

TEXAS A&M PLANT BREEDING BULLETIN -- March 2013

Our Mission: Educate and develop Plant Breeders worldwide.

Our Vision: Alleviate hunger and poverty through genetic improvement of plants.

Steve Hague joined the faculty as an Assistant Professor in 2006 with a 70% appointment in Plant Breeding, cotton, and a 30% appointment in teaching. In 2008, Steve was asked to take on additional breeding activities in oilseed crops, essentially from the perspective as potential bioenergy crops for Texas. While the preponderance of his breeding activities remains in cotton, he devotes time to evaluating and breeding castor, sunflower, and guayule.

Dr. Hague's cotton breeding program is focused on developing high-yielding germplasm with enhanced drought tolerance. Steve has developed a number of germplasm pools through the use of interspecific hybridization between *Gossypium hirsutum* (upland) and *G. barbadense* biotype Sea Island and through a series of complex crosses of elite parents from publically available germplasm and germplasm developed by Texas A&M AgriLife Research. Major emphasis is placed on identifying segregating progeny with specific yield components, drought resistance, and fiber traits. Steve devotes considerable time to the study and identification of drought resistance in cotton. He uses indices that include comparisons of yield, vegetative growth, and fiber properties under drought stress and non-drought stress.

Steve collaborates with a number of other scientists, including Dr. Keerti Rathore in the transfer of Keerti's glandless-seed-glanded-plant trait, i.e., no gossypol in the seed but



foliage contains normal gossypol. He has collaborative work with Greg Sword, Michael Brewer, and Allen Knutson in Entomology investigating resistance to the cotton fleahopper.

Dr. Hague contributes to the teaching program in plant breeding and the Department of Soil and Crop Sciences by leading SCSC 304, our undergraduate Plant Breeding and Genetics course that is taken by many of our undergraduate students. This class explores basic genetic principles and plant breeding practices such as biotechnology, phenotypic selection methods, and the seed industry in general. Steve will develop and deliver a new course in International Cropping Systems beginning in 2013/14 that will address the challenges and opportunities in international agronomy, and he leads a Production Agronomy Experiences' course that introduces students to the support industries of agronomy and includes a weekend tour of agriculture in the Mississippi River Delta. Steve has developed study abroad courses to CIMMYT in Mexico and to Australia. He is also serving on an Undergraduate Studies committee to develop internship guidelines for all TAMU undergraduate students.

One last aspect of Steve's devotion to undergraduate education in Soil and Crop Sciences is that he has been co-sponsor and is now sponsor of the Texas A&M University's undergraduate Agronomy Society and is the American Society of Agronomy's National Advisor for the Students of Agronomy, Soils, and Environmental Science (SASES).

At the graduate level, Steve has mentored four graduate students to completion: Greg Berger currently is an Assistant Professor with the University of Arkansas Agricultural Experiment Station, Jenny Clement works for CSIRO in Australia, Rosa Jauregui is a soybean breeder with Monsanto in Argentina, and Neha Kothari is a post doc with Dr. Jane Dever. He currently advises one Ph.D. candidate who is a Cotton Incorporated Graduate Fellow and two M.S. candidates.

Other News

Recent campus visitors with the Plant Breeding graduate students:

Dr. Wenwei Xu: Corn Breeder with Texas A&M AgriLife at Lubbock

Dr. David Becker: Head of U.S. Breeding, Cotton and Rice—BayerCrop Sci.

Mr. Steve Carlson: Monsanto Technology Development

Dr. Shahal Abbo: Professor, Plant Breeding, Hebrew Univ., Jerusalem, Israel

Reminder: NAPB Annual Meeting, June 2-5, 2013 in Tampa, FL

The annual meeting is an opportunity for breeders and allied scientists to stay updated on recent innovations in plant science and to discuss public policy issues relevant to plant breeding. The meeting also provides an important venue for graduate students to present their research, meet with potential employers, and become acquainted with plant breeding graduate students from other universities. This year's meeting will be hosted by the University of Florida.

More information and registration for the meeting is available at www.plantbreeding.org.

NAPB is an organization of public and private sector individuals associated with or interested in the science or business of plant breeding. It is a strong proponent for maintaining and enhancing public plant breeding and plant breeding education programs.

Distance Education in Plant Breeding at Texas A&M University

This program is an extension of the existing Plant Breeding programs offered by the Department of Soil and Crop Sciences and the Department of Horticultural Science at Texas A&M



University. We offer a non-thesis option M.S., thesis option M.S., and Ph.D. in Plant Breeding completely at a distance to students unable to study on-campus in a traditional setting. This program is designed for individuals employed in private industry, CGIAR centers, government agencies, non-government organizations, and other agriculture professionals who need and desire additional knowledge and training in plant breeding but cannot relocate to a university campus. Distance Education students will take advantage of the same curriculum available to on-campus students with identical course content and professors. Our unique program is designed to deliver a high quality plant breeding education to students across the globe. No campus visit is required. For more information visit <http://soilcrop.tamu.edu/academics/distance-education/> or contact LeAnn Hague, Distance Education Coordinator in Soil and Crop Sciences at leann.hague@tamu.edu or (979)845-6148.

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