

Zachary S. Brown

Assistant Professor, Department of Agricultural and Resource Economics
Research Leader, [Genetic Engineering and Society Program](#)
North Carolina State University

Phone: +1-919-515-5969 | Email: zack.brown@ncsu.edu

Professional Experience

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|---|-----------------------|
| Assistant Professor, NC State University | Jan. 2014 – present |
| Economist, Organization for Economic Cooperation and Development | Aug. 2011 – Dec. 2013 |
| Postdoctoral research scholar (part-time), Duke Global Health Institute | June 2011 – Dec 2012 |

Education

| <u>Institution</u> | <u>Fields</u> | <u>Degree</u> | <u>Year</u> |
|--|--|-------------------------|-------------|
| Duke University Durham, NC, USA | Environmental & resource economics | PhD | 2011 |
| Lawrence University Appleton, WI, USA | Mathematics-economics Minor in government | BA (<i>cum laude</i>) | 2005 |

Research and teaching fields

Primary: Resource economics and bioeconomics
Secondary: Environmental, development and behavioral economics

Peer-Reviewed Research Publications

Z. S. Brown (2017). [The Economics, Regulation and International Implications of Gene Drives in Agriculture](#). *Choices*, Quarter 2.

D. Miteva, R. A. Kramer, **Z. S. Brown**, M. D. Smith (2017). *Spatial patterns of market participation and resource extraction: Fuelwood collection in northern Uganda*. *American Journal of Agricultural Economics*. [Manuscript accepted.]

Z. S. Brown, R. A. Kramer (2017). [Preference Heterogeneity in the Structural Estimation of Efficient Pigovian Incentives for Insecticide Spraying to Reduce Malaria](#). *Environmental and Resource Economics*. [In press.]

D. Kim, **Z. S. Brown**, et al. (2017). [The value of information in decision-analytic modeling for malaria control in East Africa](#). *Risk Analysis*, **37**(2): 231-244.

Z. S. Brown, R. A. Kramer, D. Ocan, C. Oryema (2016). [Household perceptions and subjective valuations of indoor residual spraying programs to control malaria in northern Uganda](#). *Infectious Diseases of Poverty*, **5**:100.

Z. S. Brown, W. Oueslati, J. Silva (2016). [Links between urban structure and life satisfaction in a cross-section of OECD metro areas](#). *Ecological Economics*, **129**: 112-121.

Z. S. Brown and N. Johnstone (2014). [Better the devil you throw: Experience and support for pay-as-you-throw waste charges](#). *Environmental Science & Policy*, **38**: 132-142.

Z. S. Brown, N. Johnstone, I. Haščič, L. Vong, F. Barascud (2013). [Testing the effect of defaults on the thermostat settings of OECD employees](#). *Energy Economics*, **39**: 128-134.

Z. S. Brown, K. Dickinson, and R. A. Kramer (2013). [Insecticide resistance and malaria vector control: The importance of fitness cost mechanisms in determining economically optimal control trajectories](#). *Journal of Economic Entomology*, **106**(1): 366-374.

M. F. Bellemare, **Z. S. Brown** (2010). [On the \(Mis\)Use of Wealth as a Proxy for Risk Aversion](#). *American Journal of Agricultural Economics*, **92**(1): 273-282.

Book Chapters, Government-issued Reports and Policy Briefs

Z. S. Brown, B. Alvarez, N. Johnstone (2015). [Tender instruments: programme participation and impact in australian conservation tenders, grants and volunteer organisations](#). OECD Environment Working Papers, No. 85. OECD Publishing.

L. Trasande, **Z. S. Brown** (2015). *Addressing environmental risks for child health*, in [Promoting health, preventing disease: the economic case](#). Eds: D. McDaid, F. Sassi, S. Merkur. World Health Organization, Open University Press, Maidenhead, UK.

Z. S. Brown (2014). [Greening Household Behaviour: Cross-Domain comparisons in environmental attitudes and behaviours using spatial effects](#). OECD Environment Working Papers, 70. OECD Publishing.

Y. Serret, **Z. S. Brown**, N. Johnstone (2013). [Greening Household Behaviour: Overview from the 2011 Survey](#). *OECD Studies on Environmental Policy and Household Behaviour*, OECD Publishing. [Edited book, authored three chapters.]

Z. S. Brown (2013). [Background information on the assessment of alternatives to DDT](#). Technical report for the Stockholm Convention Secretariat. *UNEP/POPS/POPRC.7/INF/19*

J. Silva, **Z. S. Brown** (2013). [More than the Sum of their Parts: Valuing Environmental Quality by Combining Life Satisfaction Surveys and GIS Data](#). OECD Statistics Working Papers, 2013/1, OECD Publishing.

