

# Keerti Rathore Receives 2011 Cotton Genetics Research Award

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ORLANDO, FL – Dr. Keerti Rathore, a Texas A&M University associate professor and researcher, is the recipient of the 2011 Cotton Genetics Research Award.

The announcement was made here on January 6 during the 2012 Beltwide Cotton Improvement Conference, which convened as part of the National Cotton Council-coordinated 2012 Beltwide Cotton Conferences. In recognition, he received a plaque and a monetary award.

Since 2003, Dr. Rathore has worked as an associate professor in A&M's Soil and Crop Sciences Department and its Institute for Plant Genomics and Biotechnology. He also has served as director of the Institute's Laboratory for Crop Transformation since 1997. Evidence of Rathore's depth and breadth of knowledge in molecular biology and its application to cotton is highlighted by his 26 peer reviewed journal articles, 11 book chapter contributions and three granted patents.

A significant research highlight is Rathore's work on the reduction in cottonseed of gossypol, which renders the seed unfit for human and monogastric animal consumption. According to Dr. Don Jones, director Agricultural Research for Cotton Incorporated and a nominator, Rathore's ultimate goal is to create cotton plants that produce seeds that contain gossypol at levels below what is considered safe by the FDA while maintaining normal levels of gossypol and related chemicals in the foliage,

floral parts, boll rind, and the roots for defense against insects and pathogens.

Another nominator and co-worker, Dr. Wayne Smith, a professor – cotton breeding and associate head, agreed the recipient was deserving of the award on the basis of his gossypol-free seed development through gene silencing, specific promoter and gene insertion technologies.

"Keerti has lines that show 95% reduction in seed gossypol that makes these seed, an excellent source of oil and protein, edible by humans," Smith said. "This effort could lead to a new, high quality food source for people around the world."

Smith noted that Rathore's work was reported in the *Proceedings of the National Academy of Sciences* as well as in such news agencies as the British Broadcasting Company, *Wall Street Journal*, *Scientific American*, *National Geographic*, and most recently, *Time*.

Rathore's research also has flourished in the areas of resistance to fungal pathogens and drought resistance. Rathore's accomplishments of late "reflect a solid cotton transformation program that has made significant progress in developing new and exciting genotypes of upland cotton ...," Smith said.

After beginning his education in India by earning his B.S. in Animal Sciences/Plant Sciences from Rajasthan University and his M.S. in Plant Biochemistry, Physiology, Cell Biology, Ecology, Taxonomy, Anatomy from Gujarat University, Rathore obtained his Ph.D. in Plant Physiology from Imperial College, University of London. Before joining A&M, he worked as a postdoctoral research associate and a research scientist at Purdue University for 10 years.

U.S. commercial cotton breeders have presented the Cotton Genetics Research Award for more than 40 years to a scientist for outstanding basic research in cotton genetics. The Joint Cotton Breeding Committee,

comprised of representatives from state experiment stations, USDA, private breeders and the National Cotton Council, establishes award criteria.

Source: National Cotton Council