

Harshita Mangal

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EDUCATION

Ph.D. Student in Plant Breeding and Genetics in Agronomy Department
University of Nebraska, Lincoln | 2023- Present

B.Sc. in Agriculture Hons.
Integral University, India | 2018-2022

PROFESSIONAL EXPERIENCE

Graduate Research Assistant

PhD, Student

2024-Present

Schnable Lab, University of Nebraska, Lincoln

- Investigated and evaluated the **flowering-time pathway** to elucidate its role in regulating flowering time in sorghum.
- Generated datasets **gene-expression** for High and Low Nitrogen treatments in sorghum.

Graduate Research Assistant

Master's Student

2023-2024

Schnable Lab, University of Nebraska, Lincoln

- Developed a comprehensive **gene-expression dataset** from RNA-Seq data for **800 sorghum genotypes** utilizing diverse germplasm resources.
- Generated a high-resolution **SNP dataset** from RNA-Seq data for **800 sorghum genotypes** to support genomic analyses.

Internship

2022(6months)

Agricultural Extension Project

- Worked in the field with farmers and analyzed the input requirement and the agricultural productivity with an objective of maximizing the productivity; Gained exposure to data management, problem analysis, and systematic problem-solving.
- Addressed issues including excessive urea use as fertilizer by local farmers and its effects on the soil and plants; Examined the cause of the overuse of that fertilizer.

Teaching

2020-2022

Bodhi Tree Foundation

- Managed to effectively plan and coordinate my academic studies along with this job; Improved prioritization, decision-making, strategic thinking, and Time management skills to resolve issues such as schedule conflicts.
- Created collaborative classroom experience through communicating and sharing ideas on topics not only related to academics but also to real-world issues

PUBLICATIONS

Shrestha N, **Mangal H**, Torres-Rodriguez JV, Tross MC, Lopez-Corona L, Linders K, Sun G, Mural RV, Schnable JC (2025) Off-the-shelf image analysis models outperform human visual assessment in identifying genes controlling seed color variation in sorghum. The Plant Phenome Journal doi: 10.1002/ppj2.70013 bioRxiv doi: 10.1101/2024.07.22.604683

Mangal H, Linders K, Turkus J, Shrestha N, Long B, Kuang X, Cebert E, Torres-Rodriguez JV, Schnable JC Genes and pathways determining flowering time variation in temperate adapted sorghum. The Plant Journal doi: <https://doi.org/10.1111/tpj.70250>

SELECTED AWARDS

University of Nebraska, Lincoln | Plant Science and Innovation- Retreat | Oral Presentation| 2024

University of Nebraska, Lincoln| Nebraska Plant Science Symposium | Flash Talk | 2024

University of Nebraska, Lincoln| Nebraska Plant Science Symposium | Poster Presentation | 2024

PROFESSIONAL CONFERENCE \ WORKSHIP PARTICIPATION

Oral Presentations:

Corteva Delta Program, Jhonston Iowa| Oral Presentation | 2025

Plant and Animal Genome Conference, Asia India| Oral Presentation | 2025

Norman E. Borlaug International Dialogue, World Food Prize, Des Moines, Iowa | Flash Talk | 2024

Plant Science and Innovation- Retreat | Oral Presentation | 2024

8th International Plant Phenotyping Symposium | Flash Talk | 2024

Plant Science and Innovation Research Group Meeting | Oral Presentation | 2023

Poster Presentation:

Maize Genetics Conference | 2025

Norman E. Borlaug International Dialogue, World Food Prize | 2024

Plant Science and Innovation- Retreat | 2024

8th International Plant Phenotyping Symposium | 2024

Sixth International Workshop on Machine Learning for Cyber Agricultural Systems (MLCAS) | 2024

CROPS 2024 By HudsonAlpha Institute for Biotechnology | 2024

Nebraska Plant Science Symposium | 2024

Maize Genetics Conference | 2024

Plant Science and Innovation- Retreat | 2023

CONTRIBUTIONS TO SCIENTIFIC COMMUNITY

University of Nebraska, Corteva Plant Science Symposium Committee | 2025

- Gained project management, organizational, and teamwork skills through coordinating the Nebraska Plant Science Symposium.
- Experience in planning event logistics, managing communication with speakers, and handling outreach and promotions.

Agronomy and Horticulture Graduate Student Association, Graduate Chair | 2025-2026