2004 BELTWIDE COTTON CONFERENCES, SAN ANTONIO, TX – JANUARY 5-9

REGENERATION AND TRANSFORMATION OF LOCAL COTTON CULTIVARS OF UZBEKISTAN

S.A. Djataev, Abdusattor Abdukarimov, M. Yakubov, A. Pilipenko, S. Kim, Z. Buriev, and I. Abdurakhmonov
Institute of Genetics and Plant Experimental Biology
Academy of Sciences of Uzbekistan

Abstract

The main problem of cotton breeding is the development of new productive elite varieties with resistance to agricultural pests and unfavorable environmental factors, early maturing, superior fiber quality and the other useful properties. Moreover, in Uzbekistan where soil salt and pollution have been highly increased and water reservations have been decreased, we need to breed productive salt resistant and drought tolerant varieties, growing in strict stress conditions. These problems can be solved using conventional breeding methods; however, use of genetic transformation methods in combination with conventional breeding accelerates development of elite cotton varieties adapted to various conditions of Uzbekistan.

Although genetic transformation methods are being effectively used to obtain transgenic cotton cultivars with improved agronomic traits in worldwide, they are not always effective for some local varieties. Therefore, development of transformation techniques for our local varieties is important for cotton breeding program in Uzbekistan. We developed transformation techniques for our local commercial cotton varieties. Four commercial varieties of Uzbekistan- Gulbahor, AN-Bayovut-2, S-6524, and S-4880 were successfully regenerated. Using *Agrobacterium*-mediated transformation through somatic embryogenesis herbicide resistant transgenic plants have been obtained.