Brian R. Rice

University of Nebraska-Lincoln
Agronomy & Horticulture
Email: brice7@unl.edu

EDUCATION

Ph.D. in Quantitative Genetics | University of Illinois Urbana Champaign | 2021
Advisor: Alexander E. Lipka

M.S. in Quantitative Genetics | University of Illinois Urbana Champaign | 2018
Advisor: Alexander E. Lipka

B.S. in Plant Genetics, Breeding, and Biotechnology | Purdue University | 2015
Advisor: Mitch Tuinstra

PROFESSIONAL EXPERIENCE

Assistant Professor **2024 - Present**
University of Nebraska, Lincoln NE

Postdoctoral Research Fellow **2021-2023**
Colorado State University, Fort Collins CO

- Conducted genetic architecture dissection of sorghum traits for the University of Quisqueya Breeding Program.
- Developed and perform strategies for identifying adaptive variants for use in elite sorghum breeding lines for West Africa.
- Evaluated breeding frameworks for robustness to changing environment stressors.
- Developed methodologies for QTL mapping in populations under selection.
- Mentored graduates students in the Crop Adapation Lab of Geoff Morris

Graduate Research Assistant **2016-2018**
University of Illinois, Urbana Champaign

- Conducted primary research in quantatiatve genetic analysis
- Developed simulation pipelines that explored a wide depth of genetic architectures in maize and sorghum
- Lead the collection and analysis of maize leaf, ear and tassel development traits
- Supervised undergraduate research assistants

Graduate Teaching Assistant **2016-2018**
University of Illinois, Urbana Champaign

- Taught and assisted teaching in various courses including: Graduate Level Applied Statistical Analysis, Introduction To Crop Sciences, and Introduction to Vegetable Gardening

Discovery Breeding Intern **2018**
Bayer Crop Sciences, St. Louis MO

Canola Breeding Intern **2015**
Corteva Agriscience, Saskatoon SK

Maize Product Development Intern **2014**
Corteva Agriscience, Princeton IN

Wheat Breeding Intern **2013**
Bayer Crop Sciences, Lafayette IN

PUBLICATIONS

Rice, B. Lipka, AE. (2021). Diversifying Maize Genomic Selection Models. Molecular Breeding, 41(5).

Xu, X., Crow, M., **Rice, B. R.**, et al. (2020). Single-Cell RNA Sequencing of Developing Ears Facilitates Functional Analysis and Trait Candidate Gene Discovery in Maize. Developmental Cell, 56(4).

Brian R Rice, Samuel B Fernandes, Alexander E Lipka. (2020). Multi-Trait Genome-wide Association Studies Reveal Loci Associated with Maize Inflorescence and Leaf Architecture. Plant and Cell Physiology, 61(8).

Parvathaneni, R. K., Bertolini, E., Shamimuzzaman, M., Vera, D. L., Lung, P.-Y., **Rice, B.** R., Zhang, J., Brown, P. J., Lipka, A. E., Bass, H. W., & Eveland, A. L. (2020). The regulatory landscape of early maize inflorescence development. Genome Biology, 21(1).

Rice, B. Lipka, AE. (2019). Evaluation of RR-BLUP genomic selection models that incorporate peak genome-wide association study signals in maize and sorghum. The Plant Genome, 12(1).

JS Cooper, **BR Rice**, EM Shenstone, AE Lipka, TM Jamann. (2019). Genome-Wide Analysis and Prediction of Resistance to Goss's Wilt in Maize. The Plant Genome, 12(2).

Shenstone E, Cooper J, **Rice B**, Bohn M, Jamann TM, et al. (2018). An assessment of the performance of the logistic mixed model for analyzing binary traits in maize and sorghum diversity panels. PLOS ONE, 13(11).

SELECTED AWARDS

University of Illinois M. B. Russell Award | 2020
University of Washington Summer Institute Registration Scholarship | 2020
Illinois Corn Marketing Fellowship | 2020
John Pendleton Fellowship Recipient | 2018
University of Washington Institute in Statistical Genetics Participant | 2020
DuPont Pioneer Internship Program Grant Award Recipient |a 2014

PROFESSIONAL CONFERENCE \ WORKSHIP PARTICIPATION

National Plant Breeders Association's Annual Meeting | Oral Presentation | 2022
Gordon Conference on Quantitative Genetics | Poster Presentation | 2019
Maize Genetics Conference | Poster Presentation | 2019
NCCC-17 Annual Meeting | Oral Presentation | 2019
Maize Genetics Conference | Poster Presentation | 2018
University of Arizona Tucson Plant Breeding Institute Participant | 2017
NCCC-17 Annual Meeting | Oral Presentation | 2017
University of Wisconsin Plant Science Symposium | Poster Presentation | 2017
UIUC Crop Science Seminar Series | Oral Presentation | 2017
Maize Genetics Conference | Poster Presentation | 2017
Purdue University Plant Science Symposium | Poster Presentation | 2016
University of Illinois Graduate Teaching Academy | 2016

CONTRIBUTIONS TO SCIENTIFIC COMMUNITY

University of Illinois Plant Science Symposium Committee Chair | 2016-2018
Crop Science Graduate Student Organization Networking Chair | 2016

Brian R. Rice

Invited Peer Reviewer: Crop Breeding and Applied Biotechnology, Crop Science, G3: Genes|Genomes|Genetics, Genomics, Proteomics & Bioinformatics, Physiology and Molecular Biology of Plants, New Phytologist, Scientia Agricola