

CONTRIBUTION OF MOLECULAR TOOLS TO THE CHARACTERIZATION AND EXPLOITATION OF DATE PALM GENOTYPES

P. Du Jardin¹, A. Ben Abdallah², H. Snoussi² and P. Lepoivre³

¹ **Plant Biology Unit, Gembloux Agricultural University, Belgium.**

² **Biotechnology Laboratory, INRAT, Tunisia.**

³ **Plant Pathology Unit, Gembloux Agricultural University, Belgium.**

Multiple factors determine the extent and structure of the genetic diversity of date palm: the dioecious nature of the species, the use of both seeds and offshoots as propagation materials, the long-standing cultivation and exchange of date palm genotypes in the Mediterranean and Arabian Gulf regions (and beyond), the agroecology of date palm, splitting the populations into oases. In the recent history, additional factors are playing or should play a significant role in the shaping of the date palm populations, like the Bayoud epidemic, new rural development schemes and marketing opportunities, and the advent of *in vitro* propagation technologies. In order to preserve and to promote date palm, the optimal management of the genetic resources is both essential and challenging. The present paper reports the adaptation of genotyping techniques to date palm with the following aims: 1) monitoring of the genotypic conformity and of the possible epigenetic changes of date palms arising from *in vitro* embryogenesis, 2) characterization of seed progenies obtained by induced apomixis, and 3) definition of the genetic diversity within Tunisian cultivars. In the initial phase of the study, our cooperative Belgian-Tunisian network has set up RAPD (randomly amplified polymorphic DNA) and AFLP (amplified fragment length polymorphism) techniques in order to discriminate Tunisian cultivars and to assess the genetic conformity of apomictic seeds. Preliminary results will be presented.