



TEXAS TECH UNIVERSITY

Department of Plant & Soil Science™

PSS Student Research Symposium

Date: April 5, 2021

Location: Virtual - Zoom

Call for Abstracts

The Department of Plant and Soil Science invites graduate and undergraduate students to present their work at the PSS Student Research Symposium. This symposium is designed to provide an annual opportunity for students at all stages of their programs to present their research and receive feedback from peers. Graduate and undergraduate students who are conducting research and are planning to present their work at major conferences are especially encouraged to submit an abstract. Graduate students are invited to submit abstracts for either oral or poster presentations. Undergraduate students are invited to submit abstracts for poster presentations. In the case of numerous abstracts and limited time, the symposium planning committee may need to designate your presentation format at time of acceptance. Presenters will be evaluated anonymously by PSS faculty and staff, with the opportunity for students to receive feedback on presentations. Recognition and awards will be given to top student presenters.

Guide for Presenters

Please indicate at the top of your abstract whether you would prefer an oral or poster presentation format. All presentations will be presented live via Zoom during the virtual symposium.

Oral format: Presentations should be 12 minutes with an additional 3 minutes for questions.

Poster format: Presentations should be 3 minutes with an additional 3 minutes for questions.

Poster presenters should plan to send an electronic copy of their poster that will be made available for attendees to view separately in addition to the live presentation.

Abstracts are limited to 300 words (see requirements on next page), and are **due by 11:59 pm on Monday, March 1, 2021**. Please email your abstract to: lindsey.slaughter@ttu.edu. All students are required to carbon copy their advisor and presentation coauthors on the email when submitting an abstract. Abstracts submitted without prior approval or knowledge of the student's major advisor and the listed coauthors will not be accepted.

The final program and abstracts will be distributed in March 2021.

We look forward to seeing you at the symposium!

Required Abstract Information

- Student/Presenter Name, degree program level, PSS specialization
- Preferred presentation format (graduate students may choose between oral and poster)
- Presentation title
- Presentation authors
- Author affiliations
- Abstract text (limited to 300 words)
 - Briefly summarize the background/rationale, objectives/hypotheses, methods, major findings, conclusions, and implications of the study.

Example Abstract and Formatting

Student/Presenter: Zach Hinds, Ph.D. student, Fibers & Biopolymers

Preferred format: Oral presentation

Exploring Variation in AFIS Length Distribution of 8 F₂ Populations

Zach Hinds¹, Brendan Kelly^{1, 2}, and Eric Hequet¹

¹Texas Tech University, Department of Plant & Soil Science and ²Texas AgriLife Research

Abstract: Cotton fiber length distributions produced from the Advanced Fiber Information System (AFIS) have been shown to better predict yarn quality compared to individual length parameters generated from the High Volume Instrument (HVI). The AFIS length parameters have the potential to provide breeders with additional information needed to select germplasm with improved spinning performance. However, the possibility of improving a trait through breeding only exists when there is genetic variation for the trait in question. In this study, 8 F₂ cotton populations, which were generated from crosses of obsolete cotton varieties, were explored using a multivariate statistical approach. The obsolete varieties were selected for this experiment because their development predates modern HVI testing, which may have contributed to a further reduced variation for fiber quality traits. Variation was seen both within a given population and across populations with the types of variation different for the two comparisons. These findings suggest that using the genetically diverse population of this experiment, there is variation in fiber length distributions that can be utilized by cotton breeders to genetically improve this important fiber quality parameter.