

David J. Spielman, Ph.D.

EDUCATION

- 1999–2003 **Ph.D. in Economics**
American University, Washington, DC
Dissertation: Public Goods, Private Incentives, and Agricultural R&D: Productivity and Poverty in Developing-Country Agriculture
- 1992–1993 **M.Sc. in Development Studies**
London School of Economics, London, UK
Thesis: The Role of Non-Governmental Organizations in Poverty and Social Protection during Zimbabwe's Structural Adjustment Program
- 1988–1992 **B.A. in International Relations**
Tufts University, Medford, MA
- 1989–1990 **Non-degree studies** in political economy of the Middle East
American University in Cairo, Egypt

PROFESSIONAL EXPERIENCE

- 2026–present **Lauren and Lee Fixel Distinguished Professor**, Bursky School of Public Health, Washington University in St. Louis, MO
- 2023–2026 **Director**, Innovation Policy and Scaling Unit, International Food Policy Research Institute, Washington, DC
- 2020–2023 **Head**, Rwanda Strategy Support Program and **Senior Research Fellow**, Development Strategy and Governance Division, International Food Policy Research Institute, Kigali, Rwanda
- 2016–2020 **Lead**, Science, Technology, and Innovation Policy Theme and **Senior Research Fellow**, Environment and Production Technology Division, International Food Policy Research Institute, Washington, DC
- 2011–2016 **Senior Research Fellow**, Environment and Production Technology Division, International Food Policy Research Institute, Washington, DC
- 2010–2011 **Research Fellow**, Environment and Production Technology Division, International Food Policy Research Institute, Washington, DC
- 2008–2010 **Research Fellow**, Knowledge, Capacity, and Innovation Division, International Food Policy Research Institute, Addis Ababa, Ethiopia
- 2006–2008 **Research Fellow**, International Service for National Agricultural Research Division, International Food Policy Research Institute, Addis Ababa, Ethiopia
- 2004–2006 **Postdoctoral Fellow**, International Service for National Agricultural Research Division, International Food Policy Research Institute, Addis Ababa, Ethiopia
- 2003–2004 **Consultant**, Strategies for public-private partnerships in agricultural R&D, International Food Policy Research Institute, Addis Ababa, Ethiopia
- 2002–2003 **Consultant**, Evaluation of World Bank investments in global public programs, Operations Evaluation Department, World Bank, Washington, DC
- 2001 **Consultant**, Seed industry structure and regulation in U.S. agriculture, Economic Research Service, U.S. Department of Agriculture, Washington, DC
- 1997–1999 **Research Economist**, microfinance program, Aga Khan Rural Support Programme, Gilgit, Northern Areas, Pakistan
- 1995–1997 **Planning and Development Officer**, Aga Khan Education Service Pakistan, Gilgit, Northern Areas, Pakistan

MAJOR PROGRAM AND PROJECT GRANTS

2026–2029	Project lead , <i>An Evaluation of AI-Driven Agricultural Advisory Solutions for Smallholder Farmers in Kenya and Bihar, India</i> , funded by the Gates Foundation, \$2.5 million, 3 years
2026–2027	Principal investigator , <i>Exemplars in Agricultural Productivity</i> , funded by the Gates Foundation, \$1.4 million, 2 years
2026	Principal investigator , <i>Planning for the Next Generation of Transgenic Cowpea in Nigeria and Ghana: Design and Execution of a Product Stakeholder Consultation</i> , funded by Gates Agricultural Innovations, \$0.2 million, 0.9 years
2025–2026	Principal investigator , <i>The Seedbed Initiative: Designing Advance Market Commitments for New Climate-resilient Crop Varieties</i> , funded by the University of Chicago via the Center for Global Development, with additional funding from the CGIAR Scaling for Impact (S4I) Science Program, \$0.2 million, 1.5 years
2024–2028	Co-principal investigator , <i>An Evaluation of the Impact of the Gender Transformative Mechanism (GTM) Approach in the Participatory Agriculture and Climate Transformation Program (PACT) in Ethiopia</i> , funded by the Gates Foundation via the Evans School of Public Policy and Governance, University of Washington, \$1.4 million, 4 years
2024–2025	Co-lead , <i>“Inclusive Delivery” Area of Work</i> , CGIAR Breeding for Tomorrow Science Program, funded by contributors to the CGIAR Trust Fund, \$7.4 million, 1 year
2023–2024	Co-lead , <i>“Seed Equal” Research Initiative</i> , CGIAR Genetic Innovation Science Group, funded by contributors to the CGIAR Trust Fund \$19.4 million, 2 years
2023–2025	Project lead , <i>An Evaluation of the Digitally Enabled “Space to Place” Site-specific Nutrient Management Decision Support Tool for Smallholder Farmers in Malawi and Zambia</i> , funded by the U.S. Agency for International Development, \$3.5 million, 4 years (terminated by USAID in 2025)
2020–2023	Head , <i>IFPRI Rwanda Strategy Support Program</i> , funded by the European Commission, U.S. Agency for International Development, Government of Netherlands, International Growth Center, and Mastercard Foundation, \$2.5 million, 3 years
2019–2020	Flagship leader , <i>Technological Innovation and Sustainable Intensification</i> , CGIAR Research Program on Policies, Institutions, and Markets, funded by contributors to the CGIAR Trust Fund, \$3 million, 1 year
2016–2021	Principal investigator for evaluation and policy, <i>Developing Local Extension Capacity</i> , funded by the U.S. Agency for International Development, \$2.5 million, 4 years
2013–2021	Cluster co-leader , <i>Science Policy and Innovation Systems for Sustainable Intensification</i> , CGIAR Research Program on Policies, Institutions, and Markets, funded by contributors to the CGIAR Trust Fund, \$1 million, 1 year
2012–2017	Lead researcher for policy, <i>Cereal Systems Initiative for South Asia</i> , funded by the Bill & Melinda Gates Foundation and the U.S. Agency for International Development, \$4.5 million, 6 years
2015–2018	Principal investigator , <i>Impact Evaluation of a Soil Fertility Training Program in the Volta Region of Ghana</i> , funded by the International Initiative for Impact Evaluation, \$0.65 million, 2.5 years
2011–2016	Lead researcher for production and productivity, <i>Pakistan Strategy Support Program</i> , funded by the U.S. Agency for International Development, \$3.8 million, 6 years
2007–2009	Lead researcher , <i>Millions Fed: Proven Successes in Agricultural Development</i> , 2007–09, funded by the Bill & Melinda Gates Foundation, \$1.0 million, 2 years
2007–2008	Researcher , <i>Mobilizing Rural Institutions for Sustainable Livelihoods and Equitable Development</i> , 2007–08. Funded by the World Bank, \$0.1 million

- 2006–2007 **Lead researcher**, *Rural Innovation Systems and Networks in Ethiopia*, funded under the Ethiopia Strategy Support Program by the U.K. Department for International Development, the U.S. Agency for International Development, and the European Commission, \$0.2 million, 1.5 years
- 2004–2007 **Lead researcher**, *Public-private Partnerships in International Agricultural Research*. Funded by the U.K. Department for International Development and the Syngenta Foundation for Sustainable Agriculture, \$0.4 million, 3 years

PEER-REVIEWED JOURNAL ARTICLES

1. Van Zonneveld, M. N.P. Castañeda-Álvarez, E.G. Achigan-Dako, C. Almekinders, S. de Haan, W. Hugo, G. Otieno, R. Ortiz, J.E. Raneri, C. Roa, L. Sperling, D. Spielman & E. von Wettberg. 2026. [Enhancing farmers' access to neglected crop seeds for healthy diets in a changing climate: Six recommendations for policy action](#). *Food Security* (available online).
2. Mekonnen, D., G. Abate, R. Benfica, F. Place, D.J. Spielman, & S. Yimam. 2026. [Seeds of change: The impact of Ethiopia's direct seed marketing approach on smallholders' seed purchases and productivity](#). *American Journal of Agricultural Economics* (available online).
3. Manners, R., J. Warner, K. Schneider, E. Matsiko, H. Vasanthakalam, G. Benimana, & D.J. Spielman. 2026. [Deploying high-frequency market data to estimate the cost of recommended diets: Recent trends in Rwanda](#). *Food Policy*, 141: 103085.
4. Gulati, K., N. Magnan, T.J. Lybbert, & D.J. Spielman. 2026. [Gendered networks and demand for an agricultural technology in India](#). *World Development*, 197: 107182.
5. Ragasa, C., D.J. Spielman, & J. Lynam. 2025. [Agricultural innovation policies, frames, and instruments: Evolution, lessons, and future research](#). *Food Policy*, 137: 103008.
6. Melesse, M.B., M.K. Maredia, T. Wossen, D. Odeny, D.J. Spielman, H. Michelson, S.A. Waza, K. Kamunye, A. Alene, M.H. Dar, V. Afari-Sefa, & P. Pingali. 2025. [The role of genotyping in measuring improved variety adoption and impact: Advances, challenges, and policy directions](#). *Food Policy*, 137: 102984.
7. Ward, P., M. Alvi, S. Makhija, & D.J. Spielman. 2025. [Cooperation and the provision of local public goods in remote rural communities](#). *Environment and Development Economics*, 30:1–23.
8. Mieke, C., L. Nabwire, R. Sparrow, D. Spielman, & B. Van Campenhout. 2025. [Miracle seeds: Biased expectations, complementary input use, and the dynamics of smallholder technology adoption](#). *Economic Development and Cultural Change*, 74(1): 305–334.
9. Takeshima, H., C. Ragasa, T. Bamiwuye, K.S. Andam, D.J. Spielman, & L. Omoigui. 2025. [The characteristics of community seed schemes for grains and legumes: Insights from northern Nigeria](#). *Agricultural Systems*, 230: 104471.
10. Kilwinger, F., D.J. Spielman, C. J.M. Almekinders, S. Rajendran, & Y.K. van Dam. 2025. [Beyond the bids: Lessons from farmers' reflections on Vickrey auctions of sweetpotato vines in Rwanda](#). *Agricultural Systems*, 229: 104448.
11. Andrade-Piedra, J.L., K. Sharma, J. Kroschel, K. Ogero, J. Kreuze, J.P. Legg, P.L. Kumar, D. J. Spielman, I. Navarrete, W. Perez, E. Atieno, & K.A. Garrett. 2025. [Phytosanitary challenges and solutions for roots and tubers in the tropics](#). *Annual Review of Phytopathology*, 63: 627–650.
12. Spielman, D.J., M. Gatto, T. Wossen, M. McEwan, T. Abdoulaye, M.K. Maredia, & G. Hareau. 2025. [Policy and regulation in seed sector development for vegetatively propagated crops: Insights from Kenya, Nigeria, and Vietnam](#). *Agricultural Systems*, 229: 104441.
13. Kuhlmann, K., A. Naggayi Nalinya, T. Francis, & D.J. Spielman. 2025. [A comparative study of the legal and regulatory dimension of seed sector development in sub-Saharan Africa using regulatory systems maps: The case of Ethiopia, Rwanda, and Uganda](#). *Agricultural Systems*, 228: 104351.
14. Abay, K.A., J. Chamberlin, P. Chivenge, & D.J. Spielman. 2025. [Fertilizer, soil health, and economic shocks: A synthesis of recent evidence](#). *Food Policy*, 133: 102892.

