

# Perwinkle

## It's Culture and Response To Growth Retardants

Leszek Markiewicz

Department of Floriculture

Cornell University

Perwinkle *Vinca rosea* L., (now properly named *Catharanthus roseus* G. Don), has many virtues as a bedding plant and deserves more attention from plant growers and home gardeners. It is one of the easiest plants to grow as it has very few special requirements. It does well in any type of soil with reasonably good drainage. One can grow it in sunny or partially shade areas, however, it is more floriferous in a sunny location. For a short period it tolerates either dryness or high moisture. Unlike other bedding plants such as petunias, salvias, snapdragons and marigolds, even heavy rains do not affect the perwinkle's attractiveness.

Perwinkle is a decorative plant because of its attractive foliage and blossoms. The long elliptical shaped leaves are shiny and dark green during the whole growing season. The single flower is flat, containing 5 petals and is similar in appearance and size to the perennial phlox. Flower color is commonly rose-pink, but there are varieties with pure white flowers or white with pink eyes.

Perwinkle originated in the West Indies, where it still exists as a wild plant. It is also commonly found in the tropical zones of Africa and South America.

Perwinkle is a perennial plant in warm climates, however, it is treated as an annual plant in temperate areas. It is usually planted outdoors after the last frost in the spring and will blossom until the first frost in the fall.

To obtain salable plants for Memorial Day, seeds should be sown about February 25–March 15. Germination occurs in 7–10 days at temperatures of 68–75°. After germination, the seedlings should be transferred to a 60° greenhouse. The seedlings should be transplanted when they are at the 4-leaf stage. The flats or pots in which the seedlings are transplanted should be a good greenhouse soil that has good drainage. The pH of the soil should be between 6 and 6.5; superphosphate and a complete fertilizer should be added to the soil. A regular liquid feeding program should be started soon after the seedlings are planted.

Grown at 60°F the plants usually start to flower when they are about 8 inches high. If temperatures are too high or if sales are delayed for 3 or 4 weeks, the plants may



become too tall and lose leaves on the lower parts of the stem. This condition reduces the salability of the plants. As is recommended for other bedding plants, the application of a retardant may insure against the "stretching" of periwinkle.

While conducting experiments on the influence of growth retardants on the low temperature resistance of bedding plants, some observations were made on the influence of Cycocel, Phosfon D and B-Nine on the growth of periwinkle.

Data were collected from an experiment in the spring of 1966, the normal production time for periwinkle. The results of these data suggest growth regulators are suitable for preserving the shape of periwinkle.

The seeds for this experiment were sown February 28

*(continued on page 6)*

## Perwinkle

(continued from page 1)

in 6-inch pots sealed in polyethylene bags to avoid water loss during the germination period. The seeds germinated after 7 days in 70° temperature. Seedlings at the 4-leaf stage were transplanted on March 21.

A standard soil mixture (9 parts soil, 6 parts peat moss, 4 parts perlite, 2 parts sand) was used with 2 ounces of superphosphate and 1 ounce of 10-10-10 added per bushel of soil. After the plants were established (March 28) they were treated with growth retardants.

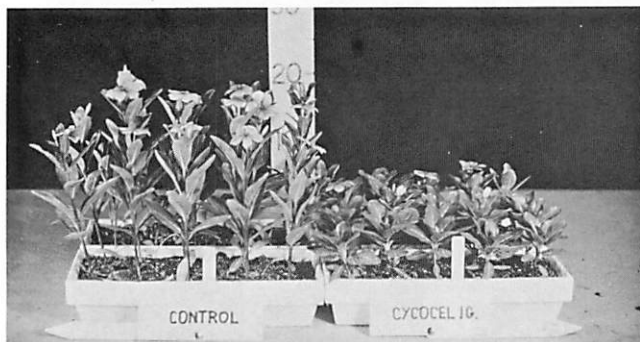


FIGURE 1 Perwinkle—Control on left and right plants treated with Cycocel 1 gm per 1000 Cm<sup>3</sup> of soil.

The data (table 1) and figures (1, 2) show Cycocel at doses of 1g and 0.5g per 1000 cm<sup>3</sup> of soil applied as a drench maintained the shape of perwinkle. Plants treated with Cycocel were still salable in mid-June. Leaf color remained deep green and the plants were compact in form. Phosfon D and B-Nine did not demonstrate as favorable influence as Cycocel.

Other observation made in a similar experiment, but under low light intensity (600 ft. candles), again showed Cycocel prevented plants from becoming taller, turning yellow, and dropping leaves.



FIGURE 2 Perwinkle—Left treated B-Nine 1% Spray—Right—Phosfon drench 2000 ppm.

Table 1. The effects of 3 growth retardants on the growth of Perwinkle.

Treatments	Ave. Plant Height cm*		Remarks
	May 25	June 15	
B-Nine 1000 ppm (Spray)	18.8	26.5	Flowers smaller than control, lower leaves became yellow.
Phosfon D (drench)	0.4 g	10.0	Roots not support upright growth — apparently there was some root injury.
	0.08g	16.8	
	0.016g	19.5	
Cycocel (drench)	1.0g	9.1	Desirable plants. Leaves remained dark green color.
	0.5g	9.2	
	0.2g	19.2	
Control	—	20.5	Plants became excessively tall and lower leaves became yellow and fell off.

cm\* There are approximately 2½ centimeters in 1 inch.

The following growth retardant concentrations, doses and types of applications were used:

*B-Nine*—1000 ppm sprayed every second week, about 2 ml solution per plant.

*Phosfon D*—2000 ppm drenched once at the rate of 0.4g, 0.08g, 0.016g per 1000 cu<sup>3</sup> of soil—which is 0.56g, 0.112g, 0.0224g per 1½ quart of soil—the quantity to fill a Tuffy Tray, TTJ5, or a 6" pot.

*Cycocel*—5000 ppm drenched once at the rate of 1.0g, 0.5g, 0.2g per 1000 cu<sup>3</sup> of soil—which is 1.4g, 0.7g, 0.28g per 1½ quart of soil, the quantity to fill a Tuffy Tray, TTJ5 or a 6" pot.