

TEXAS A&M PLANT BREEDING BULLETIN
July 2010

“I enjoy teaching undergraduate genetics because it allows me an opportunity to interact with young students and learn more about American culture. This job also provides me with the opportunity to work closely with producers and industry people. As a plant breeder, the most exciting thing is that we can create new lines and hybrids that do not exist currently that meet the needs of an ever-increasing population.”



Dr. Wenwei Xu conducts corn breeding research at the Texas A&M AgriLife Research and Extension Center in Lubbock and teaches Fundamental Principles of Genetics and Advanced Plant Breeding in Plant and Soil Science Department at Texas Tech University. Wenwei received his B.S. degree in Agronomy from Gansu Agricultural University in 1982, M.S. degree in Plant Breeding and Genetics from Chinese Academy of Agricultural Sciences in Beijing in 1985, and Ph.D. in Genetics from the University of Missouri in Columbia. He joined AgriLife Research in 1998 and holds a 25% joint-appointment with Texas Tech University. He served as the vice-president and president of the Texas Chapter of the American Society of Agronomy, and was a member of the USDA technical steering group for germplasm enhancement of maize from 2004-2009. From 1996 to 1998, he worked for DeKalb Genetics Corporation.

Wenwei focuses on developing multiple stress tolerant corn germplasm lines for food, feed, and/or silage purposes, using conventional and molecular breeding techniques. Wenwei targets such traits as yield potential, drought and heat tolerance, corn earworm resistance, aflatoxin resistance, and mite resistance, along with geographic stability and adaptation to southern environments. He is introgressing desirable genes from tropical and subtropical corn germplasm

into temperate-adapted backgrounds. His group has established methods for field evaluation of drought and heat tolerance, rooting systems, and hydraulic lift as a drought tolerance mechanism. Wenwei has released four improved germplasm lines of corn that express good drought and heat tolerance and exhibit excellent yield potential. In addition, a number of his new inbred lines have been licensed to seed companies. He is collaborating with seed companies in a collaborative effort to bring his material into commercial hybrids for the benefit of Texas' corn producers. Wenwei also manages and conducts the state silage performance tests in the Texas High Plains.

Other than plant breeding, Wenwei enjoys reading and traveling. In May of this year, Wenwei was invited by the Vietnamese Ministry of Agriculture to conduct a corn breeding workshop in Hanoi. Over 90 people participated in the workshop. In September, Wenwei will travel to Zurich, Switzerland where he will make a presentation on Developing Drought and Heat Tolerant Crops to Mitigate the Effects of Climate Change at a Zurich-Basel Plant Science Center.



Example of Wenwei's efforts to develop drought tolerant corn is shown in this picture. The line on the right maintains turgor and chlorophyll (stay green trait) while other line in the nursery exhibit advanced senescence under severe drought.

Monsanto supported PhD Graduate Assistantships:

Texas A&M University Department of Soil and Crop Sciences and Monsanto announces the availability of Monsanto Ph.D. Graduate Assistantships in Plant Breeding. Applicants must have earned a minimum 3.5 GPA on their M.S. course work, demonstrated an aptitude for research, and meet all other requirements for admission to Texas A&M, including completion of the GRE. Successful candidates will be required to register for nine hours of course work each fall and spring semester and six hours during the summer.

Annualized salary is \$ 24,000, all tuition and required fees are paid by the assistantship, and group health insurance is available. Dissertation research will be in the area of crop improvement through the application of breeding and genetics. Additional information and application protocol can be found at <http://soilcrop.tamu.edu> or by contacting Dr. Wayne Smith, Soil and Crop Sciences, 2474 Texas A&M University, College Station, TX 77843-2474, (979-845-3450 or cwsmith@tamu.edu).

Reminder: Registration is now open for the 4th Annual National Association of Plant Breeders meeting to be held August 15 - 17, 2010 in Johnston, Iowa. The 2011 NAPB will be held at College Station, Texas on the campus of Texas A&M University in May, 2011. Reminders and additional information on the 2011 meeting will be noted in future Plant Breeding Bulletins.

Please direct comments concerning this bulletin to Wayne Smith, cwsmith@tamu.edu or 979.845.3450.