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CAREER PROFILE

Dr. Timothy Krupnik has more than 15 years of experience in applied agricultural research for development projects in Asia, Sub-Saharan Africa, and in the Caribbean. He leads an innovative and multi-disciplinary science team implementing \$5 million / year portfolio of research for development projects focused on the principles of sustainable and ecological intensification in smallholder dominated and tropical agricultural systems. His team's research spans disciplines and brings together technical skills ranging from systems agronomy, remote sensing, socioeconomic, climatology, environmental modeling and data science, with the objective of addressing key knowledge gaps and efforts required to raise farmers' productivity and resilience in the context of climate variability and biophysical, economic, and sociocultural diversity in South and South East Asia. Timothy prioritizes interdisciplinary and systems-oriented research, and has a strong track-record of building high-performing science partnerships and attracting funding. He has authored over 65 peer-reviewed papers, books and research briefs, and has participated in developing a number of agricultural decision support tools. Prior to CIMMYT, Timothy was affiliated with AfricaRice where he conducted research on the environmental and socioeconomic consequences of water-saving rice cropping systems in West Africa. He has also conducted research and consulted for the Gates Foundation, the FAO, and NGOs. Timothy maintains a strong desire to translate science into impact by mainstreaming research innovations and leading scaling efforts through public and private sector partnerships. In addition, he has led the production of numerous educational and extension materials, including 11 farmer educational videos translated into six languages.

KEY SKILLS

- **Passionate about partnerships:** Demonstrated institutional 'ambassadorial' skills, and an ability to generate new and impactful public and private sector partnerships that catalyze co-investments in activities resulting in large-scale development impact.
- **Strong resource mobilization skills:** Successful management of donor relations and consolidation of \$20.9 million of R4D funding as Project Leader at CIMMYT. Detailed and practical knowledge of investment trends and international research for development donor strategies. Core contributions to project design and proposal writing amounting to \$77.4 million in grant and competitive project funding.
- **Strategic and cutting-edge thinking:** Champion of innovative, value-adding research activities that advance partnerships, encourage capacity development among and across teams, and that are positioned to influence transformative change in agricultural food systems.
- **Demonstrated team leadership abilities:** Experienced building human resources and nurturing delivery-oriented and multi-disciplinary research for development teams. Project line management of six internationally recruited scientists, 32 nationally recruited staff, and 15 consultants, with guiding responsibilities for an additional 28 in international and national partner organizations.
- **Results oriented project leadership experience:** >8 years of large-scale (up to \$5 million annual turnover) project implementation, adaptive management, and reporting.
- **Excellent communication skills: Proven track record of successful outreach and science communication skills:** Led efforts to develop numerous extension materials aimed at smallholder farmers, including eleven award-winning educational videos on risk-reducing crop management practices translated into six languages, with documented viewership of over 0.4 million farmers and millions of television viewers in South Asia.

EDUCATION

- 2011** Ph.D. Environmental Studies (Agroecology concentration). University of California, Santa Cruz. Dissertation: Integrated Agronomic and Socioeconomic Assessment of Water Saving Rice Crop Management Systems in the Sahel.
- 2005** MSc. International Agricultural Development (Integrated Natural Resources Management concentration). University of California, Davis. Thesis: Linking Farmer, Forest & Watershed: Agricultural Systems and Natural Resources Management Along the Upper Njoro River, Kenya.
- 2000** B.A. Humanities, with concentration in Cultural Anthropology and Human Ecology. New College of California, San Francisco.

KEY INTERESTS

Building and sustaining high-performance science for development teams, tropical farming systems, systems analysis, climate information services, socio-ecological systems, interdisciplinary, science communication.

PROFESSIONAL POSITIONS

- Jan. 2018 – onward** Senior Scientist and Systems Agronomist, duties as Regional Strategic lead for Sustainable Intensification in South and South East Asia, International Wheat and Maize Improvement Center (CIMMYT). Posting in Bangladesh (duties spanning South Asia and South East Asia).
- Jul. 2014 – Dec. 2017** Research Scientist and Systems Agronomist (CIMMYT). Posting Bangladesh with duties spanning South Asia.
- Jun. 2013 – Jun. 2014** Associate Research Scientist (CIMMYT). Posting in Bangladesh with duties in Nepal and Bangladesh.
- Jul. 2011 – May 2013** Post-Doctoral Fellow in Cropping Systems (CIMMYT). Posting in Bangladesh.
- May 2007 – Dec. 2009** PhD Research Fellow, Africa Rice Center and the Department of Environmental Studies, University of California, Santa Cruz. Posting in Senegal.
- Jun. 2006 – Nov. 2006** Graduate Student Researcher, Department of Environmental Studies, University of California, Santa Cruz. Posting in Burkina Faso.
- Jul. 2003 – Aug. 2003** Graduate Student Researcher, Sustainable Management of Watersheds (SUMAWA). University of California, Davis. Posting in Kenya.
- Sept. 2002 – Jun. 2003** Graduate Student Researcher, Agroecosystems Laboratory. University of California, Davis. Posting in California.

RESEARCH LEADERSHIP AND ACHIEVEMENTS

Ongoing large-scale activities

- **Regional Strategic Leadership for Sustainable Intensification in South and South East Asia**
Providing strategic leadership to CIMMYT's sustainable intensification program activities in South and South East Asia (Bangladesh, Cambodia, Myanmar, Nepal, Lao PDR, Vietnam), including new business and research project development, partnership and donor coordination, and assurance of research team cohesiveness and science coherence. Developing a comprehensive value-adding partnership strategy for CIMMYT's contributions to South East Asia, including research and host country agreements, in addition to resource mobilization. Responsible for project line management of six internationally recruited scientists, 32 nationally recruited staff, and 15 consultants, with guiding responsibilities for an additional 28 in international and national partner organizations.

- Project Leader: Fighting Back Against Fall Armyworm (FAW) in Bangladesh**
FAW is an invasive Lepidopteran pest that favors maize that is native to the Americas. FAW was identified in Bangladesh for the first time in late 2018 following migration from Africa and southern India. Supported by the University of Michigan and USAID, this project cooperates with national research and extension partners, CABI and the FAO to (a) establish digitally-based crowd-sourced FAW population and damage monitoring systems, (b) evaluate integrated pest management (IPM) strategies, and (c) develop educational strategies and institutional arrangements to facilitate FAW IPM for the public and private sector. This \$0.7 million project spans 2019-2021.
- Project Leader: Climate Services for Resilient Development (CSRD) in South Asia**
CSRD spans 2016-2019 and is a \$3 million USAID funded initiative to support weather and sub-seasonal climate forecasting improvements for agriculture in Bangladesh, India, and Nepal. CSRD works to increase regional governmental partners' use of climate information services in agricultural decision-making. Key achievements include governmental endorsement of weather-based crop disease forecasting and early warning systems, institutional backing of participatory approaches to climate services for smallholder farmers, and the development of downscaled agrometeorological advisories for rice, wheat, maize, potato, mungbean and lentil in Bangladesh. Project line supervision of three internationally recruited scientists in agronomy and climate change, climatology, and remote sensing. For more information on CSRD: [Click here](#) and [here](#). Videos about partnerships and training facilitated by CSRD can be found [here](#) and [here](#), respectively.
- Project Leader: Cereal Systems Initiative for South Asia (CSISA) Phase III**
Project Leadership for research and development activities in Nepal and Bangladesh for the USAID/Washington funded components of CSISA Phase III, in partnership with the International Rice Research Institute (IRRI) and the International Food Policy Research Institute (IFPRI), local NGOs, and three national research and extension system partners. CSISA works to increase the adoption of resource-conserving and climate-resilient technologies and crop management practices, and to improve farmers' access to market information and enterprise development. Achievements include large-scale farmer adaptation and adoption of resource conserving farm machinery, rural agricultural services provision, and sustainable intensification management techniques and practices by 0.23 million farmers on 79,000 hectares. CSISA Phase III activities in Bangladesh and Nepal have a \$14.7 million budget from 2015-2020. More information on CSISA Phase III can be found by [clicking here](#).
- Project Leader: Big data analytics for climate-smart agriculture in South Asia (Big Data² CSA)**
In partnership with national research systems and the private sector in India, Nepal and Bangladesh, Big Data² CSA is developing digital data collection systems to crowdsource, data-mine and interpret a wide variety of primary agronomic management and socioeconomic data from smallholders. The project is working to stack primary data with spatially-explicit secondary environmental and climate data products to develop insights into factors contributing to or limiting CSA indicators (yield, profitability, GHG emission intensity, resilience). Resulting information will be represented through interactive web-based dashboards, with management advisories deployed through interactive voice recognition technologies. Big Data² CSA is supported by the [CGIAR Research Program on Climate Change, Agriculture and Food Security \(CCAFS\)](#) and is funded at \$0.3 million year⁻¹ (2019-2021). More about [Big Data² CSA](#) can be found here.
- Project Leader: Climate and market-smart mungbean advisories (CMSMA)**
Project lead for this Mott McDonald/Embassy of the Kingdom of the Netherlands funded research pilot that has developed improved heavy rainfall event forecasting skill and is generating emergency mungbean harvesting advisories to 1,300 farmers in southern Bangladesh by interactive voice technologies to avoid crop losses. Advisories are linked with mungbean market information so farmers can more fairly negotiate with traders. Project budget is \$161,800, spanning 2018-2020.

