**Danielle M. Clark**

Iowa State University

1577 Agronomy Hall

716 Farm House Ln.

Ames, IA 50011

**dwilson@iastate.edu**

Office: 515.294.3886 | Cell: 515.979.1675

**EDUCATION:**

**Iowa State University,** Ames, IA

Master of Science Degree: May 2012

Major: Crop Production & Physiology

Major Professor: Dr. Emily Heaton

Thesis: “Where’s the nitrogen? The timing and impacts of internal nitrogen cycling on switchgrass (*Panicum virgatum* L.) yield and biofuel quality”

GPA: 3.36/4.0

**Iowa State University**, Ames, IA

 Bachelor of Science Degree: May 2009

 Major: Agronomy

 GPA: 3.67/4.0 Graduated with Distinction (Cum laude)

**RESEARCH**

**EXPERIENCE:**

**Iowa State University, Agronomy Department, Ames, IA**

*Graduate Research Assistant*

My primary interest centers on dedicated bioenergy, perennial crops and the ability to improve sustainability of cropping systems by enhancing ecosystem services through crop management. My previous work has included switchgrass crop management for nutrient cycling and improved biofuel quality by manipulating the biology of switchgrass, i.e., harvest timing to reduce contaminants in thermochemical processes.

**INTERNATIONAL**

**EXPERIENCE:**

**Massey University, Palmerston North, New Zealand**

*Semester of undergraduate studies*: Spring 2008

**SKILLS/**

**PROFICIENCIES:**

* Excellent organization, communication, and management
* Equipment troubleshooting and maintenance
* SAS software, Microsoft Office, and Dreamweaver CS6
* Multiple biomass sampling and characterization techniques (biomass, forage quality, thermochemical conversion)
* Field trial operations and management

**WORK EXPERIENCE/**

**INTERNSHIPS: Agronomy Shared Labs, Iowa State University, Ames, IA**

*Research Scientist III,* August 2022- Present

* Provide access to functional analytical equipment when needed by faculty, staff, and students
* Educate users by personal instruction about instrument functions, sample preparation, and quality control protocols
* Troubleshoot and maintain equipment
* Manage lab spaces and maintain safe laboratory environment
* Advise users about selection of appropriate equipment
* Promote access to equipment by scheduling clients via calendar reservations on website.
	+ Management of website using WordPress
	+ <https://www.agron.iastate.edu/shared-labs/>
* Purchase consumables needed for shared lab; advises users about purchasing any of their own
* Prepare annual reports to the department about expenditures/income, equipment usage, samples processed and other relevant information
* Seek new and update instrumentation that would benefit department
* Manage budget and financial transactions for the lab:
	+ Set per hour prices for the plant grinding room
	+ Bill users an annual fee for shared lab use
	+ Manage preventative maintenance agreements when they are feasible
	+ Track expenses for equipment and consumables
	+ Plan depreciation schedules for major equipment
* Manage departmental wiley mill plant grinding room
* Assist with departmental teaching with lab equipment
* Promote safety to the department – Department Lab Safety Contact
* Aid in the organization/cleaning effort of Agronomy Dept. main cold storage room

**Agronomy Shared labs (fka: Crop Production & Physiology Lab), Iowa State University, Ames, IA**

*Research Scientist I*, September 2017- July 2022

* Provide access to functional analytical equipment when needed by faculty, staff, and students
* Educate users by personal instruction about instrument functions, sample preparation, and quality control protocols
* Troubleshoot and maintain equipment
* Manage lab spaces and maintain safe laboratory environment
* Advise users about selection of appropriate equipment
* Promote access to equipment by scheduling clients via calendar reservations on website.
	+ Management of websites using Adobe Dreamweaver CS6
		- <http://cpandp.agron.iastate.edu/>
* Purchase consumables needed for shared lab; advises users about purchasing any of their own
* Prepare annual reports to the department about expenditures/income, equipment usage, samples processed and other relevant information
* Seek new and update instrumentation that would benefit department

