

VERIFICATION OF VARIETAL PURITY IN MAIZE SEEDS USING QUALITATIVE CHARACTERS

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ABSTRACT

Two field experiments were carried out at the Farm of the Agronomy Department, Faculty of Agriculture, Mansoura University and laboratories of Seed Technology Department, Field Crops Research Institute A.R.C. Giza during 2009 and 2010 seasons to evaluate the morphological (qualitative) characteristics according to the descriptor of the International Union For The Protection Of New Varieties of Plants UPOV., to estimate the varietal purity in Single Cross 10 (SC10) from three different sources (G3: Single cross 10 (S.C.10): Controlled produce with researcher, G4: Single cross 10 (S.C.10): Produce with researcher according the traditional method for hybrid seed production and G 5: Single cross 10 (S.C.10) Commercial seeds). A randomized complete blocks design with four replicates were used. G3 was the belonged one to the society in attitude of blade on leaf just above upper ear, anthocyanin coloration of brace roots, anthocyanin coloration of glumes, anthocyanin coloration of fresh anthers, spikelets density, length of peduncle and shape of ear. It gave insignificant differences in all characters except in shape of ear and shape of tip of the first leaf it gave significant differences (in one sample test compared with the standard S.C.10). G4 was the belonged one to the society in shape of tip of the first leaf and shape of ear. It gave insignificant differences in all characters except in anthocyanin coloration at base of glum it gave significant differences (in one sample test compared with the standard S.C.10). G5 was the belonged one to the society in anthocyanin coloration of sheath, anthocyanin coloration at base of glum, intensity of anthocyanin coloration of silks, attitude of lateral branches and anthocyanin coloration of sheath in middle of plant. It gave insignificant differences in all characters except in shape of ear it gave significant differences (in one sample test compared with the standard S.C.10). The t.test in pairs was observed that the differences between every two genotypes (G3-G4; G3-G5 and G4-G5) were not significant in all characters.

Key Words: Seed Verification, Maize, Qualitative Characters