PETER O'BRIEN

Department of Agricultural and Resource Economics
University of California, Davis
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Education

University of California, Davis
Ph.D. in Agricultural and Resource Economics — Sep 2022 – Jun 2027 (expected)
M.S. in Agricultural and Resource Economics — Awarded 2024

University of Maine
B.S. in Economics, Minor in Mathematics, *summa cum laude* — Sep 2018 – Dec 2021

Fields of Interest

Environmental Economics, International Trade, and Agricultural Economics

References

Katrina Jessoe **(Co-chair)**	James Sayre **(Co-chair)**	Ishan Nath
Associate Professor	Assistant Professor	Assistant Professor
Agricultural and Resource Economics	Agricultural and Resource Economics	Harvard Kennedy School
UC Davis	UC Davis	Harvard University
kkjessoe@ucdavis.edu	jsayre@ucdavis.edu	ishannath@hks.harvard.edu

Research in Progress

Feeding the Export Boom: Technological Change and Land Use in Brazil's Beef Industry (JMP)

Abstract: In Brazil, expanding agricultural production has driven deforestation across carbon-rich ecosystems, including the Amazon. Rapid growth in beef exports raises concerns about further land conversion, yet access to foreign markets may also encourage agricultural intensification, or the adoption of technologies that reduce land requirements per unit of output. Because intensification is difficult to observe, I use satellite imagery and deep learning to build a panel of Brazilian feedlots, facilities where cattle are produced in confinement. I combine this panel with records of processing-plant authorizations to study the effects of Brazil's beef export boom to China. I exploit variation in the timing of plant authorizations and regions' exposure to newly authorized plants and find that greater export exposure substantially increased feedlot entry and total capacity. Replacing this China-induced intensive production with traditional, grazing-based systems would require additional pasture expansion and put 169 $MtCO_2$ of carbon stocks at risk, underscoring how trade-induced technological change can shape the environmental consequences of agricultural production.

Does Eating Local Reduce Emissions?
with Levi Crews, Ishan Nath, Milan Quentel, and James Sayre

Publications

Do California's Cattle Emit Less Carbon Than We Think? Published in *ARE Update* in 2025 with James Sayre.

Research Experience

Graduate Student Researcher — 2024 – 2025
with James Sayre

Graduate Student Researcher — 2023 – 2024
with Michael Carter

Teaching Experience

Graduate Teaching Assistant, UC Davis

Econometrics (M.S. level) with Timothy Beatty	Fall 2026
Operations Science with Bulat Gafarov	Spring 2026
Agricultural Markets with Timothy Beatty	Winter 2025
Economics of Business Regulation with Katrina Jessoe	Fall 2025
Intermediate Microeconomics with Kevin Novan	Fall 2022

Scholarships, Honors, and Awards

2026	Agricultural and Resource Economics Summer Research Fellowship, UC Davis
2024–2026	Jastro-Shields Graduate Research Award, UC Davis
2024	Giannini Foundation Mini-Grant (cooperating personnel, with PI James Sayre)
2024	Agricultural and Resource Economics Summer Research Fellowship, UC Davis
2023	Non-Resident Tuition Fellowship, UC Davis
2019	Lavery Scholarship for Excellence in Economics, University of Maine

Professional Activities

Conference and Seminar Presentations

2021 Northeast Agricultural and Resource Economics Association Annual Meeting

Service

2024–2025 UC Davis Agricultural Economics Workshop, Student Coordinator

Media and Outreach

Extreme Reactions to Extreme Events: The Case of Rice Export Restrictions. Ag Data News, with Greg Boudreaux (2024).

Why do we toss 33% of food we produce when people are hungry? The Maine Question Podcast (2020).

Technical Reports

Bid Inflation for Highway and Bridge Projects: Challenges & Solutions. Prepared for the Maine Department of Transportation (2022).

Other Experience

Short-Term Research Consultant, Margaret Chase Smith Policy Center 2022

(Updated October 30, 2026)