

Extension Program Overview

Wendong Zhang

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CCE Agriculture, Food & Environmental Systems In-Service, November 7, 2023



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Research & Extension Program Themes

- Theme I: Agriculture & the Environment
- Theme II: Land Value, Land Ownership, Land Tenure, Land Use
- Theme III: Chinese Agriculture & its Global Trade Implications
- Other Useful information:

Appointment: 50% Research & 50% Extension

Joined Cornell Dyson School & CCE in July 2022

Faculty Affiliate, Cornell Institute for China Economic Research (CICER)

Faculty Fellow, Cornell Atkinson Center for a Sustainable Future

Assistant and Associate Professor at Iowa State 2015-2022

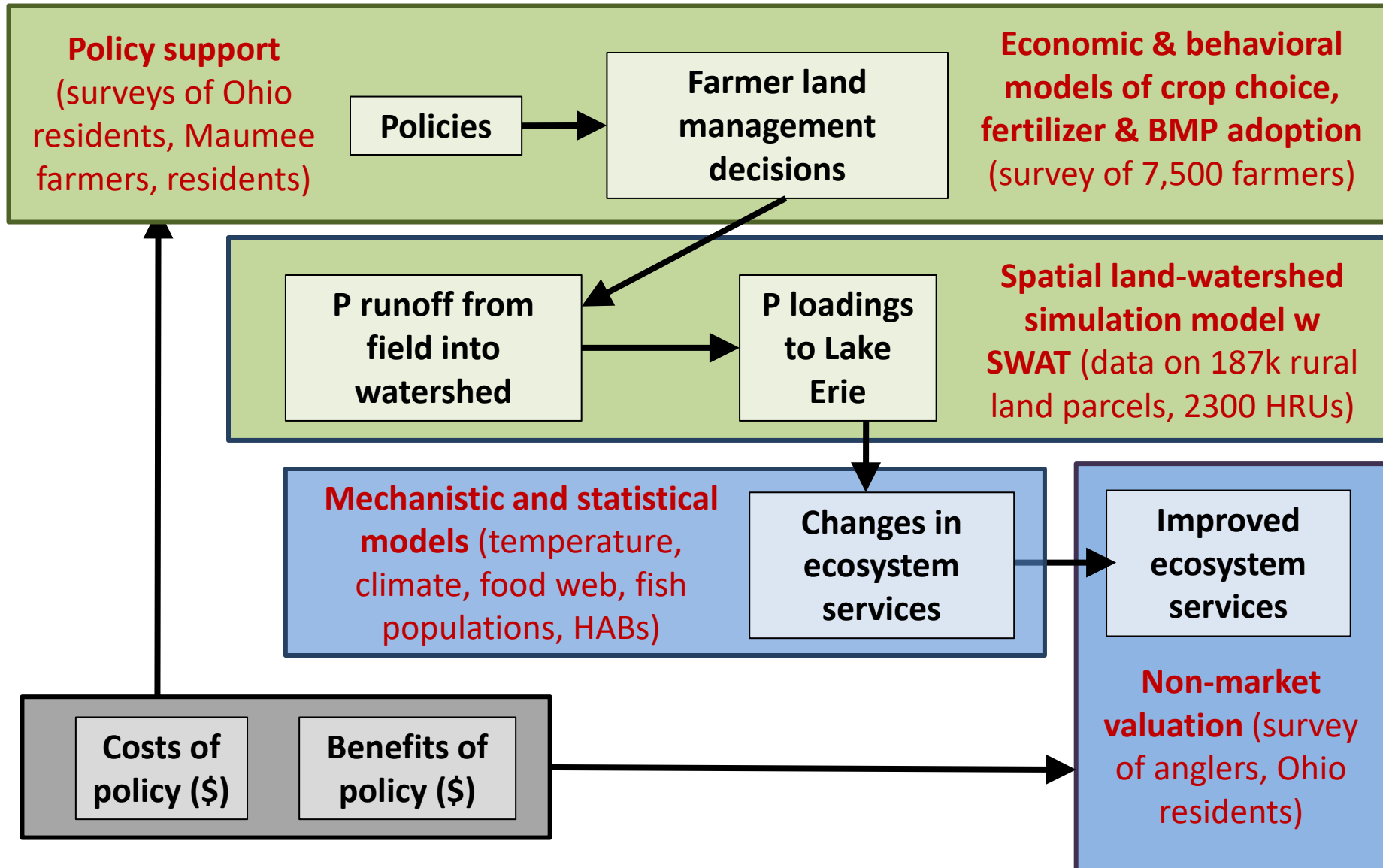
Led Iowa land value survey; co-founded the ISU China Ag Center

