



Hurricane Helene debris and deposited sediments along the Nolichucky River, Washington County, TN, USA.

[MS or PhD GRA] Restoration of Agricultural Fields on Flood-Impacted Soils for Forage, Field Crop, and Vegetable Production

The University of Tennessee Institute of Agriculture (UTIA) is seeking a motivated Graduate Research Assistant (GRA) to join a multidisciplinary team conducting innovative research on restoring agricultural fields impacted by flood-deposited sediments along the Nolichucky River. This project is funded by the Agricultural Resources Conservation Fund (ARCF) through the Tennessee Department of Agriculture. Join our team to advance science-based solutions for agricultural sustainability in flood-impacted regions while gaining valuable experience in applied plant science research.

Position Focus:

This GRA position will focus on plant science, specifically developing strategies for vegetating sediments and establishing forages and crops in flood-affected fields. The successful candidate will work closely with a soil science graduate student and other team members to integrate soil and plant research into practical solutions for farmers. Project PI(s) include agronomists, vegetable and crop production specialists, and various other project related disciplines.

Responsibilities:

- Design and implement field trials to evaluate forage and crop establishment on flood-deposited sediments.
- Develop strategies for revegetating sediment-impacted fields, focusing on sand- and silt-dominated deposits.
- Collaborate with farmers on three designated research sites in Eastern Tennessee Counties, including:
 - A beef/hay operation,
 - A vegetable farm/agrotourism,
 - A mixed vegetable/row-crop farm.
- Conduct data collection and analysis for crop performance, soil-plant interactions, and environmental impacts.
- Assist in the development of outreach materials and recommendations for stakeholders.
- Present findings at extension events, conferences, and in peer-reviewed publications.

Qualifications:

- BS (or MS) degree in plant sciences, agronomy, or a related field.

- Interest in forage systems, crop establishment, vegetable crops, and field research.
- Strong organizational and communication skills.
- Preferred: Experience with field trials and working in agricultural settings.

Funding and Support:

- Full tuition, a stipend, and health insurance.
- Travel support for research activities.

Duration:

- Two academic years for MS, or three academic years for PhD, with flexibility to start research trials and other duties early. Start immediately upon acceptance possible with pay and benefits until academic responsibilities begin (Fall 2025-May 2027). This period may be adjusted or extended depending on the project and funding available at the discretion of the project PI(s) and Department of Plant Sciences.

Project Background:

The project addresses challenges posed by Hurricane Helene, which deposited extensive sediments on agricultural fields. Research will focus on managing sand- and silt-dominated sediments, overcoming soil crusting issues, and restoring fields for productive use. This work is critical to supporting local farmers and improving the resilience of agricultural operations along the Nolichucky River.

How to Apply:

Interested applicants should be prepared to share their intellectual curiosity and demonstrate their motivation and desire to learn on-the-job. Additional highly desirable qualifications that applicants can address in the letter of interest include experience in row crops, strong organizational skills, ability and self-motivation to work independently while accomplishing high quality tasks in a timely fashion. This project is time sensitive and an opportunity to begin program by working as a paid hourly employee before semester enrolment begins, possible start date March 15, 2025. Enrollment will begin for coursework in Fall 2025.

Submit the following materials as a single PDF:

1. Cover letter outlining your interest and qualifications for the position.
2. Resume/CV.
3. **Application Deadline:** [February 20, 2025].

Please submit your application packet to Dr. Bruno Pedreira at utbeef@tennessee.edu. If you have any questions about the GRA position or project, please contact Dr. Pedreira via email.

Resources:

UT Department of Plant Sciences- Graduate Student Resources

<https://plantsciences.tennessee.edu/graduate/#graduate-student-resources>

The UT Beef & Forage Center

<https://utbeef.com>

The UT Graduate School

<https://gradschool.utk.edu/>

Tips on Writing an Interest Letter

[Tips for Writing an Effective Statement of Interest Letter for Your Application to Graduate Studies](#)

The University of Tennessee

<https://utk.edu>

The **University of Tennessee** is a land grant university with an enrollment of over 27,800. The Plant Sciences Department is located on the Agricultural Campus with lab facilities, greenhouse space, and nearby field space to support active production research. The University of Tennessee also has ten research and education centers which facilitate statewide agricultural research. Knoxville, Tennessee is a vibrant community, with a population of approximately 183,270. This community boasts a thriving music and arts scene, along with plenty of opportunities.

The University of Tennessee is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA institution in the provision of its education and employment programs and services. All qualified applicants will receive equal consideration for employment without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, gender identity, age, physical or mental disability, genetic information, veteran status, and parental status.