A STUDY ON MICROPROPAGATION AS A TOOL FOR SUSTAINABLE UTILIZATION OF JUJUBE (ZIZYPHUS JUJUBA MILL.) GENOTYPES

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ABSTRACT

Micropropagation is a very important propagation technique for fruit trees based on especially obtaining virus free sapling. In the present study, shoot tips of two selected jujube genotypes (20-Ç-10 and 20-Ç-22) were used as a material. The effects of different growth regulator combinations, carbon sources (sucrose, glucose and fructose) and silver nitrate concentrations on *in vitro* propagation of jujube were investigated. Shoot formation was observed on the medium containing TDZ alone as a cytokinin, but shoots were very short and unhealthy. In addition that, when the medium supplemented with BAP alone was used, new shoot regeneration from explants was not observed. Therefore, MS medium supplemented with both TDZ and BAP as a cytokinin was used for *in vitro* micropropagation of jujube genotypes. The highest percentage of explants forming shoots (93.3 %) and the highest number of shoots per explant (5.7) were obtained on the MS medium containing 0.1 mg/l TDZ+0.5 mg/l BAP+0.1 mg/l IBA+0.3 mg/l GA_3 in 20-Ç-10 jujube genotype. Different amounts of carbon source and silver nitrate did not increase the percentage of explant forming shoots and the number of shoots per explants in the both genotypes compared to control treatment. The highest rooting percentages of 20-Ç-10 and 20-Ç-22 jujube genotypes (83.3 % and 80.0 %, respectively) were obtained on half-strength MS medium supplemented with 2.0 mg/l IBA.