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Recent Publications

- Land 41. Lu, Qinan, Nieyan Cheng, **Wendong Zhang**, and Pengfei Liu. 2023. Disamenity or Premium: Do Electricity Transmission Lines Affect Farmland Values and Housing Prices Differently? Forthcoming at *Journal of Housing Economics* (Corresponding Author)
- L 40. Mykel R. Taylor, **Wendong Zhang**, and Festus Attah. 2023. "Foreign Interests in U.S. Agricultural Lands: The Missing Conversations about Leasing." Forthcoming at *Choices*
- C 39. Xiong, Tao, **Wendong Zhang**, and Fangxiao Zhao. 2023. "When China Strikes: Quantifying Australian Companies' Stock Price Responses to China's Trade Restrictions", forthcoming at *Australian Journal of Agricultural and Resource Economics* (Corresponding Author) (published version)
- C 38. Li, Minghao, and Xi He, **Wendong Zhang**, Lulu Rodriguez, James M Gbeda, Shuyang Qu. 2023. Farmers' Reactions to the US-China Trade War: Perceptions Versus Behaviors. Forthcoming at *Journal of AAEA* (Corresponding Author) (published version)
- L 37. Lee, Jun Yeong, Grant Durbahn, Peter F. Orazem, and **Wendong Zhang**. 2023. "The Roles of Risk Preferences, Selection, and Uncertain Returns on Land Contracts", Forthcoming at *Agricultural Economics* (published version)
- E 36. Howard, Gregory, **Wendong Zhang**, Adriana Valcu-Lisman, and Philip Gassman. 2023. Evaluating the Tradeoff between Cost-Effectiveness and Participation in Agricultural Conservation Programs. Forthcoming at *American Journal of Agricultural Economics* (Corresponding Author) (published version)
- L 35. Maule, Beatrice, **Wendong Zhang**, and Qing Liu, 2023. Of Women and Land: How Gender Affects Successions and Transfers of Iowa Farms. Forthcoming at *Applied Economic Policy and Perspectives* (Corresponding Author) (Winner of the 2021 AAEA Undergraduate Paper Competition)
- E 29 Mei, Yingdan, Li Gao, **Wendong Zhang**, and Feng-an Yang. 2021. Will Homeowners Benefit When Coal-fired Power Plants Switch to Natural Gas? Evidence from Beijing, China. *Journal of Environmental Economics and Management*, 110:102566. (published version)
- C 28. Xiong, Tao, **Wendong Zhang**, and Chen-Ti Chen. August 2021. A Fortune from Misfortune: Evidence from Hog Firms' Stock Price Responses to China's African Swine Fever. *Food Policy*, 105: 102150 (published version)

An Interdisciplinary Approach: Agriculture & the Environment



NYS (Northeast) Land Values and Lease Trends Report

A possible ASFMRA Northeast Chapter & Cornell joint annual publication?

Key Collaborators:

Rob Guay, Viewpoint Ag, ASFMRA Northeast Chapter

Rebecca Stone, Agronomic Insights Inc. ASFMRA District I VP



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American Society
of Farm Managers
& Rural Appraisers

Basic Region-Specific Report Table

Time range: Jan 1, 2023 to Jan 1, 2024

Farmland Class	Value range	Activity Trend	Value Trend
High-quality cropland	\$2500-\$3000	More Sales	Up sharply
Medium-quality cropland			Increasing
Low-quality cropland or Pasture			Stable
Woodland w/ Timber value			
Wasteland or Recreational land			
Cropland Rent	Rent Range	Rental Activity Trend	Rent Trend
	\$50-120	Stable	Increasing

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Woodland w/ Timber value			
Wasteland or Recreational land			
Possible: Vineyard or Orchard or black dirt (Hudson)	Add OPTIONAL land classes for your region if applicable		
Possible: Transitional/urban grounds			
Possible: Rural rec			
Cropland Rent	Rent Range	Rental Activity Trend	Rent Trend
	\$50-120	Stable	Increasing
Possible: hunting lease			

NYS Regional Map

- 1: Western NY & Finger Lakes
- 2: Southern Tier
- 3: Central NY
- 4: Adirondacks & Saratoga
- 5: Capital Region
- 6: Hudson Valley
- 7: Long Island



An example &
benchmark –
Minnesota &
Texas Chapters

2020

Land Value & Cash Rent Survey

Presented by the Minnesota Chapter of
Farm Managers & Rural Appraisers
January 2021

