

THE EFFECT OF DIFFERENT HORMONAL TREATMENTS ON GERMINATION OF SOMATIC EMBRYO OF DATE PALM (MAJOLCV.)Behnaz Abdolvand¹, Reza Zarghami², Hasan Hasani¹, Ali Salari³¹University of Guilan, Guilan, Iran²Agricultural Biotechnology Research Institute of Iran, Karaj, Iran³National Research Center on Plant Biotechnology, Indian Agricultural Research Institute, New Delhi 110012, India

Date palm (*Phoenix dactylifera L.*) as a rich source of nutrition is an important subsistence crop of the desert regions and has an integral relationship with life of the rural people. The 2008 estimation of total number of date palms showed approximately 100 million palms distributed in about 40 countries (FAO 2008). It has potential for improving the rural sector encouraging holistic development by contributing to the economic, social and cultural aspects of rural areas (Safwat 2007). Somatic embryogenesis is one of the most important technologies for plant regeneration. The direct somatic embryogenesis is fully developed for massive plant regeneration in date palm (Sudharsan et al. 1993). The indirect method which is based on the induction of embryogenic calli is also in use (Al-Khayri 2005). Al-Khayri (2001 and 2003), showed that the culture media containing auxin (NAA or IBA) has significant effect on somatic embryos. However, the effect of cytokinin (BA and 2ip) on germination of somatic embryos was shown before (Bekheet and Saker, 1998). Here, to study the effect of different hormonal treatments on germination of somatic embryos we evaluated 4 different hormonal combinations: 1. control (no hormone) 2. BAP (0.5 mg/l), IBA (0.1 mg/l), NAA (0.1 mg/l) 3. NAA (0.1 mg/l) 4. IBA (0.2 mg/l). The analysis of variance showed the significant difference among treatments. The highest number of germinated embryos were found in medium 3 (14.8) followed by medium 2 (11.5). The least number of germinated embryos was found in medium 1 (6.6) which no hormone was added. The experiments were carried out in complete randomized design as per the treatment/combination.

Key Words: date palm, somatic embryogenesis, organogenesis, tissue culture

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