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A Closer Look at Irrigation Water Management in South Carolina

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Abstract:

There are many challenges facing today's farmers, particularly those with high-input irrigated production systems. In South Carolina, the need for research and extension is great in irrigated agriculture. In order to remain competitive, irrigators need up-to-date information and know-how as well as simple and practical methods and technologies to efficiently utilize the advantages of irrigation in humid areas. Irrigation in humid regions like South Carolina is much more challenging than in dryer environments because of frequent but unpredictable rainfall, coupled with mostly sandy soils of high spatial and profile variability. Accurate determination of crop ET for the different climate areas in the state is needed for effective irrigation scheduling and wise use of water. Another deficiency is a lack of readily available agro-meteorology data, reference ET, and crop coefficient for on-farm water management. In South Carolina there is no network of reference ET data for ET-based irrigation scheduling. A state-wide agro-meteorology network and collaborative and innovative education and training in the principles and practices of irrigation water and system management are critical needs in South Carolina. In an effort to develop a state-wide irrigation program in South Carolina, initial efforts were to identify the state of irrigation systems and management as well as its technical and educational needs. Although baseline information is not yet complete due a significant lack of data and literature on irrigation, a reasonably sufficient picture has emerged. The presentation will cover our initial assessment as well as the emerging irrigation research and an extension program that seeks to address the irrigation needs through developing and delivering key irrigation management and agro-meteorology information resources and technologies in a state-wide, integrated approach to help irrigators manage their systems for high water productivity (i.e., more crop, less drop) and improve efficiency.

Impact Statement:

The newly developed program is to establish a nationally-recognized, externally-funded, research and extension in irrigation water and systems management in South Carolina, provide the producers with easy access to near real-time agro-meteorology data, irrigation information (reference ET, crop coefficient, GDD), and frost and heat warning on area-wide basis; increase knowledge and skills for expanding research and extension programming; increase understanding of various irrigation practices and their benefit to efficiency, conservation, resource protection, and cost returns; and increase adoption of improved irrigation practices.

Category: Conservation and Resource Management

Type of Presentation: Oral Presentation