Professional service in support of national research and development partners

- Bangladesh Academy for Climate Services (BACS)**

Co-founder of BACS in partnership in 2018 with the Bangladesh Meteorological Department, International Research Institute for Climate and Society, and the International Center for Climate Change Adaptation and Development (ICCCAD). BACS is a multi-institution program created to open trans-sectoral and multi-stakeholder dialogue on climate services to identify existing initiatives, challenges and opportunities. The academy also designs tailored certification courses. Details: [here](#) and [here](#).

- **Support to the Bangladesh Maize and Wheat Research Institute (BWMRI)**
Mobilized \$ 224,752 of USAID funding to support BWMRI on an aligned project titled 'Combatting Wheat Blast in Bangladesh' focused on large-scale resistant variety multiplication and field sample laboratory analyses to support early warning system validation.
- **Support for the Bangladesh Agricultural Development Corporation (BADC)**
Mobilized \$1.5 million of additional USAID funds to support the Bangladesh Agricultural Development Corporation (BADC) utilizing CIMMYT's [geospatial research outputs](#) to target irrigation canal rehabilitation in coastal Bangladesh. Impact was significant, with over 85 km of targeted irrigation canals rehabilitated. More details: [Click here](#) and [here](#).

Completed project leadership activities

- **Project Leader: CSISA Agronomy and Seed Systems Scaling in Nepal**
The CSISA Agronomy and Seed Systems Scaling project in Nepal focuses on the intensification and diversification of pulses (lentil and mung bean), cropping system-based approaches for sustainably intensifying wheat productivity while minimizing terminal heat stress, the development of robust seed systems, and scale-appropriate mechanization in Nepal's Terai and Hid-Hills. Outcomes include strong Provincial Government and private sector support for the above objectives, resulting in 27,000 smallholder farmers making use of improved technology, seeds, and appropriate farm machinery. Project activities span 2015-2019. Overall project budget was \$3 million. More information CSISA Scaling can be found [here](#).
- **Project leader: Wheat blast surveillance and capacity development in Bangladesh**
Led this USAID/Bangladesh funded initiative to mitigate wheat blast (*Magnaporthe oryzae* pathotype *Triticum*) disease in Bangladesh, in partnership with national research and extension partners. Partnering with the Bangladesh Agricultural Research Council and research partners in Brazil, this project has successfully developed and implemented South Asia's first training and protocols for wheat blast disease surveillance to generate verification data for a disease forecasting and early warning system now utilized by extension services. Additional activities include research with Penn State University to develop smart-phone based automated image recognition aid in tracking wheat blast spread. Project budget was \$176,000 spanning 2016 – 2019. More details can be found [here](#) and [here](#).
- **Project leader: CSISA – Mechanization and Irrigation (CSISA-MI), Phase I**
Led the design and implementation this \$15.6 million USAID supported research and development project implemented with [International Development Enterprises](#) and a number of government and private sector partners, from June 2013 – January 2014, and from July 2016 – December 2016. Deepened collaborative research partnerships between [BARI](#) and the private sector to include [irrigation geospatial technology targeting](#), and [adaptive testing and refinement of fuel-efficient irrigation](#), and improved crop establishment and harvesting equipment. Project outcomes included the establishment of commercial-scale domestic manufacture of fuel-efficient [axial flow irrigation pumps](#) and working value chains supporting the commercial availability of sowing and harvesting machinery, in addition to systems supporting rural youth entrepreneurialism for machinery service provision. For more details, click [here](#).
- **Research Team Coordinator: CSISA Expansion in Bangladesh (CSISA-BD)**
Designed, implemented and technically backstopped CIMMYT's agronomic and natural resource management research and extension activities in southern Bangladesh from 2011 – 2015. Research themes focused on testing of new heat, flooding and salinity stress tolerant wheat and rice varieties, improved wheat

nutrient management recommendations, and farmer-managed research on rice-maize system tillage and crop establishment options.

- **Bangladesh Country Lead: Agriculture and Nutrition Extension Project (ANEP)**
Led CIMMYT extension activities in the EU funded ANEP consortium (\$0.95 million over 2011 – 2014). Themes focused on improving nutrient use efficiency in rice-based cropping systems and pre-season market planning for new maize farmers. More about ANEP: [Click here](#).
- **PhD fellow: Integrated Assessments of Water-saving Rice Management Systems in the Sahel**
Fellowship with the Africa Rice Center (2007 – 2010) and affiliated with the FAO (2006). Designed and implemented multi-season cropping systems trials examining (1) water productivity, nutrient use efficiency and nutrient balances, (2) the use of organic amendments to enhance nutrient cycling and improve soil quality under water-saving irrigation, (3) weed community development and the water productivity and weed competitiveness of rice genotypes under water-saving irrigation in the Senegal River Valley. Conducted participatory action research with the FAO's Farmer Field School program examining the agronomic and economic productivity of water-saving irrigation and reduced agrochemical use in rice. Farmers achieved a 10 – 40% reduction in herbicide use without impacting yield or profitability by collaboratively redesigning their crop management practices. Also partnered with the FAO's Farmer Field School program to implement preliminary on-farm trials examining water-saving management practices in Burkina Faso's Kou valley irrigation scheme in 2006.

RESOURCE MOBILIZATION

Summary: Direct mobilization of \$20.9 million of funds as lead project designer, author, donor relationship manager, and Project Leader. Contributions to mobilization of \$77.5 million of additional funding as a core member of the project design, development, and writing teams.

- 2019 Phimmachanh, P., **Krupnik, T.J.** and Weyerhaeuser, H. Responding to Fall Armyworm (*Spodoptera frugiperda* J.E. Smith) with Agroecological Management Options in Lao PDR. CGIAR Research Program on Maize. Total award size: \$38,095. Duration: 2019-2020.
- 2019 **Krupnik, T.J.** and Edwards, J. Fighting Back Against Fall Armyworm in Bangladesh. University of Michigan and USAID. Total award size: \$0.7 million. Duration: 2019-2021.
- 2019 Ludwig, F., Uddin, Md. E., Kabir, Md. A., Terwisscha van Scheltinga, C., Kroeze, C., Werners, S., Hutjes, R., Del Pozo Garcia, M., Blom-Zandstra, M., Verhagen, J., Amjath Babu, T.S., van de Berg, H., Groen, K., Winkel, T., Bruning, B., Parra Gonzale, A., **Krupnik, T.J.**, Climate Smart Agriculture for a Resilient Coastal Bangladesh (CSA-Bangla). Nuffic – Orange Knowledge Programme. Total award size: \$80,000 (portion awarded to CIMMYT). Duration: 2019–2024.
- 2019 McHugh, J., Davis, J., Khadka, D.D., Siddiquee, I.A.A., Riggs, C., **Krupnik, T.J.**, Cereal Systems Initiative for South Asia – Mechanization and Irrigation Initiative, Phase II. USAID/Bangladesh. Total award size: \$21 million. Duration: 2019–2024.
- 2019 **Krupnik, T.J.**, Hodson, D. Gilligan, C., Millington, S. Climate services to avoid food security threatening crop disease epidemics in South Asia. UK Met Office's Asia Regional Resilience to a Changing Climate (ARRCC) programme. Phase I award size: \$720,162; Duration: 2019-2020.
- 2018 **Krupnik, T.J.**, Kruseman, G. Chamberlin, J., Schulthess, U. McDonald, A.J., Gérard, B. Filling data gaps with big data stacks to support climate smart agriculture in South Asia. Climate Change, Agriculture and Food Security (CCAFS). Flagship 2: Climate-smart technologies and practices. Award size: \$900,000. Duration: 2019-2021.
- 2018 Whitebread, A., Kadiyala Murthy, D., Tilley, A., **Krupnik, T.J.** Capacitating farmers and fishers to manage climate risks in South Asia. Climate Change, Agriculture and Food Security (CCAFS). Flagship 4: Climate services and safety nets. Award size: \$75,000 (Proportion of funding for CIMMYT, overall funding level \$0.6 million). Duration: 2019-2021.

