

ABSTRACT

SOMATIC EMBRYOGENESIS FROM LEAF SEGMENTS OF FIG (*Ficus carica* L. cv. ‘Sarılop’)

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Somatic embryogenesis has a considerable potential of quick formation and genetic transformation studies of fig. In this study, multiple somatic embryo is targeted via direct and indirect somatic embryogenesis using leaf segments of “Sarılop” fig cultivar which has a good fresh and drying quality. The apical buds taken from “Sarılop” fig trees in November and March were proliferated in Murashige-Skoog (MS) nutrient medium, then developed leaves were used as explants. Callus (66.66%) were obtained on the leaves in spring K-2 combination (2 mg/L 2,4-D and 0.2 mg/L kinetin) of MS medium for indirect somatic embryogenesis, but somatic embryo growth was not acquired. For direct somatic embryo formation, leaf explants were cultivated in MS medium containing TDZ (Thidiazuron) and 2IP (*N*⁶-2-isopentenyladenine) combinations, and callus formation, explant augmentation, root formation and embryo formation were observed. In augmentation of leaf explants, the longest leaf length is measured as 3.09 cm on average in spring. The highest root formation ratio (42.76%) and the highest embryo formation ratio (20%) were obtained in spring regenerants of DE-4 (MS + 2 mg/L TDZ + 8 mg/L 2IP) combination. Somatic embryo per explant is 0.83. In DE-2 (MS + 2 mg/L TDZ + 4 mg/L 2IP) medium, 83% callus growth ratio was observed.

Keywords: Fig, *Ficus carica* L., ‘Sarılop’, somatic embryogenesis.