



In Vitro Conservation of Date Palm Embryos under Slow-Growth Conditions With Osmotic Agent and Abscisic Acid

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Abstract : Retardation of plant *in vitro* growth is usually targeted for conservation of genotypes, saving labors input, remaining germplasm readily available for regeneration. Few researches on germplasm conservation of date palm (*Phoenix dactylifera* L.) somatic embryos were established. Slow-growth *in vitro* storage is one of the conservation techniques used. This investigation aimed to develop an effective and simple protocol with maximum viability for short and medium-term *in vitro* conservation of date palm somatic embryos under dark and cold storage (18° C). High levels of sucrose seemed to be important for conserving date palm *in vitro* cultures as it prolonged conserving period to 10 months without any subcultures. In addition, inclusion of ABA in conserving media for 6, 8 and 10 months without subculturing, increased recovery percentage significantly compared with control medium. Moreover, the highest significant embryo number was achieved after storage for eight months with sucrose and ABA together in conserving media at 0.3 M and 2.0 mg/l, respectively. It is the first report of slow growth technique for date palm embryos as we know.

Key words: abscisic acid, conservation, date palm, *in vitro*, slow growth, sucrose.

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