- 2018 **Krupnik, T.J.** Decision making science to sustain climate and market-smart mungbean advisories in Patuakhali's polder communities. Mott MacDonald's Blue Gold Innovation fund through the Embassy of the Kingdom of the Netherlands. Award size: \$150,000. Duration: 2018-2019.
- 2018 **Krupnik, T.J.,** Fernandes, J.M.C., Pavan, W., De Vargas, F. Singh, P. Combining crop and disease modeling with numerical weather forecasting to inform wheat blast early warning systems in Bangladesh, Brazil and beyond. CGIAR Platform for Big Data in Agriculture. Award Size: \$20,000. Duration: 2018-2019.
- 2017 Singh, P., Barma, N.C.D., Braun, H.J., Singh, R.P., **Krupnik, T.J.,** Tiwari, T.P., Joshi, A.K., He, X., Listman, G.M. Identification of sources of resistance to wheat blast and their deployment in wheat varieties adapted to Bangladesh. Australian Centre for International Agricultural Research. Award size: \$1.15 Million. Duration: 2017-2021.
- 2016 **Krupnik, T.J.,** Schulthess, U., McDonald, A., Stirling, C. Aggarwal, P.K., Ahmed, Z.U. Climate Services for Resilient Development (CSR) in South Asia. USAID Global Climate Change Office. Principle Investigator and Project Leader. Award size: \$3 Million. Duration: 2016–2019.
- 2016 **Krupnik, T.J.,** Singh, P., Braun, H., Tiwari, T.P., Singh, R.P., Barma, N.C.D., Malaker, P.K., Reza, M.A., Islam, R., Marza, F., Joshi, A.K. Training, surveillance and monitoring to mitigate the threat of wheat blast disease in Bangladesh and beyond. USAID Mission (Bangladesh). Total award size: \$180,000. Duration 2016-2018.
- 2015 McDonald, A., **Krupnik, T.J.,** Mathys, C., Kiel, A., Spellman, D., Ward, P., Johnson, D., Malik, R.K., Singh, S., Kumar, V. Cereal Systems Initiative for South Asia – Phase III. Bill and Melinda Gates Foundation and USAID. Award size: \$33 Million. Duration: 2015–2020.
- 2015 Schulthess, U., Ahmed, Z.U., **Krupnik, T.J.** Ground cover mobile phone application to drive an irrigation scheduling service in the delta region of Bangladesh. Netherlands Organization for Scientific Research - Food and Business Applied Research Fund. With the Bangladesh Institute of ICT in Development. Award size: \$200,000. Duration: 2016–2017.
- 2014 Schulthess, U., **Krupnik, T.J.,** Gérard, B., McDonald, A. Spurring a Transformation for Agriculture through Remote Sensing (STARS). Bill and Melinda Gates Foundation. Award size: \$1.5 Million. Duration: 2014–2016.
- 2013 **Krupnik, T.J.,** Rose, R., McDonald, A. Cereal Systems Initiative for South Asia Mechanization and Irrigation (CSISA-MI). USAID/Bangladesh. Total award size: \$15.6 million. Duration: 2013–2018.
- 2012 Akter, S., **Krupnik, T.J.,** Rossi, F. Designing weather index-based, micro-saving insurance products for maize farmers in southern Bangladesh. Innovations for Poverty Action. Award size: \$15,000. Duration: 2012-2013.

TEACHING AND ACADEMIC MENTORING

Ongoing student supervision

- Sreejith Aravindakshan, PhD Candidate. Dissertation: "Innovations for sustainable ecological intensification: An ex-ante analysis of system trajectories, diversity and cross-scale trade-offs in cereal-based agroecosystems". Farming Systems Ecology, Wageningen University. Supported by [CSISA](#), the [Trajectories and Trade-offs \(ATTIC\) project](#) and [Stiftung Fiat Panis](#).
- Hari Sankar Nayak. PhD Candidate: Dissertation: Filling data gaps with big data stacks to support climate smart agriculture in South Asia: rice and wheat crop productivity, profitability and greenhouse gas emission in India. Agronomy Division. Indian Council of Agricultural Research (ICAR) - Indian Agricultural Research Institute (IARI). Supported by [CCAFS](#).
- Shah-AI Emran, PhD Candidate. Dissertation: "Sustainability of rice-based cereal systems in Bangladesh." Department of Crop Sciences, University of Illinois at Urbana-Champaign. Supported by the [IRRI Lee Foundation Scholarship](#).

- Rachel Voss, PhD Candidate. Dissertation: "Changing Landscapes, Changing Livelihoods: Senegalese Farmers' Responses to Environmental and Technological Transformation". Department of Environmental Studies. University of California, Santa Cruz.
- Anton Urfels, PhD Candidate: "Planting and irrigating the rice-wheat system of the Eastern Gangetic Plains: Insight for food security and poverty reduction from a social-ecological system perspective" Water Resources Management, Wageningen University.

Completed PhD student supervision

- Muhammed Arshad, PhD. Dissertation: "Multidimensional Impacts of Climate Change and Climate Variability on Farming Systems in Pakistan: Implications for Adaptation and Sustainable Rural Development" Department of Agricultural Economics, Faculty of Life Sciences, Humboldt University of Berlin (Completed 2017).

Completed MSc student supervision

- Wolfram Simon, . Thesis: "Social network analysis of weather and market information flows as a measure for adaptive capacity to climate change of mungbean farmers in different Bangladeshi communities". Farming Systems Ecology, Wageningen University. Supported by the Mott MacDonald's Blue Gold Innovation fund, Embassy of the Kingdom of the Netherlands. (Completed 2019)
- Md. Shahin Alam. "Alternative feeding options to enhance the sustainability of dairy farms in Bangladesh." MSc Candidate. Farming Systems Ecology, Wageningen University. (Completed 2018).
- Anton Urfels. MSc. Thesis: "The Groundwater Irrigation Landscape of Nepal's Western Terai: A comparative case study of groundwater development and farmer's decision-making in Rupandehi, Banke and Kailali" Water Resources Management, Wageningen University. Supported by [Stiftung Fiat Panis](#) (Completed 2017).
- Sumona Sharin, MSc. Thesis: "Fuzzy cognitive mapping to capture farmers' perceptions on the realities, constraints, and opportunities associated with surface water irrigation-based crop intensification in southern Bangladesh." Farming Systems Ecology, Wageningen University (Completed 2015). Available online: [Click here](#).
- Md. Mamunur Rashid Sarker, MSc. Thesis: "Trade-off analysis of crop residues use in mixed crop–livestock systems to support more effective use of conservation agriculture in south western Bangladesh." Farming Systems Ecology, Wageningen University (Completed 2015)

Teaching Assistantships

- 2010 Integrated Pest Management, Environmental Studies Department, University of California, Santa Cruz (UCSC)
- 2010 Environmental Problem Solving, Environmental Studies Department, UCSC
- 2007 Environmental Problem Solving, Environmental Studies Department, UCSC
- 2007 Insect Ecology, Environmental Studies Department, UCSC
- 2005 Agroecology Field Practicum, Environmental Studies Department, UCSC
- 2005 Ecology and Society, Environmental Studies Department, UCSC
- 2003 Integrated Crop, Livestock, and Aquaculture Systems in Developing Countries (graduate level course), Department of Plant Sciences, University of California (Davis).
- 2003 Cropping Systems of the World: Unifying Principles and Concepts, Department of Plant Sciences, University of California (Davis).

CONSULTING, PART-TIME EMPLOYMENT, VOLUNTEERING

- **Consultant. Bill and Melinda Gates Foundation (BMGF). May and August, 2010.**
Part-time consultancy in Madagascar and India evaluating BMGF supported research implemented by Wageningen University investigating the System of Rice Intensification.
- **Consultant. Global Ecovillage Network Senegal (GENSEN). Senegal. December, 2008.**
Conducted *post-hoc* evaluations of GENSEN trainings in inland valley rice cultivation techniques in seven villages. Advised on methods to rice raise productivity given soil nutrient and salinity constraints.
- **Volunteer. Winrock International. Bangladesh. December, 2007.**
Evaluated NGO projects in municipal composting. Trained NGO staff on wet waste recovery, biogas yield measurements, and composting. Training impact was significant: compost production and net profits increased 400% and 37%, respectively, eight months after the assignment.
- **Volunteer. Integrated Bio-farm Enterprise Initiative. Ethiopia. June – December, 2001.**
Coordinated compost feedstock delivery from vegetable markets, redesigned and implemented improved compost production facilities, organized compost production and demonstrations.
- **Waste management educator. The Ecology Center. Berkeley, CA. July 1999 – August, 2001.**
Part-time position developing and managing educational campaigns on ecological waste management, with emphasis on municipal- composting. Advised NGOs in Haiti on zero waste principles. Position permitted multiple leaves of absence.