**WORK EXPERIENCE/**

**INTERNSHIPS CONT.:**

* Manage budget and financial transactions for the lab:
	+ Set per hour prices for the plant grinding room
	+ Set per sample prices for the GC – greenhouse gas samples
	+ Bill users an annual fee for shared lab use
	+ Manage preventative maintenance agreements when they are feasible
	+ Track expenses for equipment and consumables
	+ Plan depreciation schedules for major equipment
* Manage, maintain, and run Gas Chromatograph for greenhouse gas samples
* Manage departmental wiley mill plant grinding room
* Assist with departmental teaching with lab equipment
* Promote safety to the department – Department Lab Safety Contact
* Aid in the organization/cleaning effort of Agronomy Dept. main cold storage room

**Forage Research Group, Iowa State University, Ames, IA**

*Research Associate II*, September 2013-August 2017

* Manage undergraduate & graduate students
* Train students on equipment and safety requirements
* Maintain safe laboratory procedures
* Develop Standard Operating Procedures (SOP’s)
* Maintain chemical inventories
* Management websites using Adobe Dreamweaver CS6
	+ http://www.agron.iastate.edu/faculty/kjmoore/
	+ http://www.agron.iastate.edu/faculty/heaton/
	+ http://www.agron.iastate.edu/faculty/alenssen/
* Biomass fuel quality analysis (Sequential fibers, dry matter, TNC’s)

**Iowa Sustainable bioEnergy Pathway (ISEP), Ames, IA**

*ISEP Coordinator*, August 2012-August 2013

* Manage data
* Coordinate and schedule events for ISEP project
* Assist in grant writing
* Manage website using Adobe Dreamweaver CS6 and Drupal
* Manage undergraduate employees
* Coordination of hiring and firing
* Technical liaison with DOE Sungrant Regional Feedstock Partnership modeling group

**Biomass Crop Production Group, Iowa State University, Ames, IA**

*Graduate Research Assistant,* May 2009-August 2013

* Field experimental design and trial implementation
* Management of Microsoft Office files and analytical proficiency in SAS
* Technical liaison with ConocoPhillips Company, Agronomy Dept., and the Center for Sustainable Environmental Technologies
* Management/organization of undergraduate employees at lab and field level
* Prepared, interpreted, and analyzed samples from thermochemical processes (fast pyrolysis)
* Coordinate and schedule daily activities and prioritize scheduling conflicts

**WORK EXPERIENCE/**

**INTERNSHIPS CONT.:**

* Organize safety training for undergraduate employees: lab, Wiley mill grinder, and field safety
* Team and independent work
* Excellent time management and organization skills

**Forages Research Group, Iowa State University, Ames, IA**

 *Research Assistant,* June 2006-May 2009

* Preparation of biomass samples for fuel quality analyses
* Helped perform chromatography analyses (HPLC and GC), gravimetric analyses (ash), spectroscopy (NIRS), fibers, dry matter, nonstructural carbohydrates, and other analyses.
* Identification of weed species and growth stage of perennial grasses
* Weighed samples and entered data
* Team work

**Flax Research Group, Iowa State University, Ames, IA**

 *Summer Internship*, May 2007-August 2007

* Identification of weed species
* Harvested research plots and compiled data into excel spreadsheets
* Completed personal capstone project and poster presentation to upper management
* Independence and leadership skills used

**Agriscience Research Project, National FFA Organization**

*Researcher, “Grass for Biomass”*

* Completed project on biomass crops for energy purposes
* Compiled data and entered into Excel, Word, and PowerPoint
* Performed statistical analysis and presented results to various audiences

**PUBLICATIONS/**

**PEER REVIEWED**

**JOURNALS:**

* Hoover A., R. Emerson, M. Cortez, V. Owens, E. Wolfrum, C. Payne, J. Fike, J. Crawford, R. Crawford, R. Farris, J. Hansen, E.A. Heaton, S. Kumar, H. Mayton & **D.M. Wilson**. 2022. Key environmental and production factors for understanding variation in switchgrass chemical attributes. *GCBB.* 14: 776-792.<https://doi.org/10.1111/gcbb.12942>.
* **Wilson D.M.,** T.P. Gunther, L.A. Schulte, K.J. Moore, and E.A. Heaton. 2016. Landscape position influences switchgrass feedstock composition and quality. *Crop Science.* 56:1-13.
* **Wilson D. M.,** E.A. Heaton, L.A. Schulte, T.P. Gunther, R.B. Hall, W.L. Headlee, K.J. Moore, M.E. Maier & N.N. Boersma. 2014. Establishment and short-term productivity of annual and perennial bioenergy crops across a landscape gradient. *BioEnergy Research.* 7:885-898.
* Cole, P.D., E.A. Smith, D. Dalluge, **D.M. Wilson**, E.A. Heaton, R.C. Brown & Y.L. Lee. 2013*.* Molecular characterization of Nitrogen-containing species in switchgrass bio-oils at various harvest times. *Fuel*. 111:718-726.
* **Wilson D.M.**, E.A. Heaton, M. Liebman & K.J. Moore. 2013. Intraseasonal changes in switchgrass nitrogen distribution compared to corn. *Agronomy Journal*. 105:285-294.

