

# Molly Sears (Van Dop)

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ACADEMIC POSITION      **Michigan State University**, East Lansing, Michigan  
Agricultural, Food, and Resource Economics      *August 2022-Present*  
Assistant Professor

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EDUCATION      **University of California, Berkeley**, Berkeley, California  
*PhD* Agricultural and Resource Economics      *May 2022*  
*M.S.* Agricultural and Resource Economics      *May 2018*

**Purdue University**, West Lafayette, IN  
*M.S.* Agriculture and Resource Economics      *May 2016*

**University of Arizona**, Tucson, AZ  
*B.S.* Environmental and Water Resource Economics      *May 2014*  
*B.S.* Environmental Science      *May 2014*

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RESEARCH INTERESTS      Environmental and resource economics; agricultural economics; applied microeconometrics; policy design and impact evaluation

PUBLICATIONS      Jamshid Jalali, Nishan Bhattarai, Jillian Greene, Tao Liu, Oskar Marko, Mirjana Radulovic, **Molly Sears**, Sean A. Woznicki. “Climate change threatens water resources for major crops in Serbia’s Danube Basin by mid-21st century.” (*Accepted*) *Journal of Hydrology: Regional Studies*

Sampriti Sarkar, Preet Lal, **Molly Sears**, Frank Lupi. “**Evaluating the impact of fertilizer and crop prices on phosphorus concentrations in Great Lakes watersheds**” *Journal of the Agricultural and Applied Economics Association* (2024) ([Link](#))

**Molly Sears**, Karen M. Jetter, and Etaferahu Takele. “**For California Perennial Crops Facing Climate Change, Water Use Stays Stable While Planting Density Increases**” *California Agriculture* (2024) ([Link](#))

Peter Berck, **Molly Sears**, Carly Trachtman, Rebecca Taylor & Sofia Villas-Boas, “**Reduce, Reuse, Redeem: Deposit-Refund Recycling Programs in the Presence of Alternatives**” *Ecological Economics* (2024) ([Link](#))

Sat Darshan S. Khalsa, Jessica Rudnick, Mark Lubell, **Molly Sears**, Patrick H. Brown “**Linking agronomic and knowledge barriers to adoption of conservation practices for nitrogen management**” *Frontiers in Agronomy* (2022) ([Link](#))

Liza Wood, Mark Lubell, Jessica Rudnick, Sat Darshan S. Khalsa, **Molly Sears**, Patrick H. Brown, “**Mandatory information-based policy tools facilitate California farmers’ learning about nitrogen management**” *Land Use Policy* (2022) ([Link](#))

Jessica Rudnick, Mark Lubell, Sat Darshan S. Khalsa, Stephanie Tatge, Liza Wood, **Molly Sears** & Patrick H. Brown, “**A farm systems approach to the adoption of sustainable nitrogen management practices in California**” *Agriculture and Human Values* (2021) ([Link](#))

Peter Berck, Marshall Blundell, Gabriel Englander, Samantha Gold, Shelley He, Janet Horsager, Scott Kaplan, **Molly Sears**, Andrew Stevens, Carly Trachtman, Rebecca Taylor, Sofia B. Villas-

Boas, “**Recycling Policies, Behavior and Convenience: Survey Evidence from the CalRecycle Program**” *Applied Economics Perspective and Policy* (2021) ([Link](#))

Celine Bonnet, Carly Trachtman, **Molly Van Dop**, Sofia B Villas-Boas, “**Food markets’ structural empirical analysis: a review of methods and topics**” *European Review of Agricultural Economics* (2020) ([Link](#))

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PAPERS IN  
PROGRESS

James Sears, Sofia B. Villas-Boas, **Molly Sears**, Carly Trachtman, Andrew W. Stevens, Linlin Fan. “Deniers and Compilers: Unpacking the Heterogeneous Effectiveness of U.S. Stay-at-Home Mandates During the COVID-19 Pandemic” (*Revise and Resubmit, Journal of Applied Econometrics*)

Caitlin Nelson\*, Molly Sears. “Alternative Water Sources: Opportunities and challenges in addressing global water vulnerability.” (*Under Review*)

**Molly Sears**, Ellen Bruno, Michael Hanemann. “**Strawberry Fields Forever: Valuing Recycled Water For Irrigation**”. (*Job Market Paper*)

Lachhab, Rania\*, **Molly Sears**. “Silver Bullets: Cloud Seeding and Water Resources in California.” (*Working Paper*)

**Molly Sears**, James Sears, Mark Lubell, Jessica Rudnick, Patrick H. Brown, Elise Zufall, Sat Darshan S Khalsa. “Do nutrient management practices change nitrogen outcomes?” (*Working Paper*)

Sungmin Cheu\*, **Molly Sears**. “Crop Insurance and Water Use: Mitigating Costs of Irrigation.” (*Working Paper*)

**Molly Sears**, Rania Lachhab\*, Sat Darshan S Khalsa, Mark Lubell, and Patrick Brown. “Conservation practice adoption and advice: examining perceived barriers and uptake across growers and their technical advisers.” (*Working Paper*)

Noormah Rizwan\*, **Molly Sears**, Sean Woznicki, Tao Liu, Oskar Marko. “Irrigation and crop choice in the Danube River Basin: implications for agricultural production and water resources.” (*Working Paper*)

Graduate students I supervise are indicated with an asterisk (\*)

