

Abstract by Samy Mohamed - Genetic characteristics of Egyptian buffalo using DNA microsatellite markers

To evaluate the genetic polymorphisms for DNA microsatellite markers of Egyptian buffalo, 471 unrelated Egyptian buffalo were genotyped with 11 microsatellite markers. The data were analyzed with GenALEx6 software. Nine (82%) of the microsatellite markers were polymorphic and two (18%) were monomorphic. A total 198 alleles were detected, with the number of alleles per marker ranging from 17 (RM28 and BM415) to 29 (BMC4203), giving a mean number of 22 ± 1.302 alleles per marker. The effective number of alleles was lower than the observed values with a mean value of 16.502 ± 1.137 per marker. The most frequent alleles were ranged from 0.086 (BMC4203) to 0.127 (BM415). The mean observed and expected homozygosity was 0.113 and 0.063, respectively, while the observed and the expected heterozygosity was 0.887 and 0.937, respectively, over all loci. Polymorphism information content values were ranged from 0.909 (BM415) to 0.949 (ILSTS093 and ILSTS097). At the nine microsatellite loci, the mean of fixation index was 0.052. Successful genotyping of Egyptian buffalo using these DNA microsatellite markers suggests that the latter can be a valuable resource for genome analysis in Egyptian buffalo.