AWARDS AND FELLOWSHIPS

- 2018** Field Crops Research Journal. Excellent Peer Reviewer Award.
- 2016** Event and Visual Communication Association (EVCOM) bronze Screen Award for Communication Effectiveness, awarded to CIMMYT, Agro-Insight, the Bangladesh Agricultural Research Institute, and Agricultural Advisory Society. More details: [Click here](#).
- 2015** [Access Agriculture award for the use of video in farmer extension and outreach](#), awarded jointly to CIMMYT and the NGO Agricultural Advisory Society. Nairobi, Kenya.
- 2010** University of California President's Dissertation Year Fellowship (\$33,500).
- 2010** Environmental Studies Departmental Fellowship, University of California, Santa Cruz (\$1,000).
- 2010** First prize graduate student poster. International Agronomy. American Society of Agronomy Crops and Soils Conference. Sacramento, California.
- 2009** Benjamin Hammett Fellowship for Research on Water Management and Climate Change (\$2,500).
- 2008** Annie's Sustainable Agriculture Scholarship (\$2,500).
- 2008** US Presidential Volunteer Service Award for work on municipal composting in Bangladesh.
- 2008** Institute of International Education Fulbright Fellowship (\$26,000).
- 2007** The Robert and Patricia Switzer Foundation Environmental Fellowship (\$15,000).
- 2007** The Rotary Foundation International Ambassadorial Scholarship (\$25,500).
- 2007** Environmental Studies Departmental Fellowship, University of California, Santa Cruz (\$1,000).
- 2006** Environmental Studies Departmental Fellowship, University of California, Santa Cruz (\$1,000).
- 2005** Center for Tropical Research in Ecology, Agriculture and Development Award (\$1,000).
- 2005** Environmental Studies Departmental Fellowship, University of California, Santa Cruz (\$1,000).
- 2004** University of California Regent's Fellowship (\$16,000).

- 2003 International Career Center Grant for the University of California, Davis (\$1,000).
- 2003 University of California Davis Jastro Shields Research Grant (\$3,000).
- 2002 Jastro Shields Memorial Endowment Fellowship for Graduate Studies (\$16,000).

PEER-REVIEWED PUBLICATIONS

- Summary:** 40 peer-reviewed publications. Total Google Scholar citations: 1,611. Average citations per year in the last five years: 239. h-Index: 20. i10-index: 27. Further details available on Google Scholar: [Click here](#).
40. Aravindakshan, S **Krupnik, T.J.**, Groot, J.C., Speelman, E.N., Amjath-Babu, T.S., Tittonell, P. (2020) Multi-level socioecological drivers of agrarian change in South Asia: Longitudinal evidence from mixed rice-livestock-aquaculture farming systems in coastal Bangladesh. *Agricultural Systems*. 177: 102695. Available online: [Click here](#).
 39. Emran, S-A., **Krupnik, T.J.**, Kumar, V., Ali, Y., Pittelkow, C.M. (2019) Agronomic, economic, and environmental performance of nitrogen rates and source in Bangladesh's coastal rice agroecosystems. *Field Crops Research*: 241: 107567. Available online: [Click here](#).
 38. Mottaleb, K., **Krupnik, T.J.**, Keil, A., Erenstein, O. (2019) Understanding Clients, Providers and the Institutional Dimensions of Irrigation Services in Developing Countries: A Study of Water Markets in Bangladesh. Under review with *Agricultural Water Management*. 222: 242-253. Available online: [Click here](#).
 37. Schulthess, U. Ahmed, Z.U., Aravindakshan, S., Morshed, R.K., Kurishi, A.S.M.A., **Krupnik, T.J.** (2019) Farming on the fringe: Shallow groundwater dynamics and irrigation scheduling for maize and wheat in Bangladesh's coastal delta. In press: *Field Crops Research*. 239: 135-148. Available online: [Click here](#).
 36. **Krupnik, T.J.**, Andersson, J.A., Rusinamhodzi, L., Corbeels, M., Shennan, C., Gérard, B. (2019) Does size matter? A critical review of meta-analysis in agronomy. *Experimental Agriculture*. 55: 200-229. Available Online: [Click here](#).
 35. Andersson, J.A., **Krupnik, T.J.**, de Roo, N. (2019) On-farm trials as 'infection points'? *Experimental Agriculture*. 55: 195-199. Available online: [Click here](#).
 34. de Roo, N., Andersson, J.A., **Krupnik, T.J.** (2019) On-farm trials for development impact? The organization of research for scaling agricultural technologies. *Experimental Agriculture*. 55: 163-184. Available online: [Click here](#).
 33. Su, Y., Colton, J., Matin, Md. A., **Krupnik, T.J.** (2018) A simplified irrigation pump testing method for developing countries: A case study in Bangladesh. *Irrigation and Drainage*. 67: 559-571. Available online: [Click here](#).
 32. Ditzler, L., Klerkx, L., Chan-Dentoni, J., Posthumus, H. **Krupnik, T.J.**, Lopez-Ridaura, S., Andersson, J.A., Baudron, B., Groot, J. (2018) Affordances of agricultural systems analysis tools: a review and framework to enhance tool design and implementation. *Agricultural Systems*: 164: 20-30. Available online: [Click here](#).
 31. Aravindakshan, S. Rossi, F.J., Amjath-Babu T.S., Chellattan Veettil, P., **Krupnik, T.J.** (2018) Application of a bias-corrected meta-frontier approach and an endogenous switching regression to analyze the technical efficiency of conservation tillage in South Asia. *Journal of Productivity Analysis*. 49: 153-171. Available online: [Click here](#).
 30. Arshad, Amjath-Babu, T.S., Aravindakshan, S. **Krupnik, T.J.**, Kächele, H., Müller, K. (2018) Climatic variability and thermal stress in Pakistan's rice and wheat systems: A stochastic frontier and quantile regression analysis. *Ecological Indicators*. 80: 496-506. Available online: [Click here](#).
 29. Lopez-Ridaura, S., Frelat, R., van Wijk, M.T., Valbuena, D., **Krupnik, T.J.**, Jat, M.L. (2018) Climate smart agriculture, farm household typologies and food security: An ex-ante assessment from

- Eastern India. *Agricultural Systems*. 159: 57–68. Available online: [Click here](#).
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1. **Krupnik, T.J.**, Momin, A., Zahura, I. (2012) Stay Safe If You Use Pesticides! Pesticides Are Poison! CIMMYT-IRRI-WorldFish. Dhaka, Bangladesh. Bangla language training poster. Available online: [Click here](#).

INVITED PRESENTATIONS

18. **Krupnik, T.J.** (2019) Regional biosafety and integrated management of Fall Armyworm in South Asia Dhaka, Bangladesh. 7th Annual South Asia Biosafety Conference. Sept 15.
17. **Krupnik, T.J.** (2019) Ecological management of Fall Armyworm (*Spodoptera frugiperda* J.E. Smith) in Asian farming systems: What we know and don't know. Kathmandu, Nepal. National Fall Armyworm Preparedness and Management Workshop. 29 July.
16. **Krupnik, T.J.** Boddupalli, P. Hasan, M. Nurul Alam, S., Barma, NCD (2019) Fall Armyworm invasion in Asia: Background and initial country responses. SAARC Regional Expert Consultation Meeting on "The Progress and Prospects of Agricultural Biotechnology and Bio-safety in South Asia". Dhaka, Bangladesh. 19 June.
15. **Krupnik, T.J.** (2019) Experiences positioning research for extension and scaling in South Asia. Digital extension in the CGIAR. Platform for Big Data in Agriculture, Community of Practice on Data-Driven Agronomy. March 13. Online webinar available online: [Click here](#).
14. **Krupnik, T.J.** (2018) Systems analysis and agroecosystems in transition: Research Insights from South Asia with relevance for the South East. Agroecology Futures Regional Forum. Sim Reap, Cambodia. November 6. Available online: [Click here](#).
13. **Krupnik, T.J.** (2017) Increasing farmer knowledge and adaptive capacity through video-mediated learning: Experiences across Bangladesh. Digital Innovations on Agriculture Extension Conference. Dhaka, Bangladesh. September 12.
12. McDonald, A. and **Krupnik, T.J.** (2017) The Cereal Systems Initiative for South Asia. Bureau of Food Security, United States Agency for International Development. Washington, DC. 28 July.