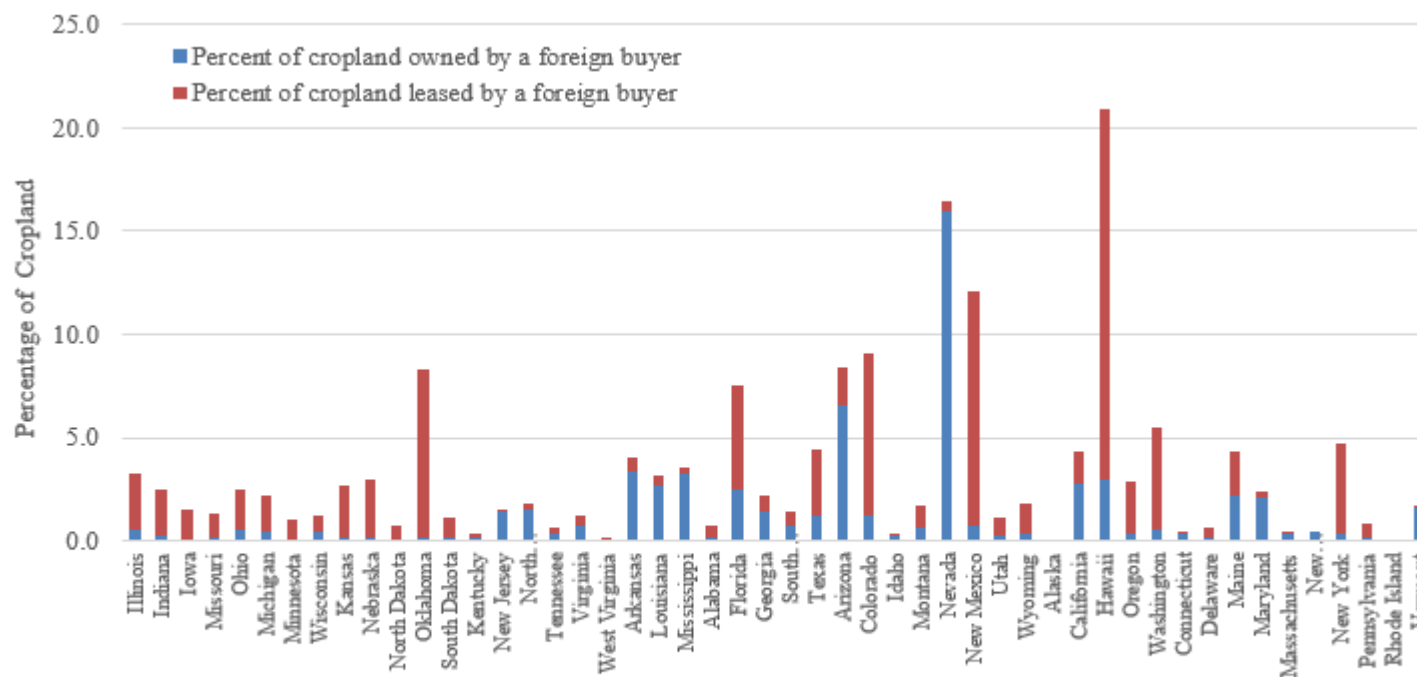


Foreign Interests in U.S. Agricultural Lands: The Missing Conversations about Leasing

Mykel R. Taylor, Wendong Zhang, and Festus Attah

JEL Classifications: Q15, Q18

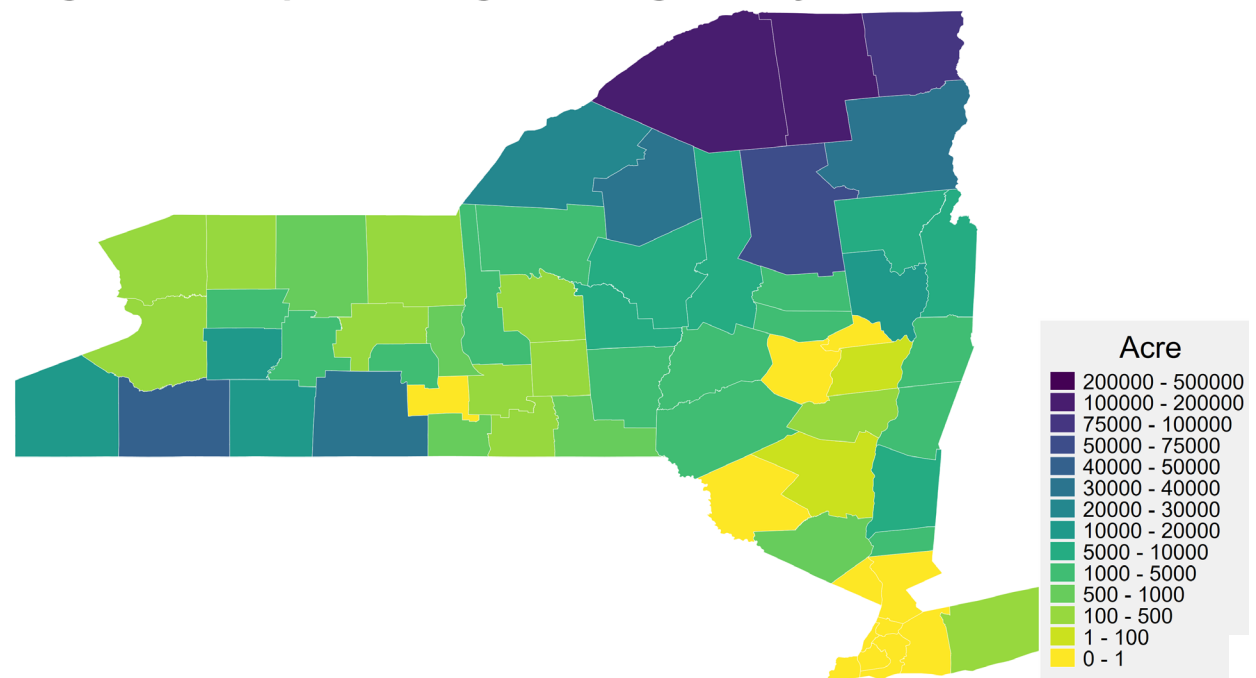
Keywords: Foreign investment, Land, Policy, Lease



