

VNTR, SSR AND MORPHOLOGICAL CHARACTERIZATION OF TOMATO ACCESSIONS SPREAD IN CAMPANIA REGION

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In this study it has been evaluated the ability of two DNA molecular markers to discriminate a set of 16 tomato accessions. Among these accessions, some could not be distinguished on the basis of morphological traits. VNTR and SSR markers were used as a tool to characterise a tomato germplasm collection representative of Italian tomato types that are traditionally cultivated in Campania. The germplasm included material for fresh market and food-processing purposes. VNTR marker revealed that some accessions were not genetically uniform; (GATA)₄ fingerprinting clearly allowed the distinction of contaminating or segregating genotypes, which show different hybridization patterns. The UPGMA hierarchical classification based on a data set of 14 SSR appropriately selected, confirmed the differences observed through VNTR analysis. The genetic diversity identified in the 16 accessions revealed a consistent polymorphism at the analyzed loci, suitable to discriminate all the genotypes. Although both markers effectively discriminated the analysed samples, SSR resulted also suitable for the genetic traceability of tomato varieties along the agro-food chain.