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Neil Hamilton
Iowa State University

Matt Russell
Drake University

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Sustainable agricultural land tenure and risk management for extreme climatic events

Abstract

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Keywords

Climate change greenhouse gas emissions, Life Cycle Assessment, Policy

Disciplines

Natural Resources Management and Policy | Sustainability



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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.

Principal Investigator:

Neil Hamilton

Co-investigator:

Matt Russell

Drake Agricultural Law Center
Des Moines, IA

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QHow can non-operator landowners (NOLs) and farmers better understand land tenure relationships and associated economic and environmental implications to ease the potential impacts of increased weather variability on Iowa farmland?

AThis 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.



P O L I C Y

Background

Iowa agriculture is threatened by extreme weather events associated with climate change, yet also is a source of greenhouse gases (GHGs) 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.

Approach and methods

Objective 1 was accomplished by conducting 18 in-depth interviews with non-operator landowners (NOLs) and farmers, also referred to as operators. The second



Flooded cornfield.

objective entailed researching statutory and regulatory eligibility within crop insurance programs, disaster relief, and other risk management tools. The third objective used the findings of the first two objectives to inform understanding of both programmatic and practical barriers to increasing resiliency in light of current land tenure trends.

Results and discussion

The research suggests Iowa NOLs and farmers renting land have varying views about the effects of extreme weather. While all agreed Iowa has experienced more extreme weather in recent years, the perceived effects of those extremes ranged from very little to very serious. Most of those interviewed shared a growing concern about how the extreme conditions of drought, heavy rains, flooding, high temperatures and heightened storm events, including wind and hail, were decreasing both the short-term productivity of their land via lower yields and the long-term productivity due to declines in soil health and increases in soil erosion.

Interviewees generally expressed a high level of responsibility for conservation management on the land they owned or farmed. In essence, they believed they were doing a good job. Interestingly, they showed some skepticism about the other party to the lease being able to appreciate or understand how they themselves were caring for the land. In several cases, the subject being interviewed was even concerned about the other party gaining too much control in the situation. True to this form, the two land managers interviewed were skeptical of both the landowner and the tenant. In other words, they felt that they as farm managers play an important role in helping both parties do a better job. Much of this mirrors what is already known about conservation perceptions on leased land in general. It can be easy to see degradation on properties where one is not involved and much more difficult to identify shortfalls on the property that he or she owns or farms.

While most subjects did not say so explicitly, the research clearly suggests that the most robust approaches to safeguard the productivity of rented Iowa farmland have both the NOL and the operator working together toward that goal. Although this may seem obvious in the abstract, the interviews suggest a real need for strategies to encourage a stronger partnership between the two or more parties to the lease. If extreme weather events continue, and predictions are they will, this need likely will become even more acute. Discussions with the 18 stakeholders point to three specific challenges--sociological, legal and policy--that must be addressed in order for the parties to work together.

The sociological challenge is to develop ways to encourage partnership and communication. At the same time Iowa farmers were seeing more unstable weather conditions, they also were receiving historically high commodity prices. Nearly all of the interviewees said that prices were a greater challenge for stewardship than the extreme weather. While this is an oversimplification, landowners tended to be suspicious that operators were incentivized to stress their land for short-term profit over longer-term stewardship. Farmers tended to feel landowners were more concerned with maintaining a balance between rents and high commodity prices



Corn planted on contour.

rather than investing in conservation. Weather seemed to be a less important factor than financial competition over the land. The sociological challenge is to overcome traditional tension (exacerbated by recent high prices and further complicated by price volatility) between the NOL and the farmer, because as extreme weather continues, it will require a new level of cooperation to keep Iowa farmland as productive as possible.

The legal challenge is to identify and develop better language, approaches, and tools in lease agreements to reflect these shared costs, responsibilities, and benefits. Tillage, residue and diversity are important strategies for keeping more carbon in the soil to combat climate change and to keep the land more resilient to extreme weather. Cover crops were frequently mentioned as a strategy to deal with uncertain weather. While these practices can be very effective in the long term, they have an immediate cost in the short term. Identifying, quantifying and assigning these costs and benefits in the lease will be increasingly important as drought, heavy rains, extreme temperatures and severe storms become more common. Structures such as waterways and terraces will increasingly be damaged, destroyed, and far more difficult to build or repair because of extreme weather. NOLs and operators will need to work with the legal community to develop lease agreements that ensure that these costs, responsibilities and benefits are transparent and fair.

There are policy challenges as both NOLs and farmers look for effective risk management tools. Crop insurance is increasingly important, but the interviews clearly showed a lack of communication between NOLs and farmers regarding these tools. Crop insurance was cited by interviewees as a subject rarely discussed between NOLs and farmers. The 2014 Farm Bill introduced several new insurance products and expanded the federal disaster programs and these changes translate into dollars for farmers. But, unless better communication becomes part of the culture of the lease arrangement for rented farm ground, federal risk management tools could create greater mistrust between owners and operators rather than providing ways for the two parties to safeguard their resources. Further, the commodity programs in the 2014 Farm Bill require NOLs and operators to work together in new and different ways. The policy issues are evolving, complicated and likely are the least well-understood of the three challenges for those dealing with rented farm ground in Iowa.

Conclusions

Health and productivity of rented farm ground in Iowa is threatened by extreme weather events. Climate scientists predict the extreme weather is going to continue and worsen throughout this century. Both NOLs and their operators have a stake in safeguarding the productivity of the land. They will need to work together to develop strategies to protect soil health and fertility, to hold soil on the farm, and to better cycle water. It is in the state's interest to develop sociological, legal, and policy strategies to bring NOLs and farmers together as partners in order to combat the damage being done by extreme weather. The challenge is getting the two parties to work together.

Impact of results

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.

Education and outreach

Publications (posted on SALT website:

<http://sustainablefarmlease.org/climate-extremes-farm-leases/>)

- Crop Insurance Considerations for Non-Operating Land Owners in the Face of Extreme Weather (see also Leopold Center website: <http://www.leopold.iastate.edu/pubs>)
- Lease provisions
- Summaries of interviews
- Annotated site map of USDA's climate change resources and outreach

Presentations (by Edward Cox and conferences where SALT materials were displayed)

- Women Food and Agriculture Network (WFAN) meetings in 2013; February 7 (30 attendees), February 13 (14), March 26 (12), April 10 (12), August 2 (15)
- Agren Sustainable Farm Lease Webinar, March 2013 (8 participants)
- Women, Land and Legacy meetings; August 2013 (34 attending) and July 2014 (40)
- Exhibit at WFAN Conference, November 2013 (200 attendees)
- North American Farm Direct Marketing Association conference, Kansas City, MO, February 2014 (400 participants)
- Iowa Soil and Water Conservation District Commissioners annual conference, September 2014 (200+ attending)
- Extension Energy Summit, September 2014 (30 participants)
- American Farmland Trust conference, Lexington, KY, October 2014 (50 attendees)

For more information, contact

Neil Hamilton, Drake Agricultural Law Center, 182 Opperman Hall, 2507 University Avenue, Des Moines, Iowa 50311; (515) 271-2065, e-mail neil.hamilton@drake.edu

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