

Genetic variation of four goat breeds in Malaysia using microsatellite polymorphism markers.

ABSTRACT

The characterisation of animals using PCR-based microsatellite markers is informative, economical and useful to elucidate genetic diversity within and among breeds. The determination of genetic variability in four goat breeds found in Malaysia, namely the indigenous Katjang goat and the exotic Jamnapari, Boer and Savanna goats, was successfully analysed using 30 microsatellite markers. Low levels of allelic variations were found in the four goat breeds. The mean numbers of observed alleles per locus were relatively low with values of 5.43, 5.73, 5.90 and 5.70 in Katjang, Jamnapari, Boer and Savanna goats, respectively. The mean observed heterozygosity was lower than the mean expected heterozygosity for the all four goat breeds. Katjang goats showed the lowest observed heterozygosity with a value of 0.36. The results showed that the Katjang goat population had a high level of inbreeding compared to the other goat breeds.

Keyword: Katjang; Jamnapari; Boer; Savanna goats; Heterozygosity.