**PUBLICATIONS/**

**PEER REVIEWED**

**JOURNALS CONT.:**

* **Wilson D.M.**, D.L. Dalluge, M. Rover, E.A. Heaton & R.C. Brown. 2013. Crop management impacts biofuel quality: influence of switchgrass harvest time on yield, nitrogen, and ash of fast pyrolysis products. *BioEnergy Research*. 6:103-113.
* **Wilson D.M.** 2012. Where’s the nitrogen? The timing and impacts of internal nitrogen cycling on switchgrass (*Panicum virgatum* L.) yield and biofuel quality. Iowa State University Graduate College, Thesis.

**PUBLICATIONS/**

**PEER REVIEWED**

**FACT SHEETS:**

* **Wilson D.M.** & E.A. Heaton. 2013. Giant *Miscanthus* Establishment. Iowa State University Extension publication. <https://store.extension.iastate.edu/ItemDetail.aspx?ProductID=14006>
* **Wilson D.M.** & E.A. Heaton. 2013. Giant *Miscanthus* Eradication. Iowa State University Extension publication. <https://store.extension.iastate.edu/ItemDetail.aspx?ProductID=13996>
* **Wilson D.M.** & E.A. Heaton. 2013. Giant *Miscanthus* Weed Control. Iowa State University Extension publication. <https://store.extension.iastate.edu/ItemDetail.aspx?ProductID=14000>

**BLOGS:**

* Donovan, T., **Wilson D.M**., & E.A. Heaton. September 29, 2020. Farmed prairie potholes. Iowa State University Extension and Outreach: Integrated Crop Management Blog.
* Connell M., **Wilson D.M.**, & E.A. Heaton. August 3, 2020. A Farmer’s Journey with Miscanthus: Part 2. Iowa State University Extension and Outreach: Integrated Crop Management Blog.
* Connell M., **Wilson D.M.**, & E.A. Heaton. July 27, 2020. A Farmer’s Journey with Miscanthus: Part 1. Iowa State University Extension and Outreach: Integrated Crop Management Blog.
* Heaton E.A. & **D.M. Wilson.** November 22, 2019. University of Iowa Biomass Fuel Project Update Meeting. Iowa State University Extension and Outreach: Integrated Crop Management Blog.
* Bendorf, J. & **D.M. Wilson**. July 2, 2019. ISU is home to a new bioenergy crops research farm. Iowa State University Extension and Outreach: Integrated Crop Management Blog.
* Bendorf, J. & **D.M. Wilson**. June 18, 2019. Working in the summer heat? Take time to chill! Iowa State University Extension and Outreach: Integrated Crop Management Blog.
* De Graaf, C., **Wilson** **D.M.** & E.A. Heaton. June 14, 2019. Best storage methods for miscanthus in Iowa. Iowa State University Extension and Outreach: Integrated Crop Management Blog.
* Bendorf, J. & **D.M. Wilson**. May 28, 2019. South Carolina undergrads come to ISU to learn about bioenergy. Iowa State University Extension and Outreach: Integrated Crop Management Blog.
* Carmenate, P., **Wilson D.M.**  & E.A. Heaton. May 3, 2019. Let’s plant some miscanthus! Iowa State University Extension and Outreach: Integrated Crop Management Blog.

**BLOGS CONT.:**

* De Graaf, C.,**. Wilson D.M** & E.A. Heaton. April 22, 2019. Miscanthus harvest concludes! Iowa State University Extension and Outreach: Integrated Crop Management Blog.
* Cano Comacho, V., **Wilson D.M.**  & E.A. Heaton. April 16, 2019. Ethnobotany of miscanthus & current uses. Iowa State University Extension and Outreach: Integrated Crop Management Blog.
* Carmenate, P., Cano Comacho, V., De Graaf, C., Donovan, T., **Wilson D.M.**  & E.A. Heaton. February 12, 2019. ISU Biomass blog series introduction. Iowa State University Extension and Outreach: Integrated Crop Management Blog.

