

Amanda McHale

Research Associate 2, Oak Ridge Associated United States

NON-COMPETITIVE DIVISION

How Extreme Weather Affects Small Family Farms

The purpose of this poster is to present research and inform emergency managers how extreme weather events impact small family farms. The increasing frequency and intensity of extreme weather events poses a threat to these farms, which make up nearly 90% of all farms in the U.S. and are the backbone of rural communities. Despite their significance, small family farms often lack adequate resources to cope with and recover from such events. This can lead to challenges for emergency managers, such as remediating environmental hazards, coordinating the procurement and delivery of specialized equipment, managing shelter for livestock, or addressing response delays due to remote farm locations.

Understanding the challenges small family farms face in the event of extreme weather can help emergency managers better plan for and respond to farmers' needs. To understand these challenges, researchers from Oak Ridge Associated Universities and the University of Tennessee Knoxville conducted in-depth interviews with small family farmers residing in rural East Tennessee. This region has seen a significant increase in extreme weather events, including two tornadoes in 2023 and a record snowstorm in early 2024. Results from this case study aim to help emergency managers better understand the struggles faced by small family farmers when managing extreme weather. Future goals of this research are

to collaborate with emergency managers and identify strategies for mitigating these impacts.

Presentation Theme: Research findings from an in-depth case study on the impact of extreme weather events on small family farms preparedness and response efforts.

Collaborators, Advisor(s) and Department(s) that assisted with this research: Jennifer Russomanno (University of Tennessee Knoxville) and Jennifer Burnette (Oak Ridge Associated Universities)