

ICGI Breeding & Applied Genomics Workgroup Co-Chair Candidate

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Dr. Mauricio Ulloa is a Research Geneticist at the Plant Stress and Germplasm Development Research Unit, Lubbock, TX and his research efforts focus on developing/integrating approaches to accelerate the selection of superior or improved cotton lines through conventional breeding, genetics, plant physiology, and genomics research. Cotton improvement includes better stress/drought tolerance and disease resistance (such as Fusarium wilt race 4 – FOV4), and yield and fiber quality. Declining levels of available water for irrigation of crops essential for the well-being of the people of the U.S., as well as, existing and new emerging pest and disease threats have led us to identify and develop cultivars that can more efficiently use available soil water and defend/protect against pest and diseases. Today, with our ability to utilize large data sets and the new analytical-omics tools (genomics, proteomics, transcriptomics, metabolomics, ionomics, etc.) the two disparate crop improvement strategies are merging and sharing both germplasm, database and analytical resources. Tremendous synergy occurs with this effort because plant stress is a response to injury from biotic or abiotic assault which shares in some instances similar defense mechanisms. As a member of the ICGI for many years, Dr. Ulloa would be happy to represent the Breeding & Applied Genomic group and to provide assistance to accelerate the advancement of these new technologies and tools for the improvement of yield and fiber quality, and stress and disease tolerance of the cotton crop.