11. **Krupnik, T.J.** (2017) Systems agronomy research to address coastal Bangladesh's unique socio-ecological problems and opportunities. Towards better integration of R4D for improved food production systems in the coastal zone of Bangladesh – II. Bangladesh Agricultural Research Council. Dhaka, Bangladesh. 22 May.
10. **Krupnik, T.J.,** Baudron, F. Matin, Md. A., Jat, M.L., Justice, S. Van Loon, J. Keil, A., Geerard, B., McDonald, A. (2017) Applying agronomy, engineering and business models to scale appropriate farm mechanization. Third Yellow River Forum. Henan Agricultural University. Zhengzhou, China. June 28.
9. **Krupnik, T.J.** (2016) CIMMYT led research initiatives addressing coastal Bangladesh. Towards better integration of R4D for improved food production systems in the coastal zone of Bangladesh – I. Bangkok, Thailand 18-19 October.
8. **Krupnik, T.J.** (2015) Partnership is the right mechanism for training video impact. Access Agriculture Week. Machakos, Kenya. 12 November.
7. **Krupnik, T.J.** (2015) Sustainable intensification or intensifying sustainably in South Asia? Background, research priorities, and opportunities for collaboration. Gansu Agricultural University Science Week. Lanzhou, China. July 3.
6. **Krupnik, T.J.,** Yasmin, S., Uddin, Z.A., Shahjahan, Md., Baksh, Md. E., McDonald, A.J., Schulthess, U. 2014. Targeting sustainable intensification in the Southern Bangladesh Mega Delta: A mixed methods assessment of land area potential. International Rice Congress: Asian Mega-Deltas Symposium. Bangkok. 27 October. Details online: [Click here](#).
5. **Krupnik, T.J.** (2014). From Research to scale to sustainability: Learning experiences in leveraging partnerships to reach farmers in Bangladesh. Global Feed the Future Forum: Plenary Session on Scaling. Washington, DC. May 21. Available online: [Click here](#).
4. **Krupnik, T.J.** and Rose, R. 2014. Scaling up through value chains: The story of the Cereal Systems Initiative for South Asia – Mechanization and Irrigation Initiative so far. Scaling Up Adoption and Use of Agricultural Technologies: Global Learning and Evidence Exchange. (Invited panel presentation). Bangkok. January 9. Video available online: [Click here](#).
3. Thierfelder, C. and **Krupnik, T.J.** (2014) Soil-water relations and water productivity in smallholder conservation agriculture systems of Southern Africa and South Asia. Conservation Agriculture for Smallholders in Sub-Saharan Africa and South Asia Conference. Mymensingh, Bangladesh. December 8. (Invited keynote presentation and extended abstract in conference proceedings, available online: [Click here](#)).
2. **Krupnik, T.J.** and Talukder, A.SM.H. (2012) Fruits of Profit: Opportunities and constraints of summer tomato production in Bangladesh. The World Vegetable Center. Shanhua, Tainan, Taiwan. February 7
1. **Krupnik, T.J.** and Ndiaye, A.B. (2008) *Le Système d'intensification du Riz: Les opportunités et contraintes*. Réunion Annuel de la Programme GIPD « FAO ». Dakar, Senegal: Nov 14.

PRESENTATIONS AND CONFERENCE PROCEEDINGS

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45. **Krupnik, T.J.,** Muyeed, Md. A., Ghimire, Y.N., Jain, M. Hussain, G., Amjath Babu, T.S., Prasad, G. Poudel, R.R., Singh, B., Craufurd, P., Adhikari, S., Sapkota, T., Jat, M.L., Sidhu, H.S., Hossain, K. Faisal, A., Khan, F., Kamal, M., Ahmed, Z.U. Data science to support climate smart agriculture in South Asia: How can crucial data gaps be filled with big data stacks? 5th Global Science Conference

on Climate Smart Agriculture. Bali, Indonesia. October 8.

44. Simon, W. Shahrin, S., Shahriar, S. Md., Groot, J., Aguilar, N., **Krupnik, T.J.** (2019) Putting social networks to practical use: Analysing weather and market information flows and their relation to mungbean productivity and profitability in climate-risk prone coastal Bangladesh. 5th Global Science Conference on Climate Smart Agriculture. Bali, Indonesia. October 8. (Oral presentation)
43. Sapkota, T.B., Wollenberg, L., Ortiz-Monasterio, I., Jat, M.L., **Krupnik, T.J.**, Hussain, G. (2010) Rapid Analysis of Country-Level Greenhouse Gas (GHG) Emission and Mitigation Opportunities in Agricultural Sector. American Geophysical Union. San Francisco. December 10. (Oral presentation).
42. Urfels, A. Foster, T., **Krupnik, T.J.**, McDonald, A.J. (2019) A Framework to enable irrigation development to support smallholder farmers' climate resilience in the Eastern Indo-Gangetic Plains. 3rd World Irrigation Forum. Bali, Indonesia. 1 September. Proceedings paper available online: [click here](#).
41. Ortiz-Monasterio, I., **Krupnik, T.J.**, McDonald, A.J., Malik, R.K., Singh, P., Crespo, L. (2018) The Role of Agronomy in Improving and Stabilizing Wheat Yields in developing regions through genetics × environment × management (G × E × M) interactions. American Society of Agronomy Annual Meeting. Baltimore, USA. 7 November.
40. Al-Shah, E., **Krupnik, T.J.**, Kumar, V., Ali, Y., Pittelkow, C.M. (2018) Agronomic, economic, and environmental performance of nitrogen rates and source in Bangladesh's coastal rice agroecosystems. American Society of Agronomy Annual Meeting. Baltimore, USA. 5 November.
39. **Krupnik, T.J.**, Hossain, K., Timsina, J., Gathala, M.K., Sapkota, T., Yasmin, S., Shahjahan, Md., Hossain, F., Kurishi, A.S.M.A., Miah, A.A.A., Rahman, B.M.S., Mcdonald, A.J. (2018) Conservation Agriculture, Mixed- and Full-tillage Systems in Coastal Bangladesh: A Multi-criteria Analysis of Three Years of Farmer-managed Rice-Maize Trials. 13th Asian Maize Conference and Expert Consultation on Maize for Food, Feed, Nutrition and Environmental Security. Ludhiana, India. 8 October.
38. Roy, K.K., Reza, M.M.A., Mustarin, K., Islam, R., Rahman, M.E., Hakim, M.A., Malaker, P.K., Barma, N.C.D., Pandit, D.B., **Krupnik, T.J.**, Acevedo, M., Tiwari, T.P., Singh, P.K., Joshi, A.K. (2018) Wheat blast in Bangladesh: Occurrence, distribution and research progress. 2018 Borlaug Global Rust Initiative Technical Workshop. Marrakech, Morocco 14-17 February.
27. Qamer, F.M., Ellenburg, W.L., Matin, M., Limaye, A.S., Montes, C. **Krupnik, T.J.**, Hamidur Rahman, H.R. (2018) Evaluation of Gridded Rainfall Data Products for Drought Monitoring in South Asia. Regional Knowledge Forum on Drought Earth Observation and Climate Services for Food Security and Agricultural Decision Making in South Asia and Southeast Asia. Kathmandu, Nepal. 10 October.
36. Montes, C. Stiller-Reeve, M.A., Hussain, G., Mason, S. **Krupnik, T.J.** (2018) Historical and projected variability in monsoon onset and withdrawal over South Asia using NASA-NEX ensemble: implications for agriculture. Second International Conference on Climate Change Colombo, Sri Lanka. 15 February. Abstract available online: [Click here](#).
35. **Krupnik, T.J.**, Akter, S., Khanam, F. (2018) Bridging the gap between climate information supply and practical use in Bangladesh: Towards a cross-sectoral climate services academy. Gobeshona 4 conference. Dhaka, Bangladesh. January 10. Proceedings available online: [Click here](#).
34. Montes, C., **Krupnik, T.J.**, Hussain, G.A., Stiller-Reeve, M.A., Mason, S. (2018) Seasonal prediction of monsoon onset in Bangladesh. Gobeshona 4 conference. Dhaka, Bangladesh. January 9. Abstract available online: [Click here](#).