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TEACHING  
EXPERIENCE

**Public Policy in the Agri-Food System: AFRE 300**  
Michigan State University

*Spring 2023-2025*

**Environmental Economics and Policy: EEP C101**  
UC Berkeley, Lead Instructor

*June-August 2019*

**Graduate Student Instructor Pedagogy Workshop: ARE 375**  
Graduate Student Instructor for Professor Sofia Villas-Boas

*August-December 2018*

**Natural Resource Economics: EEP C102**  
Graduate Student Instructor for Professor Larry Karp

*August-December 2016, 2017*

**Financial Economics: ECON 136**  
Graduate Student Instructor for Dr. Raymond Hawkins

*January-May 2017*

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## GRANTS

**Michigan Department of Agriculture and Rural Development:** Empowering Michigan Farmers: An AI-Based Forecasting and Management System for Building Resilient Agriculture (AI4AgSys) (\$1,250,000 total, \$115,000 share)

**National Science Foundation:** Global Center: International Research Center for Enhancing Plant Resilience (\$5,000,000 total, Broader Impacts Co-PI)

**Michigan Department of Agriculture and Rural Development:** BRACE: Building Resilience in Agriculture through Climate-smart Practices and Socioeconomic Evaluation (\$1,250,000 total, \$100,000 share)

**Michigan Department of Agriculture and Rural Development:** Ensuring the success of Michigan farms in the face of climate change: Using linkages between soil health and greenhouse gas emissions to enhance the resilience of Michigan field crops. (\$1,250,000 total, \$110,000 share)

**Michigan Soybean Committee:** Enhancing crop yield resilience and protecting water resources with climate-smart adaptation: A system's approach of stacking cover crops, nutrient management, and water management practices.(\$10,000 total, \$1,000 share)

**USDA Risk Management Agency:** Cost of Production Study and Expense Budgets for Michigan Cabbage and Peaches (\$51,267.44 total, \$4,954.99 share)

**NASA:** Water Scarcity in the Serbian Danube: Agricultural land use change and irrigation (\$449,817 total, \$177,141 share; added as Co-PI in Fall 2023)

**Michigan Department of Agriculture and Rural Development:** 2022 Farm Innovation Grant – Improving Irrigation Efficiency in Blueberry Orchards Using an IoT-based Automatic Smart Irrigation System (\$200,000 total, \$60,000 share)

**MSU Project GREEN:** Sustainable Water Management in Agriculture through an Irrigation System Efficiency Program (\$50,000 total, \$30,000 share)

**Fertilizer Research and Education Program, California Department of Food and Agriculture:** Project 16-0620

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## AWARDS AND FELLOWSHIPS

**2018 Outstanding Graduate Student Instructor Award,**  
Department of Agricultural Economics, UC Berkeley  
**2017-2019 Environment and Society: Data Science for the 21st Century Fellow,**  
NSF Traineeship Program, UC Berkeley  
**2015 Graduate Student Extension Competition: *Second Place,***  
American Agricultural Economics Association

2014 University of Arizona Outstanding Senior,  
Western Agricultural Economics Association

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SERVICE

**Referee:** Water Resources Research, Canadian Journal of Agricultural Economics, Case Studies in the Environment, California Agriculture, Journal of the Agricultural and Applied Economics Association, Journal of Policy Analysis and Management, AAEA Conference Abstract Reviewer

**W5190 Multi-State Hatch:** Vice President, 2023-Present

**Department Advisory Committee:** 2024-Present

**Seminar Committee:** Chair, Fall 2022-Present

**Graduate Admissions Committee:** Fall 2022-Spring 2024

**Search Committees:** Fall 2024, Spring 2024

**Berkeley Economists for Equity:** Leadership Board, 2020-2021

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RECENT  
SEMINARS AND  
PRESENTATIONS

Michigan State University, Department of Geography Colloquium	<i>September 2024</i>
American Association of Agricultural Economics Annual Meeting	<i>July 2024</i>
Joint Workshop of the GOFC-GOLD SCERIN and MedRIN Networks	<i>July 2024</i>
Grand Valley State University Annis Water Resources Institute	<i>April 2024</i>
University of Rhode Island, Departmental Seminar	<i>March 2024</i>
Kellogg Biological Station	<i>February 2024</i>
Kansas State University, Departmental Seminar	<i>September 2023</i>
American Association of Agricultural Economics Annual Meeting	<i>August 2023</i>
Western Economics Association International Annual Meeting	<i>July 2023</i>
Association of Environmental and Resource Economists Annual Meeting	<i>June 2023</i>
Environmental and Resource Economics Workshop at Illinois	<i>October 2022</i>
University of Idaho, Department Seminar	<i>November 2021</i>
Agriculture and Natural Resources Seminar, UC Berkeley & UC Davis	<i>November 2021</i>
University of Georgia, Department Seminar	<i>October 2021</i>
University of Nevada Reno, Department Seminar	<i>October 2021</i>
University of California, Berkeley, Department Seminar	<i>September 2021</i>
Online Summer Workshop in Environment, Energy, and Transportation	<i>September 2021</i>
American Association of Agricultural Economics Annual Meeting	<i>August 2021</i>
Social Cost of Water Pollution Workshop	<i>April 2021</i>
American Association of Agricultural Economics Annual Meeting	<i>August 2020</i>
Environmental and Resource Economics Seminar, UC Berkeley	<i>April 2020</i>
International Conference on Research on National Brands, Barcelona	<i>June 2019</i>
Conference on IO and the Food Industry, Toulouse	<i>June 2019</i>
Association of Environmental and Resource Economists Annual Meeting	<i>June 2019</i>
Giannini Agriculture and Resource Economics Student Conference	<i>April 2019</i>
Environmental and Resource Economics Seminar, UC Berkeley	<i>February 2019</i>
Giannini Agriculture and Resource Economics Student Conference	<i>April 2018</i>