

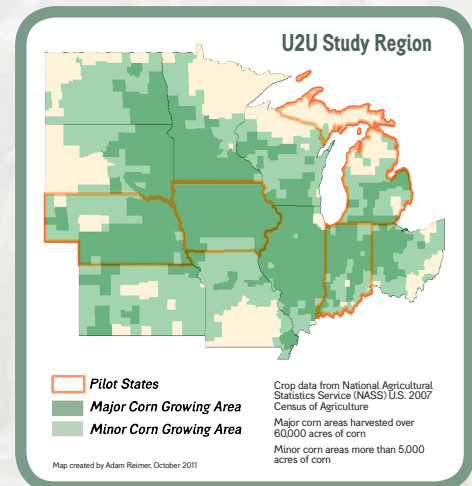


# Transforming Climate Variability and Change Information for Cereal Crop Producers

**W**eather and climate patterns are a driving force behind the success or failure of cropping systems. With U.S. corn and soybean production accounting for nearly one-third of global supplies and contributing over \$50 billion annually to the national economy, the ability to successfully produce crops under more variable climate conditions becomes critical for food security and rural livelihoods. Therefore the U2U project strives to **enhance the usability and up-take of climate-based resources** and **bolster Extension capacity to address agro-climate concerns**. Long-term, these efforts will lead to more profitable agricultural systems across the Corn Belt and greater resilience to a changing climate.

## Project Objectives

Tasks associated with five broad objectives will be completed throughout the project that, together, will improve the usability of climate information for the agricultural community and lead to more sustainable farming operations:



### Objective 1

Use existing data to develop a knowledge base of potential biophysical and economic impacts related to climate changes, and consider the relative risks they pose.

- Develop gridded crop model outputs for the Corn Belt using historical data
- Use case studies to identify impacts of climate and management decisions on yields & farm profitability

### Objective 2

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

- Survey agricultural producers and advisors about climate information and tools, adaptation strategies and climate change perceptions
- Determine the flow of knowledge and information throughout agricultural communities

### Objective 3

Develop tools, training materials and implementation approaches that lead to more effective decision making and adoption of practices associated with farms resilient to climate variability.

### Objective 4

Evaluate the effectiveness of decision support tools, training methods and implementation approaches in four pilot states (Indiana, Iowa, Nebraska and Michigan).

### Objective 5

Broadly disseminate validated training materials, tools and Extension programs to ensure increased usefulness of climate information.

## A Foundation for Success

Ongoing **engagement of key stakeholders** is at the core of this project and highly critical to its success. Agricultural producers, advisors and Extension educators play an important role in the co-production of science.

**Evaluation** occurs at every step in the process to inform and improve performance. Process evaluation

monitors the degree to which the project is carried out as intended. The program's output is monitored to describe its activities and products, participants and degree of involvement. Outcomes are measured through learning gains, attitude change and behavior change associated with intended program impacts.

**HUBzero™** technology serves as the supporting middle-ware that integrates tasks across all objectives. It will facilitate the development and delivery of decision support tools, climate and adaptation information, and associated materials.



*The U2U Project Team*

*For more information about this project, please visit*  
***[www.AgClimate4U.org](http://www.AgClimate4U.org)***



## Project Collaborators

*The U2U team is a diverse and uniquely qualified group of faculty, staff and students from nine universities across the Corn Belt. Team members are experts in applied climatology, crop modeling, agronomy, cyber-technology, economics and social science. Principal investigators include:*

### **Purdue University**

Linda Prokopy (Director)  
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