GENOTYPE IDENTIFICATION IN DURUM WHEAT’S DNA MIXTURE BY AFLP IN FLUORESCENCE

SCIACCA F.*, FICHERA C.**, DI SILVESTRO S.**, PALUMBO M.*

*) C.R.A. Experimental Institute for Cereal Research, Catania, Via Varese 43, 95123 Catania (Italy) - Tel: +39.095.350388 - Fax: +39.095.361355 - isce.ct@entecra.it
**) Science and Technology Park of Sicily – Zona Industriale Blocco Palma I, 95030 Catania, (Italy) - info.ct@pstsicilia.org

fAFLP, genotypel identification, DNA mixture, durum wheat

AFLP in fluorescence technique is a useful tool to asses polymorphism among durum wheat genotypes. The aim of this work was to analyze and recognize by AFLP in fluorescence (fAFLP) durum wheat’s genotypes in mixture.

Mixture of DNA, obtained mixing 3 known genotypes of Triticum durum, was analyzed with 5 primer combinations to evaluate as fAFLP technique reveals the presence of known germplasms and the method sensibility. Amplified fragments, obtained by two amplification steps - preselective and selective - was analyzed by capillary electrophoresis with genetic analysis system CEQ8000TM by Beckman & Coulter.

Achieved results demonstrated that AFLP in fluorescence is a helpful tool to varietal identification of durum wheat as well for distinction of genotypes mixed in small percentage. These results, applied to a larger number of mixed genotypes, will concour to establish the sensibility of the method, which it could become a technique of routine’s analysis in studies of traceability of monovarietal products.