

# Sustainable Landscape Horticulture

Status: NIFA REVIEW

## Project Director

Amanda Bayer

## Organization Project Number

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## Accession Number

7002048

## Start & End Date

10/01/2020

## Organization

University of Massachusetts

## To Project / Program

"Extension Project - Sustainable Landscape Horticulture "

## Primary Critical Issue

Commercial Horticulture and Landscape Management

## Fiscal Year

2022

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### **In 2-3 sentences, briefly describe the issue or problem that your project addresses.**

Research and outreach efforts have focused on two areas: 1) improving landscape sustainability with a focus on planting and establishment, and 2) the use of alternative containers during production. Improving the sustainability of landscapes is important to landscape professionals, nursery and garden centers and homeowners. Improved installation practices result in healthier plants that thrive even in stressful conditions such as drought. The use of alternative production containers is important because of the dependence of petroleum-based plastics by the green industries. Alternative containers, such as fabric and fiber containers, are a more sustainable option and have the potential to improve production related challenges such as circling roots. This is important to container plant producers as well as the public that wants to see more sustainable production practices used by the green industry.

### **Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.**

Multiple presentations were given on lanscape establishment and sustainabiliyt. Research looked at growth of Cornus florida in plastic and two different fabric containers over the course of two years.

### **Briefly describe how your target audience benefited from your project's activities.**

The most important results from the landscape establishment research are that there is a species-specific response to root ball preparation technique on establishment. Factors that could have resulted in this are differences in root systems (i.e., fine roots vs. coarse roots) and natural growth rates. However, overall root ball preparation technique did not make a difference in terms of survival, nor did it significantly limit above ground plant growth. It did seem that washing roots had an advantageous effect during the 2020 drought based on greater above ground growth during that year.

The dogwood container type study is ongoing. Above ground growth was not impacted by container type during year one. These research projects have shown that alternative containers can be used to produce good quality plants, but some alterations may be needed in production protocols.

### **Briefly describe how the broader public benefited from your project's activities.**

Post-production stress management for container produced plants is important for container plant growers, garden center managers,

landscapers, and homeowners.

Reductions in plant replacements from successful landscape reduces financial losses for professionals and results in more satisfied customers

### **Comments (optional)**

- Answer emails and phone calls from growers and landscapers. (Direct - Other) (20) - 20 adults
- Arrange/Attend meetings and field days on plant production and landscaping. (Single day workshop, presentation or event) (9) - 685 Participants
- Attend and Participate in Massachusetts Nursery and Landscape Association meetings and events. (Direct - Other) (3) - 200 Participants
- Consultations with nursery growers and landscapers in Massachusetts and New England on sustainable practices. (Direct - Other) (2) - 2 Participants
- Contribute relevant articles to HortNotes, Garden Clippings, the Landscape Message, and MNLA Pro Grow News (Websites or Other Electronic Delivery) (5) - 2000 Participants
- Teach "Nursery Management" undergraduate course and lab (Teaching - Undergraduate Course)