Sustainable Practices in Ornamental Crop Production Systems

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BACKGROUND
Plant production facilities for ornamental container plants are high input systems using large amounts of water, fertilizers, pesticides, plastics, and labor. The use of renewable and biodegradable inputs while growing an aesthetically pleasing and healthy plant will improve the economic, environmental, and social sustainability of current production systems. Green industry stakeholders have identified production practices which reduce plastic and water use as a major focus to increase sustainability. However, the environmental and economic costs associated with these specific practices are undetermined.

OBJECTIVES

- Evaluate the sustainability of plastic container alternatives for use in greenhouse and nursery systems.
- Evaluate the impact of biocontainers on irrigation management practices in containerized nurseries.
- Evaluate the impact of biocontainers on landscape performance of selected crops and plantable pot degradation in landscapes.

EXPECTED BENEFITS

- The impacts of this project will be directly related to alternative containers and water use efficiency. Alternative pots have the potential to reduce the amount of plastic containers used during crop production. A reduction in the use of petroleum-based plastics is of benefit to the industry and consumers due to reduced negative environmental impacts, reduced energy usage during pot manufacturing, and ease of use by consumers when planting.
- Information will be provided to industry leaders supporting critical decisions on the use of sustainable practices related to container choice and irrigation management on economic and environmental implications.
- Guidelines will be developed and provided as a foundation for subsequent management tools leading to national or regional blueprint for identifying, implementing and assessing sustainable production practices in greenhouse and nursery settings.