15. Galiè, A., B. Kramer, D.J. Spielman, N. Kawarazuka, A. Rietvelde, & S. Aju. 2025. [Inclusive and gender transformative seed systems: Concepts and applications](#). *Agricultural Systems*, 226: 104320.
16. Spielman, D.J., S. Mugabo, G. Rosenbach, S. Ndikumana, G. Benimana, & C. Ingabire. 2025. [Fertilizer policy reforms in the midst of crisis: Evidence from Rwanda](#). *Food Policy*, 133: 102823.
17. Takeshima, H., C. Ragasa, T. Bamiwuye, K.S. Andam, D.J. Spielman, H.O. Edeh, A. Fasoranti, B. Haile, C. Nwagboso, L.O. Omoigui, T. Abdoulaye, P.L. Kumar, & T. Wossen. 2025. [Seed certification, certified seeds use and yield outcomes in Nigeria: Insights from nationally-representative farm panel data and seed company location data](#). *Agricultural Systems*, 224: 104268.
18. Aragie, E., X. Diao, D.J. Spielman, & J. Thurlow. 2024. [The economywide recovery measures in Rwanda during the COVID-19 pandemic: How useful a lesson?](#) *Journal of Policy Modeling*, 46(6): 1103–1124.
19. Gulati, K., P.S. Ward, T.J. Lybbert, & D.J. Spielman. 2024. [Intrahousehold preference heterogeneity and demand for labor-saving agricultural technology: The case of mechanical rice transplanting in India](#). *American Journal of Agricultural Economics*, 106(2): 684–711.
20. Wossen, T., D.J. Spielman, & T. Abdoulaye. 2024. [Estimating seed demand in the presence of market frictions: Evidence from an auction experiment in Nigeria](#). *Journal of Development Economics*, 167: 103242.
21. Alvi, M., P. Ward, S. Makhija, & D.J. Spielman. 2024. [Do grassroots interventions relax behavioral constraints to the adoption of nutrition-sensitive food production systems?](#) *Australian Journal of Agricultural and Resource Economics*, 68: 101–124.
22. Bhargava, A.K., T.J. Lybbert, & D. Spielman. 2023. [Public benefits of private technology adoption: Spatial externalities of water conservation in India](#). *Water Economics and Policy*, 9(2): 2350002.
23. Lecoutere, E., D.J. Spielman, & B. Van Campenhout. 2023. [Empowering women through targeting information or role models: Evidence from an experiment in agricultural extension in Uganda](#). *World Development*, 167: 106240.
24. Abay, K., G. Abate, J. Chamberlin, & D.J. Spielman. 2023. [Digital tools and agricultural market transformation in Africa: Why are they not at scale yet, and what will it take to get there?](#) *Food Policy*, 116: 102439.
25. Abate, G.T., T. Bernard, S. Makhija, & D.J. Spielman. 2023. [Accelerating technical change through ICT: Evidence from a video-mediated extension experiment in Ethiopia](#). *World Development*, 161: 106089.
26. Bagamba, F., P. Ntakyio, G. Otim, D.J. Spielman, & B. Van Campenhout. 2023. [Policy and performance in Uganda's seed sector: Opportunities and challenges](#). *Development Policy Review*, 41(3): e12665.
27. Van Campenhout, B., E. Lecoutere, & D.J. Spielman 2022. [Hiding or pleasing: Spousal disagreement among Ugandan maize farmers](#). *Journal of Development Studies*, 59(1): 39–57.
28. Mekonnen, D.K., & D.J. Spielman. 2021. [Changing patterns in the international movement of crop genetic materials: An analysis of global policy drivers and potential consequences](#). *Food Policy*, 105: 102161.
29. Donovan, J., P. Rutsaert, D.J. Spielman, K. Mashisia Shikuku, & M. Demont. 2021. [Seed value chain development in the Global South: Key issues and new directions for public breeding programs](#). *Outlook on Agriculture*, 50(4): 366–377.
30. Spielman, D., E. Lecoutere, S. Makhija, & B. Van Campenhout. 2021. [ICTs and agricultural extension in developing countries](#). *Annual Review of Resource Economics*, 13: 177–201.
31. Gatto, M., D. Phuong Le, G. Pacillo, M. Maredia, R. Labarta, G. Hareau, & D.J. Spielman. 2021. [Policy options for advancing seed systems for vegetatively propagated crops in Vietnam](#). *Journal of Crop Improvement*, 35(6): 763–789.
32. Van Campenhout, B., D.J. Spielman, & E. Lecoutere. 2021. [Information and communication technologies \(ICTs\) to provide agricultural advice to smallholder farmers: Experimental evidence from Uganda](#). *American Journal of Agricultural Economics*, 103(1): 317–337.

33. Ward, P.S., D.J. Spielman, D.L. Ortega, N. Kumar, & S. Minocha. 2020. [Complementarity of drought-tolerant rice and weather index insurance: Evidence on farmers' preferences for drought risk management in Bangladesh](#). *Economic Development and Cultural Change*, 68(2): 607–653.
34. Ward, P.S., S. Makhija, & D. Spielman. 2020. [Drought-tolerant rice, weather index insurance, and comprehensive risk management for smallholders: Evidence from a multi-year field experiment in India](#). *Australian Journal of Agricultural and Resource Economics*, 64(2): 421–454.
35. Kouser, S., D.J. Spielman, & M. Qaim. 2019. [The impact of transgenic cotton on farmers' health in Pakistan](#). *PLoS One*, 14(10): e0222617.
36. Stevenson, J., B. Vanlauwe, K. Macours, N. Johnson, L. Krishnan, F. Place, D. Spielman, P. Vlek, & K. Hughes. 2019. [Farmer adoption of plot and farm-level natural resource management practices: Between rhetoric and reality](#). *Global Food Security*, 20: 100–104.
37. Hill, R.V., N. Kumar, N. Magnan, S. Makhija, F. de Nicola, D.J. Spielman, & P.S. Ward. 2019. [Insuring against droughts: Evidence on agricultural intensification and index insurance demand from a randomized evaluation in rural Bangladesh](#). *Journal of Development Economics*, 136: 1–17.
38. Kosec, K., M.A. Hamza Haider, D.J. Spielman, & F. Zaidi. 2018. [The effects of political competition on rural land: Evidence from Pakistan](#). *Oxford Economic Papers*, 70(4): 1036–1061.
39. Lybbert, T.J., N. Magnan, D.J. Spielman, A.K. Bhargava, & K. Gulati. 2018. [Targeting technology to reduce poverty and conserve resources: Experimental provision of laser land leveling services to Indian farmers](#). *Economic Development and Cultural Change*, 66(2): 265–306.
40. Meemken, E.-V., D.J. Spielman, & M. Qaim. 2017. [Trading off nutrition and education? A panel data analysis of the dissimilar welfare effects of Organic and Fairtrade standards](#). *Food Policy*, 71: 74–85.
41. Spielman, D.J., F. Zaidi, P. Zambrano, A.A. Khan, S. Ali, H.M.N. Cheema, H. Nazli, R.S.A. Khan, A. Iqbal, M.A. Zia, & G.M. Ali. 2017. [What are farmers really planting? Measuring the presence and effectiveness of Bt cotton in Pakistan](#). *PLoS One*, 12(5): e0176592.
42. Azzarri, C., B. Haile, C. Roberts, & D. Spielman. 2017. [Targeting, bias, and expected impact of complex innovations on developing-country agriculture: Evidence from Malawi](#). *Agricultural Economics*, 48(3): 317–326.
43. Ma, X., M. Smale, D.J. Spielman, P. Zambrano, H. Nazli, & F. Zaidi. 2017. [A question of integrity: Variants of Bt cotton, pesticides, and productivity in Pakistan](#). *Journal of Agricultural Economics*, 68(2): 366–385.
44. Spielman, D.J., P.S. Ward, D.E. Kolady, & H. Ar-Rashid. 2017. [Public incentives, private investment, and outlooks for hybrid rice in Bangladesh and India](#). *Applied Economic Perspectives & Policy*, 39(1): 154–176.
45. Spielman, D.J., & A. Kennedy. 2016. [Towards better metrics and policymaking for seed system development: Insights from Asia's seed industry](#). *Agricultural Systems*, 147: 111–122.
46. Spielman, D.J., & X. Ma. 2016. [Private sector incentives and the diffusion of agricultural technology: Evidence from developing countries](#). *Journal of Development Studies*, 52(5): 696–717.
47. Krishna, V.V., D.J. Spielman, & P.C. Veettil. 2016. [Exploring the supply and demand factors of varietal turnover in Indian wheat](#). *Journal of Agricultural Science*, 154(2): 258–272.
48. Magnan, N., D.J. Spielman, T.J. Lybbert, & K. Gulati. 2015. [Leveling with friends: Social networks and Indian farmers' demand for agricultural custom hire services](#). *Journal of Development Economics*, 116: 223–251.
49. Spielman, D. J., H. Nazli, X. Ma, P. Zambrano, & F. Zaidi. 2015. [Technological opportunity, regulatory uncertainty, and the economics of Bt cotton in Pakistan](#). *AgBioForum*, 18(1): 98–112.
50. Mekonnen, D.K, D.J. Spielman, J.H. Dorfman, & G. Fonsah. 2015. [Innovation systems and technical efficiency in developing-country agriculture](#). *Agricultural Economics*, 46(5): 1–14.
51. Chiputwa, B., D.J. Spielman, & M. Qaim. 2015. [Food standards, certification, and poverty among coffee farmers in Uganda](#). *World Development*, 66: 400–412.

