

Ellen McCullough

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EDUCATION

- PhD Candidate, Applied Economics and Management, Cornell University, 2011- 2016 [expected]
Special Committee Members: Christopher B. Barrett (chair), David R. Just, and Victoria Prowse
Fields: Development, Agriculture, Labor
- M.S., Earth Systems, Stanford University, 2003-2004
- B.S., Earth Systems, Stanford University, 1999-2003

JOURNAL ARTICLES

- McCullough, EB., P.A. Matson. 2011. Evolution of the knowledge system for agricultural development in the Yaqui Valley, Sonora, Mexico. *Proceedings of the National Academy of Sciences*. May 23, 2011.
- Gómez, M.I., C. B. Barrett, L. E. Buck, H. De Groote, S. Ferris, H. O. Gao, E. McCullough, D. D. Miller, H. Outhred, A. N. Pell, T. Reardon, M. Retnanestri, R. Ruben, P. Struebi, J. Swinnen, M. A. Touesnard, K. Weinberger, J. D. H. Keatinge, M. B. Milstein and R. Y. Yang. 2011. Research Principles for Developing Country Food Value Chains. *Science* 332 (6034): 1154.
- Jacobs, K., L. Lebel, J. Buizer, L. Addams, P. Matson, E. McCullough, P. Garden, G. Saliba, and T. Finan. 2010. Linking knowledge with action in the pursuit of sustainable water-resources management. *Proceedings of the National Academy of Sciences*. January 11, 2010.
- Omiti, J.M., D.J. Otieno, T.O. Nyanamba and E.B. McCullough. 2009. Factors influencing the intensity of market participation by smallholder farmers: a case study of rural and peri-urban areas of Kenya. *African Journal of Agricultural and Resource Economics* 3 (1): 57-82.
- Galloway, J.N., M.B. Burke, G.E. Bradford, R. Naylor, W. Falcon, A.K. Chapagain, J.C. Gaskell, E.B. McCullough, H.A. Mooney, K.L. Oleson, H. Steinfeld, T. Wassenaar and V. Smil. 2007. International trade in meat: The tip of the pork chop. *Ambio* 36 (8): 622.
- Burke, M., K. Oleson, E. McCullough, and J. Gaskell. 2009. A Global Model Tracking Water, Nitrogen, and Land Inputs and Virtual Transfers from Industrialized Meat Production and Trade. *Environmental Modeling and Assessment* 14 (2): 179.
- Falcon, W.P., R.L. Naylor, W.L. Smith, M.B. Burke and E.B. McCullough, 2004. Using climate models to improve Indonesian food security. *Bulletin of Indonesian Economic Studies* 40 (3).

BOOKS

- McCullough, E.B., P.L. Pingali, and K.G. Stamoulis (eds). 2008. *The Transformation of Agri-food Systems: Globalization, Supply Chains, and Smallholder Farmers*. London, UK: Earthscan Press, 381pp.

BOOK CHAPTERS

- McCullough, EB., PA Matson. 2012. Linking knowledge with action for sustainable development: a case study of change and effectiveness. In PA Matson (ed). *Seeds of sustainability: Lessons from the birthplace of the Green Revolution in Agriculture*, Washington DC: Island Press, pp 63-83.

- Matson, P., Luers, A. and EB McCullough. 2012. Exploring vulnerability in the Yaqui Valley human-environment system. In PA Matson (ed). *Seeds of sustainability: Lessons from the birthplace of the Green Revolution in Agriculture*, Washington DC: Island Press, pp 83-92.
- Schoups, G., L. Adams, D. Battisti, E. McCullough, and JL Minjares. 2012. Water resources management in the Yaqui Valley. In PA Matson (ed). *Seeds of sustainability: Lessons from the birthplace of the Green Revolution in Agriculture*, Washington DC: Island Press, pp 197-230.
- McCullough, E.B., P.L. Pingali, and K.G. Stamoulis. 2010. Small farms and the transformation of food systems: an overview. In R. Haas, M. Canavari, B. Slee, C. Tong, and B. Anurugsa (Eds) *Looking East Looking West: Organic and quality food marketing in Asia and Europe*. Wageningen, The Netherlands: Wageningen Academic Publishers, pp 47-85.
- Pingali, P., and E. McCullough. 2010. Drivers of Change in Global Agriculture and Livestock Systems. In H. Steinfeld, H. A. Mooney, F. Schneider, and L.E. Neville (Eds) *Livestock in a Changing Landscape: Drivers, Consequences, and Responses*. Washington, DC: Island Press, pp 5-10.
- Tobgay, S.K. and E.B. McCullough. 2008. Linking small farmers in Bhutan with urban consumers: the importance of market access. In E.B. McCullough, P.L. Pingali, and K.G. Stamoulis (eds) *The Transformation of Agri-food Systems: Globalization, Supply Chains, and Smallholder Farmers*. London, UK: Earthscan Press, pp 235-258.
- Omiti, J.M., T. Nyanamba, E.B. McCullough and D. Otieno. 2008. Factors influencing diversification of smallholder agriculture in Kenya. In E.B. McCullough, P.L. Pingali, and K.G. Stamoulis (eds) *The Transformation of Agri-food Systems: Globalization, Supply Chains, and Smallholder Farmers*. London, UK: Earthscan Press, pp 259-278.

