UF IFAS Extension UNIVERSITY of FLORIDA

AEC586

Attitudes and Perceptions of Agricultural Water Use in Florida Expressed by the General Public and Local Officials[1]

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This EDIS document is the first in a series describing perceptions of agricultural water use in Florida. This study can be used to assist Extension educators and the agricultural industry at large, in the development of strategies that can be used to inform people about the realities of agricultural water use in Florida. The series includes the following EDIS documents:

1. *Attitudes and Perceptions of Agricultural Water Use in Florida Expressed by the General Public and Local Officials*, http://edis.ifas.ufl.edu/wc248

2. *Differences in Perceptions of Agricultural Water Use Between the General Public and Local Officials*, http://edis.ifas.ufl/edu/wc249

3. *How the General Public and Local Officials Prefer to Learn about Agricultural Water Use in Florida*, http:// edis.ifas.ufl.edu/wc247

Introduction

The use of water has become increasingly contentious because an increased population is sharing a decreasing amount of water (Schaible & Aillery, 2012). Water remains Florida's most plentiful natural resource (Roper & Lamm, 2014) but is at risk as the agriculture industry and Floridians demand more water for a variety of uses, including landscape irrigation, commerce, recreation, and agriculture (Odera et al., 2013). While there is a need to share this vital resource, without appropriate water resources the agricultural industry will be unable to increase or even sustain current production (Lamm, Owens, Telg, & Lamm, 2015) for an increasing population.

Media Influence on the Public's and Local Officials' Perceptions

According to Kingdon (2003), the media motivates the significance of an issue by emphasizing certain events, while giving lower recognition to others of equal importance. The media plays a vital role in informing the public so that informed decisions about current issues can be made (Lasorsa, 2008). However, the unbalanced portrayal of an issue could cause the public to make decisions without the full story.

Though ideally, both the public and local officials would draw their own conclusions, sometimes they are heavily swayed by the messages they receive (Lasora, 2008). This holds true when it comes to issues of water use and the role of the agricultural industry. For example, as water has become contentious in California due to prolonged drought, media personalities have taken a critical view of agriculture's use of water. In addition, a nationally

1. This document is AEC586, one of a series of the Department of Agricultural Education and Communication, UF/IFAS Extension. Original publication date April 2016. Visit the EDIS website at http://edis.ifas.ufl.edu.

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syndicated radio show personality in the Los Angeles area, with the largest listener base in the United States, recently stated on the radio, "The farming industry is using 80 percent of the water and they're 2 percent of the economy, justify that!" (Kobylt, 2015). In this situation, the radio show host does not provide all the information, failing to mention the role the farming industry, as 2 percent of the economy, plays in providing food and other advantages to the public.Unbalanced media attention such as this can lead to uninformed decisions, which can negatively impact the agricultural industry, decisions such as increases in regulation and decreases in permitting. It is important for the industry to be aware of local officials', both elected and non-elected, attitudes towards agricultural water use so that educational initiatives and communication campaigns can be developed in a way that will inform and not offend.

Measuring Attitude and Perceptions Towards Agricultural Water Use

Attitudes "are defined as relatively enduring orientations toward objects that provide individuals with mental frameworks for making economical sense of the world" (Bardes & Oldendick, 2012, p.15). An online survey was used to measure attitudes and perceptions towards agricultural water use of both the general public and local county commissioners, county clerks, and county mangers in Florida. The survey instrument was created using the 2012 RBC Canadian Water Attitudes Study (Patterson, 2012) as a foundation and then was modified to address Florida issues. A panel of experts reviewed the survey and it was pilot tested to ensure validity and reliability.

