STUDY OF GENETIC DIVERSITY AND PRESERVATION STRATEGIES OF ROMANIAN PINZGAU CATTLE

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Abstract

The Romanian Pinzgau cattle, currently endangered, was formed through crossbreeding Grey Steppe cows with Austrian Pinzgauer bulls and is well adapted to mountain and submountain regions (400–1600 m altitude) with fertile natural pastures and abundant rainfall. This breed is highly resilient and efficiently utilizes cellulose-rich forage, holding significant zootechnical importance. In this study, the Pinzgau population was genetically analyzed using mitochondrial markers (mtDNA), which allowed the identification of three main haplogroups, with haplogroup T3 being predominant in analyzed populatyion, confirming both considerable genetic diversity and demographic equilibrium. The purpose of the research was to assess genetic variability and establish phylogenetic relationships, providing a foundation for effective conservation strategies. The results highlight the necessity of applying reproductive biotechnologies, cryopreservation of genetic material, and the creation of gene banks to ensure the long-term preservation and protection of this valuable breed.

Key words: *endangered cattle, genetic diversity, mtDNA, phylogeny*