

RACHEL WADE

806-834-0486 | Rachel.B.Wade@ttu.edu

MACHINE LEARNING, DATA VISUALIZATION, MODELING, ANALYSIS, PROBLEM-SOLVING

EXPERIENCE

Research Data Manager & Economist – Plant and Soil Science

Texas Alliance for Water Conservation, Texas Coalition for Sustainable Integrated Systems,
Water Center
Texas Tech University | Lubbock, TX 2025 – Present

Data Analyst & Economist – Plant and Soil Science

Texas Alliance for Water Conservation, Texas Coalition for Sustainable Integrated Systems,
Water Center
Texas Tech University | Lubbock, TX 2024 – 2025

Research Assistant – Agricultural and Applied Economics

Texas Tech University | Lubbock, TX 2023 – 2024

Student Assistant – Agricultural and Applied Economics

Texas Tech University | Lubbock, TX 2019 – 2022

EDUCATION

PhD Agricultural and Applied Economics

Texas Tech University | Lubbock, TX Aug 2025 – Present
Davis College of Agricultural Science and Natural Resources

MS Agricultural and Applied Economics

Texas Tech University | Lubbock, TX Jan 2023 – Dec 2024
Thesis | Study Abroad | Davis College of Agricultural Science and Natural Resources

BS Agricultural and Applied Economics

Texas Tech University | Lubbock, TX Aug 2019 - Dec 2022
Honors | Magna Cum Laude | Davis College of Agricultural Science and Natural Resources

BBA General Business

Texas Tech University | Lubbock, TX Aug 2019 - Dec 2022
Honors | Magna Cum Laude | Rawls College of Business

SKILLS

Software:

- R
- Python
- Tableau
- IMPLAN Economics Impact Analysis
- SPSS Statistical Analysis
- Qualtrics Survey Maker
- Jotform – Form Builder

Applications:

- Microsoft Office (Excel, Word, PowerPoint, etc.)
- Google Applications (Sheets, Slides, Drive, etc.)
- Adobe (InDesign, Photoshop, etc.)

Operating Software:

- Apple
- Windows
- Google

PATENTS

Preliminary Patent - A Machine-Learning Economic Threshold Approach to Soil Moisture and Irrigation Management

Rachel Wade | Darren Hudson | Krishna Jagadish | Syed Badruddoza June 2025

GRANTS

Assess key drivers that impact dryland cotton production systems in Texas, OK, and Kansas

Cotton Incorporated | Texas Tech University

2025

PAPERS

Soil Moisture Using Machine Learning Techniques

Master's Thesis | Rachel Wade | Darren Hudson | Krishna Jagadish | Syed Badruddoza

Oct 2024

Estimated Regional Economic Impacts of the 2022 Drought in the Texas Northern and Southern High Plains: Row Crop Agriculture (BP-02-23)

Rachel Wade | Darren Hudson

Jan 2023

Preliminary Assessment of the Economics Losses to the Cotton Ginning Industry and Regional Economic due to the 2022 Drought on the Texas High Plains (BP-04-22)

Darren Hudson | Rachel Wade

Aug 2022

The Regional Economic Benefits of Crop Insurance During Drought: Cotton on the Texas High Plains (BP-03-22)

Rachel Wade | Darren Hudson

Aug 2022

The Regional Economic Impacts of Coronavirus Food Assistance Program 2.0 on Row Crop Agriculture in the Texas High Plains (BP-02-22)

Rachel Wade | Darren Hudson

Apr 2022

PRESENTATIONS

Soil Moisture Prediction Using Machine Learning Techniques

Southern Agricultural Economics Association Conference | Irving, TX

Feb 2025

Beltwide Cotton Conference | New Orleans, LA

Jan 2025

Chinese Consumer Cotton Textile Demand

Beltwide Cotton Conference | Fort Worth, TX

Jan 2024

Estimated Regional Economic Impacts of the 2022 Drought in the Texas Northern and Southern High Plains: Row Crop Agriculture

Beltwide Cotton Conference | New Orleans, LA

Jan 2023

POSTERS

Soil Moisture Prediction Using Machine Learning Techniques

Ogallala Aquifer Program Workshop | Lubbock, TX

Feb 2025

Conventional vs Late Planted Corn

TAWC Water College | Lubbock, TX

Jan 2025

AFFILIATIONS/MEMBERSHIPS

Agricultural Economics Graduate Student Association

Texas Tech University | Lubbock, TX

Dec 2021 – Dec 2024

Secretary (Sep 2023 – Sep 2024)

Phi Kappa Phi

Texas Tech University | Lubbock, TX

Mar 2020 – Dec 2022

Alpha Lambda Delta/Phi Eta Sigma

Texas Tech University | Lubbock, TX

Mar 2020 – Dec 2022

National Society of Colligate Scholars

Texas Tech University | Lubbock, TX

Mar 2020 – Dec 2022

Honors College

Texas Tech University | Lubbock, TX

Aug 2019 – Dec 2022

AWARDS/ACCOMPLISHMENTS

West Point Student Conference on U.S. Affairs (SCUSA)

Nov 2022

Photography in “Adventures in Study Abroad” Gallery and Virtual Exhibit

Sep 2022 – Oct 2022

Dean’s List

Spring 2020 – Summer 2021

Presidents List

Fall 2019 – Fall 2021