52. Ward, P.S., D.L. Ortega, D.J. Spielman, & V. Singh. 2014. [Farmer preferences for drought tolerance in hybrid versus inbred rice: Evidence from Bihar, India](#). *World Development*, 64: 125–139.
53. Spielman, D.J., D.E. Kolady, A.J. Cavalieri, & N.C. Rao. 2014. [The seed and agricultural biotechnology industries in India: An analysis of industry structure, competition, and policy options](#). *Food Policy*, 45: 88–100.
54. Spielman, D.J., D.E. Kolady, & P.S. Ward. 2013. [The prospects for hybrid rice in India](#). *Food Security*, 5(5): 651–665.
55. Dey, M.M., D.J. Spielman, A.B.M. Mahfuzul Haque, M.S. Rahman, & R. Valmonte-Santos. 2013. [Change and diversity in smallholder rice-fish systems: Recent evidence from Bangladesh](#). *Food Policy*, 43: 107–118.
56. Lybbert, T.J., N. Magnan, A.K. Bhargava, K. Gulati, & D.J. Spielman. 2012. [Farmers' heterogeneous valuation of laser land leveling in eastern Uttar Pradesh: An experimental auction to inform segmentation and subsidy strategies](#). *American Journal of Agricultural Economics*, 95(2): 339–345.
57. Kolady, D., D.J. Spielman, & A.J. Cavalieri. 2012. [Intellectual property rights, private investment in research, and productivity growth in Indian agriculture](#). *Journal of Agricultural Economics*, 63(2): 361–384.
58. Spielman, D.J., J. Ekboir, K. Davis, C.M.O. Ochieng, & E. Zerfu. 2012. [An innovation systems perspective on agricultural education in sub-Saharan Africa: Evidence from Ethiopia](#). *Ethiopian Journal of Education & Science*, 7(2): 15–32.
59. Spielman, D.J., K. Davis, M. Negash, & G. Ayele. 2011. [Rural innovation systems and networks: findings from a study of Ethiopian smallholders](#). *Agriculture & Human Values*, 28(2): 195–212.
60. Wesseler, J., D.J. Spielman, D.J., & M. Demont. 2010. [The future of governance in the global bioeconomy: Policy, regulation, and investment challenges for the biotechnology and bioenergy sectors](#). *AgBioForum*, 13(4): 288–290.
61. Spielman, D. J., F. Hartwich, & K. von Grebmer. 2010. [Public-private partnerships and developing-country agriculture: Evidence from the international research system](#). *Public Administration & Development*, 30(4): 261–276.
62. Spielman, D.J., D. Byerlee, D. Alemu, & D. Kelemework. 2010. [Policies to promote cereal intensification in Ethiopia: A review of evidence and experience](#). *Food Policy*, 35(3): 185–194.
63. Naseem, A. D.J. Spielman, & S.W. Omamo. 2010. [Private-sector investment in R&D: A review of policy options to promote its growth in developing-country agriculture](#). *Agribusiness*, 26(1): 143–173.
64. Spielman, D.J., M.J. Cohen, & T. Mogue. 2009. [Local governance systems and smallholder cooperatives in Ethiopia](#). *International Journal of Agricultural Resources, Governance & Ecology*, 8(5/6): 388–408.
65. Bernard, T. & D.J. Spielman. 2009. [Cooperatives and the poor: Who's in, who's out? A study of marketing cooperatives in rural Ethiopia](#). *Food Policy*, 34(1): 60–69.
66. Spielman, D.J., J. Ekboir, & K. Davis. 2009. [The art and science of innovation systems inquiry: Applications to Sub-Saharan African agriculture](#). *Technology in Society*, 31(4): 399–405.
67. Birner R, K. Davis, J. Pender, E. Nkonya, P. Anandajayasekeram, J. Ekboir, A. Mbabu, D.J. Spielman, D. Horna, S. Benin, & M. Cohen. 2009. [From best practice to best fit: A framework for designing and analyzing pluralistic agricultural advisory services worldwide](#). *Journal of Agricultural Education and Extension*, 15(4): 341–55.
68. Spielman, D.J., J. Ekboir, K. Davis, & C.M.O. Ochieng. 2008. [An innovation systems perspective on strengthening agricultural education and training in Sub-Saharan Africa](#). *Agricultural Systems*, 98(1): 1–9.
69. Davis, K.E., J. Ekboir, & D.J. Spielman. 2008. [Strengthening agricultural education and training in sub-Saharan Africa from an innovation systems perspective: A case study of Mozambique](#). *Journal of Agricultural Education and Extension*, 14(1): 35–51.

70. Spielman, D.J., J.I. Cohen, & P. Zambrano. 2007. [Are developing country policies and investments promoting research and research partnerships in agricultural biotechnology?](#) *International Journal of Biotechnology*, 9(6): 509–529.
71. Spielman, D.J. 2007. [Pro-poor agricultural biotechnology: Can the international research system deliver the goods?](#) *Food Policy*, 32(2): 189–204.
72. Spielman, D.J., J.I. Cohen, & P. Zambrano. 2006. [Will agbiotech applications reach marginalized farmers? Evidence from developing countries.](#) *AgBioForum*, 9(1): 23–30.
73. Spielman, D.J., & K. von Grebmer. 2006. [Public–private partnerships in international agricultural research.](#) *Journal of Technology Transfer*, 31(2): 291–300.
74. Spielman, D.J. 2006. [A critique of innovation systems perspectives on agricultural research in developing countries.](#) *Innovation Strategy Today*, 2(1): 41–54.
75. Spielman, D.J. 2006. [Systems of innovation: Models, methods, and future directions.](#) *Innovation Strategy Today*, 2(1): 55–66.

PEER-REVIEWED JOURNAL ARTICLES IN PROGRESS

1. Occelli, M., J. Ashby, M. Gomez, S. Humphries, C. Mugisha Mukankusi, J.C. Rubyogo, M. Sidibe, D.J. Spielman, J. Thompson, E. Weltzien, & H.A. Tufan. Embedding farmer participation in national agricultural policy and practice (*under review*).
2. Xu, Z., P. Ward, & D.J. Spielman. Passive moral hazard in weather index insurance (*under review*).
3. Ralph, J.P., K. Rich, & D.J. Spielman. Linking herd dynamics, disease spread, and economic analysis: A multisectoral partial equilibrium application to Foot-and-Mouth Disease in Rwanda (*under review*).
4. Abate, G.T., T. Bernard, S. Boukaka, J.W. Deutschmann, & D.J. Spielman. Improving smallholder agriculture with AI-enabled digital extension: The impact of FarmerChat in Kenya [pre-analysis plan] (*under review*).
5. T.J. Krupnik, M. Schut, N. Hanke-Louw, T. Abdoulaye, I. Ali, S. Assefa, S. Atanga Ndindeng, D. Baron, M. Baum, N. Buono, A.E. Castellanos, O. Cofie, J. Delarueda, I. Dror, R.J. Flor, M. Gatto, E. Girvetz, C. Gonzalez, C. Hurt, I. Jacobs-Mata, O. Kirui, C. Lutz, B. Mhlanga, T. Minh, K. Murshed-e-Jahan, K. Nelson, V. Pede, P. Phiri, M.M. Rana, M. Rajasekharan, P. Schmitter, D. Spielman, S.K. Millach, & I. Elouafi. Scaling agricultural innovations for food system transformation: persistent barriers and pathways forward (*under review*).
6. Amare, M., K. Andam, D.J. Spielman, T. Bamiwuye, C. Nwagboso, P. Zambrano, J. Chambers, A. Fasoranti, & O. Popoola. New evidence on the productivity, profitability, and welfare impacts of genetically modified cowpea in Nigeria: Findings from a cluster randomized controlled trial (*in preparation*).
7. De Boef, W., G. Borman, S. de Haan, F. Kilwinger, B. Kramer, D. Nabuuma, I. Navarrete, C.O. Ojiewo, D.J. Spielman, E. ter Steeg, T.J. Stomph, M.H. Thijssen, & A. Wineman. Integrated seed sector development: A synthesis of evidence, gaps, and pathways to transformation (*in preparation*).

