

# Understanding consumers' ornamental plant preferences for disease-free and water conservation labels

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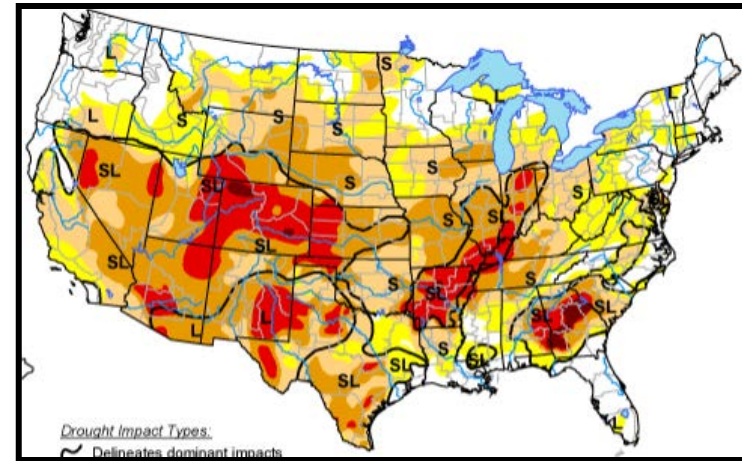
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# Background

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Horticulture and nursery operations face two key issues:

- Water Shortage:
  - 61% of the lower 48 have experienced drought conditions.
- Regulation to reduce nonpoint source pollution



# Background

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- Solutions such as water recycling exist to allow growers to reduce water use by as much as 40-50%<sup>4</sup>, however...
  - Risk of plant disease is exacerbated due to the potential repeated inoculation of water-borne disease such as Pythium and Phytophthora.
  - Water recycling and necessary disease control measures require capital investment and increased operating cost.



<sup>4</sup> Source: Wilson & von Broembsen (<http://osufacts.okstate.edu/docushare/dsweb/Get/Document-7408/BAE-1518web.pdf>).

# Objectives

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- Investigate if consumers will pay more for plants labeled as disease-free or produced with water conservation practices.
- Investigate if consumer preferences differ by certifying agency.
  - Governmental organization
  - Industry organization
  - Non-governmental organization
- Investigate if the results vary among consumers (preference heterogeneity)

# Study Design

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- Choice experiment
- Study area: Georgia, Maryland, Pennsylvania and Virginia
- Focused on annual plants and perennial plants.
  - Geraniums, Petunias, Chrysanthemums
  - Azaleas, Boxwoods, Hollies



# Results-Latent Class Conditional Logit

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- Segment the market by consumers' environmental preferences
- Consumers be grouped into two segments
  - Price sensitive segment
  - Attribute sensitive segment
- Both segments are willing to pay premium for certified plants
- Neither segment have a preference for any particular certifying authority

# Results – Random Parameters Logit

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- Consumers are willing to pay a premium for certified plants.
- We uniformly failed to reject the hypothesis that variances of individual labels are zero.
- The results are mixed as to whether the preferences for different certifying authorities can be aggregated.

# Questions?

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