**PRESENTATIONS:**

* **Wilson D.M.**, E.A. Heaton, E. Foresman & T. Hedrick. July 22-25, 2019.Blazing towards Zero Coal – The Biomass Fuel Project at the University of Iowa.Dedicated Energy Crops and Native Grasses for the Emerging Bioeconomy – Switchgrass V International Conference. University of Illinois at Urbana- Champaign.
* **Wilson D.M.,** V. Walker, A.N. Hoover, R.M. Emerson, M. Cortez, R. Kinoshita & E.A. Heaton. Nov. 7, 2016. Bioenergy Feedstock Data? – How do we learn from it? ASA-CSSA-SSSA International Annual Meetings. Phoenix, AZ.
* Bourguignon M., K.J. Moore, S.V. Archontoulis, A.W. Lenssen, B.S. Baldwin & **D.M. Wilson.**  Nov. 7, 2016. Optimal agricultural practices for growing Kenaf in Iowa. ASA-CSSA-SSSA International Annual Meetings. Phoenix, AZ.
* **Wilson D.M.** March 28, 2016. ISU/INL Discussion. Idaho Falls, ID.
* **Wilson D.M.,** T.P. Gunther, L.A. Schulte, K.J. Moore, & E.A. Heaton. Nov. 3, 2014. Switchgrass composition and quality changes across a landscape gradient. ASA-CSSA-SSSA International Annual Meetings. Long Beach, CA.
* **Wilson D. M.,** E.A. Heaton, L.A. Schulte, T.P. Gunther, R.B. Hall, W.L. Headlee, K.J. Moore, M.E. Maier, & N.N. Boersma. Nov. 4, 2013. Influence of landscape position on biomass feedstock productivity. ASA-CSSA-SSSA International Annual Meetings. Tampa, FL.
* Heaton E.A., L.A. Schulte, & **D.M.** **Wilson.** June 22, 2013.Integrating food and fuel production in temperate climates. BioFuelNet Annual General Meeting Workshop. McGill University. Montreal, Canada.
* **Wilson D.M.,** E.A.Heaton., & L.A. Schulte. April 26, 2013. Management Matters! Biofuels Workshop at BCRF. Ames, IA
* Heaton E.A., N.N. Boersma, L.A. Schulte, & **D.M. Wilson.** March 19, 2013. Perennial energy crops in Iowa. 3rdAnnual Biomass Workshop. Iowa City, IA.
* Heaton E.A., L.A. Schulte & **D.M. Wilson**. March 12, 2013. Managing for bioenergy-integrating food and fuel production. Ag Education Day. Emmetsburg, IA.
* **Wilson D. M.,** D.L. Dalluge, M. Rover, E.A. Heaton, & R.C. Brown. Oct. 23, 2012. Crop management impacts biofuel quality: Influence of switchgrass harvest time on yield, nitrogen, and ash of fast pyrolysis products. ASA-CSSA-SSSA International Annual Meetings. Cincinnati, OH.
* Heaton E.A., **Wilson, D.M.,** Dalluge D.L., Rover M. & Schulte L.A. August 2012. Management matters: what engineers should learn about agronomy. Agronomy departmental seminar, Purdue University, W. Lafayette, IN.