(b) Foreign Interest in U.S. Cropland

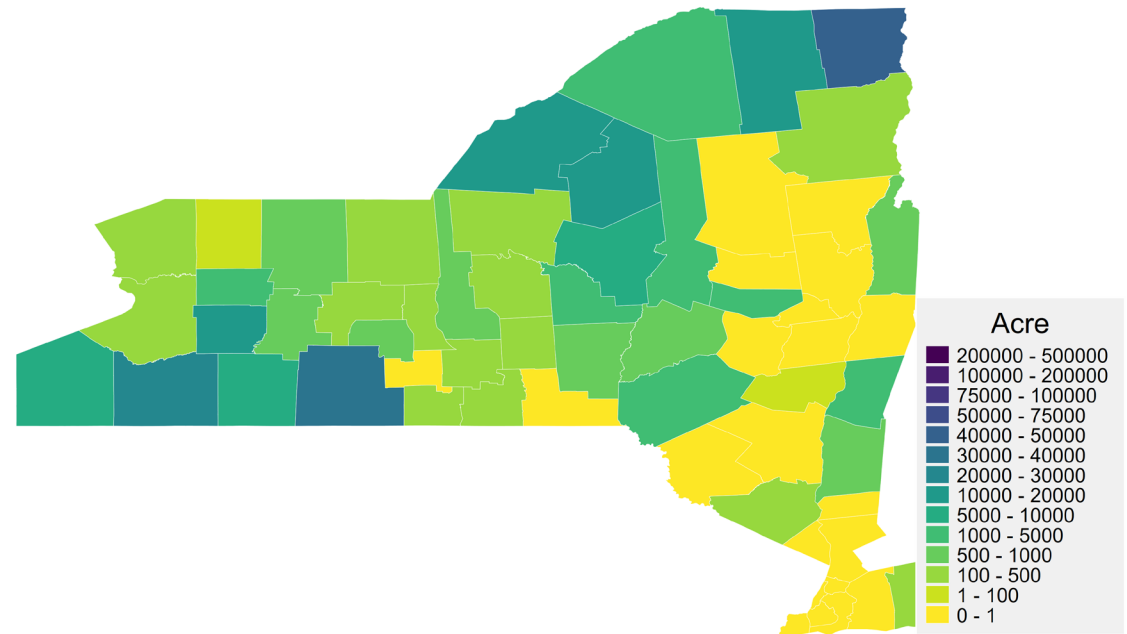
Note: Author calculations based on AFIDA database via a 2020 FOIA request with USDA Farm Service Agency. State-level total privately-held farmland is from USDA (2021) and the state-level cropland acres is based on 2017 U.S. Census of Agriculture.

