

Residents' Perceived Landscape Benefits Can Help Extension Promote Good Landscape Management Practices¹

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Introduction

Households can help conserve and protect water resources through irrigation and fertilizer best practices without compromising the quality of their landscape. UF/IFAS Extension, along with Extension services across the country, conducts programs to protect water quality and quantity by educating communities and individuals about research-based landscape practices (UF/IFAS, 2011). Extension has increasingly explored innovative methods, such as those informed by social marketing, to help target audiences and encourage them to adopt good landscape management practices (Sauri, 2013).

Using Innovative Methods to Encourage Landscape Best Practices

Social marketing is the application of commercial marketing tools and principles to programs that elicit change that benefits individual, community, or environmental well-being (Lefebvre, 2011; McKenzie-Mohr, Lee, Schultz, & Kotler, 2012). Extension professionals can use social marketing to encourage positive behavior change among clientele by positioning irrigation and fertilizer best practices as beneficial products that clients consider valuable

(Lee & Kotler, 2011). Following this approach, we expect Extension clients to adopt good irrigation and fertilizer behaviors when the perceived benefits of doing so outweigh the perceived costs or barriers (Lee & Kotler, 2011).

The project described in this publication considered the entire landscape and its maintenance activities (particularly fertilizer-use and irrigation) as a product (Warner, Ali, & Kumar Chaudhary, 2017). Therefore, understanding the perceived benefits that individuals receive from their home landscape can help Extension professionals in designing programs. For example, programs that promote landscape and maintenance activities using the benefits most valued by Extension clients can also encourage water conservation practices. Further, this project explored the relationship between landscape benefits and engagement in good irrigation and fertilizer practices to identify ways to promote good landscape management.

Exploring Perceived Landscape Benefits and How They Relate to Landscape Best Management Practices

- We surveyed 540 households that use home landscape irrigation across the United States. The average age was

1. This document is AEC620, one of a series of the Department of Agricultural Education and Communication, UF/IFAS Extension. Original publication date July 2017. Visit the EDIS website at <http://edis.ifas.ufl.edu>.

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U.S. Department of Agriculture, UF/IFAS Extension Service, University of Florida, IFAS, Florida A & M University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Nick T. Place, dean for UF/IFAS Extension.

40 years, and half (50.2%, $n = 271$) of the respondents were females. Most respondents (82.6%, $n = 446$) were homeowners, and the largest percentage (13.1%, $n = 71$) of households were from California. One-third (34.3%, $n = 185$) had a 4-year college degree, and the largest percentage of participants (21.2%, $n = 114$) earned \$50,000 to \$74,000 per year. We used the survey instrument to identify respondents' perceived landscape benefits. In total, there were eight landscape benefits in the study. These were:

- aesthetic,
- environmental,
- food,
- habitat,
- health and comfort,
- monetary,
- social, and
- well-being.

We also asked respondents to indicate whether they intended to engage in several best fertilization and irrigation practices. The fertilizer and irrigation practices were taken from those encouraged by UF/IFAS and they applied to home landscape management broadly in other states. Some of the fertilizer questions explored if residents would:

- engage in good lawn fertilization practices,
- prevent fertilizer spills on paved surfaces, and
- reduce the application of lawn fertilizers.

Some of the irrigation questions explored if residents would:

- prevent irrigation when it is raining,
- irrigate only when needed, and
- irrigate to reduce water use.

The possible responses ranged along a 5-point, Likert-type scale from very unlikely to very likely. We used binary logistic regression to explore relationships between landscape benefits and engagement in landscape best management practices.

Understanding How Individuals Perceive Landscape Benefits

Most respondents value their landscape for aesthetic and well-being landscape benefits (84.3% and 70.7% respectively; Figure 1). Residents indicate high aesthetic value because their landscapes are enjoyable to look at and block unwanted views. Additionally, residents strongly perceive well-being benefits because they view their landscape as a place for relaxation and a source for inspiration. Fewer respondents value their landscape for social benefits (48.3%) or monetary benefits (53.0%).

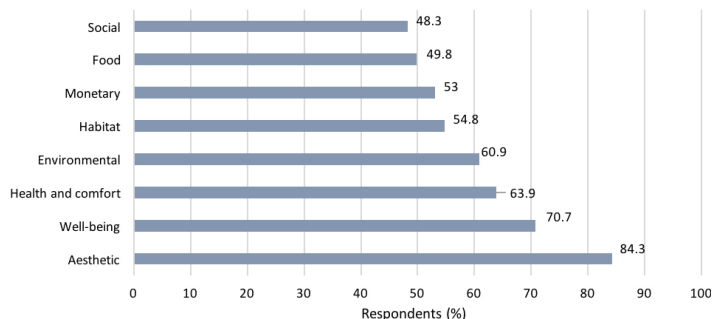


Figure 1. Residents' perceived landscape benefits. Credits: Adapted from L. A. Warner, A. D. Ali, and A. Kumar Chaudhary (2017)