PEER-REVIEWED BOOKS AND BOOK CHAPTERS

1. Ragasa, C., D.J. Spielman, & J.K. Lynam. 2025. Agricultural innovation policies: Prioritizing investments and promoting uptake and impacts at scale. In: *Global Food Policy Report 2025—Lessons and Priorities for a Changing World*, J. Swinnen & C. Barrett, eds. (Chpt. 17, pp. 413–440). Washington, DC: IFPRI.
2. Kramer, B., & D.J. Spielman. 2025. Quality seeds, improved varieties: The economics of crop genetic improvement and farmer uptake. In: *Global Food Policy Report 2025—Lessons and Priorities for a Changing World*, J. Swinnen & C. Barrett, eds. (Chpt. 9, pp. 221–244). Washington, DC: IFPRI.
3. Davis, K.E., R. Gandhi, J. Koo, B. Kramer, A. Miller, J. Repishti, D.J. Spielman, & R. Sulaiman V. 2025. Agricultural extension services: From transfer of technology to facilitation for innovation. In: *Global Food Policy Report 2025 -Food Policy: Lessons and Priorities for a Changing World*, J. Swinnen & C. Barrett, eds. (Chpt. 8, pp. 195–220). Washington, DC: IFPRI.

4. Tabe-Ojong, M.P. Jr., G.T. Abate, K.A. Abay, & D.J. Spielman. 2023. Digital innovations and agricultural transformation in Africa: Lessons from Kenya. In: *Food Systems Transformation in Kenya: Lessons from the Past and Policy Options for the Future*, C. Breisinger, M. Keenan, J. Muthia, & J. Njuki, eds. Washington, DC and Nairobi: IFPRI.
5. Naher, F., & D.J. Spielman. Seeding the future: Accelerating seed system development in Bangladesh. In: *Securing Food for All in Bangladesh*, A. Ahmed, N. Islam, & M.K. Mujeri, eds. (Chpt. 7, pp. 241–274). Dhaka: University Press.
6. Abate, G.T., K.A. Abay, & D.J. Spielman. 2020. Fertilizer policies and implications for African agriculture. In: *ReSAKSS 2020 Annual Trends and Outlook Report: Sustaining Africa's Agrifood System Transformation: The Role of Public Policies*, D. Resnick, X. Diao, & G. Tadesse, eds. Washington, DC & Kigali: IFPRI and Akademiya2063.
7. Spielman, D.J. 2020. Seed policies and regulatory reforms. In: *ReSAKSS 2020 Annual Trends and Outlook Report: Sustaining Africa's Agrifood System Transformation: The Role of Public Policies*, D. Resnick, X. Diao, & G. Tadesse, eds. Washington, DC & Kigali: IFPRI and Akademiya2063.
8. Spielman, D.J., & D. Mekonnen. 2018. Seed demand and supply responses in Ethiopia's teff seed system. In: *The Economics of Teff: Exploring Ethiopia's Biggest Cash Crop*, B. Minten, A.S. Taffesse, & P. Brown, eds. Washington, DC: IFPRI.
9. Spielman, D.J., S.J. Malik, P. Dorosh, & N. Ahmed, eds. 2016. *Agriculture and the Rural Economy in Pakistan: Issues, Outlooks, and Policy Priorities*. Philadelphia: University of Pennsylvania Press.
10. Pingali, P.L., D.J. Spielman, & F. Zaidi. 2016. Changing donor trends in assistance to agricultural research and development in Africa south of the Sahara. In: *Agricultural Research in Africa: Investing in Future Harvests*, J. Lynam, N. Beintema, J. Roseboom, & O. Badiane, eds. Washington, DC: IFPRI.
11. Spielman, D.J., D. Zang, & X. Ma. 2014. Clusters, innovation systems, and biotechnology in developing-country agriculture. In *Handbook on Agriculture, Biotechnology and Development*, S. Smyth, D. Castle, & P. Phillips, eds. Surrey, UK: Edward Elgar Publishing.
12. Juma, C., & D.J. Spielman. 2013. Farmers as entrepreneurs: Sources of agricultural innovation in Africa. In: *New Directions for Smallholder Agriculture*, P.B.R. Hazell & A. Rahman, eds. Oxford: Oxford University Press.
13. Spielman, D.J., & P. Zambrano. 2013. Policy, private investment, and agricultural biotechnology in Africa: New and emerging evidence. In: *What Role for Genetically Modified Crops in Sub-Saharan Africa? Lessons from Economic and Policy Research*, G. Gruere & J. Falck-Zepeda, eds. Washington, DC: IFPRI.
14. Spielman, D.J., C. Ragasa, & R. Rajalahti. 2012. Designing agricultural research linkages within an AIS framework. In: *Agricultural Innovation Systems: An Investment Sourcebook*. Washington, DC: World Bank.
15. Spielman, D.J., D. Kelemework, & D. Alemu. 2012. Seed, fertilizer, and agricultural extension in Ethiopia. In: *Food and Agriculture in Ethiopia: Progress and Policy Challenges*, P. Dorosh & S. Rashid, eds. Philadelphia: University of Pennsylvania Press.
16. Bernard, T., D.J. Spielman, A.S. Taffesse, & E.Z. Gabre-Madhin. 2010. *Cooperatives for Staple Crop Marketing: Evidence from Ethiopia*. IFPRI Research Monograph no. 164. Washington, DC: IFPRI.
17. Spielman, D.J. & R. Pandya-Lorch, eds. 2010. *Proven Successes in Agricultural Development: A Technical Compendium to Millions Fed*. Washington, DC: IFPRI.
18. Spielman, D.J. & R. Pandya-Lorch, eds. 2009. *Millions Fed: Proven Successes in Agricultural Development*. Washington, DC: IFPRI.

SELECTED WORKING PAPERS AND REPORTS

1. Jaleta, M., G.T. Abate, C. Yirga, S. Kidane, M. Hailu, A. Shifa, H. Beyene, A. Mohammed, B. Mohammed, & D.J. Spielman. 2026. [Varietal adoption, turnover, and concentration for major crops in Ethiopia Evidence from household surveys and field sample genotyping](#). IFPRI Discussion Paper no. 2416. Washington, DC: IFPRI.