Foreign ownership of NYS ag & non-ag land by all countries as of 2020

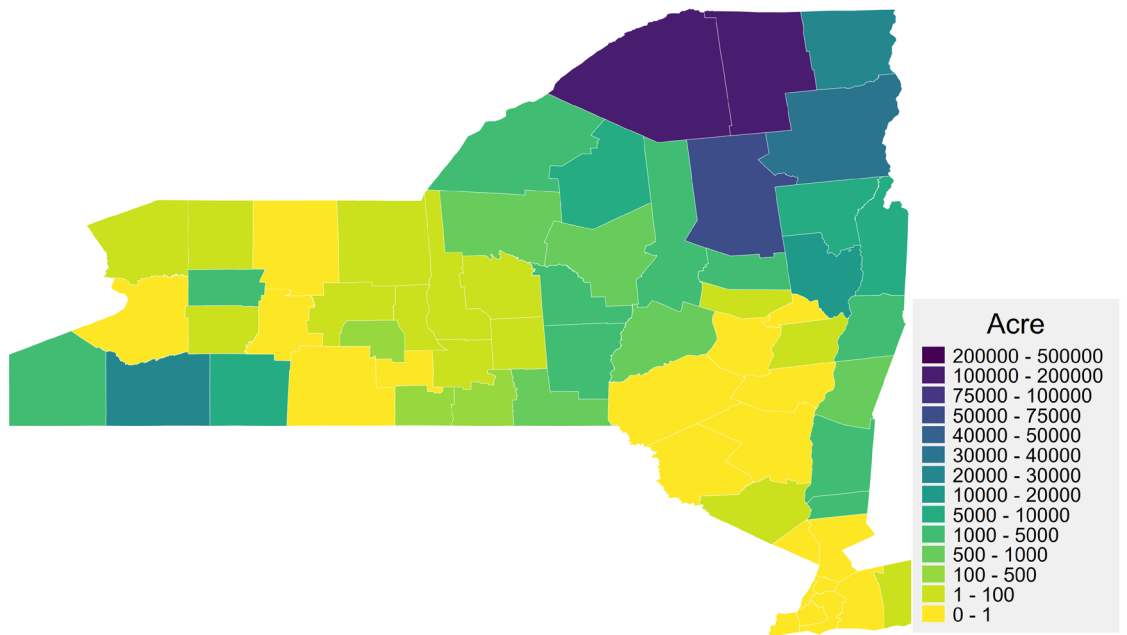


Source: AFIDA Database; Created by Wendong Zhang (Cornell) & Mykel Taylor (Auburn)

Foreign ownership of NYS cropland by all countries as of 2020



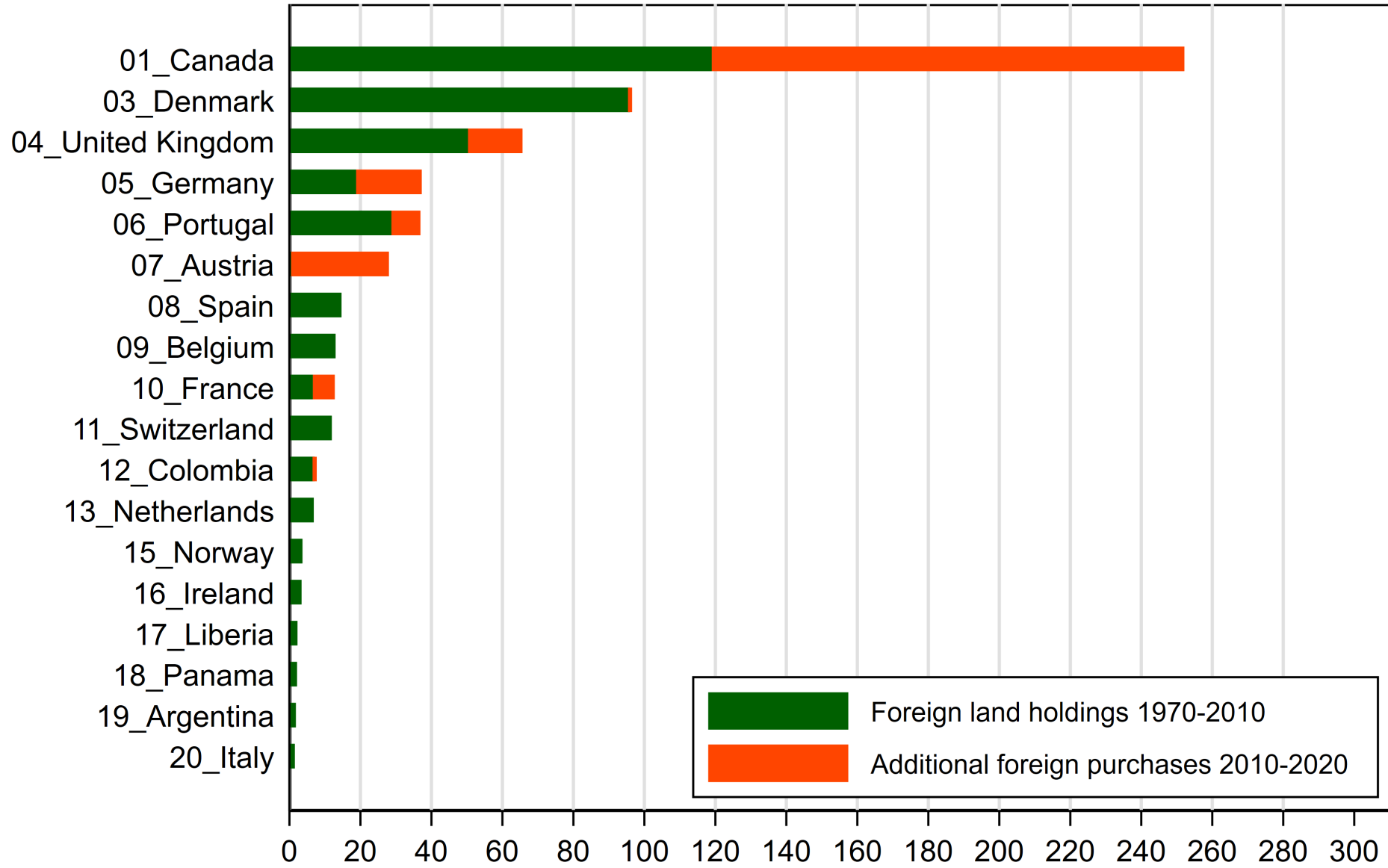
Foreign ownership of NYS forest land by all countries as of 2020



