**Micropropagation of Decorative Species *Dianthus orientalis* Adams.**

Deniz HAZAR1 İbrahim BAKTIR2

1Department of Horticulture, Faculty of Agriculture, Akdeniz University, Antalya / TURKEY

2 Faculty of Agricultural Sciences and Technologies, Cyprus International University / TRNC

The aim of this study was to establish an effective protocol for the *in vitro* propagation of the fall flowering decorative species *Dianthus orientalis* Adams., which has the characteristics of being a good erosion prevention plant. *D. orientalis* seed capsules were collected from Kemer location of Antalya province (Turkey) and brought to the tissue culture laboratory of Akdeniz University Faculty of Agriculture, Department of Horticulture, where the study was conducted. After the seeds were sterilized, they were cultured in jars containing Murashige and Skoog (MS) medium. Shoot tip cuttings of 25-30 mm in length were taken from the developing shoots and used as explants. In the shoot multiplication phase, the explants were cultured on MS medium supplemented with different concentrations of 6-benzylaminopurine (BAP) and indolebutyric-3-acid (IBA). The effect of different strengths of MS on shoot multiplication was also studied. The highest multiplication rate was obtained in IBA-free medium containing 1 mgL-1 of BAP. In the root initiation phase, rooting was investigated on basal MS medium with different concentrations of indole-3-acetic acid (IAA), indole-3-butyric acid (IBA) and α-naphthaleneacetic acid (NAA). Rooting was successful in all media containing IBA (100%). Despite achievement of a successful protocol for *in vitro* multiplication and root induction of *D. orientalis*, low survival rate was obtained when rooted explants were exposed to ex vitro conditions.

Key words: *Dianthus orientalis*, micropropagation, *in vitro*, shoot multiplication, BAP, IBA