



markers were sequenced and then phylogenetic tree based on unbiased distances was drawn using MEGA 4. To study the genetic relationships among sheep populations, a principal component analysis (PCA) based on Nei standard distances was performed which indicated a conservation program is needed in these sheep population since most of them are in danger of inbreeding.

Key words: Sheep, PCA, H-W equilibrium

PMAP-17

Characterization of Udaipuri Goat of Uttarakhand using Microsatellite Markers

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The genetic diversity was studied in Udaipuri goat found in Pauri Garhwal district of Uttarakhand using a set of 20 microsatellite markers. Blood samples were collected from 30 unrelated animals from the breeding tract of Udaipuri goat. The extraction of DNA was followed by PCR amplification, PAGE, silver staining, sizing and scoring of gels and the analysis of population parameters using POPGEN (version 1.31) software. All the twenty microsatellite loci were amplified successfully and a total of 96 alleles were observed across all the loci. The observed numbers of alleles ranged from 02 (OarJMP-29) to 07 (ILSTS-058, ILSTS-34 and OarFCB-304) with a mean value of 4.80. The effective number of alleles ranged from 1.60 (OarJMP-29) to 5.84 (ILSTS-34) with a mean value of 3.43. The Nei's heterozygosity values showed a variation from 0.38 (OarJMP-29) to 0.82 (ILSTS-34) with a mean value of 0.63. The PIC value ranged from 0.30 (OarJMP-29) to 0.79 (ILSTS-34) with a mean value of 0.63. The Shannon's Information Index values were observed to vary from 0.56 (OarJMP-29) to 1.77 (ILSTS-34) with an average value of 1.30. All the twenty microsatellite loci deviated significantly from the Hardy-Weinberg equilibrium. Bottleneck analysis revealed a significant observed heterozygosity excess than the expected heterozygosity excess on the basis of IAM, TPM and SMM models. The heterozygote deficiency at Hardy-Weinberg equilibrium, genetic bottleneck and substantial genetic variability was observed across all the loci. It is important to conserve the breed for its genetic improvement and to be used under different breeding programme.

Key words: Genetic diversity, heterozygosity, microsatellite, bottleneck analysis and Udaipuri goat

PMAP-18

Draughtability and Related Biochemical Parameters in Kangayam Cattle

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Kangayam cattle is an excellent draught breed of Tamil Nadu. In the present study, biochemical parameters like creatine kinase and lactic acid along with draughtability parameters *viz.* speed and stride length of Kangayam bullock were evaluated. Usually, different kinds of exercise lead to muscle damage at different rates. The extent of damage and recovery from such damage could be associated with varying levels of certain biochemical parameters in the blood of cattle. Thus, considerable increase in creatine kinase and lactic acid in serum almost