Source: AFIDA Database; Created by Wendong Zhang (Cornell) & Mykel Taylor (Auburn)

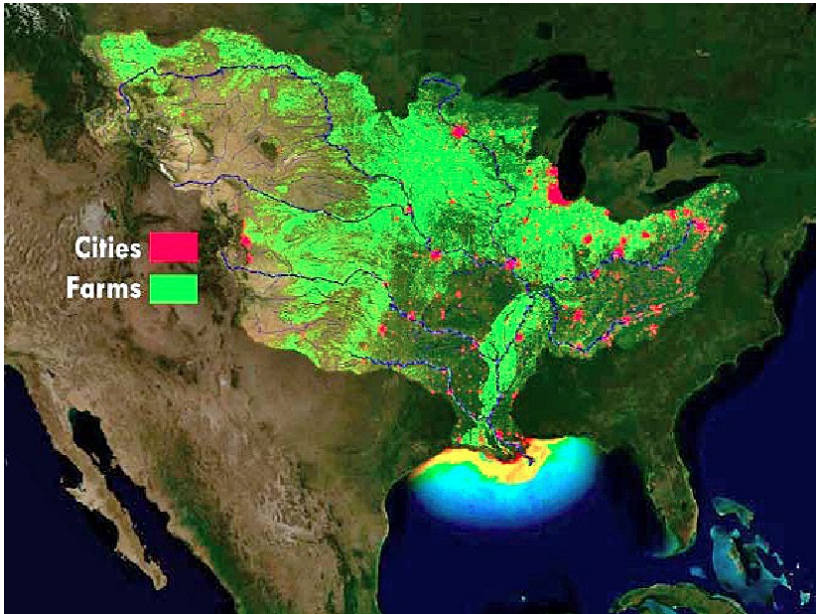
<https://wendongzhang.weebly.com/afida.html>

Top 25 Foreign Countries by NYS Farmland Ownership in 2020



Thousands of acres of NYS farmland owned by a foreign country

Source: AFIDA Database; Created by Wendong Zhang (Cornell) & Mykel Taylor (Auburn)



New Research & Extension Project: Harmful algal blooms in Finger Lakes



Taughannock Falls State Park closed swimming areas multiple times owing to toxic algae outbreaks. Photo: Jeff Katris



Top: Dead Zone in the Gulf of Mexico

Bottom: Great Atlantic Sargassum Belt in the Caribbeans

Aquatic Invasive Species in NYS

e.g., Water Chestnuts – funded by NYS Water Resources Institute



Cornell University.

How informed are you regarding aquatic invasive species in Hudson Valley/Mohawk Valley/Capital District?

Not informed at all

Somewhat informed

Informed

Very informed

Not sure

Please check the box next to each aquatic invasive species that you have heard of. (Check ALL that apply)



Water chestnut



Hydrilla



Starry stonewort

New Project

Organic Cucurbit Growers' Technology Adoption – Mesotunnels

Table 9. Perceived Effectiveness of Mesotunnels in Achieving Outcomes for Cucurbit Crops

	Not effective at All (%)	Moderately Effective (%)	Effective (%)	Very Effective (%)	Not Sure (%)
Maximizing marketable yield	3.13	17.55	50.16	20.38	8.78
Reducing pesticide use	7.76	13.66	42.55	27.64	8.39
Controlling insect pests	3.28	12.84	45.07	34.33	4.48
Controlling diseases	14.62	26.91	31.23	15.28	11.96
Protecting crops from extreme weather events (such as cold, high wind, and hail)	6.19	24.46	38.39	21.36	9.60
Maximizing profitability	7.48	29.25	31.97	13.95	17.35



Has survey data already
 Now has a new \$3.5 mil. Grant
 Joint w Sarah Pethybridge @ AgriTech

