

Sustainable agricultural land tenure and risk management for extreme climatic events

Abstract: The researchers studied how landowners and farmers are working to improve conservation and protect productivity, soil health and water quality while facing extreme weather. The project results yielded more future research questions than definitive answers as to how non-owner landlords and their tenants can work together to safeguard the land and its productivity.

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This project interviewed land owners, farmers, and land managers to develop a more comprehensive understanding of the relationships between landowner and farmer perceptions of climate change. Iowa farmland can become more resilient to extreme weather events when NOLs and farmers work together to address the sociological, legal, and policy challenges to better land management. Resilient practices can also play an important role not only in responding to climate change, but to mitigating the causes as well.



What was done and why?

Iowa agriculture is threatened by extreme weather events associated with climate change, yet also is a source of greenhouse gases that are driving the climate instability. Because threats to agriculture also represent threats to society, calls for action to address climate change are increasing. Research consistently shows land tenure relationships have significant impacts on the use of conservation practices that form the foundation of agricultural resilience. This project explored the relationships between landowner and farmer perceptions of climate change and the role that institutional arrangements, especially leases, crop insurance, and other tenure-related contracts and obligations, may play in the context of increasingly volatile weather conditions.

Three primary project objectives were to:

1. Identify key land tenure issues, in relation to the effect of extreme climatic events on land ownership and control.
2. Identify the effects of public policy on land tenure arrangements within the context of extreme climatic events.
3. Develop useful outreach materials to help educate landowners and farmers on possible tenure arrangements to protect the land from extreme climatic events; formulate policy recommendations to account for disparity in utilization of risk management tools; encourage arrangements to better adapt to the extreme weather of climate change; and identify key areas for further research.

What did we learn?

Iowans involved in agriculture, particularly farmers and landowners, can use this research to identify strategies and tools for putting more resilient farming systems into their operation and onto their land through intentional and strategic lease agreements.

This research suggests both farmers and landowners will play important roles as Iowans develop farm-based responses to extreme weather and innovations for agricultural solutions to climate change. While each group could act alone, clearly the most effective responses will occur when farmers and landowners work together to share costs and responsibilities as well as receive benefits from more resilient farmland.