

Matthew Gammans

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EXPERIENCE

Assistant Professor

January 2025- present

Agribusiness and Applied Economics, North Dakota State University

Role description: Assistant Director of NDSU Center for Agricultural Policy and Trade Studies. Conducting research and extension projects focused on agricultural production economics, climate change impacts, and ag policy.

Economist

October 2023-August 2024

Isometric

Role description: Isometric is a carbon removal registry company. I served as lead author of Isometric's Biogenic Carbon Capture and Storage protocol, as well as its Biomass Feedstock Accounting methodology.

Assistant Professor

August 2020-August 2023

Agricultural, Food, and Resource Economics, Michigan State University

Role description: Developed research and extension agenda focused on farm management and production economics. Taught PhD-level course in applied microeconomics.

EDUCATION

University of California at Davis

PhD, Agricultural and Resource Economics

July 2020

Michigan State University

BS, Biosystems Engineering (second major in Economics)

May 2014

PUBLISHED RESEARCH

Is climate change driving food inflation?

Choices. 2025.

Matthew Gammans and K. Aleks Schaefer

Cash crop demand and conservation practices: the effect of ethanol expansion on cover cropping

Applied Economics Policy and Perspectives. 2025.

Sungmin Cheu and Matthew Gammans

Extreme weather events, climate expectations, and agricultural export dynamics

American Journal of Agricultural Economics. 2025.

Kjersti Nes, Aleks Schaefer, Matthew Gammans, and Daniel Scheitrum.

Double cropping as an adaptation to climate change in the United States

American Journal of Agricultural Economics. 2024. [Link]

Matthew Gammans, Pierre Mérel, and Ariel Ortiz-Bobea.

Sufficient statistics for climate change counterfactuals

Journal of Environmental Economics and Management. 2024. [Link]

Pierre Mérel, Emmanuel Paroissien, and Matthew Gammans.

A new look at agricultural fires and health: A replication of Rangel and Vogl (2019)

Applied Economics Policy and Perspectives. 2023. [Link]

Matthew Gammans and Ariel Ortiz-Bobea.

Heterogeneous climate impacts on crop yields: Evidence from Ukraine

Environmental Research Communications. 2023. [Link]

Ming Fang, Songqing Jin, Klaus Deininger, and Matthew Gammans.

Climate econometrics: Can the panel approach account for long-run adaptation?

American Journal of Agricultural Economics. 2021. [Link]

Pierre Mérel and **Matthew Gammans**.

Are simultaneously decided referenda substitutable? Evidence from municipal land use ballot measures

Land Economics. 2021. [Link]

Matthew Gammans, James N. Sanchirico, Kailin Kroetz, Paul R. Armsworth, and Elaine W. Swiedler.

Temporal displacement, adaptation, and the effect of climate on suicide rates

Nature Climate Change. Comment. 2020. [Link]

Matthew Gammans.

Negative impacts of climate change on cereal yields: Statistical evidence from France

Environmental Research Letters. 2017. [Link]

Matthew Gammans, Pierre Mérel, and Ariel Ortiz-Bobea.

TECHNICAL PUBLICATIONS (NON-PEER REVIEWED)

Budgeting for Prairie Strips [Link]

Rachel Drobnak, Fahimeh Baziari, Scott Swinton, Christine Charles, Brook Wilke, Elizabeth Schultheis, Jon LaPorte, Christine Sprunger, John Tyndall, *Matthew Gammans*, and Julie Doll. June 2024. *MSU Extension*.

Biochar Production and Storage Protocol [Link]

Matthew Gammans, Sophie Gill, Adam Ward, Emma Marsland, and Marya Matlin-Wainer. July 2024. *Isometric*.

Biomass Feedstock Accounting Protocol [Link]

Matthew Gammans, Neil Hacker, Clare Leckie, Ola Sitarska, Chris Podgorney, and Christie Patel. December 2023. *Isometric*.

Subsurface Biomass Storage Protocol [Link]

Kevin Sutherland and *Matthew Gammans*. July 2024. *Isometric*.

Energy Use Accounting Module [Link]

Matthew Gammans, Neil Hacker, Jonathan Lambert, Emma Marsland, and Christie Patel. February 2024. *Isometric*.