https://dyson.cornell.edu/wp-content/uploads/sites/5/2023/06/EB_05_2023-VD.pdf

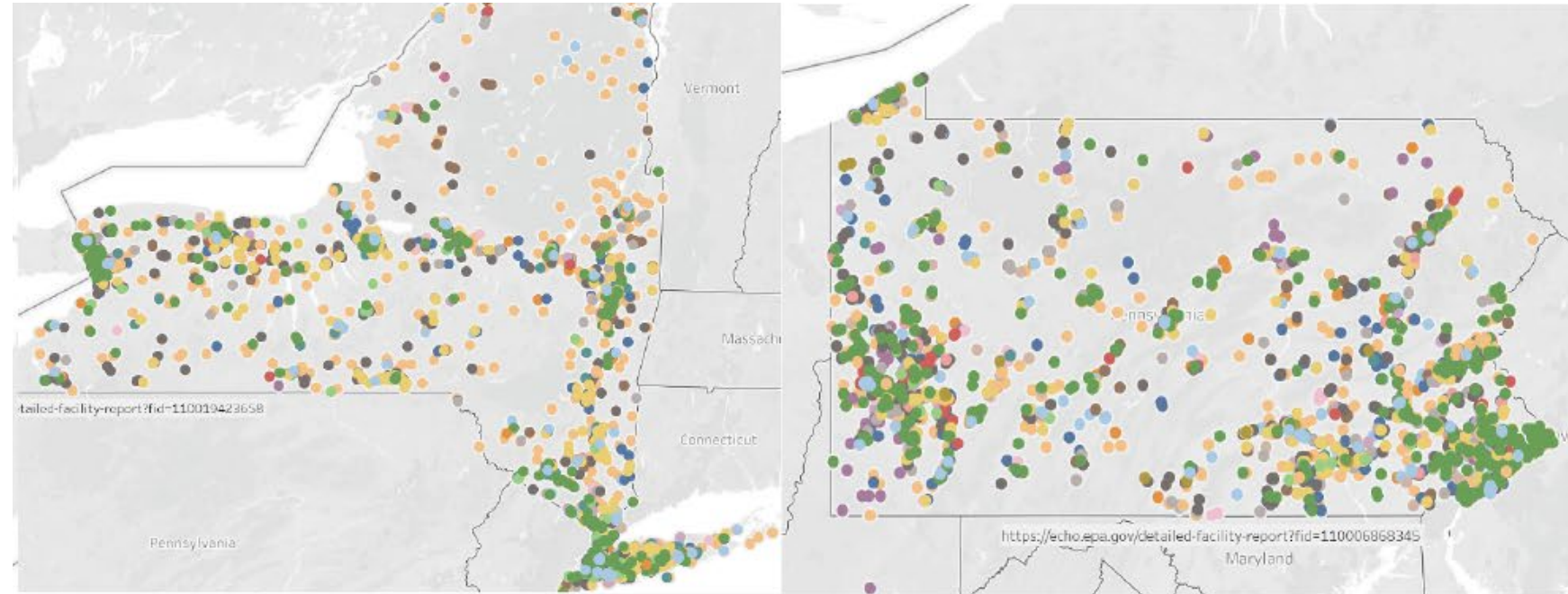


Figure 6. Left: Mesotunnel System 1 with living mulch. Right: Mesotunnel System 2 with landscape fabric.

From Awareness to Action: Assessing PFAS exposure in communities and evaluating the effectiveness of its mitigation strategies

• New Sea Grant

'Forever Chemicals'



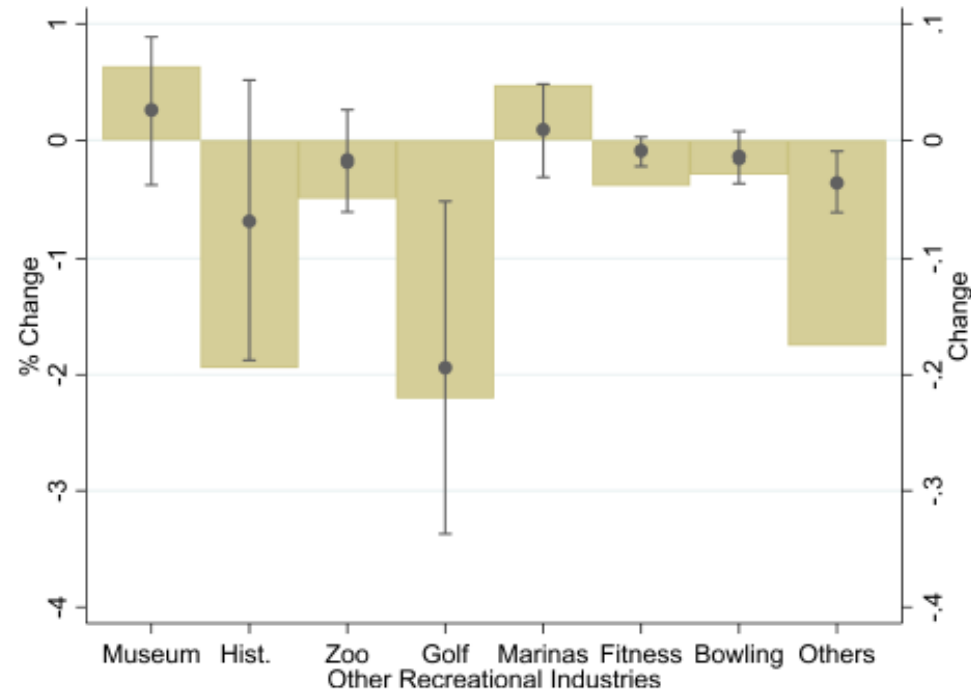
B) New York

C) Pennsylvania

Figure: Facilities that "Maybe Handling PFAS" from public employees for environmental responsibility (PEER)

