



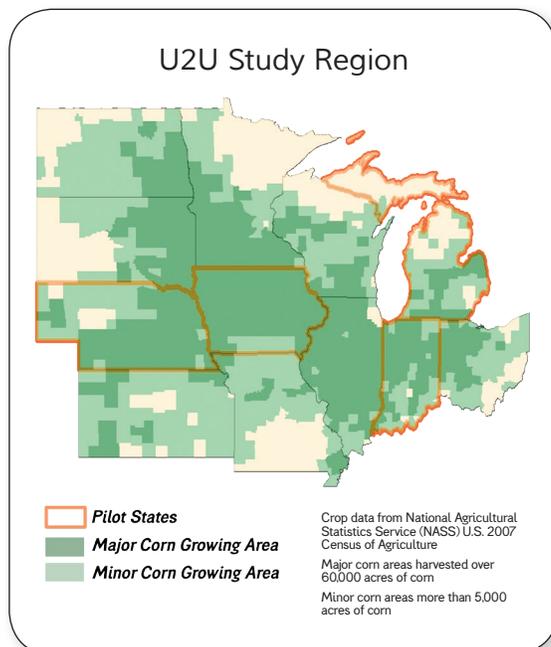
## EXECUTIVE SUMMARY

### Weather 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 variable and changing climate.



Map created by Adam Reimer

### 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.

### Objective 2

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

### Objective 3

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

### Objective 4

Evaluate the effectiveness of decision support resources and implementation approaches in four pilot states.

### Objective 5

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

## The U2U Project Team



The U2U team includes a diverse group of over 50 faculty, staff, and students from nine universities across the Corn Belt with expertise in climatology, social science, agronomy, crop modeling, and cyber-technology.

## Top 5 Accomplishments

1. Simulated the impact of historical and future climate conditions on crop productivity across the U.S. Corn Belt using crop models of varying biophysical complexity and process scale representations.
2. Conducted three large-scale surveys of corn farmers and agricultural advisors across the North Central region to understand their climate information needs, climate change beliefs and concerns, and influential information sources.
3. Developed several new decision support resources, including an easy-access interface to region-wide climate and crop information and a Growing Degree Day (GDD) tool.
4. Presented project information at more than 50 conferences and meetings, and published over 20 book chapters and journal articles featuring U2U-related research.
5. Team members have been awarded over \$565K in additional funding to expand and leverage U2U research, tools, and ideas.

### PROJECT CONTACTS:

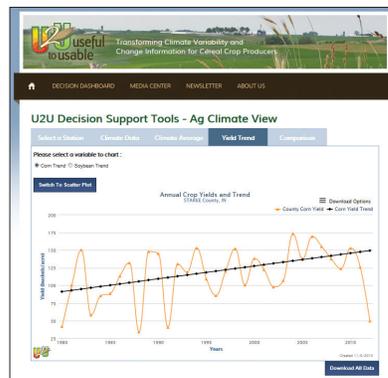
**Linda Prokopy,**  
Associate Professor and  
Project Lead, U2U  
Purdue University  
765-496-2221  
lprokopy@purdue.edu

**Melissa Widhalm,**  
Project Manager, U2U  
Purdue University  
765-494-8191  
mwidhalm@purdue.edu

## Decision Support Resources

### AgClimate View (ACV)

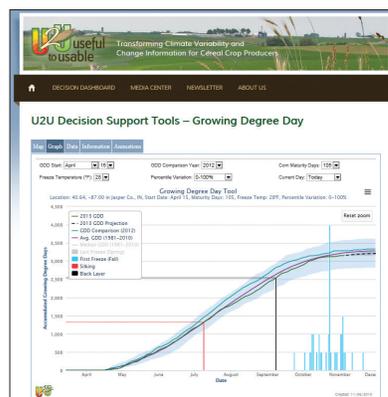
A convenient way to access customized historical climate and crop yield data for the U.S. Corn Belt. View graphs of monthly temperature and precipitation, plot corn and soybean yield trends, and compare climate and yields over the past 30 years.



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

### Growing Degree Day (GDD) Tool

Track real-time and historical GDD accumulations, assess spring and fall frost risk, and guide decisions related to planting, harvest, and seed selection. This innovative tool integrates corn development stages with weather and climate data for location-specific decision support tailored specifically to agricultural production.



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