

PROPAGATION OF VINES

TOM KIMMEL

*Twixwood Nursery
Berrien Springs, Michigan 49103*

Although many vine species and cultivars have been in and out of our production we will concentrate on a select group of eight genera which are hardy at least to Zone 5: *Clematis*, *Hydrangea*, *Actinidia*, *Ampelopsis*, *Campsis*, *Lonicera*, *Parthenocissus*, and *Polygonum*. These comprise approximately 7% of our total nursery output. Many more vines which are primarily considered groundcovers, such as *Euonymus fortunei* and *Hedera helix* cultivars, will not be considered here.

At Twixwood Nursery we prefer vegetative cutting techniques as a method of maintaining cultivars or superior strains. This gives us control over inventory and allows us to increase numbers quickly either by maintaining adequate stock plantings or by late winter forcing of containerized material for cuttings.

In order to obtain a high quality product we strive to take our cuttings from pest and disease free stock. We also strive to provide a clean work area as well as treat our propagation houses with Green Shield™ (general greenhouse disinfectant) at a rate of ½ oz/gallon of water. The primary pest problems are two spotted spider mites and to a lesser degree aphids. Pests are controlled with a rotating spray schedule of three to four miticide/aphicide combinations on a seven to ten day schedule during the growing season. Clematis wilt can be a problem and is caused by an unspecified fungus. We apply preventive drenches of benomyl and Chipco 26019 on a rotating schedule during the growing season. This is done every two weeks. Leaf spot on *Parthenocissus* can be a cosmetic problem and is controlled with a zinc-based chemical. *Hydrangea anomala* subsp. *petiolaris* and *Polygonum aubertii* have been found to be susceptible to high E.C.'s (electrical conductivity) in the potting soil, particularly in the hot summer growing season. Liquid fertilizer, (ammonium nitrate/potassium nitrate at 3.0 mmho) is applied at every other watering and the E.C.'s of the soil are monitored so as not to exceed the 0.35 to 0.4 mmho. Leaching is done as a corrective measure.

Our *Clematis* production begins approximately mid-March and continues until about mid-June. The vines are cut from containers overwintered in unheated polyhouses. Cuttings are taken in the early morning and stored in a cooler if necessary until ready to process later that day. The vines are processed into two node cuttings, discarding the very tender tip. The basal leaves are cut off and ¼ in. of the stem is left below the bottom node. Cuttings are

stuck in an open flat filled with a perlite/sand mix (1:1, v/v) using #8 Hormex rooting powder. Trays are watered shortly after sticking. At the end of each day the trays are hand drenched with benomyl at a rate of 2 tbs to 1½ gal water. The use of bottom heat and an intermittent overhead mist system has worked best for us. We use a Maplewood vortex type fine mist nozzle hanging 6 ft above the plant surface set to mist at a rate of 8 sec every 20 min. In approximately four to five weeks the cuttings are removed from the mist and are ready to be potted two to three weeks later.

Hydrangea anomala subsp. *petiolaris* production begins in mid to late April. Timing is very important as cuttings must be taken from new growth when the leaf is approximately ½ its mature size. Cuttings are taken from containers overwintered in unheated polyhouses. The cutting consists of both the apical and the lateral buds. Lateral buds are cut so as to include part of the old wood. Cuttings are stuck in an open flat filled with BP4 Stronglite mix (composted pine bark, vermiculite, perlite, peat) using #8 Hormex rooting powder. These are placed under intermittent mist and bottom heat again using the Maplewood mist nozzles 6 ft above the plant surface at a rate of 8 sec every 20 min. It takes approximately three to four weeks for root initiation to occur, and they are ready to pot in another three to four weeks.

The bulk of our vine production starts in June when our main crew beings work. Vines included are: *Actinidia arguta*, *Ampelopsis brevipedunculata* 'Elegans', *Campsis radicans*, *Lonicera japonica*, *Parthenocissus* species, and *Polygonum aubertii*. We take herbaceous softwood cuttings from stock plants. All cuttings are two to three nodes and 3 to 6 in. long depending on the vine. We use #3 Hormex rooting powder and stick directly into 2¼ in. pots filled with BP4 Stronglite mix. Flats are placed under intermittent mist. We begin at a rate of 8 sec every 5 min for the first week, then switch the clocks back to 8 sec every 10 min. After callusing and root initiation, the clocks are moved back to 8 sec every 20 min until they are moved out of the mist. We do not use bottom heat.