2. Xu, Y., P. Ward, & D.J. 2026. [Passive moral hazard in weather index insurance](#). SSRN Economics Research Network Working Paper. Social Science Research Network (SSRN).
3. Amare, M., K. Andam, D.J. Spielman, T. Bamiwuye, C. Nwagboso, P. Zambrano & J. Chambers. 2025. [Insecticide use, farmers' self-reported health status, and genetically modified cowpea in Nigeria: Findings from a clustered randomized controlled trial with causal machine learning](#). IFPRI Discussion Paper no. 2388. Washington, DC: IFPRI.
4. Amare, M., K. Andam, D.J. Spielman, T. Bamiwuye, P. Zambrano, J. Chambers, A. Fasoranti, & O. Popoola. 2025. [The impact of genetically modified cowpea on yield, post-harvest losses, and profitability in Nigeria: Findings from a cluster randomized controlled trial](#). IFPRI Discussion Paper no. 2383. Washington, DC: IFPRI.
5. Manners, R., J. Warner, K. Schneider, E. Matsiko, H. Vasanthakalam, G. Benimana, & D.J. Spielman. 2025. [Deploying high-frequency market data to estimate the cost of recommended diets: Recent trends in Rwanda](#). Rwanda Strategy Support Program Working Paper no. 22. Kigali and Washington, DC: IFPRI.
6. Kuhlmann, K., A. Naggayi Nalinya, D.J. Spielman, & T. Francis. 2025. [Mapping the design and implementation of seed sector regulation: The case of Rwanda](#). IFPRI Discussion Paper no. 2377. Washington, DC: IFPRI.
7. Hill, R.V., W. Martin, B. McNamara, R. Nia, D.J. Spielman, H. Takeshima, & R. Vos. 2025. [A good global investment for the European Commission: How investing in CGIAR reduces global poverty and benefits E.U. citizens](#). IFPRI Working Paper. Washington, DC: IFPRI.
8. Hill, R.V., W. Martin, B. McNamara, R. Nia, D.J. Spielman, H. Takeshima, & R. Vos. 2025. [A good global investment for Canada: How investing in CGIAR reduces global poverty and benefits Canadian citizens](#). IFPRI Working Paper. Washington, DC: IFPRI.
9. Hill, R.V., B. McNamara, C. Ringler, D.J. Spielman, J. Thurlow, M.L. Berrospi, J. Chambers, J. Falck-Zepeda, D. Gilligan, J. Glauber, M. Hernandez, D. Headey, V. Hoffman, K. Kosec, W. Martin, R. Nia, A. Nin-Pratt, V. Pineiro, H. Takeshima, R. Vos, P. Zambrano, & W. Zhang. 2025. [A good global investment for the United States: How investing in CGIAR makes America stronger, safer and more prosperous](#). IFPRI Working Paper. Washington, DC: IFPRI.
10. Hill, R.V., W. Martin, B. McNamara, R. Nia, D.J. Spielman, H. Takeshima, & R. Vos. 2025. [A good global investment for the United Kingdom: How investing in CGIAR reduces global poverty and benefits U.K. citizens](#). IFPRI Working Paper. Washington, DC: IFPRI.
11. Abate, G.T., B. McNamara, J. Bonilla, H. Yesigat, & D.J. Spielman. 2025. [Lessons from the Digital Agricultural Advisory Services \(DAAS\) project in Ethiopia: Dairy use case](#). IFPRI Policy Note. Washington, DC: International Food Policy Research Institute.
12. Abate, G.T., B. McNamara, J. Bonilla, Juan, D.T. Asrat & D.J. Spielman. 2025. [Lessons from the Digital Agricultural Advisory Services \(DAAS\) project in Ethiopia: Wheat use case](#). IFPRI Policy Note. Washington, DC: International Food Policy Research Institute.
13. Mekonnen, D.K., G.T. Abate, S. Yimam, R. Benfica, D.J. Spielman, & F. Place. 2025. [Seeds of change: The impact of Ethiopia's direct seed marketing approach on smallholders' seed purchases and productivity](#). Policy Research Working Paper no. WPS11078. Washington, DC: World Bank.
14. Andam, K.S., C. Agbara, C. Nwagboso, D.J. Spielman, O. Olanrewaju, J. Amailo, H. Takeshima, & A. de Brauw. 2024. [Retrospective evaluation of scaling associated with the IITA Cassava Weed Management Project \(CWMP\)](#). *Gates Open Research*, 8: 58.
15. de Boef, W.S., B. Kramer, D. Nabuuma, C.O. Ojiewo, D.J. Spielman, & T.J. Stomph. 2024. [Special issue opening editorial: Designing, assessing and scaling approaches for integrated seed sector development](#). *Agricultural Systems*, 219: 104042.
16. Kuhlmann, K., A. Naggayi Nalinya, T. Francis, & D.J. Spielman. 2023. [Mapping the design and implementation of seed sector regulation: The case of Uganda](#). IFPRI Discussion Paper no. 2200. Washington, DC: IFPRI.

17. Davis, K., G. Rosenbach, D.J. Spielman, S. Makhija, & L. Mwangi. 2024. [Assessing agricultural extension agent digital readiness in Rwanda](#). Rwanda Strategy Support Program Working Paper no. 12. Kigali and Washington, DC: IFPRI.
18. Takeshima, H., G. Benimana, D.J. Spielman, & J. Warner. 2024. [Agricultural mechanization policy options in Rwanda](#). Rwanda Strategy Support Program Working Paper no. 9. Kigali and Washington, DC: IFPRI.
19. Warner, J., G. Rosenbach, G. Benimana, S. Mugabo, J. Niyonsingiza, E. Mukangabo, B. Dushimayezu, O. Nshimiyimana, C. Ingabire, & D.J. Spielman. 2023. [Rwanda Smallholder Agriculture Commercialization Survey: Overview using selected categorical variables](#). Rwanda Strategy Support Program Working Paper no. 8. Kigali and Washington, DC: IFPRI.
20. Rosenbach, G., G. Benimana, C. Ingabire, D.J. Spielman, & R. Tumukunde. 2023. [Women's empowerment in Rwandan agriculture: a baseline assessment in the context of Rwanda's gender and youth mainstreaming strategy and the Fourth Strategic Plan for Agricultural Transformation](#). Rwanda Strategy Support Program Working Paper Working Paper no. 7. Kigali and Washington, DC: IFPRI.
21. Diao, X., M. Ellis, S. Mugabo, K. Pauw, G. Rosenbach, D.J. Spielman, & J. Thurlow. 2022. [Rwanda's agrifood system: Structure and drivers of transformation](#). Rwanda Strategy Support Program Working Paper no. 6. Kigali and Washington, DC: IFPRI.
22. Mieke, C., R. Sparrow, D. Spielman, & B. Van Campenhout. 2023. [The \(perceived\) quality of agricultural technology and its adoption: experimental evidence from Uganda](#). IFPRI Discussion Paper no. 2198. Washington, DC: IFPRI.
23. Cummings, S., J. Koerner, M. Schut, R. Lubberink, T. Minh, D. Spielman, J. Vos, M. Kropff, & C. Leeuwis. 2022. [Open for business: Pathways to strengthen CGIAR's responsible engagement with the private sector](#). Utrecht and Montpellier: Netherlands-CGIAR Strategic Partnership and CGIAR System Organization.
24. Dusingizimana, P., J. Kazungu, A. Lalui, P. Milani, J. Munanura, A. Nsabimana, J.K. Sindi, D.J. Spielman, & M. Umugwaneza. 2022. [Rwanda's food systems transformation: A diagnostic of the public policy landscape shaping the transformation process](#). Rwanda SSP Working Paper no. 4. Kigali and Washington, DC: IFPRI.
25. Aragie, E., X. Diao, D.J. Spielman, J. Thurlow, S. Mugabo, G. Rosenbach, & G. Benimana. 2022. [Public investment prioritization for Rwanda's inclusive agricultural transformation: Evidence from rural investment and policy analysis modeling](#). Rwanda Strategy Support Program Working Paper no. 3. Kigali and Washington, DC: IFPRI.
26. Diao, X., G. Rosenbach, D.J. Spielman, & E. Aragie. 2021. [Assessing the impacts of COVID-19 on household incomes and Poverty in Rwanda: A microsimulation approach](#). Rwanda Strategy Support Program Working Paper no. 2. Kigali and Washington, DC: IFPRI.
27. Spielman, D., N. de Roo, J. Brouwers, K. Richter, J.Y. Ye, D. Dentoni, R. Williams, S. Russo, S. Babu, N. Paul, N. Beintema, W. Heinrich, J. Bonnell, & E. Zerfu. 2019. [Capacity development for agriculture innovation: A practitioners' guidebook to a systems approach](#). U.S. Feed the Future Innovation Lab for Food Security Policy website. Washington, DC: IFPRI with Michigan State University, Wageningen UR, and the University of Florida.
28. Spielman, D.J., & M. Smale. 2017. [Policy options to accelerate varietal change among smallholder farmers in south Asia and Africa south of the Sahara](#). IFPRI Discussion Paper no. 01666. Washington, DC: IFPRI.
29. Davis, K., S. Franzel, & D.J. Spielman. 2016. [Extension options for better livelihoods and poverty reduction: A selected review, 2012–2015](#). Michigan State University International Development Working Paper no. 143. East Lansing, MI: MSU.
30. Spielman, D.J., & R. Birner. 2008. [How innovative is your agriculture? Using innovation indicators and benchmarks to strengthen national agricultural innovation systems](#). Agriculture & Rural Development Discussion Paper no. 41. Washington, DC: World Bank.
31. World Bank. 2004. [The CGIAR at 31: An independent meta-evaluation of the Consultative Group on International Agricultural Research](#). Washington, DC: World Bank.