WORKING PAPERS

“Occupational Choice and Agricultural Labor Exits in Sub-Saharan Africa”

I structurally model households’ returns to participation in farming, self- and wage employment in Sub-Saharan Africa and their occupational choices. I find that human capital is a stronger driver of occupational choice than agricultural technology.

“Labor Productivity and Employment Gaps in Sub-Saharan Africa” Policy Research Working Paper no. 7234. 2015. Washington, D.C.: World Bank Group. [*resubmission invited by Food Policy*]

In a new study focused on Ethiopia, Malawi, Tanzania and Malawi, I find that the agricultural sector is not necessarily a bastion of low productivity, as national accounts statistics suggest, but rather a large reservoir of underemployed workers. This result emerges when labor inputs are measured more carefully, using newly available LSMS-ISA survey data.

RESEARCH IN PROGRESS

“A robust profitability assessment tool for targeting agricultural investments in developing countries: modeling spatial heterogeneity and uncertainty” with Julianne Quinn, Andrew Simons, Leslie Valteramo, and Joshua Woodard.

“The myths of ‘subsistence farmers’ and ‘missing markets’” with Christopher B. Barrett and Brian Dillon.

“Market Participation in Developing Countries: Implications for the Distributional Welfare Impacts of Food Price Changes” with Christopher B. Barrett.

OTHER PUBLICATIONS

- Buck, H.J., D.F. Flannelly, E.B. McCullough, J.D. Quinn, and A.M. Simons. 2013. Targeting soils interventions in Ethiopia: A research agenda based on improved soil resource and fertility data. Report prepared for the Ethiopian Agricultural Transformation Agency, June 2013.
- McCullough, E.B., M. Mulford, and N. Jensen. 2012. Improving the quality and effectiveness of U.S. Food Aid: Local and Regional Procurement. Policy briefing document prepared for the Congressional Research Service, June 2012.
- McCullough, E.B. 2006. Can contracts help small farmers participate in more globalized food chains? *The State of Food and Agriculture in Asia and the Pacific 2006*. FAO. Bangkok: FAO, p22.
- McCullough, E.B. 2005. Coping With Drought: An analysis of crisis response in the Yaqui Valley, Mexico. M.S. Thesis, Earth Systems Program. Stanford, California: Stanford University, 45pp.
- McCullough, E.B. 2003. The responses of montane shrubs to spatial and temporal climate variation. *Undergraduate Research in Behavior, Ecology, and Evolution* 1 (1): 1-7.

PROFESSIONAL EXPERIENCE

Associate Program Officer, Agricultural Development Program, 2009-2011

Research Analyst, Agricultural Development Program, 2008-2009

Bill & Melinda Gates Foundation, Seattle, WA

Developed and managed a \$45 million portfolio of grants in the Agricultural Policy and Statistics initiative. Created an on-demand research platform through the University of Washington Evans School of Public Affairs. Played a key role in strategy formulation for the Agricultural Development division, leading a review of historic strategy implementation and serving as lead author on strategy re-calibration document proposing priorities for a \$3Bn envelope over a 5-year horizon, which was approved by the foundation's Co-Chairs and adopted by the division.

Economist, Agricultural & Development Economics Division, 2005-2008

Food and Agriculture Organization of the United Nations, Rome, Italy

Managed multi-country research project assessing global changes in the organization of agri-food systems and the impacts on smallholder farmers in developing countries. Led an extensive conceptual overview and oversaw implementation of illustrative case studies conducted in Kenya, Bhutan, India, China and Honduras, which included original surveys and other field research.

