

GENETIC DIVERSITY AND STRUCTURE OF SLOVAK DOMESTIC GOOSE BREEDS

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Abstract. Knowledge of the genetic diversity and structure is particularly important in the case of endangered breeds. The preliminary characterization of the genetic diversity and structure were assessed in two critically endangered national goose breeds Suchovska and Slovak, based on 6 microsatellite loci analysis in a total population of 50 birds. A total of 31 alleles were found across 6 microsatellite loci with a mean number of 5.17 alleles per locus. The mean observed heterozygosity was 0.33 in Suchovska and 0.39 in Slovak. The degree of inbreeding of Suchovska and Slovak calculated as a mean F_{IS} was 0.13 and 0.15 respectively. The F_{ST} value between Suchovska and Slovak breeds was 0.058. Nei's genetic distance between Suchovska and Slovak goose was 0.093. The low level of diversity indicated as heterozygosity deficiency coupled with low population size confirm, that Slovak national breeds of geese are critically endangered and required attention for the preservation.

Keywords: genetic diversity, genetic structure, microsatellite, goose/geese.