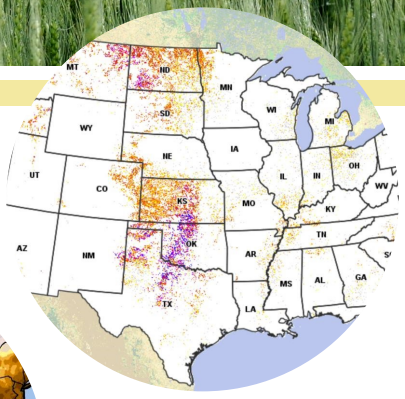
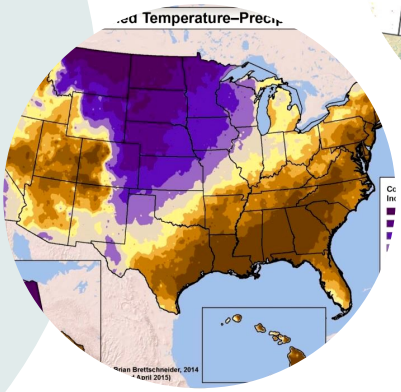
RAIN

Rainfed Agriculture Innovation Network

Persistent yield stagnation, large yield and forage gaps, and low water and nutrient use efficiencies threaten the sustainability of rainfed agricultural systems, leading to extreme fluctuations in both food production and farm income.

The Rainfed Agriculture Innovation Network (RAIN) is a transdisciplinary effort focusing on developing effective management strategies for **diversifying and intensifying** cropping systems.





We are employing systems approaches to increase agricultural **productivity and profitability**, improve soil health, and optimize water and nitrogen use efficiency by developing innovative management strategies empowered by technology.

Project activities include field research and on-farm trials using innovative technologies for improved decision making.

A summer research experience for undergraduates (REU) will create educational opportunities to recruit and train the next generation of scientists to work in agriculture.

Learn more about the project at **RainfedAg.org**

Team Leadership

Project Director: Charles Rice (KSU)

Cropping Systems
Brian Northup (ARS)
Romulo Lollato (KSU)

Tactical Management
César Izaurralde (UMD)
Tyson Ochsner (OSU)

Extension/Outreach
Ignacio Ciampitti (KSU)
Jason Warren (OSU)

Education
Anita Dille (KSU)
Beatrix Haggard (OSU)

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Photos Courtesy of Kansas State University and Oklahoma State University

Research Experience for Undergraduates

The RAIN Research Experience for Undergraduates (REU) program focuses on adaptive management in water-limited production systems. The program aims to train future engineers and scientists with the skills and perspective necessary to address some of the world's future food and fiber needs.

The RAIN REU Program seeks students from diverse disciplines including, but not limited to:

- Agronomy
- Animal Science
- Grain Science and Industry
- Agricultural Economics
- Biological and Ag Engineering
- Biology/Microbiology
- Sociology and other Social Sciences
- Geographical Sciences
- Physics
- Chemistry
- Meteorology

RAIN REU participants will produce original research within inter-disciplinary research projects relating to rainfed agricultural production. Research spans all methods and aims to sustainably increase the productivity of rainfed agricultural systems in the SGP and while restoring and enhancing soil health, including:

- Agricultural (soil carbon sequestration, increasing precipitation and nitrogen use efficiency, reducing yield losses due to environmental stresses and weed pressure, etc.);
- Technological (use of sensors and modeling to enhance long-term strategic management and in-season tactical management; and

Program Dates

June 2-August 6, 2021

Benefits

- Hands-on **research experience** in the field and the lab
- **Mentorship** by faculty advisor and a graduate student mentor
- **$9000 stipend** (inclusive of travel and room and board) paid in three installments
- **Professional development** via workshops and research seminars on topics related to sustainability related to water-limited crop and animal production systems

Apply by Feb. 12, 2021

http://bit.ly/RAINREUApp

For more information:
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Learn more about the program at

www.rainfedag.org/summer-reu

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