

**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).