SELECTED PAPER PRESENTATIONS

1. “Public goods, private investment, and agri-food system innovation.” Invited guest lecture for a class on *Contemporary Controversies in the Global Economy*, Dyson School of Applied Economics and Management, Cornell University, May 4, 2026.
2. “Ensuring sustainable farming through soil health.” Invited panel speaker at a policy conference on *Connecting Research, Policy, and Practice for an Evidence-based Agricultural Future*, organized by the Mohammed VI Polytechnic University (UM6P), the Abdul Latif Jameel Poverty Action Lab (J-PAL), and OCP Nutricrops, Rabat, January 12, 2026.
3. “Public goods, private investment, and agricultural innovation.” Invited presentation, International Finance Corporation (IFC) Economics Seminar Series, Washington, DC, December 11, 2025.
4. “What is required to achieve sustainable food systems transformation?” Invited panel speaker at the Food Futures Forum organized by the Food and Agriculture Research Mission (FARM), School of Public Health, Washington University in St Louis, October 9, 2025.
5. “Scaling innovation in biotechnology: From research to impact.” Invited parallel session presentation given at the FAO Biotechnologies Conference, Rome, June 16–18, 2025.
6. “Reimagining fertilizer subsidies, incentive schemes, and markets: Learning from international experience.” Invited parallel session presentation given at a conference on *Partners for Change—SOILutions for a Food Secure, Resilient, and Sustainable Future*, organized by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Berlin, May 20–22, 2025.
7. “Designing an advance market commitment for climate-resilient crop varieties in Africa.” Panel discussant at a convening on *Advancing Innovation for Climate Change and Agribusiness*, organized by the International Finance Corporation (IFC) with the Innovation Commission (IC) and the Market Shaping Accelerator (MSA), University of Chicago, Washington, DC, February 20, 2025.
8. “Emerging trends in the international exchange of plant genetic resources for food and agriculture: Cross-country evidence on the effects of the 2014 Nagoya Protocol.” Keynote presentation given at a Green Zone Main Stage session on *Resilient Food Security in the Face of Diverse Climatic Conditions*, organized by the Saudi Arabia Ministry of Environment, Water and Agriculture at the 16th Conference of the Parties (COP16) to the United Nations Convention to Combat Desertification (UNCCD), Riyadh, December 12, 2024.
9. “Genetic resource policy for food systems transformation, sustainable development, and climate resilience: Thoughts on a collaborative policy research agenda.” Invited policy seminar given to the Global Crop Diversity Trust, Bonn, December 9, 2024.
10. “Policy options to advance bioeconomic solutions from research to practice.” Presentation given at an organized symposium session on *Bioeconomic Technologies and Their Contributions to the Food Systems Summit’s Action Tracks* at the International Conference of Agricultural Economists (ICAE) Triennial Conference, New Delhi, August 2–7, 2024.
11. “Emerging trends in the international exchange of plant genetic resources for food and agriculture: Cross-country evidence on the effects of the 2014 Nagoya Protocol.” Selected paper presentation given at the Annual Meeting of the NC 1034 Multistate Research Group on Impact Analysis and Decision Strategies for Agricultural Research, Colorado State University, Fort Collins, CO, March 29–30, 2024.
12. “Estimating the impacts of CGIAR research: Conceptual, methodological, and data considerations.” Selected presentation given at the Annual Meeting of the NC 1034 Multistate Research Group on Impact Analysis and Decision Strategies for Agricultural Research, Colorado State University, Fort Collins, CO, March 29–30, 2024.
13. “Innovation policy, scaling, and food security: A master class?” Invited guest lecture to graduate students in the Global Human Development Program, Edmund A. Walsh School of Foreign Service, Georgetown University, Washington, DC, February 29, 2024.
14. “Enabling farm-scale resilience through science, technology, and innovation.” Inaugural plenary session panelist at the Africa Conference on Agricultural Technologies, organized by the African Agricultural Technology Foundation (AATF) and Kenya Ministry of Agriculture and Livestock Development, Nairobi, October 30–November 3, 2023.

15. "Transforming African food systems: Implications for IITA, IFPRI, and CGIAR." Keynote presentation given at the International Institute of Tropical Agriculture (IITA) Annual Work Planning Week 2023, Ibadan (virtual), October 20, 2023.
16. "Global climate change, agricultural production systems, and sustainable rural development." Invited lecture at the International Conference on Agriculture, Natural Resources, and Development (ICANaRD), Jakarta (virtual), October 17, 2023.
17. "Agriculture, the Rural Economy, and the Food System of Rwanda: What Next for Rwanda's Fourth Strategic Plan for Agricultural Transformation?" Panel discussion held at the Economic Policy Research Network (EPRN) 8th Annual Conference, Kigali, May 26–27, 2022.
18. "Data, evidence, and strategy: The promise and pitfalls of agricultural insurance." Presentation given at an international convening on *Agricultural Insurance in Rwanda: Principles, Products, and Practices to Inform the National Agriculture Insurance Scheme*, organized by the Rwanda Ministry of Agriculture and Animal Resources and IFPRI, Kigali, May 25, 2022.
19. "Agriculture sector development priorities for Rwanda." Invited moderator for a stakeholder listening session with the Agriculture Sector Working Group, organized by the World Bank, European Commission, and Rwanda Ministry of Agriculture and Animal Resources, Kigali, May 5, 2022.
20. "Policy options for seed sector development: Innovation, economics, and political realities." Keynote presentation given at an expert dialogue on *The Future of Sustainable Agriculture: Translating Strategy into Implementation*, convened by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Berlin (virtual), February 9, 2022.
21. "What happens when you put politicians, bureaucrats, donors, and analysts in the same room together? Messy thoughts on evidence-based decision-making in agricultural development." Invited guest lecture given to graduate students in economic development, Miami University, Oxford, OH (virtual), November 22, 2021.
22. "Insights into innovation: Public-private partnerships in the international agricultural research system." Invited keynote presentation given at an online seminar on *Public-Private Partnerships in the International Agricultural Research System*, organized by the Global Forum for Rural Advisory Services (GFRAS), virtual, November 9, 2021.
23. "Digital tools and agricultural market transformation in Africa: Why aren't they at scale yet, and what will it take to get there?" Paper presented at a technical workshop on *The Potential of Digital Tools to Support Farmers in Egypt: Lessons Learned and Way Forward* convened by the Egypt Ministry of Agriculture and Land Reclamation, USAID, and IFPRI, Cairo (virtual), November 9, 2021.
24. "Policy options for fertilizer subsidy reforms in Rwanda: A micro-simulation analysis of subsidy reductions and targeting mechanisms." Paper presentation given at an organized symposium session on *Input Subsidies and Smallholder Agriculture* at the International Conference of Agricultural Economists (ICAE) Triennial Conference, virtual, August 18, 2021.
25. "Lessons learned from the COVID-19 pandemic." Opening remarks given at the Rwanda launch of the 2021 Global Food Policy Report on *Transforming Food Systems after COVID-19*, organized by the Rwanda Ministry of Agriculture and Animal Resources and IFPRI, Kigali, April 28, 2021.
26. "Building resilience to vulnerabilities, shocks, and stress." Presentation given at the Rwanda National Dialogue for the U.N. Food Systems Summit, organized by the Rwanda Ministry of Agriculture and Animal Resources and the World Food Programme (WFP), Kigali, April 1, 2021.
27. "Framing policy options for seed market development for low-middle-income countries." Invited guest lecture for the students in a learning module on *Participatory Plant Breeding and Resilient Seed System Development: Options for Stakeholder Engagement and Benefit Sharing*, Graduate School Production Ecology and Resource Conservation, Wageningen University and Research, Wageningen (virtual), December 4, 2020.
28. "Seed policies and regulatory reforms." Keynote presentation given at the first Steering Group meeting of the African Seed and Biotechnology Platform, convened by the Africa Union (virtual), December 2, 2020.

29. "Accelerating technical change through ICT-enabled agricultural extension: Evidence on technology adoption, gender, and productivity." Invited lecture given at a learning breakfast event at the Bill & Melinda Gates Foundation (virtual), April 11, 2020.
30. "Building productive capacities for Rwanda's agricultural transformation, rural development, and food security." Presentation given at a *National Dialogue on Policy Research and Communication*, organized by the Economic Policy Research Network (EPRN), Kigali, February 26, 2020.
31. "Enabling policies for seed sector growth in developing countries: Policy trade-offs, unintended consequences, and operational realities." Presentation given at an *International Seed Conference and Expert Consultation*, organized by the International Center for Maize and Wheat Improvement (CIMMYT), and the Government of Nepal, Kathmandu, September 3–4, 2019.
32. "Innovation in agricultural extension and advisory services: Lessons learned from ongoing research." Presentation given at a workshop on *Agriculture, Youth, Incentives and the Digital Era*, organized by One Acre Fund and Digital Green, Kigali, July 11, 2019.
33. "Accelerating technical change through video-enabled agricultural extension: Evidence from Ethiopia and Uganda, and thoughts for Rwanda." Presentation given at a seminar organized by the Rwanda Agriculture and Animal Resources Board and the International Potato Center, Kigali, May 3, 2019.
34. "Internationally comparable metrics for agricultural extension: Data, indicators, challenges, and opportunities." Presentation given at a convening on *Improving Agricultural Extension Metrics and Evidence*, organized by the Bill & Melinda Gates Foundation, Digital Green, and ALine, Addis Ababa, April 8–9, 2019.
35. "Public policy solutions to advance the scaling agenda." Presentation given at a conference on *Innovations in Agriculture: Scaling Up to Reach Millions*, organized by Purdue University and the African Development Bank Group, West Lafayette, IA, September 25–27, 2018.
36. "Seed policies, quality assurance systems, and vegetatively propagated crops: A conceptual framing with empirical insights from three countries and three crops." Presentation given at the 18th Triennial Symposium of the International Society for Tropical Root Crops (ISTRC), Cali, October 24, 2018.
37. "Accelerating technical change through video-mediated agricultural extension: Evidence from Ethiopia." Presentation given at a seminar organized by IFPRI and Digital Green for the Government of Ethiopia and development partners, Addis Ababa, July 18, 2018.
38. "Evolution, innovation, and institutions: Did intellectual property disputes cause Pakistan's cotton losses in 2015?" Presentation given at the International Conference of Agricultural Economists (ICAE) Triennial Conference, Vancouver, BC, July 28–August 2, 2018.
39. "The role of evidence in designing innovative approaches to agricultural extension and rural advisory services." International and Africa track session presentation given at the Agricultural & Applied Economics Association (AAEA) Annual Conference, Chicago, IL, August 2, 2017.
40. "Insuring against droughts: Evidence on agricultural intensification and insurance demand from a randomized evaluation in rural Bangladesh." Presentation given at the LICOS Centre for Institutions and Economic Performance, University of Leuven, April 27, 2017; and at the Department of Agricultural and Resource Economics, University of California Davis, CA, February 27, 2017.
41. "Agriculture and the rural economy in Pakistan: Issues, outlooks, and policy priorities." Presentations given at the National Rural Support Programme, the Pakistan Society for Development Economists Annual General Meeting, and the Pakistan Agricultural Research Council, Islamabad, December 12–15, 2016.
42. "Global priorities for agricultural science, technology, and innovation." Presentation given the G20 Meeting of Agricultural Chief Scientists, Xian, May 30–31, 2016.
43. "Science, food, and society: Charting out the future role of science policy in developing-country agriculture." Presentation given at the Global Conference on Agricultural Research for Development (GCARD 3), organized by the Global Forum on Agricultural Research (GFAR) and the Consultative Group on International Agricultural Research (CGIAR), Pretoria, April 5–8, 2016.

