

COMPARATIVE ANALYSIS OF CORPORAL INDICES IN HORSE POPULATIONS FROM NORTH-EASTERN ROMANIA

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Abstract

This study analyzes corporal indices in horse populations from North-Eastern Romania, comparing unimproved groups with populations ameliorated using stallions of different breeds (Shagya Arab, Hucul, Lipizzaner, Romanian Semigreu, Trăpaș, Gidran and Romanian Sport Horse) across several counties. Descriptive statistics were calculated for compactness, chest depth, bone index, substernal void, height difference, massiveness and lateral body format. Differences between stallions and their half-breeds were evaluated using one-way ANOVA within county–breed groups. Most indices showed low coefficients of variability (generally <10%), indicating high population homogeneity. Differences were predominantly non-significant; however, significant effects were recurrently observed for height difference and lateral body format, and occasionally for compactness and massiveness. The results indicate that breed-based amelioration contributes to measurable improvements in corporal traits, with half-breeds generally approaching the morphological characteristics of the breeding stallions.

Key words: *horse, corporal indices, amelioration, ANOVA, morphology*