induction Requirements
The following

recommended production information applies only to 'Sunny Border Blue.' Other *Veronica* species and cultivars may have different production schedules.

1. PLANT SIZE

'Sunny Border Blue' is propagated by stem cuttings. Rooted cuttings with at least two to three nodes will flower after cold treatment.

2. COLD TREATMENT

Rooted cuttings of 'Sunny Border Blue' taken from unchilled stock plants have an obligate cold (vernalization) requirement to flower. A 10-week cold period or longer at about

41°F (5°C) is recommended. Five weeks of cold will satisfy the requirement, but plants take approximately 2 weeks longer to flower. Plants not provided with a cold treatment will not flower (Figure 2). Some rooted cuttings may flower without cold treatment if they were taken from cold-treated stock plants.

3. PHOTOPERIOD

'Sunny Border Blue' is a day-neutral plant; following cold, all plants flower regardless of photoperiod (Figure 3). Therefore, natural photoperiods are recommended.

4. PROPAGATION

The only method of propagation is by cuttings. Stock plants should not be exposed to cold unless flowering of cuttings is desired. Cuttings with two to three nodes root readily within 2-3 weeks.

5. MEDIA AND FERTILIZATION

Plants prefer a moist, well-drained medium maintained at a pH of 5.5 - 6.0. Constant fertilization of 100 to 150 ppm N, 10 to 20 ppm P, and 100 to 150 ppm K₂O is recommended (for example, 20-10-20).

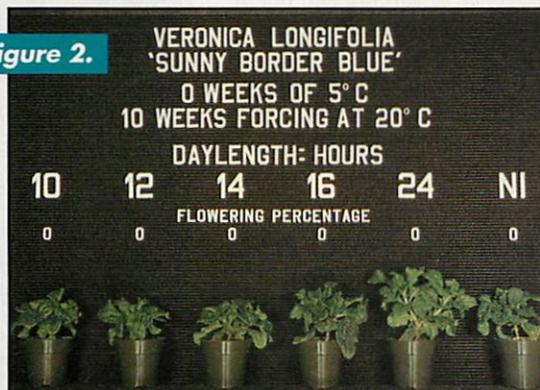
6. LIGHTING AND SPACING

Moderate to high light levels are recommended during forcing of 'Sunny Border Blue.' Supplemental lighting at 400-500 footcandles improves plant quality during winter.

7. IRRIGATION

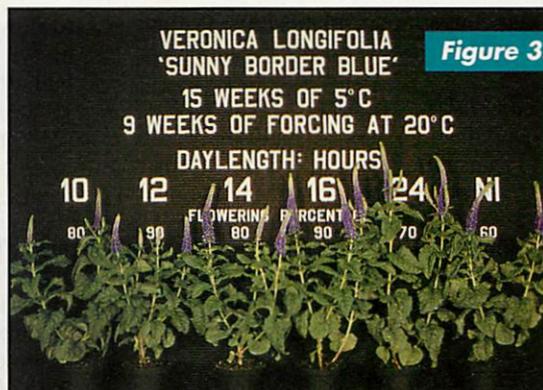
Although 'Sunny Border Blue' is a relatively slow grower, plants have thick leaves and require frequent irrigation, especially when grown in small pots. Rapid wilting is of particu-

Figure 2.



'Sunny Border Blue' cuttings taken from unchilled stock plants will not flower without cold treatment.

Figure 3.



After cold treatment, 'Sunny Border Blue' flowers under all daylengths.

TABLE 1. *Veronica longifolia* 'Sunny Border Blue' Production Schedule

Growing Time	Cultural Practice	Temperature	Photoperiod
2-3 weeks	Take cuttings ↓ Rooting OR purchase plugs	72°-77°F (22°-25°C)	Natural photoperiods
≥10 weeks	Cold treatment ↓ ↓	35°-45°F (1°-7°C)	9 hours of light
Begin Forcing. Pinch Tips.			Natural photoperiods
		70°F (21°C) 8-9 weeks flower	Visible Bud to Flower 60°F (15°C) - 29 days 65°F (18°C) - 25 days 70°F (21°C) - 22 days
		65°F (18°C) 10 weeks flower	
		60°F (15°C) 12 weeks flower	

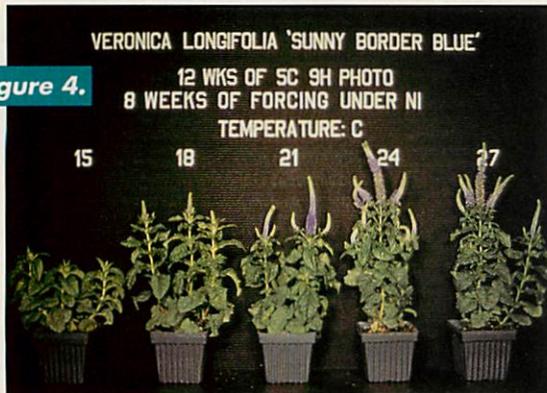


Figure 4.

'Sunny Border Blue' flowers faster under warm temperatures, but plants are more attractive when grown at daily averages of 60°-70°F (15°-21°C). Photo courtesy of Shi-Ying Wang.

lar concern once plants have visible buds.

8. PLANT HEIGHT CONTROL

Pinched plants are naturally 12-16 inches tall. Pinching the tips of cuttings before forcing will induce lateral breaks, increasing the number of flower spikes and reducing plant height by a few inches. Growth retardants are recommended to control plant height only when plants are grown in 4-inch pots. Our research indicates that A-Rest, B-Nine, Bonzi, and Sumagic effectively reduce stem elongation and cause only slight flowering delay. If growth retardants are

applied, spray after 2-3 weeks of forcing or when stems begin to elongate.

9. TEMPERATURES AND CROP SCHEDULING

Time to flower depends on forcing temperature (Figure 4). 'Sunny Border Blue' is most attractive when grown at daily averages of 60°-70°F (15°-21°C). Plants grown above 70°F (21°C) have light-green foliage and small inflorescences. Plants grown at 60°F (15°C) have the largest inflorescences but flower slowest. At 60°F (15°C), buds are visible after 8 weeks of forcing and begin to flower after 12 weeks. Plants grown at 65°F (18°C) reach visible bud after 6 weeks and flower within 10 weeks. Plants grown at 70°F (21°C) have visible buds after 5 weeks and begin to flower in 8 weeks.

10. DISEASE AND INSECT PESTS

Botrytis is often a problem on lower leaves. Spraying for Botrytis is recommended before and after cold treatment. Powdery mildew is also a frequent problem; fungicide applications are advised once symptoms become apparent. Starting with disease-free cuttings is a must.

11. POSTHARVEST CONCERNS

Plants should be shipped once the first flowers open. Spent flowers remain on the lower part of inflorescences, making plants less attractive. **GG**

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FORMULA FOR SUCCESS: 'SUNNY BORDER BLUE'

1. Unchilled rooted cuttings should be given at least 10 weeks of cold at 41°F (5°C).
2. Pinch tips of cuttings at the beginning of forcing.
3. Force at 60°-70°F (15°-21°C) under natural daylengths. Supplemental lighting during winter improves plant quality.
4. Plants grown in 4-inch pots need to be irrigated frequently, especially once they have visible buds.
5. Apply growth retardants after 2-3 weeks of forcing if plants are grown in 4-inch containers.