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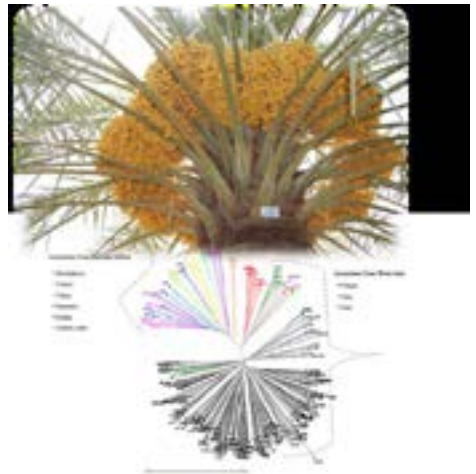
Genetic diversity of Omani date palm (*Phoenix dactylifera L.*) cultivars and its relationships with 'exotic' cultivars using SSR markers

Al-Ghaliya H Al-Mamari

Ministry of Agriculture & Fisheries, Oman

The present study investigated the genetic diversity of one hundred and ninety-four date palm accessions from Oman and forty-eight accessions from Italy, USDA-ARS, France, Iraq, Libya, Sudan and Iran using SSR molecular markers. Around 300 varieties of date palm are grown throughout the Sultanate and this study has provided the first molecular identification key, which enables the unambiguous discrimination of Omani date palm accessions. The genetic analysis showed that the Omani accessions were closely related to each other and there was no clear genetic differentiation between female and male cultivars. There was a quite high degree of genetic differentiation observed between germplasm from Oman, Sanremo, Bordighera, USDA-ARS, France, Iraq, Libya, Sudan and Iran as measured by Fst (19.7 %) compared with the genetic differentiation observed among the Omani accessions (2.1%) of the total variation, which probably reflects the homogeneous nature of the Omani date palm used in this study comparing to the divergent sets of other germplasm. The study also confirms that the

Europe-Africa (Sanremo, Bordighera, France, Libya and Sudan) accessions are distinguished from West-Asia (Oman, Iraq and Iran) accessions, have their own autochthonous origin, a finding which was strongly validated by bootstrap consensus tree test.



Biography

Al-Ghaliya H Al-Mamari has completed her PhD at the age of 32 years from Nottingham University. She is the Head of Biotechnology Research Section, Ministry of Agriculture & Fisheries in the Sultanate of Oman. She has different expertise in plant molecular and genetics, plant tissue culture and mutation breeding.

info@mufthasci.com