

## **Project: Water Management for Horticultural Operations**

**Project Leader: Amanda Bayer**

### **Project Overview**

Improving water management is of increasing importance in horticultural operations. A growing global population and changes in water availability will mean that less water will be available for ornamental plant production. There are also a growing number of federal and state regulations regarding water use and runoff from production areas. Better irrigation and fertilization management practices will help to limit the environmental impact of container plant production by limiting the runoff of water and nutrients from nurseries. Growers require assistance in meeting regulations which will serve to improve water quality in local ecosystems.

To help growers improve irrigation practices, the current state of nursery production in New England must be assessed in order to identify key areas for improvement. Disseminating educational materials for nursery growers will also create opportunities to help direct future research on identified irrigation management issues. Sustainable production techniques will be shared with the next cohort of nursery producers so that they can help implement sustainable practices as they move out into the industry.

The ultimate goal of this program will be to improve irrigation management in Massachusetts and New England nurseries. More efficient irrigation will result in less waste of water and recued inputs for production. The range of possible environmental benefits include less runoff from production areas which will decrease the nutrient, pesticides, and fungicides that enter local ecosystems. I will also be investigating ways to improve water and nutrient management in the landscape. Related research will consider deficit irrigation as a means of growth control instead of using plant growth regulators. This will reduce the environmental impact of production as well as production costs.

### **Activity Summary – 2017**

- Arrange/Attend meetings and field days on plant production and landscaping. (2)
- Answer emails and phone calls from growers and landscapers. (23)
- Attend Massachusetts Nursery/Landscape Association meetings and New England Grows (3)
- Contribute relevant articles to HortNotes, Garden Clippings, the Landscape Message, and MNLA Pro Grow News (31)
- Deliver educational presentations on improving resource management in nursery production and landscapes. (3)
- Develop Extension publications on water management, irrigation, and other relevant topics (3)

## ***Educational contacts***

	Adult Contacts	Youth Contacts
In Person	1883	
Indirect Contacts (Print, Web, etc...)	2150	

## **Narrative Summary - 2017**

The goal of the Water Management for Horticultural Operations project is to improve the management and use of water resources in ornamental plant production and the landscape industry. Managing water resources in ornamental plant production is becoming increasingly important as water availability becomes more limited as a result of a growing global population and climate change. There are also a growing number of federal and state regulations regarding water use and nutrient runoff from production areas. The drought in Massachusetts in 2016 brought further attention to the need to better manage water and to improve the efficiency and sustainability of nursery and landscape operations. Specific activities in the past year have focused on outreach via industry related presentations and publications.

Association and work with state and regional organization such as the Massachusetts Nursery and Landscape Association and New England Grows helps the project to stay up to date on industry needs. The goal of the project continues to be to develop effective outreach programs which a) change behavior and implement best management practices and b) increase resource use-efficiency and minimize environmental impacts of practices. We also intend to continue to disseminate research results to the academic community through traditional means (e.g. peer reviewed journals, and extension programs) and also more novel web-based methods (knowledge centers and social networks).

## **Collaborating Organizations:**





