

JANELLE DONAHUE

3520 Jefferson Ave.
Des Moines, IA 50310

(812) 760-4228
janelle.donahue@gmail.com

SUMMARY

A versatile agricultural researcher with over 10 years of experience conducting plant science research in lab, greenhouse, and field settings. Known for designing experiments, executing protocols, collecting data and developing assays using knowledge of crop physiology and agronomy. Performs data analysis in context with environmental and molecular data and communicates complex results in a clear manner.

PROFESSIONAL EXPERIENCE

DUPONT PIONEER, Johnston, IA

A leading global developer and supplier of advanced plant genetics and solutions to farmers.

Senior Research Associate, Trait Phenotyping-Ag Traits

2012 to Present

Assay development and plant phenotyping to better understand biotech leads for drought tolerance and nitrogen use efficiency.

- Developed and optimized an assay for phytohormone sensitivity widely used within Agronomic Traits to further inform knowledge of selected candidate leads and to assess genetic variation within selected germplasm.
- Pioneered innovative automated protocol adaptation and is leading its validation in collaboration with multidisciplinary teams to increase assay throughput and data precision over current methods.
- Deploys a wide range of methodologies in development of new assays for targeted mode of actions, using instruments for soil water content, spectral and color imaging, plant photosynthesis, biochemical assays and conducts validation experiments.
- Manages the execution of research protocols for field experiments across the Trait Phenotyping Group and prepares data for QC and interpretation.
- Builds Spotfire visualizations to connect molecular, physiological, and environmental data related to experimental results and facilitate understanding of large and diverse data sets, rapid decision-making and communication across multiple groups.
- Adheres to core values and regulations for safety, research with regulated material, information security.

UNIVERSITY OF MISSOURI, FRITSCHI LAB, Columbia, Missouri

A research and teaching lab that studies the physiology of environmental stressors and yield in crops including soy, corn, and sorghum.

M.S. Graduate Student

2009 to 2012

Researched soybean yield potential and the response of soybean biological nitrogen fixation and N applications.

- Designed experiments and managed data collection for field and greenhouse studies; performed nutrient and poultry litter applications, pest management for insect and weed control, drip irrigation tape application and repair, non-destructive measurements as well as root and above ground tissue biomass collections, contributed to planting and harvest activities.

Janelle Donahue Resume

- Performed assays for soybean uriedes and acetylene reduction, prepared samples for leaf total N and soil N analysis, conducted root imaging analysis using WinRhizo software.
- Developed protocol using Image J to count soybean nodules allowing for measurement of additional trait over previous method.
- Performed data analysis using excel and SAS in collaboration with statistical support at the University of Missouri.

PURDUE UNIVERSITY, JOHNSON LAB, West Lafayette, Indiana 2003 to 2007
An extension focused lab researching efficacious weed management regimes for Indiana farmers and strategies to deal with herbicide resistance.

Undergraduate Research Assistant

- Collected data on selected weeds and crops toward assessing herbicide efficacy and resistance at the plant and plot level.
- Managed data of industry and academic research trials in excel and Gylling Agricultural Research Manager.
- Researched the glyphosate resistance of selected *Conyza canadensis* populations and survivorship of progeny plants.

EDUCATION

M.S., Plant, Insect, Microbial Sciences University of Missouri, 2012

B.S., Plant Biology Purdue University, 2007

COMPUTER & INSTRUMENT COMPETENCIES

Microsoft Word, Powerpoint and Excel; Tibco Spotfire, SAS, Image J and WinRhizo, HTML, Certified user of Licor 6400XT, Dupont Pioneer proprietary databases and informatics tools

CONFERENCE PRESENTATIONS

Donahue, J.M., Fritschi, F. 2010. *Nodulation Response to Different Soil Mineral Nitrogen Concentrations in Modern and Obsolete Soybean Cultivars*. The International Annual Meetings of the Agronomy Society of America, Crop Science Society of America, Soil Science Society of America, Long Beach, CA.

Donahue, J.M., Fritschi, F. 2010. *Soybean Nodule Number, Size and Weight in Obsolete to Modern Cultivars in Response to Applied Nitrogen*. The 4th Annual PBCC/National Association of Plant Breeders, Des Moines, IA.

Donahue, J.M., Davis, V.M., Kruger, G.R., Johnson, W.G. 2007. *Glyphosate Dose-Response of Selected Indiana Horseweed Biotypes*. Poster presented at the 61st Annual Meeting of the North Central Weed Science Society, Milwaukee, WI.

AWARDS & SERVICE

Recipient, Gerald O. Mott Award, Division of Plant Sciences, University of Missouri, 2012

Graduate Student Representative, ACS732 Annual Meetings Planning Committee, ASA-CSSA-SSSA, 2012

Member, Graduate Student Sub-committee, Membership and Society Identity Committee, ASA-CSSA-SSSA, 2011