

Mature *Vinca minor* Propagation®

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Vinca minor, myrtle or periwinkle, a popular evergreen groundcover is a very difficult plant to propagate. It is very sensitive to stressing during the cutting and sticking process, it rots easily under mist, and it requires a deep well-drained propagation tray with a well-drained propagation mix. It also has a very strong juvenility factor. During the first 2 years of growth in the field it sends out long horizontal runners that naturally root from the nodes into the ground, and this node development and rooting in take place in late summer and early fall, mid-August to October, here in southern Michigan. Therefore, traditionally a 3 to 5-node cutting is taken from cuttings harvested early in the morning from the field, kept moistened and shaded, the bottom two sets of leaves are stripped, and it is stuck in a very soft, well drained, fine-particle propagation mix.

There are times when we have an older, 3- or 4-year-old field, and there are times when we need to propagate earlier in the summer, June or July, and we can use a longer rooted cutting for forcing in the following spring for early conventional cutting production. Fraser Hancock of Sheridan Nursery in Canada presented much of this system of vinca production to the Eastern Region many years ago. We have further developed this method such that the cutting is not stuck but is buried in propagation medium by the handful.

The mature cutting is from 10 to 20 inches long. It usually does not have any leaves along the bottom 6 to 8 inches of the stem, and the nodes are not well developed there. This is not the type of cutting that will root when treated in the conventional manner. We do not cut this but pull the stems by the handful and this usually brings up a small piece of crown with a few buds at the base of the stem. The crown area is where rooting usually initiates, with some rooting from the poorly formed nodes along the stem. What leaves are there are not stripped. They will disappear when buried under the soil and roots will develop from the nodes there.

We use a bulb crate for the propagation tray. It has enough depth so that 8 to 10 inches of the stem are buried in the potting mix. The production technique is to fan out a handful of "pullings", which are different than cuttings, so that the stems are 1/2 to 1 inch apart and then to scoop about 1 inch of potting mix (a peat-bark mix) over the stems, and to pack the medium a little. This is a very fast method of getting a cutting into the propagation mix. Also it is the only way to get a long cutting into the propagation mix because it is not possible to stick a weak-stemmed cutting this deeply.

This is a highly effective method of rooting *V. minor*. We can only surmise the reasons for this. We think that it is because of the synergistic effect of all of the factors involved. Firstly, many of the stems have a nubbin of crown at the base and this roots early, usually within 2 weeks. Secondly, a lot of stem is buried in the soil including some of the leaves and we think that the stem and leaves benefit from being covered with damp earth and that this adds moisture to the cutting. Thirdly, the plant material is placed very thick and at an angle so that the upper part of the cuttings, the part with the leaves, is layered or shingled, and this both self-shades

the cuttings underneath and holds in the moisture from the mist creating an optimum microclimate for rooting. And fourthly, vinca seems to like a long cutting even though there is more leaf material to transpire during the rooting process.

We like this process because it is the fastest way to get a plant stem into the soil mix so that it can be mist propagated. To recapitulate: first of all they are pulled by the handful and placed in a large tray with the bottoms orientated in the same direction harvest the plants. These trays of cuttings are then immediately sprayed with cool water. Then handfuls of plants are taken directly from the carrying tray where they are all oriented and lined up and placed into the bulb crate on top of a propagation mix. Then a scoop of a propagation mix is placed over the row of stems, about 1 inch or less thick, and packed down. There is no further processing of the stems, no sorting, no cutting or trimming, and no stripping of leaves, and no sticking in hormone powder.

The resulting rooted cutting is usually used as a source of cuttings in early summer and then the lower rooted part is potted up into a 3- to 4-inch pot. This is a very good cutting because often it has rooted from multiple nodes and new shoots are growing from the old nodes. This method of rooting should be applicable to other plants that have a soft flexible stem and that are difficult to stick into a dibbled tray of a peat-bark mix or any other long cutting that can be kept oriented from the time of harvesting until the time of sticking.

Boxwood Propagation at Zelenka Nursery, Inc.®

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INTRODUCTION

I will be sharing the production steps we use to produce *Buxus* at Zelenka Nursery, including greenhouse propagation and field grown liners. We propagate and grow our liners for our container program. We have tried several different production methods and have found the following method to be most cost effective to produce *Buxus* at Zelenka.

CULTIVAR SECTION

Our sales forecast drives the quantity and species of *Buxus* to be grown. We currently are propagating 200,000 *Buxus* annually, including the following species and cultivars:

- *Buxus* 'Green Velvet'
- *Buxus* 'Green Mountain'
- *Buxus sinica* var. *insularis* (syn. *microphylla*) 'Winter Gem'
- *Buxus sempervirens* 'Wonford Paige'
- *Buxus* 'Glencoe'

PROPAGATION GREENHOUSE REVIEW

Our greenhouse is equipped with raised benches, natural gas heaters, intermittent mist system, hot-water bottom heat, fans for cooling, and is covered with a 6-mil 3-year poly tube.