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31. Matin, M.A., **Krupnik, T.J., Hossain, Md. I., Gathala, M.** 2017. Blade specifications for strip-tillage on excessively moist clay soils in southern Bangladesh. Seventh World Congress on Conservation Agriculture. Rosario, Argentina. August 2. Available online: [Click here](#).
30. McDonald, A.J., Malik, R.K., **Krupnik, T.J., Kumar, V., Sharma, P., Khanal, N., Jat, H.S.** (2016) Possibilities, pre-conditions and pathways for achieving crop diversification in South Asia. Lead Papers Vol. 4: 4th International Agronomy Congress, New Delhi. November 22–26, 2016. Available online: [Click here](#).
29. Schulthess, U., Ahmed, Z.U., **Krupnik, T.J., Rodriguez, F., Ortiz-Monasterio, I., McDonald, A., Gérard, B., Mass, S. Ritchie, J.T., Hasan, A.** (2016) PANI: An app for dynamic irrigation scheduling. American Society of Agronomy. Phoenix, AZ. November 9 (Oral presentation). Available online: [Click here](#).
28. **Krupnik, T.J., Andersson, J., Rusinamhodzi, L., Corbeels, M., Gérard, B.** (2016) Does size matter? A critical assessment of meta-analysis in contested agronomy. University of Sussex, UK. February 24. (Oral presentation).
27. Andersson, J.A., de Roo, N., **Krupnik, T.J.** (2016) Trials for development impact? On-farm trials for scaling in AR4D. University of Sussex, UK. February 24 (Oral presentation). Available online: [Click here](#).
26. Sarker, M.M.R., **Krupnik, T.J., Scholberg, J., Groot, J.C.J., Chaki, A.K., Gaydon, D., Akhter, S., Ahmed, F., Hossain, A., Aravindakshan, S., Kurshi, A.S.M.A., Khan, R., Hossain, M.G.** (2015) Simulating the Impact of Climate Change on Rice-Maize System under Conservation Agriculture in Coastal Bangladesh International Conference on Climate Change Adaptation. Colombo, Sri Lanka. 23 November (Oral presentation).
25. Baudron, F., **Krupnik, T.J., Mchugh, A., Van Loon, J. Kahan, D., Marena, P. Gérard, B.** (2015) Making mechanization accessible to African smallholders: Experience from CIMMYT and its partners. Grand Challenges Annual Meeting. Beijing, China. October 19 (Oral presentation).
24. Schulthess, U., **Krupnik, T.J., Ahmed, Z.U., and McDonald, A.J.** (2015) Technology targeting for sustainable intensification of crop production in the Delta region of Bangladesh, *Int. Arch. Photogram. Remote Sens. Spatial Inf. Sci.*, XL-7/W3, 1475-1481, doi:10.5194/isprsarchives-XL-7-W3-1475-2015, (Oral presentation, published paper in conference proceedings, available online: [Click here](#)).
23. Hoque, M.A, Hossain, M.M., Uddin, A.T.M.Z., **Krupnik, T.J., Pandit, D.B., Yasmin, S., Gathala, M.K.** (2014) Furrow opener design can improve seed placement and emergence in strip tillage. Conservation Agriculture for Smallholders in Sub-Saharan Africa and South Asia Conference. http://www.fao.org/fileadmin/templates/rap/files/meetings/2014/141107_Final_report.pdf singh, Bangladesh. December 8. (Oral presentation, published paper in conference proceedings, available online: [Click here](#)).
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21. Baksh, E., Rossi, F.J., Uddin, Md. M., Hasan, Z., Haque, F., **Krupnik, T.J.**, Miah, A.A., Tiwari, T.P. (2014) Wheat cultivation under conservation tillage options: a promising, low cost and profitable technology for small holders in Faridpur (Bangladesh). Conservation Agriculture for Smallholders in Sub-Saharan Africa and South Asia Conference. Mymensingh, Bangladesh. December 9. (Oral presentation, published paper in conference proceedings, available online: [Click here](#)).
20. Pandit, D.B Arafat, M.A., Haque, M.E., Alam, M.A., **Krupnik, T.J.**, Tiwari, T.P., Gathala, M.K. (2014) Strip tillage in maize: farmers' preferences and profit potential in char land of Bangladesh. Conservation Agriculture for Smallholders in Sub-Saharan Africa and South Asia Conference. Mymensingh, Bangladesh. December 10. (Oral presentation, published paper in conference proceedings, available online: [Click here](#)).
19. Qureshi, A.S., Yasmin, S., Howlader, N.C., Krupnik, T.J. 2014. Improving agricultural productivity in Southern Bangladesh: How can Irrigation be put into action at scale? In Humphreys, E., Tong, T.P., Buisson, M.C., Pukinskis, I. and M. Phillips (Eds.) Revitalizing the Ganges Coastal Zone: Turning Science into Policy and Practices. Conference Proceedings. Colombo, Sri Lanka: CGIAR Challenge Program on Water and Food (CPWF). 600pp. Dhaka, Bangladesh. October 23. (Oral presentation, published paper in conference proceedings, presentation available online: [Click here](#)).
18. Schulthess, U., **Krupnik, T.J.**, Ahmed, Z.U., McDonald, A.J. (2014) Decentralized surface water irrigation as a pathway for sustainable intensification in southern Bangladesh: On how much land can the drop be brought to the crop? In Humphreys, E., Tong, T.P., Buisson, M.C., Pukinskis, I. and M. Phillips (Eds.) Revitalizing the Ganges Coastal Zone: Turning Science into Policy and Practices. Conference Proceedings. Colombo, Sri Lanka: CGIAR Challenge Program on Water and Food (CPWF). 600pp. Dhaka, Bangladesh. October 23. (Oral presentation, published paper in conference proceedings, presentation available online: [Click here](#)).
17. Mottaleb, K.A., Krupnik, T.J. (2014) Agricultural Machinery Ownership and Intensification in South Asia: What can we learn from Bangladesh? In Humphreys, E., Tong, T.P., Buisson, M.C., Pukinskis, I. and M. Phillips (Eds.) Revitalizing the Ganges Coastal Zone: Turning Science into Policy and Practices. Conference Proceedings. Colombo, Sri Lanka: CGIAR Challenge Program on Water and Food (CPWF). 600 pp. Dhaka, Bangladesh. October 22. (Poster presentation, published paper in conference proceedings).
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15. Gathala, M.K., Timsina, J., **Krupnik, T.J.**, Rahman, M. Ghosh, K. Hassan, M.K., Hossain, I., Tiwari, T.P. (2014) Improving livelihood of resource poor farmers through conservation agriculture based crop management techniques under rice-maize cropping system in Bangladesh. 6th World Congress on Conservation Agriculture. Winnipeg, Canada. June 27. (Oral presentation, published paper in conference proceedings available online: [Click here](#)).
14. Gérard, B., Hellin, J., Govaerts, B., McDonald, A.J., Krupnik, T.J. (2014) Precision agriculture for smallholder farmers: An option? Beyond Images. Mexico City. December 14. (Oral Presentation with published abstract available online: [Click here](#)).
13. Schulthess, U., **Krupnik, T.J.**, and A. McDonald. (2014) Land use – Case study from Bangladesh for technology targeting. Remote Sensing: Beyond Images. Mexico City. December 14. (Oral Presentation with published abstract, available online (Spanish): [Click here](#)).

12. Valbuena, D., Groot, C.J.V., **Krupnik, T.J.**, López-Ridaura, S., Tittonell, P. (2013) Trayectorias de cambio de agro-ecosistemas: Conceptos, enfoque e implementación. 4th Latin American Congress on Agroecology. Lima, Peru. 11 September. (Published abstract, available online: [Click here](#)).
11. Uddin, M. M., Haque, M. F., Akter, M.A., Hasan, M.Z., Tiwari, T.P., Krupnik, T.J. 2013. Performance of wheat varieties under different tillage systems in Faridpur. 12th Annual Bangladesh Society of Agronomy conference. Gazipur, Bangladesh. September 20. (Oral Presentation).
10. Akter, S., Rossi, F., **Krupnik, T.J.**, Chantarat, S. (2013) Designing Weather Index Based, Micro-Saving Insurance Products For Farmers in Southern Bangladesh. Weather index-based insurance (IBI): Lessons learned and best practices for Bangladesh. Dhaka, Bangladesh. September 9. (Oral Presentation).
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8. **Krupnik, T.J.**, Uddin, M.M., Rossi, F., Tiwari, T.P. (2013) Effect of hermetic storage device and local bio-insecticide on wheat seed quality in Faridpur and Gopalganj Districts. Improving Grain Storage at Household Level for Food Security in Rural Areas. Center on Integrated Rural Development for Asia and the Pacific. Dhaka, Bangladesh. April 2. (Oral presentation).
7. **Krupnik, T.J.**, T.P. Tiwari, Md. Shahjahan, M. Gathala, U. Schulthess, S. Yasmin, F. Perveen, S. Santos Valle, McDonald, A.J. (2012) Changing climate, Changing Cereals: Adapting Cropping Systems to Future Stresses in Southern Bangladesh. Sustaining Food Security in a Changing Climate: Examples from the Regions. American Society of Agronomy International Annual meeting. Cincinnati, Ohio. October 23. (Oral presentation).
6. **Krupnik, T.J.**, Shennan, C.S., Settle, W.H., Ndiaye, A.B., Sarr, M., Demont, M., Rodenburg, J. (2010) Adaptive On-farm Evaluation of Resource Conserving Rice Cultivation Practices in the Middle Senegal River Valley. In E. Tielkes, ed. World food system- A contribution from Europe. Book of Abstracts. Tropentag 2010: International Research on Food Security, Natural Resource Management and Rural Development, Göttingen. Zurich, Switzerland. Pp. 369–373. September 16. (Oral presentation, published paper in conference proceedings, available online: [Click here](#)).
5. **Krupnik, T.J.**, Shennan, C.S., Mbaye, D., Rodenburg, J. (2010) Nutrient and water use efficiency under conventional and a water saving practice in the Sahel: Multi-season effects of mixed fertilizer and straw application. American Society of Agronomy International Annual meeting. Long Beach, California. Nov. 2. (Oral presentation).
4. **Krupnik, T.J.**, Rodenburg, J., Shennan, C.S., Mbaye, D., Haden, V.R. (2010) Tradeoffs between rice yield, weed competition and water use the Senegal River Valley. Africa Rice Congress. Bamako, Mali: March 23. Pp. 2.3.1–2.3.9 (Oral presentation and paper, available online: [Click here](#)).
3. **Krupnik, T.J.**, Jenkins, M.W., Mooney, S., Kipttich Bett, E. (2006) Net present value analysis to assess the economic consequences of changing farming systems in the upper catchment of the River Njoro Watershed. Tenth Biennial Scientific Conference and Agricultural Forum. Kenya Agricultural Research Institute. Presented Nairobi, Kenya. Nov 12-17. Pp. 1–5 (Oral presentation, available online: [Click here](#)).
2. **Krupnik, T.J.** (2004) Understanding agroforestry practices and soil resource management Along the upper Njoro river, Kenya. Breslauer Symposium on Natural Resource Issues in Africa. Presented at UC Berkeley: April 19. (Oral presentation).
1. **Krupnik, T.J.** (2002) Sustainable Agriculture in Africa. Ecofarm Meeting. Asilomar, California. January 18. (Oral presentation).