**PRESENTATIONS**

**CONT.:**

* Heaton E.A., **D.M. Wilson,** D.L. Dalluge, M. Rover & L.A. Schulte. July 2012. Switchgrass and pyrolysis (and more!). (plenary). 3rd PanAmerican Congress on Plants and Bioenergy. Urbana-Champaign, IL.
* **Wilson D. M.** April 2, 2012. Where’s the nitrogen? The timing and impacts of internal nitrogen cycling on switchgrass (*Panicum virgatum* L.) yield and biofuel quality. Masters defense (public presentation). Agronomy Hall, Iowa State University.
* **Wilson D. M.,** E.A.Heaton & M. Liebman. Oct. 17, 2011. Impacts of Internal Nitrogen Cycling within Switchgrass on Biomass Feedstock Sustainability. ASA-CSSA-SSSA International Annual Meetings. San Antonio, Texas
* **Wilson D. M.,** E.A.Heaton, &M. Liebman. Nov. 2, 2010. Quantifying the timing and impact of internal N movement with switchgrass on crop sustainability. ASA-CSSA-SSSA International Annual Meetings. Long Beach, California.
* **Wilson D. M.,** E.A. Heaton, & M. Liebman. June 29, 2010. Where and when? Quantifying the movement of nitrogen in switchgrass. 2010 Bio-char Initiative Conference field day.
* **Wilson D. M.,** E.A.Heaton & M. Liebman. June 24, 2010. Where and when? Quantifying the movement of nitrogen in switchgrass. Iowa Corn Growers Association field day.
* **Wilson D.M.** March 9, 2010. This is Big!! Graduate Students Pursue Cutting Edge Biorenewable Research. Celebration of Agriculture. Cedar Rapids, Iowa. <http://www.ag.iastate.edu/video/v/This_is_Big>
* **Wilson D.M.** 2009. 2009 BioCentury Research Farm Report. <http://www.biocenturyresearchfarm.iastate.edu/sites/default/files/2009%20BioCentury%20Research%20Farm%20Report.pdf>.
* Heaton E.A., **D.M. Wilson** & N.N. Boersma. 2009. Miscanthus – Separating Hope from Hype? Iowa State University Agronomy 600 Seminar.

**POSTERS:**

* **Wilson D.M.,** T.P. Gunther, L.A. Schulte, K.J. Moore & E.A. Heaton. November 17, 2015. Variety interacts with space and time to influence switchgrass quality. ASA-CSSA-SSSA International Annual Meetings. Minneapolis, MN.
* **Wilson D.M.,** D.L.Dalluge, M. Rover, E.A. Heaton & R.C. Brown. February 25, 2013. Crop management impacts biofuel quality: Impact of switchgrass harvest time on yield, nitrogen and ash of fast pyrolysis products.

Symposium on Sustainability. Connecting Today’s Bottom Line with a Sustainable Future: Our Growing Commitment. Iowa State University Memorial Union.

* **Wilson D.M.,** D.L.Dalluge, M. Rover, M., E.A. Heaton E.A., & R.C. Brown. November 1, 2012. Crop management impacts biofuel quality: Impact of switchgrass harvest time on yield, nitrogen and ash of fast pyrolysis products. Agronomy Department Research Symposium and Poster Session. Iowa State University.

**POSTERS CONT.:**

* **Wilson D.M.,** D.L.Dalluge, M. Rover, M., E.A. Heaton E.A., & R.C. Brown. September 12, 2012. Crop management impacts biofuel quality: Impact of switchgrass harvest time on yield, nitrogen and ash of fast pyrolysis products. New Technology Expo. BioCentury Research Farm. Iowa State University.
* **Wilson D.M.,** E.A.Heaton & M. Liebman. November 3, 2011. Impacts of internal nitrogen translocation within switchgrass on biomass feedstock sustainability. Agronomy Department Research Symposium and Poster Session. Agronomy Hall, Iowa State University.
* **Wilson D.M.,** E.A.Heaton, & M. Liebman. September 21, 2011. Impacts of internal nitrogen translocation within switchgrass on biomass feedstock sustainability. Association of Applied Biologists. Biomass and Energy Crops IV Conference. Champaign, IL.
* **Wilson D.M.,** E.A. Heaton, & M. Liebman. Nov. 18, 2010. Quantifying the timing and impact of internal N movement within switchgrass on crop sustainability. Agronomy Department Research Symposium and Poster Session. Agronomy Hall, Iowa State University.
* **Wilson D.M.,** E.A.Heaton, M. Liebman, & M. Darr. Oct. 29, 2009. Quantifying the timing and impact of internal N cycling on switchgrass sustainability and feedstock storage. Agronomy Department Research Symposium and Poster Session. Memorial Union, Iowa State University.
* **Wilson D.M.,** E.A.Heaton, M. Liebman, & M. Darr. Oct. 6, 2009. Quantifying the timing and impact of internal N cycling on switchgrass sustainability and feedstock storage. Live Green Presidential Lecture Series. Iowa State University.
* **Wilson D.M.,** E.A.Heaton, M. Liebman, & M. Darr. Sept. 22, 2009. Quantifying the timing and impact of internal N cycling on switchgrass sustainability and feedstock storage. BioCentury Research Farm Dedication. Iowa State University.

