Changing Homeowner's Lawn Care Behavior to Reduce Nutrient Losses in New England's Urbanizing Watersheds: The Role of Social Science

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Introduction

•Nutrient losses from common lawn care practices have been identified as significant contributors to Non Point Source Pollution in New England's watersheds.

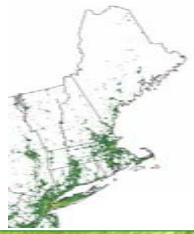
•Little research exists that addresses either the social dynamics involved or the means of achieving pro-environmental behavioral change in lawn care practices.

•Our work seeks to address these issues by providing empirically tested research to enhance and direct Cooperative Extension educational programs, as well as provide a framework for other regions to adapt or duplicate.

•Social science research was conducted in targeted communities across five New England states (NH, ME, VT, RI, and CT) to identify primary drivers of homeowners' lawn care choices and behaviors. This study examines the relative strength of various influences including environmental values, attitudes, and norms, as well as the relative influence of different types of informational messages.

•This poster presents the theory and methods used in the research, and presents examples of key findings for the creation of successful outreach and education.

NASA Image of New England Turf Grass



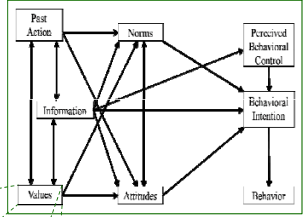
Google Earth Image of a Study Community: Hampden, ME

Theoretical Model

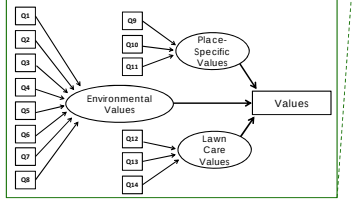
•The theory of planned behavior has been applied to a wide range of behavioral research that seeks to elucidate the underlying factors that antecede behavior.

•Meta-analysis of research applying the theory of planned behavior to environmentally responsible behavior indicates strong empirical support for the theory.

Conceptual Model of the Theory of Planned Behavior



Construction of Values Factor



•Augmenting the theory has been proven to improve it's validity and applicability to specific topics.

•This theory fits well with the project goals and was used to conceptually guide the design of the study.

•The model identifies key relationships needed to develop successful outreach.

Methods

•A methodological triangulation approach was taken utilizing both qualitative and quantitative social science research methods.

•To best understand the social dynamics of lawn care decisions by homeowners, this project employed a modified form of the theory of planned behavior to conceptually structure the research and guide the data collection and analysis process.

•In-depth interviews were conducted with key stakeholders, organized into the following groups: industry/business, outreach/education, community/alpha neighbor, and research/scientists.

•The findings of the in-depth interviews guided the development of a self-administered mail survey. A random sample was taken of 300 residents from each of the five communities. The response rate was respectable at 41% (n=754).

•Respondents were questioned about past behavior, values, attitudes, information, norms, and perceived behavioral control related to lawn care. The survey also measured the correlates of willingness to engage in environmentally friendly lawn care practices.

Key Findings

•When asked about what features of a lawn are most important, the most common response was that lawns be safe for the environment.

•Respondents are very accepting of simple practices that reduce nutrient runoff.

•However, respondents assert that it is important that their lawn look the same as it currently does if they adopt environmentally friendly alternatives.

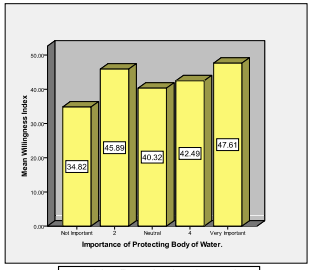
•Linking the impacts of over-fertilization on water quality with a specific body of water is essential due to place attachment.

•Most respondents agreed or strongly agreed that they want their lawn to look good enough to fit into their community. These findings elucidate the prevalence of lawn care social norms and a need to redefine these norms to include considerations of water quality impacts.

•Results from both the survey and interviews indicate the timing of the messages is important and is most effective at "point of sale." Furthermore, the most commonly used source of information on lawn care is product packaging.

•41% of the respondents who fertilize use the entire bag to avoid surplus.

Bivariate Analysis Explaining Relationship between Place Attachment and Willingness Index

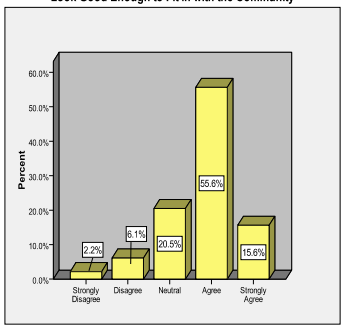


Correlations: Willingness Index and Protecting Water Body	
Pearson Correlation	.382**
Significance (2-tailed)	.000
N	500

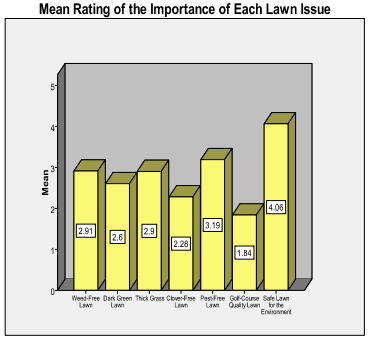
**. Correlation is significant at the 0.01 level (2-tailed).

Significant Results

Respondent's Level of Agreement that they Want their Lawn to Look Good Enough to Fit in with the Community



Mean Rating of the Importance of Each Lawn Issue



Outcomes: Outreach and Education

•Existing outreach products and programs have been modified in light of this research. Examples include: URI Lawn Care pages on Healthy Landscapes website, UNH Master Gardener training slide show, and ME DEP Our Backyard column.

•Many new outreach products are being developed including: bag stuffers, sticky labels, an interactive computer decision tree, an interactive website, press releases, hand-outs, book marks, a flower show booth, fact-sheets, and television spots.

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