Bio-oil in Geologic Storage Protocol [Link]

Sophie Gill, Neil Hacker, Christie Patel, Rebecca Tyne, Emma Marsland, Jonathan Lambert, and *Matthew Gammans*. December 2023. *Isometric*.

Custom Work Rates [Link]

Jon LaPorte, *Matthew Gammans*, Melissa McKendree, Zach Rutledge, Florencia Colella, and Corey Clark. November 2022. *MSU Extension*.

Introduction to Grain Marketing [Link]

Jon LaPorte and *Matthew Gammans*. 2022. *MSU Extension*.

Michigan Land Values Report [Link]

Matthew Gammans and Sungmin Cheu. 2021. *MSU Extension*.

TEACHING EXPERIENCE

Applied Microeconomics (PhD course), Michigan State

Fall 2022

Applied Microeconomics (PhD course), Michigan State

Spring 2022

Teaching assistant (TA) Natural Resource Economics, UC Davis

Spring 2020

TA Environmental Policy, UC Davis

Winter 2017

TA Financial Management of the Firm, UC Davis

Spring 2016

TA International Commodity and Resource Markets, UC Davis

Winter 2016

TA Engineering Optimization, Michigan State

Winter 2013

RESEARCH GRANTS AND CONTRACTS

Raised over \$6 million in grants and contracts working as a member of interdisciplinary teams. Team members are affiliated with NDSU unless otherwise specified.

Water Scarcity in the Serbian Danube: Agricultural Land Use Change and Irrigation (2022-2024)

-NASA (\$450,000 total; AFRE portion \$178,622)

-Team: Sean Woznicki (Grand Valley State University), Tau Liu (Michigan Tech), Matthew Gammans, Molly Sears

Measuring the Dynamics of Minimum Required Cover Crop Incentive Payments (2021-2023)

-USDA ERS (\$1,275,000 total; AFRE portion \$1,275,000)

-Team: Frank Lupi, Scott Swinton, Matthew Gammans

Estimating Financial and Environmental Sustainability of Apple Production in Michigan (2022-2023)

-USDA (\$58,246 total; AFRE portion \$45,500)

-Team: Matthew Gammans (PI), Julianna Wilson, Anna Wallis

Optimal Harvest Drydown (2022-2024)

-MSU Internal Funding (Project GREEN) (\$40,000 total)

-Team: Maninderpal Singh, Jeffrey Andresen, and Matthew Gammans

Great Lakes Regional Integrated Sciences and Assessments Center (2021-2026)

-NOAA Climate Program Office (\$750,000 total; MSU Portion: \$370,000; AFRE portion \$69,500)

-Team: Maria Lemos (PI- UofM), Jeffrey Andresen, Matthew Gammans, Richard Rood (UofM), Thomas Kenote (College of Menominee Nation), Michael Notaro (U of Wisconsin)

Integrating soil health into land valuation in Southeast Michigan 2021

-Delta Institute (Prime: Erb Family Foundation) (\$33,000 total, AFRE portion \$33,000)

-Principal Investigator: Matthew Gammans

Restocking the IPM toolbox to meet current insect management challenges in highbush blueberry (2021-2023)

-USDA NIFA (\$325,000 total, AFRE portion \$42,000)

-Team: Rufus Isaacs (PI), Matthew Gammans, Carlos Garcia-Salazar, Marisol Quintanilla

PROFESSIONAL SERVICE

AAEA Annual Meeting Topic Leader (Environmental and Resource Economics) 2022-2023
Referee for: *Nature* (2025), *American Journal of Agricultural Economics* (2020-2025), *Journal of the Association of Environmental and Resource Economists* (2021-2024), *Quarterly Journal of Economics* (2021), *PNAS* (2021-2022), *Journal of Environmental Economics and Management* (2021), *Food Policy* (2021, 2025), *Agricultural Economics* (2021, 2025), *Journal of Agricultural and Resource Economics* (2021-2022, 2025), *Environmental Research Letters* (2018-2019, 2022), *Applied Economic Perspectives and Policy* (2022), *Agricultural and Resource Economics Review* (2021), *Journal of the Agricultural and Applied Economics Association* (2022)