To measure the attitude and perceptions of agricultural water use, respondents were provided the phrase "When it comes to protecting water in Florida, farmers are…" and asked to select, on a five-point semantic-differential scale between two words, where their attitude was best represented. A score of one indicated a negative attitude, and a five indicated a positive attitude. The word pairings were good/bad, positive/negative, careful/careless, thoughtful/thoughtless, cautious/reckless, and innovative/old-fashioned. Respondents were also asked to respond to a series of statements related to farmers' engagement with and protection of natural resources and water on a five-point, Likert-type scale (ranging from 1=*Strongly Disagree* to 5=*Strongly Agree)*. The researchers also developed a scale to examine the respondents' views towards protection of natural water resources. Respondents were given the phrase "Farmers can be relied upon to keep their promises when it comes to water use." This statement was used to measure the level of trust and the possible answers ranged from 1=*Strongly Disagree* to 5=*Strongly Agree)*.

The UF/IFAS Center for Public Issues Education in Agriculture and Natural Resources (PIE Center) worked collaboratively with a public-opinion survey research company, Qualtrics, to obtain an opt-in non-probability-based sample to collect data from the general public. Qualtrics sent a link allowing access to the survey for Florida residents representative of the state population based on the 2010 Census data. The survey was also sent to county-level local officials in Florida. A list of email addresses for all mayors, county commissioners, county clerks, and county managers was acquired through an online search. The data was collected over a three-week interval with three reminders sent to the respondents in order to increase the response rate to 16%, resulting in 194 responses. To account for low response rate the respondents were compared to the entire population and the sample was found to be representative of the population of interest.

When examining the respondents' attitude towards agricultural water use, the general public had a more positive perception than the local officials (Figure 1). Both the general public and local officials agreed agriculture uses water resources appropriately and that agriculture has a positive impact on open space and wildlife Examples of negative perceptions of agricultural water use in the media are readily available (e.g. Kim, Schleuss & Krishnakumar, 2015; Kobylt, 2015), whereas positive media examples are less common (Young & Dhanda, 2013). The exposure to more media, and the nature of the news within the media surrounding agricultural water use, may serve as a likely condition for the differences being observed between these two groups.

Results/Implications for Practice

The findings demonstrate that the general public had a more positive attitude towards the agriculture water use than local officials. Therefore, more work should be designated to educate local officials about the realities of water usage in order to increase positive perceptions and awareness. Extension offices should create direct dialogues with local officials in a way that displays accurate information about agriculture water usage and engagement in best management practices. Through this process, local officials can use information presented in the pamphlets created by Extension educators to engage in conversations with other local officials to render stronger legislation that supports agriculture and natural resources. This study also revealed

that both the general public and local officials agreed agriculture uses water resources appropriately and agriculture has a positive impact on open space and wildlife.

Extension educators should invest more time providing workshops, seminars, and forums that encourage local officials and the general public to create factual stories about agricultural water usage (Telg, Jones, & Telg, 2015a). In addition, Extension educators should provide workshops for farmers and farmer coalitions to equip this audience with the skills needed to successfully describe good agricultural practices to others not related to the agricultural industry (Telg, Jones, & Telg, 2015b).

Since the media is a powerful tool, it is imperative that Extension educators assist with communicating a positive message about agricultural water use for the public. In addition, increasing the number of concise educational materials pertaining to agricultural water usage could enhance the level of knowledge being transferred to stakeholders. Extension educators can improve rapport with elected and non-elected officials and the general public through public issues educational fairs tailored towards agricultural water use.

Extension educators should use audience segmentation to collect information that informs beliefs, attitudes, and practices about agricultural water use. Extension educators could host two separate meetings including one for public officials and one for the general public. Targeted media channels would be utilized to advertise the meetings. Having different meetings can ensure that local officials and the general public have tailored information specific to their particular interest. Extension educators should also follow up with additional research to target learning preferences for the general public and local officials to better understand how these groups obtain positive information about the agricultural industry's use of water.

