Graduate Research Assistantship in Plant Breeding

The Department of Plant and Soil Science at Texas Tech University is seeking a highly motivated PhD student to work on a project funded by NIFA-USDA (National Institute of Food and Agriculture-U.S. Department of Agriculture) beginning the **Spring semester of 2023 (January 11, 2023).** The project is a collaborative research between Texas Tech University and Texas A&M Agrilife Research.

Project Description

The overall goal of the project is to improve the yield and blast resistance of the elite, Texas-bred rice cultivar Presidio using a marker-assisted backcrossing pipeline. Presidio is a conventional inbred rice cultivar that is widely planted in Texas. It has been grown commercially for the past 16 years and has consistently met the requirements of the rice industry for superior agronomic and grain quality traits. These include superior ratoon yield potential, high milling yield, low chalkiness, and resistance to blast races IH1, IG1, IC17, and IE1K as conferred by the blast resistance gene *Piz*. Since the release of Presidio in 2005, it has fallen behind in yield compared to new cultivars that have higher yield potential but lack Presidio's blast resistance. To address the requirements for high yield and blast resistance in rice grown in the US, the project aims to introgress natural alleles that have been shown to increase grain number and number of primary branches per panicle, as well as confer broad spectrum blast resistance in the genetic background of Presidio. Improving these two target traits in Presidio will extend the longevity of this widely accepted cultivar while satisfying requirements for high yield and blast resistance in rice.

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Qualifications

This position requires a BS or MS Degree in Genetics, Plant Breeding or any other related field. Recruitment for the position will be based on the standards of the Department of Plant and Soil Science in hiring graduate students (i.e., undergraduate grade point average, standardized test scores, recommendation letters, and interview performance), although preference will be given to highly qualified students belonging to underrepresented minorities and the economically disadvantaged.

For more information, please contact:

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