IMPROVEMENT OF UPLAND COTTON THROUGH INTERSPECIFIC HYBRIDIZATION: ANALYZE OF THE FIBRE FINENESS OF BI- AND TRISPECIFIC HYBRIDS INVOLVING G. LONGICALYX

Guy Gustave Mergeai
J. P. Baudoin
O.N. Konan
Gembloux Agricultural University
Gembloux, Belgium

Abstract

The diameter and the ribbon width of swelled fibers produced by different interspecific hybrids involving G. longicalyx were assessed using an optical microscope. The results of these analyses show that G. longicalyx contains genes that reduce drastically the diameter of the fiber when associated to G. hirsutum genome. A same level of decrease of the diameter of the fiber was observed for the fibers produced by (G. hirsutum x G. longicalyx)$^2$ hexaploid and [G. hirsutum x G. thurberi)$^2$ x G. longicalyx] trispecies hybrid. The G. longicalyx genes inducing a drastic reduction of the fiber diameter were introgressed in 4 of the 12 F1 plants produced by crossing the HTL hybrid to G. hirsutum and in about 10 % of their BC1 progeny (2 BC1 plants out of 15 expressed the trait).