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From climate variability to climate change: Building adaptive capacity among row crop farmers in the Southeastern USA

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Abstract

Agricultural food production has been extremely important to the Southeastern USA, not only providing quality food for residents but also contributing to the region's economy. Southeastern agricultural production has always faced threats related to interannual and seasonal changes in climatic conditions; however, different from other regions of the globe there has not been a pronounced warming trend signal. With the goal of increasing resilience to climate variability and change as well as building adaptive capacity among row crop farmers, regional research and extension efforts including the states of Alabama, Georgia, Florida, and South Carolina were initiated in 2010 with funding from USDA-NIFA. We believe that strategies for adapting to climate change and variability will become much more accessible when education occurs in the familiar context of climate-related risk management. By using participatory approaches and taking advantages of our established partnerships within the agriculture industry, we are working with producers, extension specialists and agents, and farmers' associations on the identification, development and evaluation of climate adaptation strategies with increased change of adaption by producers in the Southeastern USA. Four major objectives are imply a range of targets: 1) Identification of adaptation and mitigation strategies to cope with climate variability and; 2) Design of extension programs for co-development of extension materials and decision support tools, establishment of learning networks to facilitate and promote engagement between researchers and practitioners in adaptation science, and conduct training; 3) Development of decision support tools for Agroclimate.org; 4) Identification of Policies and Insurance programs to cope with climate changes. Major outputs from these efforts are: identification of adaptation strategies, establishment of the Tri-state row crops climate learning group, design and establishment of an annual adaptation exchange fair showcasing adaptation strategies to cope with climate-related risks, partnership with stakeholders on identification of adaptation strategies for crops such as wheat and corn, web-based decision support tools targeting drought, planting date optimization, water-carbon-nitrogen foot print, factsheets and videos.