

## Propagation Techniques for Blue Elderberry (*Sambucus nigra* ssp. *cerulea*)

Tiffany Maughan, Brent Black, Larry Rupp, and Matt Yost

Plants, Soils, and Climate Department, Utah State University, Logan, Utah 84322, USA

[brent.black@usu.edu](mailto:brent.black@usu.edu)

*Keywords:* Cold-callusing, *Sambucus cerulea*, specialty food products.

### Abstract

Native fruiting species provide an interesting opportunity for sustainable diversification by fruit growers. However, efforts to develop commercial fruit production using the blue elderberry (*Sambucus nigra* L. ssp. *cerulea* (Raf.) R. Bolli (syn. *Sambucus cerulea* Raf.) have been hampered by difficulty in propagating this Western North American species.

We previously reported on a series of experiments to develop viable propagation protocols. Semi-hardwood cuttings collected from wild-grown plants at full bloom and treated with a commercial naphthaleneacetic acid (NAA) formulation had rooting success greater than 60%. Hardwood cuttings taken from greenhouse-grown stock plants and then cold-callused for 70 to 120 days had success rates ranging from 50 to 100%. In the latest experiment, cuttings were taken from clonal plant material grown in three different envi-

ronments (greenhouse, field, wild) in December, January or February, and cold-callused from the collection date until March.

Survival was then evaluated after 6 weeks in the greenhouse. Survival from wild-grown cuttings was very low (< 10%) for all collection dates/callusing times. For cuttings from field-grown plants, survival was higher using earlier collection dates (longer callusing period) but did not reach commercially viable levels. For greenhouse-grown stock plants, survival ranged from 75% to 100%, with the highest survival rate for plants collected in February and cold-callused for 60 days.

Additional work is needed to optimize both mother plant environment and cold-callusing conditions. These methods will be useful for domesticating blue elderberry for both the landscape and the specialty food products industry.