Research Fellow, Center for Environmental Science and Policy, 2004-2005

Freeman-Spogli Institute for International Studies, Stanford University, Stanford, California

Evaluated systems science and technology policies to promote regional development in Northern Mexico as one of several cases addressing Knowledge Systems for Sustainable Development, a NOAA-funded project based at Harvard's Kennedy School of Government.

CONFERENCE AND SEMINAR PRESENTATIONS

- 2015: IZA-World Bank Conference on Employment and Development, Bonn, Germany; Agriculture in Africa – Telling Facts from Myths Symposium, World Bank and International Food Policy Research Institute, Washington DC; Western Economic Association International, Honolulu, Hawaii; Western Economic Association International Graduate Student Workshop, Honolulu, Hawaii; Agricultural and Applied Economics Association, San Francisco, CA; Cornell University Development Economics Seminar, Ithaca, NY;
- 2014: Food Systems and Poverty Reduction IGERT Symposium, Ithaca, NY;
- 2013: African Association of Applied Economics Conference, Hammamet, Tunisia; International Conference on Global Food Security, Noordwijkerhooft, The Netherlands; Agriculture in

- Africa – Telling Facts from Myths Workshop, Washington, DC; Food Systems and Poverty Reduction IGERT Symposium, Ithaca, NY;
- 2011: Leverhulme Centre for Integrative Research on Agriculture and Health, Agri-food Policy and Governance for Nutrition and Health Research Conference, London, UK; Shoreline Community College Seminar, Seattle, Washington;
- 2009: International Association of Agricultural Economists, Beijing, China; International Fertilizer Association, Cairo, Egypt;

TEACHING

- Writing in the Major, Applied Economics and Management, Prof. Christopher B. Barrett, Cornell University (TA) 2016 [planned]
- Marketing, Cornell University, Prof. Miguel I. Gómez (TA), 2015
- Business Management and Organizations, Cornell University, Prof. Aija E. Leiponen (TA), 2014
- Introduction to Earth Systems, Stanford University, Prof. W. Gary Ernst (TA), 2004

PEER REVIEWS

- Agricultural and Applied Economics Association conference (2014, 2015); *Agriculture and Food Security*; *Agricultural and Resource Economics Review*; *Global Environmental Change*;
- International Association of Agricultural Economists conference (2015); *Food Security*;

FELLOWSHIPS, GRANTS, AND AWARDS

- 2014- *Soil fertility and Agricultural Development in Ethiopia* (Co-investigator in grant from the International Food Policy Research Institute to Cornell University, with funding from the Bill & Melinda Gates Foundation)
- 2013 Ecological Society of America Sustainability Science Award (awarded to *Seeds of Sustainability: Lessons from the Birthplace of the Green Revolution* in recognition of an outstanding contribution to sustainability science)
- 2013 Field-Based Research Grant Food Systems and Poverty IGERT (Recipient), \$10,000
- 2013-2014 *Agriculture in Africa: Telling Facts from Myths* (Co-investigator in grant from the African Development Bank to Cornell University)
- 2012-2014 Integrative Graduate Education and Research Traineeship (IGERT) in Food Systems and Poverty Reduction (Trainee in Cornell University IGERT funded by the National Science Foundation)
- 2004-2005 Knowledge Systems for Sustainable Development Project (Research fellow on grant awarded to the Kennedy School of Government at Harvard University by the National Oceanographic and Atmospheric Association)
- 2003-2004 Texaco Research Fellowship, Stanford University (Recipient), \$9,000
- 1999-2003 Toyota Community Scholarship (Recipient), \$10,000

REFERENCES

- Christopher B. Barrett, David J. Nolan Director and Stephen B. & Janice G. Ashley Professor of Applied Economics and Management, Cornell University
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- David R. Just, Professor, Director of Graduate Studies, and Placement Chair, Dyson School of Applied Economics and Management, Cornell University
 Email: drj3@cornell.edu Phone: (607) 255-2086
- Victoria L. Prowse, Assistant Professor, Department of Economics, Cornell University

Email: prowse@cornell.edu Phone: (607) 255-4723
Aija Leiponen, Associate Professor, Dyson School of Applied Economics and Management, Cornell
University (Teaching Reference)

Email: aia.leiponen@cornell.edu Phone: (607) 255-7588