

Brian R. Rice

University of Nebraska-Lincoln
Agronomy & Horticulture
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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 graduate students in the Crop Adaption Lab of Geoff Morris

Graduate Research Assistant

2016-2018

University of Illinois, Urbana Champaign

- Conducted primary research in quantitative 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, A.E. (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 | 2014

PROFESSIONAL CONFERENCE \ WORKSHOP 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

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