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SOUTH DAKOTA STATE UNIVERSITY

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Contact: Dennis Todey, 605-688-5678

SDSU among universities to receive \$20 million USDA research grant to keep
Midwestern corn-based cropping systems resilient

BROOKINGS, S.D. – South Dakota State University is one of nine land-grant universities to receive funding and participate in a new research effort by the U.S. Department of Agriculture's National Institute of Food and Agriculture (USDA-NIFA).

USDA-NIFA has awarded a \$20 million grant to nine land-grant universities and two USDA Agricultural Research Service institutions. A team of 42 scientists from the institutions involved in the project, comprising eight states in the north central region of the United States, will collect and analyze data over the next five years. This region produces 8 billion bushels of corn, 64 percent of the U.S. annual harvest. The research will focus on keeping Midwest corn-based cropping systems resilient in the face of future climate uncertainties.

The project's director, Lois Wright Morton, Iowa State professor of sociology and interim director of the Leopold Center for Sustainable Agriculture, said the grant would help producers and land-grant university scientists

"The grant takes a synergistic approach to understanding the effects of climate variability and impacts on the sustainability of corn-based cropping systems throughout the Midwest," said Morton.

Researchers will begin collecting data on carbon, nitrogen, and water movement this spring from 21 research sites in eight states. Special equipment will be used to monitor

greenhouse gas emissions at many of the sites. The team will integrate field and climate data to create models and evaluate crop management practices.

“The goal is to create a database of plot, field, farm, and watershed data that can be combined with climate data to develop scenarios based on different practices,” Morton said. “Farmers in the region will have opportunities to participate in on-farm research and evaluate research models. The project will also offer training for teachers and the next generation of scientists to better understand the relationships among climate shifts and agriculture.”

The South Dakota contribution will include Extension and education components of the project interacting with producers making use of climate information. They also will work on various education projects that aim to help students and teachers understand the basics of climate and climate-agriculture system interaction. South Dakota Cooperative Extension State Climatologist Dennis Todey said that SDSU’s role in the effort is noteworthy.

“We are excited to contribute to this larger project, and we see this project as an opportunity to learn more about the climate-agriculture system across the Corn Belt and how that system varies,” Todey said. “We hope to help determine producer needs and to develop tools for producers to make use of information gathered from the project.”

The grant is part of the USDA-NIFA Coordinated Agricultural Program. The project’s researchers include agronomists, agricultural engineers, environmental scientists, hydrologists, soil scientists, sociologists, watershed engineers, natural resource scientists, and climatologists.

South Dakota Corn Utilization Council Endowed Dean Barry Dunn, dean of SDSU’s College of Agriculture and Biological Sciences, said that participating in the effort would provide both the university and the producers of South Dakota with important information and a voice in the discussion.

“Taking part in this research will help our scientists and students to gauge changes and to share perspective as the data is collected,” Dunn said. “It also will help South Dakota grain producers understand the way our region fits into a greater understanding of the natural world in the Northern Plains.”

The Iowa State grant is one of three \$20 million “cap” grants to be awarded nationally. The grant awards were announced today in Washington, D.C.