

Prajina Neupane

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Key Skills and Competencies

Research Skills: Plant Phenotyping, Plant Bioassays Design, Greenhouse Management, DNA Extraction, qPCR and Quality Control, Plate Culture, Aseptic Lab Techniques, Bioinformatics, Data Collection and Analysis

Software skills: SAS (intermediate), QIIME2 (intermediate), RStudio (intermediate)

Other skills: Samples Handling and Shipping, APHIS-Regulated Sample Handling, Samples and Chemical Inventory Management, Lab Safety and Protocol Implementation, Record Keeping, Presentation and Communication of Data

Education

Texas A&M University

MS in Soil Science and Agronomy

CGPA: 4.0/4.0

College Station, TX

Dec 2025

Agriculture and Forestry University

BS in Agricultural Science

CGPA: 3.52/4.0

Bharatpur, Bagmati Province, Nepal

Dec 2022

Work Experiences

Texas A&M AgriLife Research & Extension Center

Research Assistant (RA) – Temp Casual

Overton, TX

Jan 2026 – Present

- Evaluate plant growth response and arbuscular mycorrhizal fungi (AMF) colonization in controlled environment conditions under various organic and synthetic treatments to determine favorable amendment for better AMF benefits
- Analyze soil and plant microbiomes under various amendments to identify key beneficial taxa and make informed crop management decisions
- Perform statistical analysis of crop performance data and prepare reports to guide treatment optimization and improve plant productivity

Texas A&M AgriLife Research & Extension Center

Graduate Research Assistant (GRA)

Overton, TX

Aug 2023 – Dec 2025

Project: Potential for Greenhouse Gas Mitigation and Soil-Borne Disease Management Through Organic Practices in Peppers

- Funded by USDA-SCRI

- Designed and led controlled plant bioassays in greenhouse systems, including experimental setup, treatments application, and data analysis, to utilize beneficial microbiome in soil for suppression of soil-borne pathogens in peppers
- Assessed nitrogen (N) dynamics through ion chromatography, N₂O flux measurement, and interpretation of high-throughput sequencing data to evaluate soil-plant nitrogen dynamics
- Conducted statistical analysis and interpretation of data, prepared technical reports and presented to wide audiences in national and regional conferences

National Plant Breeding and Genetics Research Centre

Student Intern

Lalitpur, Bagmati Province, Nepal

Feb 2023 – Mar 2023

- Supported field-based disease screening trial by conducting yellow stripe rust disease scoring, collecting agronomic and phenotypic data, and maintaining accurate datasets to inform wheat breeding selection decisions
- Performed manual emasculation and controlled cross-pollination in BNI-Munal wheat lines to support varietal development, evaluation, and release programs

Agriculture and Forestry University

Undergraduate intern

Bharatpur, Bagmati Province, Nepal

Feb 2022 – Jun 2022

- Designed and led a field experiment evaluating zinc treatments in an organic potato production system, overseeing plot layout, treatment application, in-season data collection and analysis
- Collected and analyzed agronomic and yield data, applying appropriate experimental design and statistical analysis methods to generate decision-quality datasets, resulting in a first-author peer-reviewed publication

Teaching Experience

Texas A&M University, Department of Soil and Crop Sciences

Graduate Teaching Assistant (GTA)

College Station, TX

Jan 2024 – May 2024

- Trained and supervised student groups in experimental setup, data collection, basic statistical analysis, and laboratory techniques, reinforcing accuracy, reproducibility, and protocol compliance
- Delivered laboratory safety training and equipment instruction to non-science majors, ensuring full compliance with safety protocols and maintaining a zero-incident safety record across two course sections

Awards and Accomplishments

- **DOW-AGLS Graduate Assistantship in Plant Protection (2024/25)**
- **First place, University-Wide 3-minutes Thesis (3MT) competition - Master's Division (2025)**
Recognized for excellence in communicating complex scientific research to multidisciplinary and non-technical audiences

Publications

- **Neupane P., Bhatta, S., Kafle, A., Adhikari, M. (2025).** Evaluation of Foliar Application of Zinc at Different Doses on Potato (*Solanum tuberosum* L.) Growth, Yield, and Economic Feasibility in Dolpa of Nepal. *Technology in Horticulture*, 5.

- Adhikari, M., Sah, S. K., Ghimire, B., & **Neupane, P.** (2023). Performance of hybrid maize at different nitrogen levels in spring season at Badhaiyatal area of Bardiya District, Lumbini Province, Nepal. *Nepal Agriculture Research Journal*, 15(1), 136–151.
- Adhikari, M., **Neupane, P.**, Rokaya, L., Poudel, S., Marahatta, S., & Shrestha, J. (2022). Effect of Plant Spacing and Genotype on Growth, Yield, and Yield-Related Traits of Rice Varieties. *Russian Journal of Agricultural and Socio-Economic Sciences*, 123(3):89-98.