



Transforming Climate Variability and Change Information for Cereal Crop Producers

Outputs and impacts by the numbers

Useful to Usable (U2U): Transforming Climate Variability and Change Information for Cereal Crop Producers was a USDA-NIFA funded research and extension project focused on **improving the usability of climate information** for agricultural production in the Midwestern United States. Beginning in 2011, a diverse team of biophysical and social scientists from nine Midwestern universities spent six years working with the agricultural community to develop climate-based decision support tools and resources to enhance farm resilience to a variable and changing climate.

FEATURED OUTCOMES



TEAM

Team members from **9 universities**

60 faculty and staff contributors

62 graduate and undergraduate students trained

11 students earned MS or PhD



OUTREACH

162 scientific conference presentations

165 outreach events with Midwestern farmers and advisors

Over **40,000 website visitors** with more than **165,000 page views**

35,560 people reached through 4-round print & online media campaign



PUBLICATIONS

50 peer-reviewed articles in physical, social, and interdisciplinary science journals

53 Extension publications, book chapters, and magazine articles

Research and tools featured in **over 170 trade and popular press articles**



AWARDS

2015 USDA-NIFA Partnership Award for Mission Integration

2015 Purdue College of Agriculture TEAM Award



OVERALL SUCCESS

U2U tools have been used to support decisions on **over 15.5 million acres** in the Midwestern U.S.

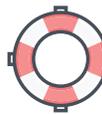
35% of advisors¹ and **34% of farmers²** had heard about at least one U2U tool

33% of advisors¹ and **34% of farmers²** who had heard about U2U tools have used one or more U2U tools in their decision making

71% of advisors¹ and **44% of farmers²** familiar with U2U tools said they would recommend the tools to others

¹ Across 12-state U2U region

² In 4 key outreach states (IA, IL, IN, NE)



DECISION TOOLS

5 Decision Support Tools (DSTs) developed and transferred to Regional Climate Centers for long-term availability

WHAT WE DELIVERED

Decision Support Tool Suite

U2U incorporated climate data into **five web-based tools** to help farmers and advisors make informed decisions.

Top ways farm advisors used the U2U tools with their clients:

- Seed purchases
- Crop choice
- Fertilizer application timing

Farmers used U2U tools for:

- Scheduling planting/harvest
- Planning and scheduling fertilization
- Improving their yields

52% of advisors who used U2U tools said they are now more likely to use weather and climate information in their job

74% of advisors who had used U2U tools felt the **tools are moderately to very usable.**



AgClimate View_{DST}

Customize historical climate and crop yield data for the U.S. Corn Belt

ACV.AgClimate4U.org

Corn GDD_{DST}

Track real-time GDD accumulations and learn about climate risks for corn development

GDD.AgClimate4U.org

Climate Patterns Viewer_{DST}

Connect global climate conditions to local climate impacts

CPV.AgClimate4U.org

Corn Split N_{DST}

Determine the feasibility and profitability of using in-season nitrogen application for corn production

SplitN.AgClimate4U.org

Irrigation Investment_{DST}

Explore the profitability of investing in irrigation equipment within the Corn Belt

Irrigation.AgClimate4U.org

PARTNERS



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