

Field Day: UAS Community & Plant Stress Ontologies - AG2PI “Coconut” Grant Outcomes



Facilitating community in unoccupied aerial systems knowledge, communication, and data processing

Unoccupied (Unmanned, Uncrewed) Aerial Systems (UAS) also called drones, are tools that can provide field-based phenotyping and phenomics derived insights into plant breeding, biology, genetics and agronomy. The goal of our project is to advance knowledge and activities through promoting UAS data collection, processing, analysis, and community discussions. This project is working to ease the learning process of beginners using UAS tools, as well as sharing the advancements of experienced users on the forefront of innovation and discovery.

Presenter:



Seth Murray is a Professor and Eugene Butler Endowed Chair in the Department of Soil and Crop Sciences at Texas A&M University. His research focuses on phenomics & quantitative genetics methodologies and applications to his applied public corn breeding program.

Jose L. Landivar Scott is a Senior Research Associate at Texas A&M AgriLife Research and Extension Center.



Mahendra Bhandari is an Assistant Professor at Texas A&M AgriLife Research and Extension Center. His research focuses on the intersection of remote sensing, agronomy, and data analytics for crop phenotyping and precision agriculture.



Plant Stress Ontology: Data Standards & Knowledge Graph

Plant stress refers to any environmental or biological factor that impairs the normal functioning and growth of a plant. The species agnostic reference Plant Stress Ontology we are working on will provide a standardized way to describe and classify different types of plant stresses, their manifestation, measurements, observations, affected plant parts and growth stages, and curated images, phenotype data tables and known molecular interactions. Adoption of this new framework will provide consistency in annotation and data collection in phenomics projects, enable open discussion on sharing information about plant stress responses observed/recorded by different research groups and improve interoperability among online databases.

Presenter:



Pankaj Jaiswal is a Professor in the Department of Botany and Plant Pathology at Oregon State University. His research focuses on studying the processes of flowering time and seed development in plants.

February 21, 2024

10:30 AM–12:00 PM
(Central Time, UTC–6)

Purpose:

Discussion of outcomes from two AG2PI “coconut” seed grant projects as one works to build a UAS community and the other builds common language for plant stress responses and adaptations.

Register for this [Zoom](#) virtual meeting:

<http://tinyurl.com/AG2PI-FD29>

Upon registration, you will receive a confirmation email with information about joining the meeting.

A recording will be available at a later date at: ag2pi.org/



Agricultural Genome to Phenome Initiative (AG2PI) is funded by USDA-NIFA awards 2020-70412-32615, 2021-70412-35233, and 2022-70412-38454.