A GLOBAL VIEW OF COTTON GERMPLASM RESOURCES

B. T. Campbell **USDA-ARS** Florence, SC S. Saha J. N. Jenkins **USDA/ARS** Mississippi State, MS W. Park **USDA-ARS** Florence, SC **R.** Percy J. Frelichowski **USDA-ARS College Station**, TX C. D. Mavee V. Gotmare **Central Institute for Cotton Research** Nagpur, India D. Dessauw M. Giband CIRAD **Montpellier Cedex 5, France** X. Du Y. Jia Cotton Research Institute, Chinese Academy of Agricultural Science Anyang, China G. A. Constable **CSIRO Plant Industry** Narrabri 2390, Australia S. Dillon Australian Tropical Grains Germplasm Centre Queensland, Australia I. Abdurakhmonov A. A. Abdukarimov S. Rizaeva A. A. Abdullaev **Institute of Genetics and Plants Experimental Biology** Tashkent, Uzbekistan P. Barroso L. V. Hoffmann **EMBRAPA** Campina Grande, Brazil J. G. Pádua **EMBRAPA** Brasilia, Brazil

Abstract

Without global, collaborative efforts to collect, protect, and secure cotton germplasm, the rarest and most unique cotton germplasm resources are vulnerable to extinction. Global cotton germplasm resources are important sanctuaries of important genes and genetic variability that can be used in the future to improve cotton production systems and provide genetic tolerance to emerging diseases and pests. This report describes a unique collaborative effort among the germplasm collection centers of major cotton growing countries to document the cotton germplasm resources at the global level. This report emphasizes the importance of international collaboration to protect, secure, and evaluate the global cotton germplasm resources. The status of several large cotton germplasm collections

representing a large portion of the curated cotton germplasm resources worldwide, including those from the US, India, France, China, Australia, Uzbekistan, and Brazil, is described. The contents, maintenance methods, and availability of each germplasm collection are discussed. Future concerns and opportunities are discussed that aim to protect and secure the global cotton germplasm resources within a collaborative, multi-national framework. We expect that this report will initiate multi-national, collaborative efforts to collect, preserve, evaluate and utilize global cotton germplasm resources to address the current and future needs of the global cotton community.