**PROFESSIONAL**

**DEVELOPMENT/**

**CONFERENCES:**

* ISU P&S Professional Development Conference. Cultivate your adventure: Engage, Innovate, Evolve. February 23, 2022. Ames, IA.
* University of Iowa Biomass Fuel Project Update Meeting. November 22, 2019. Linn County Extension Office, Cedar Rapids, IA.
* Dedicated Energy Crops and Native Grasses for the Emerging Bioeconomy – Switchgrass V International Conference. University of Illinois at Urbana- Champaign. July 22-25, 2019. Champaign, Illinois.
* ISU P&S Professional Development Conference. Cultivate your adventure: Planting the seeds of success. February 26, 2019. Ames, IA.
* ISU CALS P&S Council Representative: June 2018- 2021
* ISU CALS P&S Council Committee Chair, Networking & Social Event Committee: June 2018-2021
* ASA-CSSA-SSSA International Annual Meetings. Nov. 6-9, 2016. Phoenix, AZ.
* ISU Department of Agronomy Personal and Professional Development. 8 class series led by Workshop Leadership Team at Edge Cultural Architects, LLC. Spring 2016.
* ASA-CSSA-SSSA International Annual Meetings. Nov. 15-19, 2015. Minneapolis, MN.

**PROFESSIONAL**

**DEVELOPMENT/**

**CONFERENCES CONT.:**

* 2015 Biomass Fuel Project Field Day. University of Iowa/ Repreve Renewables update to the UI Biomass Fuel Project. Field Tours at miscanthus plots and University Main Power Plant. August 25, 2015. Iowa City, Iowa.
* ASA-CSSA-SSSA International Annual Meetings. Nov. 2-6, 2014. Long Beach, CA.
* Biomass Crop Production Workshop. March 4, 2014. Iowa City, IA.
* ASA-CSSA-SSSA International Annual Meetings. Nov. 3-6, 2013. Tampa, Florida.
* Ninth Annual Bioenergy Feedstocks Symposium. Energy Biosciences Institute. August 21-22, 2013. Champaign, Illinois.
* Landscape Biomass field day. Iowa State University BioCentury Farm. July 15, 2013.
* Biomass Crop Production Workshop. March 19, 2013. Iowa City, IA.
* ASA-CSSA-SSSA International Annual Meetings. Oct. 22-24, 2012. Cincinnati, Ohio.
* New Technology Expo. BioCentury Research Farm. Iowa State University. September 12, 2012. Ames, IA.
* Biomass Crop Production Workshop. March 8, 2012. Creston, IA.
* ASA-CSSA-SSSA International Annual Meetings. Oct. 17, 2011. San Antonio, TX.
* Association of Applied Biologists. Biomass and Energy Crops IV Conference. Sept. 21, 2011. Champaign, IL.
* ASA-CSSA-SSSA International Annual Meetings. Nov. 2, 2010. Long Beach, CA.
* Bioenergy Feedstock Conference. 2010. University of Illinois, Champaign, IL.
* ASA-CSSA-SSSA International Annual Meetings. 2009. Pittsburgh, PA.

**TEACHING:**

* Agron 183: Basic Skills for Agronomists. Guest lecturer. Iowa State University.
	+ Fall 2017/2018/2019/2020/2021
	+ Assisted with plant photosynthesis lab
* Agron 181. Guest Lecturer. Iowa State University.
	+ Fall 2018.
	+ Assisted with plant photosynthesis lab.
* Agron 490/590. Special Topics in Agronomy: Cropping systems, soils, and service learning in Guatemala, Course Development. 2015.
	+ Course development with department of Agronomy and College of Agriculture Study Abroad.
	+ Presentations for recruitment.
	+ Instructors: Dr. C.Lee Burras, Ruth Burke (graduate student), Danielle Wilson
* Agron 334: Forages. Guest Lecturer. Iowa State University.
	+ Spring/Fall 2014, Spring/Fall 2015, Spring 2016
	+ Developed material for 90+ students
* West Central Valley Career Fair. ISU Agronomist representative. March 26, 2015.

