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Poster Abstract – A.55

A COMPARISION OF MINISATELLITE AND SSR MARKERS IN RELATION TO MORPHOLOGICAL TRAITS FOR DISCRIMINATION OF 'SAN MARZANO' ACCESSION

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'San Marzano' is one of the most widely known tomato (*Lycopersicon esculentum* Mill.) cultivars, and is a classic example of a local variety with a premium value. Unfortunately, the original cultivated form is underrepresented in the Protected Denomination of Origin (PDO) area because of the incidence of contaminant morphologically similar genotypes. Our aim was to investigate the ability of three DNA marker systems (minisatellite, CAPS and SSR) to reveal the genetic diversity of tomato accessions that, as indicated by a morphological analysis, are phenotypically very close. The data indicate that CAPSs are the least effective, whereas both minisatellites and SSRs can be used to genetically distinguish the analysed materials and depict relationships consistent with the hierarchal pattern obtained by the morphological data. As locally cultivated tomato accessions are often characterised by some degree of genetic variability, our results will be valuable in facilitating the purification, management and breeding of tomato germplasms. The differences between the marker systems employed are discussed in relation to their usefulness in the agro-food chain.