Ongoing project

Wildfire & Recreation using cellphone foot traffic data

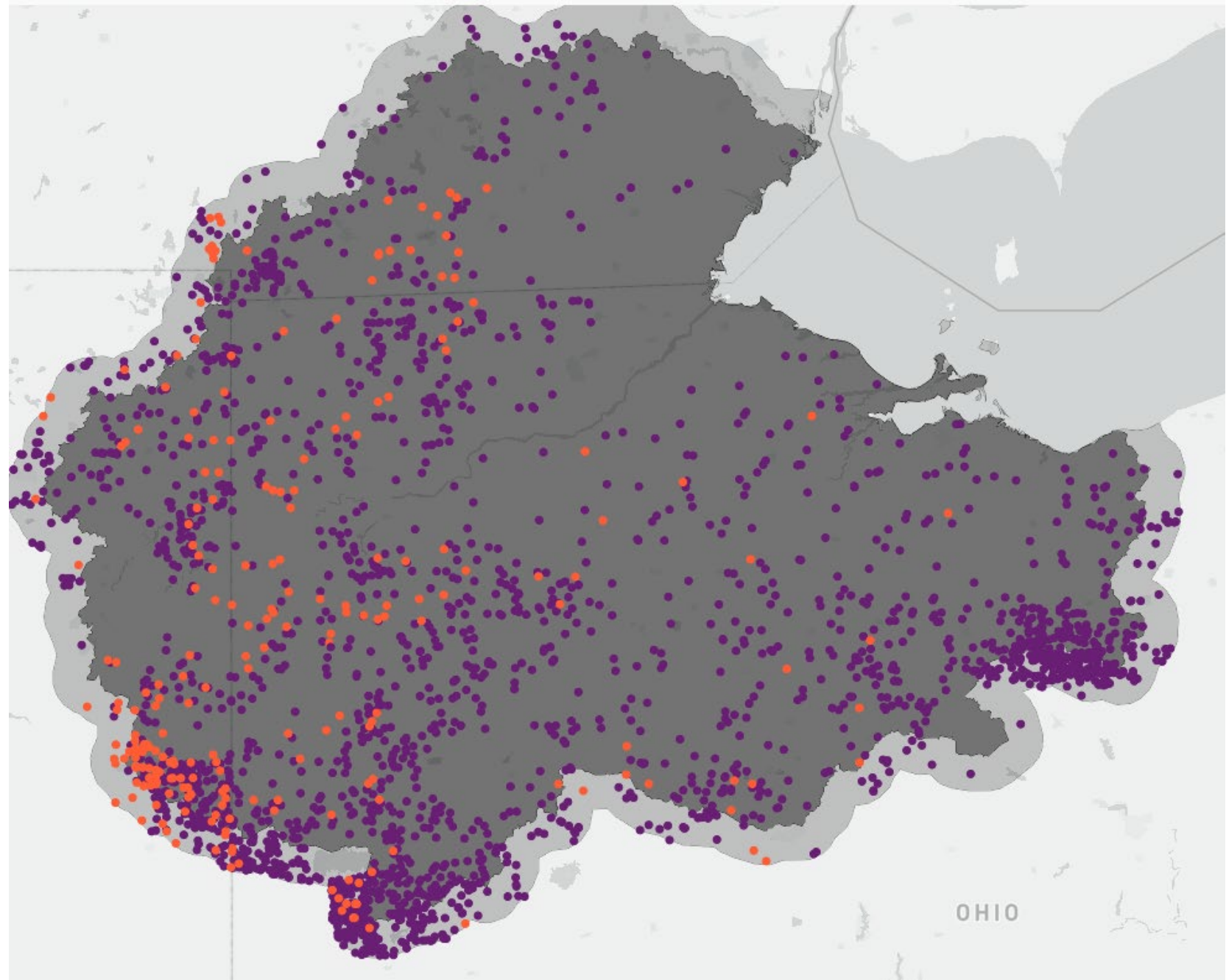


Significant impact of wildfire smoke and air pollution on outdoor recreation:
50% increase in smoke days in a week is associated with a 2-3% reduction in
recreational visits; # visitors; how long you stay → \$6 billion loss in recreational value

Ongoing Project CAFO and Farmland Values

- Concentrated Animal Feeding Operation needs to deal with manure to satisfy its nutrient management plan requirements
- thus could competitively bid nearby farmland parcels because it is costly to ship manure beyond certain distance (e.g., 8 miles)
- could result in higher farmland values

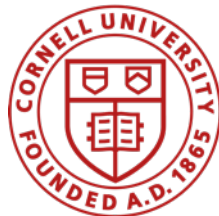
Locations of animal feeding operations in the Western Lake Erie Basin



Thank you!

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