

## Propagation at Carolina Native Nursery<sup>©</sup>

Bill Jones

President, Carolina Native Nursery, 1126 Prices Creek Road, Burnsville, North Carolina 28714, USA

Email: [Bill@carolinanativenursery.com](mailto:Bill@carolinanativenursery.com)

### NEW JERSEY TEA

The name, New Jersey tea (*Ceanothus americanus*) was coined during the American Revolution. The leaves were boiled and used as a substitute for tea. From personal experience, as we boil the seed prior to planting, the aroma smells of tea. One problem we have in the native plant business is finding liners that are not too large. *Ceanothus americanus* has a maximum height of 1 m (~3 ft) and is drought resistant. It is an early-to-mid-summer bloomer.

As the demand of this plant became apparent to us, we were determined to figure out how to best grow it. We certainly could not find a nursery growing liners, as is the case with other plants we grow. We originally brought some to the nursery from a plant rescue that took place in Henderson County, North Carolina. Those original 20 plants sold quickly. So, as we have with many plants at Carolina Native we asked the question: to propagate by seed or cuttings? Which was going to be quickest method to get a good quality plant in the most cost effective timeframe? We have expertise in both methods, where to look for research, and the patience to do it.

### The Bottom Line: Use Seed Propagation and Grow Your Own Plants

The seed capsules will disperse the seed 1.2 to 1.8 m (4 to 6 ft) from the plant. It is important to harvest the seed when it ripens and turns black. As you begin to find open capsules, you will have a week or two to harvest or you will have to pick up seed from the ground. Clean the seed. Then boil a pot of water, add seed to boiling water and then turn off the heat. Soak those seeds for 24 h. We sow the seed into pine bark, the same medium we will shift the seedling transplants into. This reduces shock, which is extremely important in the ericaceous plants we grow.

Germination take approximately 2-3 weeks and we start fertilization with the 20-20-20 (N-P-K) at half rate on a weekly basis until we are prepared to move the seedlings to a RootMaker<sup>®</sup> flat of 18 cells. RootMakers grow the dense, fibrous root system we need in all the liners we grow. We will continue to grow them in the 18-cell flats, pruning at least 2 to 3 times until we are ready to transplant the next spring; we are currently experimenting with plant growth regulators for height control. Potting up in the March/April timeframe of the following spring will produce a full, 0.5-0.6 m (18-24 in.) 3-gal container plant ready to sell. We will top dress with Harrell's 18-4-8 (N-P-K) 6-month formulation at 62 g.

### Vegetative Propagation

We have tried all the hormones — K-IBA, IBA, and liquid and talc formulations at varying levels. We found that 8000 ppm Dip 'N Grow (IBA and NAA) worked the best with a 60% rooting and overwintering the rooted liners in flats. We found a pine-bark mix worked better than peat-based media, since this species does not like a lot of moisture. However, seedling produced liners work the best.

**1. Side Note.** These plants are addictive for rabbits and need to be protected. Rabbits will eat them to the ground and the plants will not recover.

### MAPLELEAF VIBURNUM

*Viburnum acerfolium* is found from Florida to Maine, and as far west as Texas. The species is 1-1.2 m (3-4 ft) wide by 1.5-1.8 m (5-6 ft) tall. Ornamental features include creamy-white flowers, black fruit that hangs like cherries, and great fall color. It is a

difficult plant to grow, requiring shade and a relatively dry, not too moist site. Mapleleaf viburnum needs to be watered by hand in the nursery and closely monitored.

### **Seed**

Takes 2 years to propagate from seed, which is difficult to find.

### **Cuttings**

We also use screened pine-bark medium and RootMaker flats with 18 cells. Cuttings are from current year's growth taken during the summer and 8-13 cm (3-5 in.) long. We use 8000 IBA talc plus Celluwet (sodium carboxymethyl cellulose, Coor Farms Supply) and get 60% rooting. The most important thing here is to overwinter the rooted liners in an unheated greenhouse. We will pot up the following spring and top dress with Harrell's 18-4-8 (N,P,K) 6-month formulation at 62 g. It will take 2 years from this point to have a nice, fully rooted 0.6 m (2 ft) plant. Water only as needed and keep the plant on the dry side.

### **MOUNTAIN ANDROMEDA, MOUNTAIN FETTERBUSH, MOUNTAIN PIERIS**

*Pieris floribunda* is a dark green broadleaf evergreen, ericaceous shrub, cold hardy ornamental plant. It is a slow grower that obtains width and height dimensions of 1.2-1.5 m (4-5 ft). It should be planted in full sun in well-drained soil, let me repeat: well-drained soil! It does not like high humidity. We collected seed from Shining Rock Wilderness in Pisgah National Forest (North Carolina). It can be found in boulder fields and on ridge tops in Virginia south of Roanoke.

### **Seed Propagation**

We grow it from seed and have very successful germination from seed we gathered 5 years from the Shining Rock Wilderness. Seed flats have screened pine bark with approximately 1/8 in. peat on top. We want the roots to grow into the bark as soon as possible. In our experience, if ericaceous seedlings are grown in peat, when the plants are transferred to larger containers with a pine-bark medium the roots will not want to venture out of the peat. So we sprinkle the seeds onto the peat, cover the flats with clear plastic covers, put them on heated benches maintaining a temperature around 15.5°C (60°F), and wait 2-3 weeks. Once germination occurs we activated lighting from 10 PM to 4 AM and begin the following schedule:

### ***Pieris* Seedling Care and Feeding**

Our recommendations are similar to Jay Jackson's presentation last year. For biweekly algae control use Xerotron-3 (Griffin Greenhouse and Nursery Supplies) at ¾ tablespoon per 2 gal as a drench.

### **Recommendations**

For fertilization apply 20-20-20 (N-P-K) with a ¼ tbs per gal at germination until true leaves appear. When the true leaves appear, use injector concentration rates, alternating one every 10 days with stock solutions of: 20-20-20: 5.1 oz/1 gal, 21-7-7: 4.8 oz/1 gal, and 5-11-26: 5 oz/1 gal. We monthly apply the biostimulant Essential® Plus Organic 1-0-1 at 2 oz/gal as a water drench. We weekly alternate fungicides captan and Heritage® at 1 tbs/gal. Gnatrol® is applied biweekly at 8 teaspoon/gal. Yellow sticky cards are used to monitor insects.

In April we will pull the seedlings out of the flat and plant in RootMaker flats of 18 cells with screened pine bark. We prune 2-3 times for developing fully rooted liners for planting into 3-gal squats containers the following spring. We will top dress with Harrell's 16-6-11 (N-P-K) 6-month formulation at 63 g.

### **SMOOTH HYDRANGEA**

With *Hydrangea arborescens* and *H. arborescens* subsp. *radiata* the overall process for seed propagation is the same as for the *P. floribunda*. But the separating differs. We separate the seedlings in the winter to plant in the RootMaker flats of 18 cells. The roots are firmer in the winter. Even though the root systems can be relatively small, the plants flush quickly in the spring. By midsummer we have pruned them twice and they are ready to move up to a 3-gal pots by midsummer. They will be top dressed with Harrell's 14-3-17 (N-P-K) 6-7 month product at a rate of 87 g for 3-gal pots. By the end of the growing season we will have a decent 3-gal plant and by the end of the next spring's flush, we have produced a beautiful plant — 18 months from a seedling to a full 0.6 m (2 ft) 3-gal plant.

