

Rooting Second-Generation *Syringa vulgaris* Cultivar Microcutting

John Larsen

Bailey Nurseries, Inc., 1325 Bailey Road, St Paul, Minnesota 55119

Rooting second-generation microcuttings means taking a cutting off a rooted microcutting that was produced by tissue culture and rooting that cutting.

The rooting of second-generation microcuttings of *Syringa vulgaris* cultivars is just an additional means of propagation for us when we have shortages of certain cultivars. We do not count on it yet as a major means of propagation.

We began rooting tissue-cultured cuttings a few years back. Through a little trial and error and help we developed a simple system for rooting these cuttings. We treat the second-generation cuttings the same as the microcuttings we get from the tissue culture lab.

Currently we are sticking all of our microcuttings in a Techniculture tray. This tray is a 12-1/2 in. × 12-1/2 in. × 1-1/8 in. styrofoam tray that holds 400 plugs. The plugs are made from peat with a polymer holding the peat together. We do not use rooting hormone on any of our microcuttings. Once a tray is planted, it is covered with a clear plastic dome. Planted flats are placed on a cart that has overhead lighting. The cuttings receive 16 h of light per day. The carts are put in a small poly chamber where we keep the temperature around 70F. The cuttings are hand misted three times a day for about a week and then weaned off the mist. After about 2 weeks they receive no mist. We usually start seeing roots after 7 to 10 days.

A liquid fertilizer program with 100 ppm of a 20-10-20 balanced fertilizer is started after about 3 weeks. Whenever the cuttings need water, we liquid fertilize.

After about 5 to 6 weeks the first generation microshoots have enough growth on them and we start taking cuttings. The cuttings are about 1 in. long when we start cutting. After all the cuttings are taken we move the flats of rooted cuttings to the greenhouse where they are acclimated to greenhouse conditions for a few days. The rooted cuttings are then transplanted and grown on in the greenhouse until they are planted in the field or put in cold storage for spring planting

We are now also taking third-generation cuttings and rooting them. All of our second- and third-generation cuttings are taken from rooted cuttings that are still in our rooting chamber—not in the greenhouse.