Understanding How Perceived Landscape Benefits Relate to Landscape Practices

Values below 50 indicate less likelihood of engaging in irrigation best practices while values above 50 represent a greater likelihood of engaging in irrigation best practices. Of the eight benefits, six increase intent to engage in irrigation best practices in the landscape (habitat, health and comfort, environmental, food, social, and well-being). Those who value their landscapes for these benefits are more likely to engage in irrigation best practices. Particularly, those who value their landscapes for habitat and health and comfort benefits (65.4% and 64.6% respectively) are most likely to engage in irrigation best practices. On the other hand, those who value their landscapes for monetary and aesthetic benefits are less likely to engage in irrigation best practices. The landscape benefits that relate most strongly to good irrigation practices (habitat and health and comfort) are not the most commonly valued (aesthetic and well-being; see Figure 1), while the presence of the most commonly recognized landscape benefit (aesthetic) reduces the likelihood of engaging in good irrigation practices.

There are similar relationships between landscape benefits and good fertilizer practices (Figure 2). Of the eight

landscape benefits, six increase intent to engage in fertilizer best practices (environmental, well-being, food, habitat, social, and aesthetic). Those who perceive that their landscapes offer these benefits are more likely to engage in fertilizer best practices. Those who perceive environmental benefits from their landscapes are most likely to engage in fertilizer best practices (80.5%). On the other hand, those who perceive that their landscape offers health and comfort and monetary benefits are less likely to engage in fertilizer best practices.

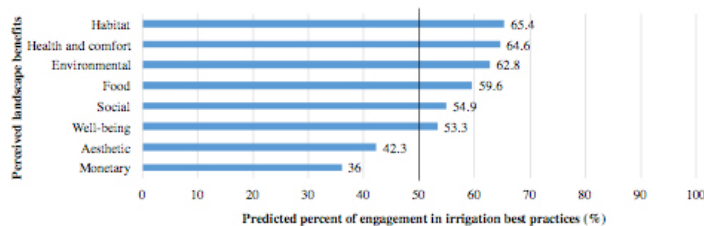


Figure 2. The effect of residents' perceived landscape benefits on irrigation best practices.

Credits: Adapted from L. A. Warner, A. D. Ali, and A. Kumar Chaudhary (2017)

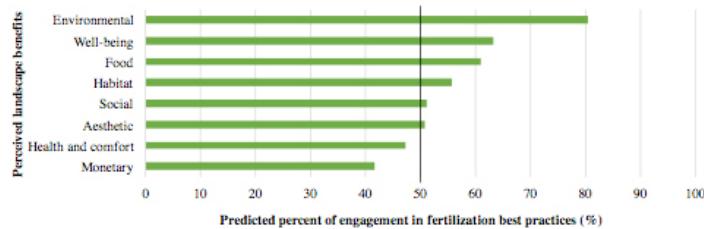


Figure 3. The effect of residents' perceived landscape benefits on fertilizer best practices.

Credits: Adapted from L. A. Warner, A. D. Ali, and A. Kumar Chaudhary (2017)

Summary of Findings

Respondents value aesthetic landscape benefits the most. An appreciation of habitat benefits relates most strongly to an intent to engage in good irrigation practices, and an appreciation of environmental benefits relates most strongly to an intent to engage in good fertilization practices.

How to Use this Information

Extension professionals who promote landscape best management practices should consider the following:

- Since aesthetics is valued above all other landscape benefits, irrigation and fertilizer programs should emphasize how conserving water and using appropriate fertilizer practices is compatible with an attractive yard.
- Since perceptions of habitat benefits are positively associated with irrigation best practices, consider first promoting awareness of how landscapes provide home and food

sources for wildlife before bringing water conservation actions into a program.

- Consider recruiting irrigation best practices program participants from those engaged in habitat-related programs, such as butterfly gardening.
- Since perceptions of environmental benefits are positively associated with fertilizer best practices, consider promoting awareness of how landscapes positively contribute to the larger environment, such as your local watershed.
- Consider recruiting fertilizer best practices program participants from those engaged in environmental programs, such as Earth Day or local cleanup groups.
- Take time to understand how your Extension clients perceive their home landscapes.

Conclusions

There is a relationship between perceived landscape benefits and landscape irrigation and fertilization best practices. Those who value environmental, well-being, food, habitat, and social landscape benefits are more likely to engage in good landscape practices, while those who value monetary landscape benefits are less likely to engage in fertilization and irrigation practices. Extension professionals should communicate the importance of engagement in good landscape management practices by using the benefits that influence behavior most strongly while emphasizing compatibility with those benefits that clients value the most. Perceived audience benefits can help guide Extension programs: clients may be more likely to engage in new practices and technologies when programs emphasize the relationship between landscape best practices and the landscape benefits that they value the most.

Acknowledgements

The authors thank the University of Florida Institute of Food and Agricultural Sciences Early Career Scientist Seed Fund program for supporting the work shared in this publication. We thank Gail Hansen, Joe Sowards, and C.C. Suarez for their helpful reviews of an earlier draft.

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