**TEACHING CONT.:**

* Agronomy New Student Learning Community. Perennial crops for biofuels. August 22, 2014.
	+ ~66 students
* CenUSA Intern Tour: Biomass Education. June 20, 2014. Boone, IA.
* World Food Prize Scholars. Iowa State University field tour. April 29, 2013.
	+ *Tour for ~30 students*
* West Central Valley Career Fair. ISU Agronomist representative. March 28, 2013.
* Biomass Crop Workshop. October 15, 2012. Chicago High School for Agricultural Sciences visit to Iowa State University. Field Education Lab.
* CenUSA Intern Tour: Biomass Education. July 9, 2012. Boone, IA.

**EXTENSION/**

**OUTREACH:**

* State Science & Technology Fair of Iowa Board Member
	+ 2022 to Present
	+ Co-Chair for Larry Schwinger Seminar Competition
* State Science & Technology Fair of Iowa Seminar Judge.
	+ March 24 & 25, 2022
* Farm Progress Show. Biomass crop representative. August 31-September 1, 2016. Boone, IA.
* ISU liaison with INL Biomass Library group. Presentation and training with Biomass Feedstock Library. March 28-30. Idaho Falls, ID.
* Farm Progress Show. Biomass crop representative. August 26-28, 2014. Boone, IA.
* Hay/Forage Expo. CenUSA representative. June 25-26, 2014. Boone, IA.
* Biomass Crop Production Workshop. March 4, 2014.
	+ *Workshop Coordinator*
	+ *Phone interview with RFD-TV, March 3, 2014.*
* Finley, Stephani. Southwest Ag Mag. Fall 2013. SWCC students gain advantage by studying energy crops.
	+ *Contributed to article*

Farm Progress Show. Biomass crop representative. August 2012. Boone, IA

**VOLUNTEER WORK:**

* American Cancer Society Relay for Life of Boone County, Iowa
	+ 2018- Present: Ogden Salad Social Committee Member
	+ 2018- Present: Boone Co. Relay for Life Walk Committee Member
* Sleeping Angels Foundation
	+ 2014-Present
		- Volunteer work
		- Donation to events: Fun Run, Gala, Golf tournament, Sleeping Angels at the Iowa Speedway, etc.
* North Branch Foundation. Earlham, Iowa. Oct. 2-4, 2015. Whitetail Challenge.
	+ The Whitetail Challenge gives disabled hunters the opportunity to hunt and experience a hunting opportunity. In its 13th year, it helped 22 hunters. I helped with meals and cleanup during the challenge.

**PROFFESIONAL**

**ASSOCIATIONS/CLUBS:**

* 2018-2021 ISU CALS P&S Council Representative
* 2018-2021 ISU CALS P&S Council Committee Chair,

Networking & Social Events Committee

* 2009- Present. Crop Science Society of America (CSSA)
* 2009- Present. Soil Science Society of America (SSA)
* 2009- Present. Agronomy Society of America (ASA)
* 2009 -Present. Gamma Sigma Delta Agricultural Fraternity
* 2007-2008 Golden Key International Honor Society
* 2005-2006 Agriculture Education Club
* 2006- Present. National Society of Collegiate Scholars
* 2001- 2007 National FFA Organization

**HONORS/AWARDS:**

* World Food Prize Tour Award 2013
* Celebration of Agriculture Scholarship 2010
* ConocoPhillips Funding 2009-2012
* Agronomy Scholarship 2009-2012
* Pioneer Agronomy Scholarship 2008
* Kiley and Marie Powers, ISU Ag Endowment 2007-2008
* Edgar Timm Memorial Scholarship 2008
* Global Agriculture Programs Scholarship 2008
* Sojourner Scholarship 2008
* Agronomy Travel Fellowship 2008
* George & Nellie Heald Scholarship 2007
* Agronomy Scholarship Endowment 2007
* Western Seed Association Scholarship 2006
* American FFA Degree 2006
* Dean’s List at Iowa State University 2005-2009
* ISU Academic Achievement Award/Scholarship 2005-2009
* Iowa FFA Degree 2005
* Iowa Energy Scholarship 2005
* Iowa Biotechnology Scholarship 2005