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EFFECT OF DIFFERENT LEVELS OF NITROGEN SOURCES ON EMBRYOGENESIS CALLUS INDUCTION OF IMMATURE FEMALE INFLORESCENCES OF DATE PALM

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ABSTRACT

This study conducted through 2014-2017 years. The aim was to improve productivity of somatic embryogenesis from callus culture of immature female inflorescence of date palm cultivar Amhat .

MS media was used, in addition to NH₄ NO₃, KNO₃ and glutamine at different levels. Data revealed that the least browning (0.33) was recorded by adding treatment of NH₄ NO₃ and KNO₃ at 0.83:1.43 g/l . with 400 mg/l. glutamine ; The highest embryogenesis (4.0) recorded by treatment of glutamine at 400mg/l. The lowest vitrification (1.0) was by obtained treatment of NH₄ NO₃ :KNO₃ at 0.83:1.43g/l and glutamine at 400mg/l . The best embryos germination (4.0) was by treatment of NH₄ NO₃ at 0.83g/l., by KNO₃ at 1.43 g/l. and 200mg/l of glutamine ; and the best growth rate (greenish embryos) was 6.4 and recorded by treatment of NH₄NO₃ at 0.83g/l., KNO₃ at 1.43 g/l. and 200 mg/l. of glutamine. The best growth rate (greenish embryos) was 6.4 and recorded by treatment of NH₄NO₃ at 0.83g/l., KNO₃ at 1.43mg/l. and glutamine at 400mg/l, which are the recommended levels of nitrogen sources.

Key words: Amhat Cultivar, Date Palm, female inflorescences , micro propagation, and nitrogen sources.