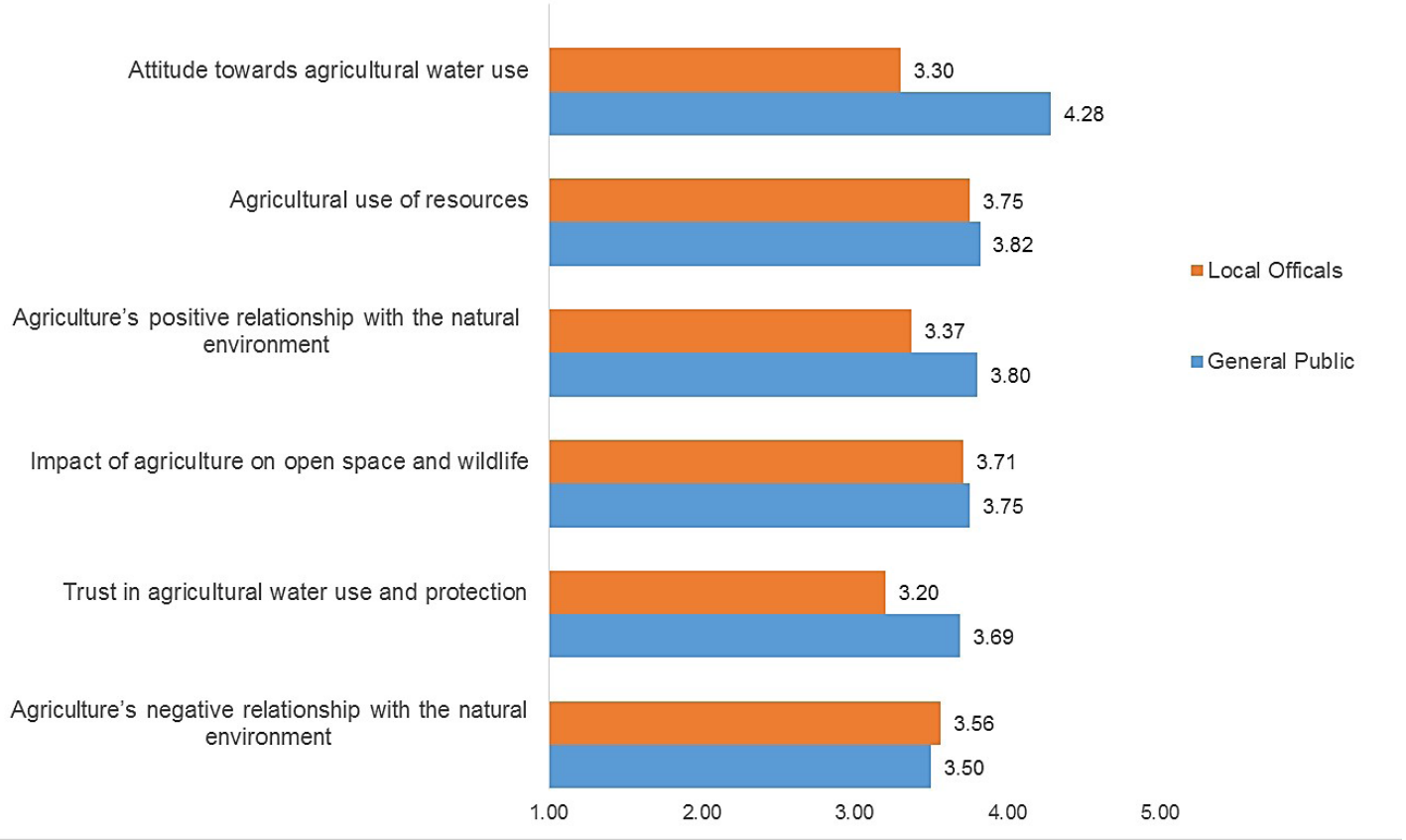

Figure 1. General Public & Local Officials' Perceptions of Agricultural Water Use. Note. 1= Negative and 5= Positive.

Summary

By identifying similarities and differences between the general public and local officials, agricultural educators and communicators can begin to determine ways in which to resolve potential issues through improved education, communication, and messaging designed for both groups. Also having more informative outlets like town hall meetings and fact sheets can raise the level of awareness and perception of agricultural water use. Through this process, better targeted educational programs designed to inform local officials and the general public can increase their current perception of agricultural water usage.

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