44. "Evidence-based policymaking: The role of impact assessment studies and their implications for agricultural biotechnologies." Invited panel presentation given at the FAO Symposium on *The Role of Agricultural Biotechnologies in Sustainable Food Systems and Nutrition*, Rome, February 15–17, 2016.
45. "A regional overview of best practices and their implications for seed market development in Nepal." Presentation given at the National Seed Summit organized by the Nepal Ministry of Agricultural Development, Kathmandu, September 14–15, 2015.
46. "Information networks among women and men and the demand for an agricultural technology in India" and "Innovation, competition, and productivity growth: Evidence on the impact of growth in Asia's maize seed sector." Selected papers presented at the International Conference of Agricultural Economists triennial conference, Milan, August 8–14, 2015.
47. "Complexity, tradeoffs, and bias: Evaluating the impact of 'new' agronomy and 'old' extension systems and its implications for rice science." Invited seminar presentation given at the International Rice Research Institute (IRRI), Los Baños, May 28, 2015.
48. "Food policy in a world of natural resource scarcity: What role for entrepreneurial India?" Presentation given at a private sector roundtable on *Deepening Private Sector Engagement in the Vulnerable and Underserved Markets of Eastern India*, organized by the Cereal Systems Initiative for South Asia (CSISA) and IFPRI, New Delhi, December 8, 2014.
49. "Expanding the Evidence Base on the Impact of Rural Advisory Services." Keynote presentation given at the 5th Global Forum for Rural Advisory Services (GFRAS) Annual Meeting on *Rural Advisory Service RAS Policies—Evidence and Practice*, Buenos Aires, September 23–25, 2014.
50. "Insights into innovation: Public-private partnerships in the international agricultural research system." Invited presentation given at the 6th Meeting of the Food Chain Analysis Network on Public-Private Partnerships for Agricultural Innovation, convened by the Organisation for Economic Co-operation and Development (OECD), Paris, October 12–14, 2014.
51. "Research on genetically modified organisms in the CGIAR: Biotechnology policy and biosafety regulation." Presentation given at a workshop on the *CGIAR Independent Science and Partnership Council (ISPC) Study on Biotechnology*, Washington, DC, March 12, 2014.
52. "Intellectual property rights, private R&D incentives, and food security: Evidence from developing countries." Presentation given at the Intellectual Property and Human Development 2013 Seminar Series on *The Role of Intellectual Property in Food Security in Developing Countries*, organized by Public Interest Intellectual Property Advisors (PIIPA), Washington, DC, June 6, 2013.
53. "Public goods, private investment, and agricultural productivity: Economic policy dimensions of plant reproductive biology." Presentation given at an expert convening on *Genetic Approaches to Modify Crop Reproduction for Smallholder Farmers*, organized by the Bill & Melinda Gates Foundation, Seattle, WA, January 28–29, 2013.
54. "Policy dimensions of agricultural biotechnology in South Asia." Presentation given at a conference on *Biotechnology in Indian Agriculture: Performance, Potential and Concerns*, organized by the Centre for Economic and Social Studies, the Andhra Pradesh Department of Agriculture, and IFPRI, Hyderabad, AP, January 17–25, 2012.
55. "Field experiments in market segmentation strategies for the deployment of new agricultural technologies: The case of laser land levelers in eastern Uttar Pradesh." Invited lecture organized by the Centre for International Trade and Development (CITD), Jawaharlal Nehru University, New Delhi, March 5, 2012.
56. "Bridging the productivity gap between developed and developing countries." Invited presentation given at a G20 seminar on *Re-energising Global Agricultural Productivity: Themes from the 2011 G20 Agriculture Ministers' Action Plan*, organized by the governments of Australia and France, Brussels, October 13, 2011.
57. "Policy dimensions of innovation in rice and fish systems in Bangladesh." Presentation given at a conference on *Enhancing Food Security in Bangladesh: Evidence for Action*, Dhaka, October 4–5, 2011.

58. "Opportunities and challenges in Tanzanian agriculture." Panel presentation given at a private session organized by the World Economic Forum (WEF) for the *New Vision for Agriculture Program* hosted by the Consumer Industries Community during the WEF Africa 2010 Summit, Dar es Salaam, May 4, 2010.
59. "Millions Fed: Proven Successes in Agricultural Development." Book launch presentations given at events organized by the International Livestock Research Institute (ILRI), Nairobi, January 27, 2010; by the Bangladesh Rural Advancement Committee (BRAC), Dhaka, January 23; by the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and the Trust for Advancement of Agricultural Sciences (TAAS), New Delhi, January 19; and by the Institute of Agricultural Economics and Development (IAED), Chinese Academy of Agricultural Science (CAAS), Beijing, January 15.
60. "Agricultural research, public-private partnerships, and risk management: Evidence from the international agricultural research system." Paper presentation given at a conference on *Delivering Agricultural Biotechnology to African Farmers: Linking Economic Research to Decision Making*, organized by the Science Foundation for Livelihoods and Development (SCIFODE), National Council for Science and Technology (UNCST), and IFPRI, Entebbe, May 19–21, 2009.
61. "Perspectives on agricultural productivity, growth, and input markets in Ethiopia." Invited presentation given at a symposium on *Agrarian Reform in Ethiopia*, organized by the InterAfrica Group, Addis Ababa, January 20, 2009.
62. "Measuring Agricultural Innovation System Properties and Performance: Illustrations from Ethiopia and Vietnam." Invited paper presentation given at a workshop on *Performance Indicators for Agricultural Innovation Systems in the Africa, Caribbean, and Pacific Region*, organized by the Technical Centre for Agricultural and Rural Cooperation, Wageningen, June 2–4, 2009.
63. "The effect of increased agricultural research, especially in Africa. Invited presentation given at a seminar on *Hunger, Health and Hope in Africa*, Faculty of Life Sciences, University of Copenhagen, Copenhagen, December 3, 2008.
64. "Partnerships in agricultural research: Evidence from the international agricultural research system." Invited presentation given at a conference on *Innovative Public-Private Partnerships that Promote International Agricultural and Rural Development*, organized by the Association for International Agriculture and Rural Development (AIARD), Washington, DC, June 1-3, 2008.
65. "Mobilizing rural institutions for sustainable livelihoods and equitable development." Paper presented at a seminar organized by the Ethiopian Cooperative Agency, Addis Ababa, June 11, 2007.
66. "Enabling smallholder innovation: Findings from Ethiopia." Paper presentation given at a seminar on *Mobilizing Rural Institutions for Sustainable Livelihood and Equitable Development*, organized by the World Bank, Addis Ababa, February 12, 2007.
67. "Developing the Art and Science of Innovation Systems Inquiry: Alternative methods for the study of innovation and complexity over time and space." Selected paper presentation given at the *Innovation Africa Symposium*, organized by the International Centre for Tropical Agriculture (CIAT), International Livestock Research Institute (ILRI), the International Institute for Rural Reconstruction (IIRR), PROMoting Local INNOVation (PROLINNOVA), and IFPRI, Kampala, November 21–23, 2006.
68. "Poverty, innovation and agriculture in Ethiopia: Opportunities and constraints." Selected paper presented at the *Agricultural Economics Society of Ethiopia Annual Conference*, Addis Ababa, April 14, 2006.
69. "Investment opportunities in less-favored areas and the role of public-private partnerships." Presentation given at an international conference on *Public-Private Partnerships for Harnessing the Potential of Rainfed Agriculture*, organized by the Federation of India Chambers of Commerce and Industry (FICCI), the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), and IFPRI, New Delhi, October 19–20, 2005.
70. "Public-private partnerships in agricultural research." Paper presentation given at a workshop on *Public-Private Partnerships in Agricultural Research: Finding Common Ground for Common Good*, organized by the International Maize and Wheat Improvement Center, the Kenya Agricultural Research Institute, and IFPRI, Nairobi, June 21, 2005.