SELECTED POSTER PRESENTATIONS

15. Emran, S-A., **Krupnik, T.J.**, Aravindakshan, S., Kumar, V., Pittelkow, C.M. (2019) Factors Contributing to Farm-Level Food Security and Sustainability in Rice-Based Farming Systems in Southern Bangladesh. American Society of Agronomy International Annual Meeting. San Antonio, Texas. 13 November. Abstract available online: [Click here](#). Poster available: [Click here](#).
14. Pandit, D.B., Gathala, M.K., Tiwari, T.P., Haque, M.A., Arafat, M.A., Haque, M.E., Alam, M.A., Adhikari, M.K., Haque, R., Ghosh, A.K., Uddin, S. Rahman, M.M., **Krupnik, T.J.** (2018) Intercropping Leafy Vegetables with Maize in Bangladesh: Multi-Criteria Analysis of Yield, Profitability and Potential Nutrition Benefits. 13th Asian Maize Conference and Expert Consultation. Ludhiana, India. 9 October. Awarded best poster in the agronomy section of the conference.
13. **Krupnik, T.J.**, Hossain, K. (2015) Is service provision the key to unlock smallholder access to appropriate agricultural machinery? Lessons from South Asia with relevance for Africa. Grand Challenges Annual Meeting. Beijing, China. October 19.
12. Colton, J. Yu, S., **Krupnik, T.J.**, Lam, E., Matin, M.A. (2015) Rapid Prototyping Enables Cooperative Design of Irrigation Pumps for Bangladesh. Grand Challenges Annual Meeting. Beijing, China. October 19. (Poster presentation).
11. Aravindakshan, S., Tiftonell, P., **Krupnik, T.J.**, Scholberg, J.M.S., Groot, J.C.J. (2015) Greenhouse gases emission efficiency of conservation and traditional tillage practices in wheat farming systems of the Eastern Indo-Gangetic Plains of Bangladesh. Climate Smart Agriculture. Third Global Science Conference. Montpellier, France. 17 March. Abstract available online: [Click here](#).
10. Lam, E., Hoque, M.A., Das, R.K., Gathala, M.K., **Krupnik, T.J.** (2014) Computational Modeling and Finite Element Analysis of Strip Tillage Components for Fabrication Purposes. Conservation Agriculture for Smallholders in Sub-Saharan Africa and South Asia Conference. Mymensingh, Bangladesh. December 8. (Extended abstract in conference proceedings).
9. Mottaleb, K.A., **Krupnik, T.J.** (2014) Rice farm households' consumption and marketing responses to rising rice prices. International Rice Congress. Bangkok. 27 October.
8. **Krupnik, T.J.**, Perveen, F., Ar-Rashid, H. Val Mele, P., Bentley, J. (2014) Lessons learned in creating awareness of scale-appropriate machinery for strip tillage and bed planting through video in Bangladesh. 6th World Congress on Conservation Agriculture. Winnipeg, Canada. June 26. Poster presentation with published abstract). Extended abstract available online: [Click here](#).
7. **Krupnik, T.J.**, Yasmin, S., Pandit, D., Alanuzzaman Kurishi, M., Khan, Md. S.I., Majumdar, K., McDonald, A.J. Buresh, R. Gathala, M.K. (2014) Yield Performance and Agronomic N efficiency of a Maize-Rice Rotation under Strip and Conventional Tillage in Contrasting Environments in Bangladesh. 6th World Congress on Conservation Agriculture. Winnipeg, Canada. June 25. Poster presentation with published abstract). Extended abstract available online: [Click here](#).
6. **Krupnik, T.J.**, McDonald, A.J., Schulthess, U. (2013) Turning on the "off season" to forgo the fallow in Southwestern Bangladesh: An ex-ante method to target decentralized surface water irrigation. First International Conference on Global Food Security. Noordwijkerhout, The Netherlands. October 2.
5. Pandit, D.B. Arafat, Md. M., Haque, Md. E, Alam, A., Tiwari, T.P. **Krupnik, T.J.**, Rossi, F., Gathala, M.K. (2013) Maize Intercropping with leafy vegetables: An Opportunity to Boost Income and Nutritional Security on Char islands in Bangladesh. Agriculture and Nutrition Global Learning and Evidence Exchange – Asia. Strengthening Partnerships, Results and Innovations in Nutrition Globally. Bangkok, Thailand. March 19-21.
4. **Krupnik, T.J.**, Shennan, C.S., Settle, W.H., Ndiaye, A.B., Sarr, M., Demont, M., Rodenburg, J. (2010) On Farm Assessment of Rice Cultivation Practices in the Sahel. Agronomy Society of America

International Meetings. Long Beach, California. Nov. 2.

3. Koffler, K., **Krupnik, T.J.**, Kreidich, N., Wiederkehr, S. (2006) Land Equivalency Ratio Analysis to Examine Synergistic Nitrogen Dynamics in a Wheat-Vetch Intercrop Produced for Fodder in California. American Society of Agronomy Plant and Soil Meeting. Visalia, California: February 7-8.
2. **Krupnik, T.J.**, Monsen, K. (2006) Student perceptions of graduate sustainable agriculture education in an interdisciplinary department. Facilitating Sustainable Agriculture: A Participatory National Conference on Post- Secondary Education. Pacific Grove, California: January 24-25.
1. **Krupnik, T.J.**, Parr, D., Koffler, K., Kreidich, N., Wiederkehr, S. (2006) Linking Theory, Coursework and Practice to Research Fieldwork at the UC Davis Student Experimental Farm. Facilitating Sustainable Agriculture: A Participatory National Conference on Post- Secondary Education. Pacific Grove, California: January 24-25.

POPULAR SCIENCE PUBLICATIONS

4. **Krupnik, T.J.** (2016) No laughing matter: videos that blend humor, drama and machinery in Bangladesh in Bentley, J., Boa, E. and Salm, M. (Eds). A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp. Book available online: [Click here](#). Specific chapter available: [Click here](#).
3. Pittelkow, C. and **Krupnik, T.J.** (2016) Know Your Community: Sustainable Intensification. CSA News. 61(10): 27. Available online: [Click here](#).
2. **Krupnik, T.J.** (2007) West African rice farmers explore alternatives to cheap, dangerous insecticides: Farmer-to-farmer training and on-farm research grow locally adapted knowledge of biologically based integrated pest management that embraces biodiversity, careful observation and beneficial insects. New Farm Magazine. Available online: [Click here](#).
1. Zivian, A., Monsen, K. **Krupnik, T.J.** (2007) Letter to the editor regarding 'Going Organic'. Crops and Soils. 40 (2): 16. Available online: [Click here](#).

MEDIA APPEARANCES

12. Oleary, M. (2019) Digital Warning System Boosts Resilience in Bangladesh. Feed the Future. Available online: [Click here](#).
11. Meadu, V. (2019) Fight against fall armyworm in Asia benefits from experience in other regions: Scientists mobilize African and Latin American knowledge to protect Asia's maize. CIMMYT news. Available online: [Click here](#).
10. Relief Web (2019) New drought monitoring system will reduce climate risks for South Asian farmers. After Afghanistan, Nepal, and Pakistan, the Regional Drought Monitoring and Outlook System extends its coverage to Bangladesh. Available online: [Click here](#).
9. Jahan, S., Haque Khan, S.H. (2019) Cross-continental disease and crop modeling collaborations to beat back wheat blast. CGIAR Big Data Platform. 16 January. Available online: [Click here](#).
8. Johnson, J.A. (2018) Research opportunities and partnerships are key to sustainable intensification of maize in South East Asia. 21 December. Available online: [Click here](#).
7. Mollins, J. (2018) Innovations in Climate Smart Agriculture offer South Asian Farmers Prosperity, Part 2. Foodtank. 5 September. Available online: [Click here](#).
6. Mollins, J. (2018) Innovations in Climate Smart Agriculture offer South Asian Farmers Prosperity, Part 1. Foodtank. 5 September. Available online: [Click here](#).
5. Relief Web (2017) Bangladesh Agricultural Research Council and Partners to Collaborate on

Strengthening Climate Services for Drought Monitoring. August 30. Available online: [Click here](#).

4. BJRI. (2017) What can we do to actively manage wheat blast? Borlaug Global Rust Initiative Interview featured on YouTube. 26 April. Available online: [Click here](#).
3. Mollins, J. (2017) Online tool pinpoints Bangladesh water irrigation sites to boost crop rotations. Thompsons Reuters Foundation News. March 21. Available online: [Click here](#).
2. Correspondent. (2017) Experts visit wheat fields in Meherpur: Advise farmers on how to contain wheat blast. The Daily Star (Bangladesh). January 27. Available online: [Click here](#).
1. Richter, S. (2015) A round tour of mechanization. Rural 21 Magazine. 49(2): 10–13. Interview available online: [Click here](#).

