

TO LARGE SCALE PROPAGATION OF SOME ELITE DATE PALM CULTIVARS THROUGH EMBRYOGENIC SUSPENSION CULTURES

L. Fki, R. Masmoudi, R. Tounsi and N. Drira

Laboratoire des Biotechnologies Vegetales, Faculte des Sciences, de Sfax BP 802, 3018 Sfax, TUNISIE.

Somatic embryogenesis is believed by most research workers to be the *in vitro* system of choice for mass propagation of many species. However, with date palm, solid media did not permit a good exploitation of the embryogenic calli. This research reveals the advantages of the regeneration system based on the pro-embryogenic masses (PEMs) proliferation in suspension cultures. Our study proves that many elite date palm varieties, originated from the Maghreb and the Middle East, can produce a high number of pro-embryos using appropriate liquid media. Embryos at the globular stage complete their developmental program in the same fresh medium, and thousands of mature somatic embryos can be generated from a few grams of PEMs. Furthermore, problems with the germination of the somatic embryos have been overcome by desiccation treatment and plantlets are easily acclimatized. About genetic fidelity, flow cytometry analysis of the DNA showed that our *in vitro* conditions did not affect the ploidy level of somatic embryo-derived plantlets.