

# Blake P Trygestad

320-894-2811; btrygestad@gmail.com

## Education

### **M.S., Plant Breeding, Genetics and Biotechnology**

August 2019-Present

Michigan State University, East Lansing, Michigan

### **B.S., Agronomy, Emphasis of Plant Breeding and Crop Management**

August 2015-May 2019

Iowa State University, Ames, Iowa

GPA: 3.86

## Research Experience

### **Masters Research Tar Spot Resistance in Maize**

August 2019-Present

Dr. Addie Thompson, Michigan State University, East Lansing, MI

- Ran a field trial on tar spot (*Phyllachora maydis*) resistance for 543 inbred of various sources.
  - Communicated with a multidisciplinary team in order to collect accurate data and efficiently run the trial.
  - Trained workers on data collection methods.
- Ran genome-wide association study (GWAS) on genetic markers to find candidate genes for further study.
- Ran statistical analysis on field data including area under disease progress curves, moving grid averages, ANOVA, and linear regression to data mine out significant data.
- Worked with aerial multispectral and natural color images to see disease progress and severity from the air.

### **Integrated Field Sciences Intern**

May 2018-Dec 2018

R&D groups of Jeffery Klever/ Stephen Zimmerman, Corteva (Pioneer Hybrid) Agrosiences, Johnston IA

- Executed trait development studies to provide technical information that improve hybrid and inbred corn production and soybean production for Corteva AgroSciences, formally Dow AgroSciences and Dupont Pioneer.
- Infested, extracted, prepared, scored, and did data analytics on 3000 hybrid and inbred corn roots to test efficacy of various combination of IPM traits.
  - Read and executed protocols to collect quality data and prevent injury.
  - Used team management to coordinate the many step process. Also used it to maintain high quality data and efficiency.
  - Trained hired crew on best methods of data collection, and safety standards.
- Set up experiments and infested soybean pest on precommercial soybean lines and checks.
- Helped lead collection of high-volume phenotyping and genotyping of hybrid and inbred corn and soybeans
  - Documentation and collection of field performance.
  - Helped with remote sensing technology and automation
  - Led teams in collection of quality tissue sampling for presence of transgenes genetic markers
- Helped with hand harvest of inbred corn.
  - Tested new technologies to speed line the moisture sampling process.
  - Ran experiments on new trans genes to increase dry down.

## **Soybean Research Assistant**

August 2017-May 2018

Dr. Silvia Cianzio, Iowa State University. Ames, IA

- Worked with Dr. Cianzio on finding a less expensive and accurate way to look for genetic resistance to soybean cyst nematode.
  - DNA Extraction, PCR, Gel Electrophoresis of soybean cultivars
  - Hand planting and greenhouse work
  - Data analysis of number of resistant genes present and what types
  - Presented work at Iowa State Undergrad Research Symposium
- Helped assist other soybean projects
  - Seed packaging and inventory
  - Hand harvesting and trashing
  - Field design

## **Poster Presentations**

Trygestad B., & Thompson A. (2019) Genetic Resistance to Tar Spot (*Phyllachora maydis*) in Maize.

Plant Resilience Research and Social Session, November 12<sup>th</sup>, 2019, Michigan State University

Trygestad B. & Canizio S., (2017) Screening of Soybean Lines for Soybean Syst Nematode Resistance.

R.F. Baker Symposium, March 1<sup>st</sup>, 2019, Iowa State University, Ames IA

## **Honors and Awards**

Iowa State out of State Gold Scholarship | 2015-2018

- Award given to students that are from out of state and show an academic excellence.

College of Ag and Life science Kiley and Marie Powers Scholarship

- Award for academic achievement and an observed interest in agriculture

Teressa Bly Scholarship

- Award given to student who is active in their community in volunteering and leadership. They have a strong academic achievement and strive for their best in and out of the classroom.

## **Leadership and Volunteerism**

- The Salt Company Small Group Leader: 2017- Present
- Iowa State Football stadium Clean-up: 2015-2019
- Ames Elementary School Weekly volunteer: 2016-2017
- Linden Hall Floor Council Chairman: 2016-2017
- Maple Hall Floor Council Chairman: 2015-2016