TEACHING

- 2020–2021 Instructor, in-service capacity development for early- and mid-career professionals in the Government of Rwanda, organized by the IFPRI Rwanda Strategy Support Program, Kigali, Rwanda
Courses: One- to two-week modules on topics in food policy analysis, including household data analysis, market policy and value chain analysis, price analysis for agriculture and nutrition policy, causal impact evaluation, and economy-wide modeling (co-instructor)
- 2017–2018 Adjunct Professor, Global Human Development Program, Edmund A. Walsh School of Foreign Service, Georgetown University, Washington, DC
Courses: Seven-week graduate seminars on “Agriculture, Environment, and Sustainable Development: Political Economy Perspectives” (sole instructor)
- 2012 Guest Lecturer, Graduate Program in National Academy of Agricultural Research Management, Hyderabad, AP, India
Course: 10-day module on “Agricultural Science, Technology, and Innovation Policy” (sole instructor)
- 2001–2002 Lecturer, Department of Economics, American University, Washington, DC
Courses: 14-week undergraduate classes on “Principles of Macroeconomics” and “Principles of Macroeconomics” (sole instructor)

GRADUATE STUDENT ADVISING

- 2026 External examiner for Astrid Mastebroek, doctoral degree candidate in economics, Wageningen University, Wageningen, Netherlands
Thesis: Smallholder seed choices under risk and uncertainty: Reflective and automatic processes shaping adoption of improved maize varieties in Uganda
- 2025 External advisor for Ruth Mawia, master’s degree candidate in economics, Egerton University, Njoro, Kenya
Thesis: The impact of weather shocks on the perceptions and uptake of crop insurance among smallholder maize farmers in Kenya’s arid and semi-arid counties
- 2024 External examiner for Michael Murphy, doctoral degree candidate in economics, Bordeaux School of Economics, University of Bordeaux, France
Thesis: Understanding risk and adoption in responses to environmental uncertainty
- 2023 External examiner for Rosie Morrisson, doctoral candidate in behavioral economics, Global Academy of Agriculture and Food Systems, University of Edinburgh, U.K.
Thesis: Farmer networks and the adoption of agricultural innovations in East Africa
- 2021 External advisor for Gilberthe Uwera Benimana, master’s degree candidate in agricultural and applied economics, University of Nairobi
Thesis: Factors determining choice and impact of hermetic maize storage technology adoption on smallholder farmers’ income in Gatsibo District, Rwanda
- 2017 External advisor for Eva-Marie Meemken, doctoral degree candidate in agricultural economics, University of Goettingen, Germany
Thesis: Essays on the social and economic effects of sustainability standards for smallholder farmers in Africa
- 2015 External examiner for Martha Negash, doctoral degree candidate in agricultural economics, Katholieke Universiteit Leuven, Belgium
Thesis: An economic analysis of the impact of biofuels in Ethiopia

- 2013 External advisor for Brian Chiputwa, doctoral degree candidate in agricultural economics, University of Goettingen, Germany
Thesis: Assessing the impact of high-value certified markets on smallholder farmers in East Africa
- 2012 External advisor for Dawit K. Mekonnen, doctoral degree candidate in agricultural and applied economics, University of Georgia, Athens, GA
Thesis: Productivity, poverty and small-scale irrigation in Ethiopia
- 2010 External advisor for Miachew Manaye, master's degree candidate in agricultural information and communication management, Egerton University, Njoro, Kenya
Thesis: An analysis of language use and content in communicating agricultural technologies to farmers in Ethiopia
- 2010 External examiner for Nora Cristina Holguin-Pando, master's degree candidate, University of Saskatchewan, Saskatoon, Canada
Thesis: Technology transfer in transitional economies: The case of Mexico

AWARDS

- 2019 Recipient, Best Paper Focused on Gender Issues, from the African Association of Agricultural Economists (AAAE) at the 6th African Conference of Agricultural Economists, for E. Lecoutere, D.J. Spielman, and B. Van Campenhout, "Empowering women with digital extension in Uganda: Effects of information and role models"
- 2018 Finalist, Uma Lele Prize for Best Contributed Paper on Gender from the International Association of Agricultural Economists (IAEE) at the 30th IAEE Triennial Conference, Vancouver, BC, for B. Van Campenhout, E. Lecoutere, & D.J. Spielman, "The role of gender in ICT-mediated extension information campaigns: Evidence from Uganda"
- 2010 Recipient, Quality of Communication Award, from the Agricultural and Applied Economics Association (AAEA) for D.J. Spielman & R. Pandya-Lorch (2009), *Millions Fed: Proven Successes in Agricultural Development*
- 2010 Mercury Excellence Awards in Communications for D.J. Spielman & R. Pandya-Lorch (2009), *Millions Fed: Proven Successes in Agricultural Development* in the categories of "DVDs/Videos: Educational/Informational," "Promotion/Marketing: Awareness Campaign," "DVDs/Videos: Public Awareness Campaign," and "Writing: Booklet"
- 2008 *Journal of Agricultural Education & Extension* Award for Best Article for K.E. Davis, J. Ekboir, & D.J. Spielman (2008), "Strengthening agricultural education and training in sub-Saharan Africa from an innovation systems perspective: A case study of Mozambique"
- 2002 Recipient, Dissertation Fellowship Award, Department of Economics, College of Arts & Sciences, American University
- 2002 James H. Weaver Award for Teaching Excellence, Department of Economics, College of Arts & Sciences, American University
- 2002 Frank Tamagna Award for Outstanding Work in International Economics, Department of Economics, American University

PROFESSIONAL SERVICE AND MEMBERSHIPS

External service

- 2026-present Member, Multistate Research Fund (MRF) NC1034 on “Impact Analyses and Decision Strategies for Agricultural Research,” funded by the U.S. National Institute of Food and Agriculture (NIFA)
- 2025–present Co-editor, *Food Policy*
- 2025–present Member, Advisory Board for Seed Sector Monitoring Reference Methods, SeedNL (Netherlands)
- 2025–present Member, Technical Steering Committee for the Consortium for Red Palm Weevil Control (C4RPWC)
- 2025–2026 Center delegate, CGIAR Scaling for Impact (S4I) Science Program
- 2025 Member, organizing committee for the Integrated Seed Sector Development (ISSD) Community of Practice annual conference
- 2023–present Guest editor, *Agricultural Systems*, special issue on “Designing, assessing and scaling approaches for integrated seed sector development”
- 2024–2025 Guest editor, *Food Policy* special issue on “Fertilizer and soil health policies in the context of global supply disruptions and economic crises”
- 2024–2025 Member, Writing Team and interim management team, CGIAR Breeding for Tomorrow Science Program
- 2022–2023 Member, Design Team, CGIAR Genetic Innovation Action Area/Science Group
- 2020–2025 Member, Steering Group, African Seed and Biotechnology Partnership Platform, convened by the African Union
- 2017–2018 Member, Technical Advisory Group (TAG) for the African Women in Agricultural Research and Development (AWARD) review of *The State of Gender Responsive Agricultural Research for Development in Africa*
- 2015–2018 Member, Advisory Panel for the U.N. Food and Agriculture Organization (FAO) Symposium on *The Role of Agricultural Biotechnologies in Sustainable Food Systems and Nutrition*
- 2014–2020 Member, Expert Review Committee, Access to Seeds Index, hosted by the World Benchmarking Alliance
- 2010 Member, organizing committee for the 14th International Consortium on Applied Bioeconomy Research (ICABR) Annual Conference on *Bioeconomy Governance: Policy, Environmental and Health Regulation, and Public Investments in Research*, Ravello, June 16-18.

Internal service

- 2025-2026 Chair, IFPRI Data Governance and Management Committee
- 2025–2026 Member, IFPRI Standing Committee on Research, Strategy, and Partnerships
- 2017–2020 Chair, IFPRI Data Governance and Management Committee
- 2012–2018 Member, IFPRI Publications Review Committee
- 2012–2014 Chair, IFPRI Private Sector Task Force

Affiliations and memberships

- 2026-present Non-resident research fellow, International Food Policy Research Institute
2020-present Researcher, International Growth Centre
2008-present Member, Agricultural & Applied Economics Association
2008-present Member, International Association of Agricultural Economists
2005-present Member, African Association of Agricultural Economics

PEER REVIEWING

Journal reviewer for *Agricultural Economics*, *Agricultural Systems*, *American Journal of Agricultural Economics*, *Food Policy*, *World Development*, *Global Food Security*, *Journal of Agricultural Economics*, *Journal of African Economies*, *Journal of Agricultural Education and Extension*, *Journal of Development Studies*, *Journal of Modern African Studies*, *Journal of Rural Studies*, *Land Economics*, *Land Use Policy*, *Journal of Economic Behavior and Organization*, *Applied Economics Perspectives and Policy*, *Agriculture and Human Values*, *Environment and Development Economics*, *Natural Resources Forum*, *Poverty & Public Policy*, and *World Development Perspectives*

Proposal reviewer for the Competitive Research Grants Program to Develop or Validate Innovative Methods and Metrics for Agriculture and Nutrition Actions, London School of Hygiene & Tropical Medicine; U.S. Borlaug Graduate Research Fellowship Program; Research Fellow Partnership Programme for Agriculture, Forestry and Natural Resources, North-South Centre, Swiss Federal Institute of Technology, Zurich; Australian Centre for International Agricultural Research; African Agricultural Technology Foundation; International Centre of Insect Physiology and Ecology; InterAction Best Practices & Innovations Initiative. and the Austrian Agency for International Cooperation in Education and Research.

SKILLS AND ABILITIES

- Languages: Functional ability in Urdu and Hindi; Elementary ability in Amharic
- Proficiency in MS Office applications. Experience with Stata, EViews, LaTeX, UCINET, and other statistical, mathematical, and scientific software
- Expertise in logical framework analysis, results-based management, outcome mapping, and other project monitoring, learning, and evaluation systems

ADDITIONAL INFORMATION

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