Working Papers (Drafts available on request)

P. D. Mitchell, **Z. S. Brown**, N. McRoberts. *Economic Issues to Consider for Gene Drives*.

Z. S. Brown, Q. Weng. *New technology-industry concordances using linked micro-level data on patents and firms*.

Z. S. Brown. [Voluntary programs to encourage compliance with refuge regulations for pesticide resistance management: evidence from a quasi-experiment](#). Presented at 2016 AAEA Annual Meeting.

Z. S. Brown, R. A. Kramer, C. Mutero, D. Kim, M. L. Miranda, B. Ameneshawa, A. Lesser. *Implementing decision support systems for sustainable malaria control*.

Z. S. Brown, K. L. Dickinson, S. Paskewitz. [Partially observable latent class analysis \(POLCA\): An application to serial participation in mosquito control in Madison, Wisconsin](#). CEnREP Working Paper No. 16-015,

Z.S. Brown. *Fully characterizing the set of time-consistent discount functions*.

Conference Presentations and Invited Seminars

2016 OECD Cooperative Research Program on Biological Resources in Agriculture (Paris, France)
AAEA Annual Meeting (Boston, MA)
AERE Summer Conference (Breckenridge, CO)

- NSF-SESYNC Workshop on “Living with Resistance” (Annapolis, MD)
 Invited seminar in University of Richmond Economics Department (Richmond, VA)
- 2015 Atlanta Conference on Science and Innovation Policy (Atlanta, GA)
 AAEA Annual Meeting (San Francisco, CA)
 AERE Summer Conference (San Diego, CA)
 NIMBioS Investigative Workshop on Malaria-Leishmania Co-infection (Knoxville, TN)
 Economics and Management of Risk in Agriculture and Natural Resources (Destin, FL)
 Invited seminar in Forestry and Environmental Resources Dept. at Virginia Tech (Blacksburg, VA)
- 2014 CU Environmental and Resource Economics Workshop (Vail, CO)
 World Congress of Environmental and Resource Economists (Istanbul, Turkey)
 Invited talk for the OECD Environment Directorate (Working Party on Integrating Environmental Economics and Policy)
- 2013 EAERE Summer Conference (Toulouse, France)
 UKNEE envecon 2013 (The Royal Society, London)
- 2012 EAERE Summer Conference (Prague, Czech Republic)
 Journées Louis-André Gérard-Varet in Public Economics (Marseille, France)
- 2011 Invited talk for the 7th meeting of the Stockholm Convention Persistent Organic Pollutant Review Committee (POPRC)
 AERE Summer Conference (Seattle, WA)
- 2010 “Parasite to Prevention” with Malaria Journal (Edinburgh, Scotland) – Poster
 EcoHealth Meetings (London, UK) – Poster
 Applied and Agricultural Economics Association Annual Meeting (Denver, CO)
 World Congress of Environmental and Resource Economists (Montreal, Canada)
 Economics and Management of Risk in Agriculture and Natural Resources (Destin, FL, USA)
- 2009 Economics and Management of Risk in Agriculture and Natural Resources (Galveston, TX, USA)

Teaching

- ECG 716: Topics in Environmental and Natural Resource Economics (Spring 2015-2016)
 ECG 515: Environmental and Natural Resource Policy (Spring 2014-2015)
 GES 591: Integrated Socioecological Systems Modeling (Fall 2014-2016, GES Program)
 Preparing Future Faculty Fellow. Duke University. 2010 – 2011.

Dissertation

- [The Economics of Malaria Vector Control](#) (2011)
 Committee: R.A. Kramer (chair), M.F. Bellemare, K. Koelle, P. Peretto, M.D. Smith

Honors and Awards

- [2012 AAEA Outstanding Doctoral Dissertation Award](#)
[2011 Outstanding Article, American Journal of Agricultural Economics](#) (with Marc Bellemare)
[2009 Peccei Prize, International Institute for Applied Systems Analysis \(IIASA\)](#), Vienna, Austria

Professional Service

- Executive Committee (2014-present), [Genetic Engineering & Society Center](#), NC State University
 Chair, Organizing Committee, OECD-funded workshop on [Environmental Release of Engineered Pests: Building an International Governance Framework](#) (Fall 2016)

Refereed for the following journals:

American Journal of Agricultural Economics

Environmental and Resource Economics

Canadian Journal of Economics

Health Economics

Journal of Environmental Economics and Management

Journal of Theoretical Biology

Land Economics

Pest Management Science

Philosophical Transactions of the Royal Society B: Biological Sciences

PLOS Computational Biology

Proceedings of the National Academy of Sciences (PNAS)

Resources, Conservation and Recycling

Professional Affiliations

Association of Environmental and Resource Economists

Applied and Agricultural Economics Association

Entomological Society of America