



Transforming Climate Variability and Change Information for Cereal Crop Producers

Intent of Objective 2:

Understand the use and value of climate information in agricultural decision making, and determine effective methods for disseminating usable climate knowledge.

Two primary goals have been identified:

1. Survey agricultural producers and advisors about climate information and tools, adaptation strategies, and climate change perceptions.
2. Determine how information flows throughout the agricultural community, and identify effective means for disseminating climate information.

Knowledge gained through Objective 2 research will help us understand the type, and timing, of farm management decisions and how weather/climate information can better serve Midwestern farmers.

Approach:

In collaboration with researchers at Iowa State University (CS-CAP project), we are surveying agricultural producers in 22 of the top corn/soybean producing watersheds in the region. Approximately 19,000 surveys (40% expected response rate) will be deployed in January 2012 to corn producers with a gross farm income over \$100K. The National Agricultural Statistics Service (NASS) will assist with preparing the survey sample, mailings, and data entry. Additionally, they will provide related 2007 and 2012 Ag Census data for survey respondents, allowing for unique data analysis opportunities. Survey questions will address topics related to:

- Types of farm practices used and timing of management decisions
- Influence of weather and climate information on decision making
- Weather and climate risk management strategies and beliefs
- Concerns and beliefs about climate change and its impact on Midwestern agriculture
- Influence of various groups and individuals on farm management practices

A survey of agricultural advisors in four pilot states (Indiana, Iowa, Michigan, and Nebraska) will be launched in January 2012. We have defined advisors to include people who guide farmers on crop-related decisions and those who provide agriculture-related services and products. Examples of advisor groups are crop consultants, bankers, agro-business retailers, conservation groups, and government agencies. Extension personnel are also advisors, and due to their prominent role in agricultural management we will survey this group in all 12 states across the region. Advisor survey questions will closely follow those topics asked in the producer survey, allowing for comparisons across the two

populations. Our intent is to assess their role in advising producers and understand their use and dissemination of weather/climate information.

During 2012-2013, we will conduct a series of focus groups with farmers and advisors in each of the four pilot states. Our primary interests are in receiving input on survey results and allowing participants to elaborate on some of the more generalized questions within the surveys. We will also begin to explore current gaps in climate information delivery and request recommendations/strategies for producing and promoting useful climate adaptation knowledge, both of which are topics too complex to fully cover in a survey alone.

Also during 2012-2012, we will study how social and knowledge networks affect peoples' use of climate information in farm management. Specifically, our interests are how climate information flows through networks and how networks influence decision making processes. We will collect and analyze specific network data (where, how, and from whom people access and spread climate information) in conjunction with producer and advisor survey data to map the structure of climate knowledge dissemination. In-depth analysis will occur in the four pilot states, beginning with Extension agents and crop advisors and growing the network from them. The goal is to identify the people/organizations that most effectively bridge communication between those who produce and use climate information.

We are examining the feasibility of surveying Native American farmers in the region throughout 2012. Including Native American farmers will help ensure that we reflect a diverse set of producers, and it provides an opportunity to bridge cross-cultural communication. Unfortunately, limited Ag Census data is available for this population of farmers, and building trust and collaboration with Native American farmers requires time. As a first step in addressing these issues, we participated in the American Indian Alaskan Native Climate Change Working Group fall meeting (Nov. 7-8, 2011) in Keshena, Wisconsin. We will continue seeking additional networking opportunities.

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