WORKSHOPS AND TRAININGS FACILITATED

19. Co-led organization and facilitation of four day traveling seminar on 'Scale-appropriate machinery for cereal crop harvesting in South Asia" 25–29 March, 2019. 40+ participants from six countries. For more information, click [here](#).
18. Lead organization and facilitation of a three day workshop and traveling seminar on 'Sustainable and ecological intensification of maize farming systems in South East Asia: Identifying key research needs and partnerships'. 25 participants from eight countries. 9-11 November, Siem Reap, Cambodia.
17. Co-led organization and facilitation of a week-long 'Introduction to Climate Services' training as part of the [Bangladesh Academy for Climate Services](#). 21-25 October, 2018. 23 participants graduated from the course. For more information, click [here](#).
16. Lead organization and facilitation of a three-day technical exchange on "Participatory Approaches to Agricultural Climate Services Development and Extension in South and South East Asia", with participants nine countries. 17-19 September, 2017. Dhaka, Bangladesh. For more information, click [here](#).
15. Lead facilitation team for an intensive residential training course "Taking action to mitigate the threat of wheat blast in South Asia: Disease surveillance and monitoring skills training" for 40 scientists from the Bangladesh Agricultural Research Institute (BARI), Indian Center for Agricultural Research, and the Nepal Agricultural Research Center. 4-16 February, 2016. BARI Wheat Research Center, Dinajpur, with field studies in 24 districts. For more information, click [here](#) and [here](#).
14. Co-facilitated a training course focused on on-farm research, data management, and scale-appropriate farm mechanization for 20 CIMMYT, IRRI, and Government of Bangladesh staff. October 5-9, 2014. Bangladesh Agricultural Research Institute, Bangladesh.
13. Co-facilitated an agronomy and refresher course in agricultural statistics for 28 CIMMYT and BARI technical staff. October 5-9, 2013. Gazipur, Bangladesh.
12. Co-facilitated a training of trainers on conservation agriculture machinery. Developed modules and oversaw trainings. 32 technical staff. September 15–17, 2013. Cox's Bazar, Bangladesh.
11. Co-facilitator of a two-day workshop on "Participatory Action Research: State of the Art in Bangladesh" co-sponsored by the Aquatic Agricultural Systems Collaborative Research Program, CIMMYT, and Practical Action. 50 participants. July 14-15, 2013. Dhaka, Bangladesh.
10. Lead facilitator of a workshop on to develop experiential learning module and curricula. 12 participants. March 13-15, 2013. Kathmandu, Nepal.
9. Training on two-wheel tractor seeder-fertilizer drills for conservation Agriculture. Developed learning modules and oversaw trainings. 108 Service Providers Trained. November 5-15, 2012. Faridpur, Bangladesh.
8. Training on research gaps in agricultural intensification issues in South Asia. Led training session for

USAID Agricultural officers. 20 officers trained. July 19, 2012. Bangkok, Thailand.

7. Training on conservation agriculture based crop management. Participated in training organization, module development, and implementation (in partnership with the Bangladesh Agricultural Research Institute). 26 trainers trained. June 9-13, 2012. Rajshahi, Bangladesh.
6. Research staff training on site-specific nutrient management tools for maize, in partnership with IRRI and IPNI. Participated in training organization and implementation. 18 research staff trained. November 3-4, 2012. Dhaka, Bangladesh.
5. Farmer trainings in integrated pest management (IPM) and pesticide reduction in off-season tomato production. Developed IPM curricula for trainings. 203 farmers trained. May 5-14, 2012. Jessore, Bangladesh.
4. Training of trainers on upland cereal crops and legume production. Participated in training organization, module development, and implementation. 22 trainers trained. November 1-2, 2011. Dhaka, Bangladesh.
3. Field technician training on conservation agriculture crop management (in partnership with the Bangladesh Agricultural Research Institute). Training organization and implementation. 19 people trained. October 1-2, 2011. Gazipur, Bangladesh.
2. Training of farmers and extension agents on inland valley rice production (for the [Projet d'Appui à la Petite Irrigation Locale](#) (PAPIL). Training module development and implementation. 35 people trained. December 23-25, 2008. Tambacouta, Senegal.
1. Training of trainers on municipal solid waste recovery, recycling, biogas, and composting (for the [Bangladesh Association for Social Advancement](#) (BASA). Training module development and implementation. 15 people trained. December 9 – 11, 2007. Gazipur, Bangladesh.

PROFESSIONAL SOCIETIES

- Agronomy Society of America (ASA): since 2004.
 - 2017: Leader for the ASA [Sustainable Intensification \(SI\) Community of Practice](#) (Environmental Quality Section) January - December.
 - 2016: SI Community Vice Leader and co-founder
- Ecological Society of America: since 2005, Agroecology section.

JOURNAL PEER-REVIEWING

- Peer-review for the following journals: Agricultural and Forest Meteorology, Agriculture, Ecosystems and Environment, Agronomy Journal, Agricultural Systems, Agricultural Water Management, Australian Journal of Crop Science, Field Crops Research, Climatic Change, International Journal of Plant Production, Journal of Rural Studies, Land Degradation and Development, Wageningen Journal of Life Sciences, Pedosphere, PLOS One, Scientific Reports.
- Awarded the Field Crops Research Journal 2018 Excellent Reviewer Award for Service.
- Further details and a partial list of recent reviews can be found on [Publions](#).

PROFESSIONAL SERVICE

- Contributions as a member of the [Sixth International Conference on Climate Services Organizing committee](#) (2019).
- Participant in the consultation for the FAO's 'Voluntary Guidelines for Sustainable Soil Management', part of the Global Forum on Food Security and Nutrition (2016). Available online: [Click here](#).
- Proposal reviewer for the [Bill and Melinda Gates Foundation's Grand Challenge Explorations](#) program for \$1 million investments in applied agricultural research projects (2015).

- External peer-review for PhD Student thesis proposals in [Farming Systems Ecology, Wageningen University](#).
- Editorial committee member for the first and second [Regional Conference on Conservation Agriculture for Smallholders in Asia and Africa](#) (Mymensingh, Bangladesh, December 7 - 11, 2014 and February 14-16, 2017).
- Peer reviewer for the [Challenge Program on Water and Food Revitalizing the Ganges Coastal Zone: Turning Science into Policy and Practices Conference](#) (Dhaka, Bangladesh, October 21 – 23, 2014).
- Internationally Recruited Scientist search committees at CIMMYT:
 - Agricultural Data Scientist (2019, as Chair)
 - Senior Systems Agronomist (2019)
 - Disease Geospatial / Data Scientist (2019)
 - Agricultural Economist (2019)
 - Agricultural Climatologist (2017, as Chair)
 - Agronomist/Soil Scientist (2016)
 - Value Chain Economist (2015)
 - Senior Remote Sensing Scientist (2014)
 - Systems Agronomist (2013, as Chair)
 - Innovation Systems Scientist (2013)
 - Remote Sensing Scientist (2013, as Chair)
 - Applied Socioeconomist (2013, as Chair)
 - Water Resources Scientist (2013, as Chair)

RELEVANT COUNTRY EXPERIENCE

Bangladesh, Benin, Burkina Faso, Cambodia, China, Democratic Republic of the Congo, Ethiopia, India, Madagascar, Malaysia, Mali, Mexico, Morocco, Haiti, Indonesia, Kenya, Lao PDR, Lesotho, Myanmar, Nepal, Republic of Singapore, Rwanda, Senegal, South Africa, Sri Lanka, Taiwan, Thailand, Zimbabwe

SECOND LANGUAGES

<u>Language</u>	<u>Speaking</u>	<u>Reading</u>	<u>Writing</u>
French	Professional capacity	Proficient	Proficient
Bangla	Elementary	Elementary	Elementary

PROFESSIONAL REFERENCES

1. Dr. Andrew J. McDonald. Associate Professor – International Cropping Systems. Section of Soil and Crop Sciences, School of Integrative Plant Sciences. 617 Bradfield Hall. Cornell University. Email: ajm9@cornell.edu Phone: +001-607-79-1873
2. Mr. Anar Khalil. Deputy Team Leader – Feed the Future. United States Agency for International Development (Bangladesh Mission). Shahzadpur, Dhaka, Bangladesh. Email: akhalilov@usaid.gov Phone: +880-1713141191
3. Dr. Horst Weyerhauser. Former Mekong Coordinator and lead scientist, World Agroforestry Centre (Myanmar, Thailand and Lao PDR). 122/108 MooBaan Lake Land, Chiang Mai, Thailand. Email: horstweyerhaeuser@fastmail.fm Phone: +66-929200174
4. Dr. Bruno Gérard. Director, Sustainable Intensification Program. International Wheat and Maize Improvement Center. Km. 45, Carretera. México-Veracruz El Batán, Texcoco CP 56237. Edo. de México. Mexico. Email: b.gerard@cgiar.org Phone: +52 (595) 1020112
5. Mrs. Patricia Orlowitz. Agriculture Development Officer - Office of Economic Growth. Feed the Future. United States Agency for International Development (Bangladesh Mission). Email: porlowitz@usaid.gov Phone: +880-175555685.