

JEFFREY L. NEYHART
CURRICULUM VITAE

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Department of Agronomy and Plant Genetics
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EDUCATION

Bachelor of Science, Plant Science, Cornell University, Ithaca, NY 2014
Doctorate of Philosophy, Plant Breeding and Molecular Genetics, University of Minnesota – Twin Cities, St. Paul, MN Expected 2019

HONORS

Awards:

Rahr Fellowship, University of Minnesota, St. Paul, MN 2015
Applied Plant Sciences (APS) Fellowship, University of Minnesota, St. Paul, MN 2014 – 2015
Gerhardt and Jane Fick Fellowship, University of Minnesota, St. Paul, MN 2014
B.S. with Honors and Distinction in Research, Cornell University, Ithaca, NY 2014

Grants:

Undergraduate research grants (totaling \$5,000), Cornell University, Ithaca, NY 2011 – 2014

RESEARCH EXPERIENCE

Applied Plant Sciences (APS) Program, University of Minnesota, St. Paul, MN 2014 – Present

Doctoral thesis research presently conducted with Dr. Kevin Smith
Investigating the novel application of genomics in a nascent two-row barley breeding program, including foci on genome editing and extensions of genomic selection. Accomplishment include the development of a robust genotyping pipeline using next-generation sequencing data

Department of Plant Breeding and Genetics, Cornell University, Ithaca, NY 2011 – 2014

Honors thesis research conducted with Dr. Mark Sorrells
Conducted experiments using virus-induced gene silencing to achieve gene knockdown in red spring wheat. Targeted pigmentation genes and assessed their association with pre-harvest sprouting susceptibility

RESEARCH EXPERIENCE, CONT.

- Nucleic Acid Analysis Laboratory**, DuPont Pioneer, Johnston, IA 2013
Summer research intern
Designed and carried out an independent research project evaluating the efficacy of molecular characterization protocols for experimental crop lines
- Plant Biology Division**, Samuel Roberts Noble Foundation, Ardmore, OK 2012
Summer research scholar with Dr. Kelly Craven
Investigated various methods of isolating and identifying an endophyte species with reported plant growth-enhancing properties. Experimented with different selective nutrient media for fungal isolation and DNA sequencing for identification

TRAINING & OTHER EXPERIENCE

- Summer Institute in Statistical Genetics**, University of Washington, Seattle, WA 2015
Module 6: Gene Expression
Module 12: Supervised Methods of Statistical Machine Learning
Module 15: Mixed Models in Quantitative Genetics
Proficiency in several programming languages
R
Shell/Bash
Python

RESEARCH INTERESTS

Interests center on exploring new methods and ideas with promising application in plant breeding and genetics, including genomics technologies for genotyping and molecular characterization, unmanned aerial vehicles (UAVs) for high-throughput phenotyping, co-cultivation of crop plants and endophytic species, and genome editing for precise gene modification; interdisciplinary collaboration will hopefully be a focus in current and future research.

TEACHING EXPERIENCE

- Teaching Assistant**, Oral Communication, Cornell University, Ithaca, NY Fall, 2013
Interacted individually with students and with the class as a whole to develop effective public speaking skills; most students demonstrated remarkable improvement in these skills; also assisted with regular class activities, such as grading and attendance

TEACHING EXPERIENCE, CONT.

Study Group Leader, Intro to Evolutionary Biology and Diversity, Fall, 2012
Cornell University, Ithaca, NY
Led a small study group that served as learning supplement to a large, lecture-based course; employed creative and interactive learning techniques to ensure student understanding of course material; most students reported benefiting from study group participation

TEACHING INTERESTS

Teaching interests focus primarily around the emphasis on conceptual and analytical learning, while assessing this learning through organized writing; this may involve addressing relevant issues and questions in the subject field through research-supported analysis and thoughtful expression.

SOCIETIES & HONORARIES

Crop Science Society of America, Member 2015 – Present
Agronomy Society of America, Member 2015 – Present
Soil Science Society of America, Member 2015 – Present
Ho-Nun-De-Kah Honor Society, Cornell University, Member 2013 – 2014

UNIVERSITY SERVICE

President, APS Graduate Student Association 2015 – 2016
Borlaug Memorial Lecture Planning Committee 2015
Pioneer Plant Breeding Symposium Planning Committee 2014 – 2015
Other APS fundraising and social committees 2014 - Present

PRESENTATIONS & POSTERS

“Leveraging Novel Genomics Techniques in a New Two-Row Barley Breeding Program,” **Thesis Proposal Seminar**, University of Minnesota, September 21, 2015 (Presentation).

“VRS1 Reverse Genetics Through Gene Editing,” **University of Minnesota Barley Symposium**, June 12, 2015 (Presentation).

“Virus-induced gene silencing of traits in the developing grain of wheat,” **Triticeae Coordinated Agricultural Project (TCAP) Annual Meeting**, January 9, 2015 (Poster).

COMMUNITY SERVICE

Usher, St. Catherine’s Parish, Farmingdale, New Jersey 2006 – Present
Volunteer, Second Harvest Heartland, Minneapolis, Minnesota 2015 – Present

ADDITIONAL INFORMATION

Languages: English; basic fluency in Spanish
Citizenship: United States

REFERENCES

References will be furnished upon request.