Genetic parameters for ultrasound-evaluated carcass and body traits in Anglo-Nubian goats [

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text (article)

Analítica

Background: Meat goat breeding programs should prioritize the identification and selection of genetically superior animals for traits related to meat quality and carcass yield in order to increase the value of the final product. Objective: To estimate (co)variance components and genetic parameters for ultrasound-measured carcass traits, body size and body weight in AngloNubian breed goats raised in the Mid-North region of Brazil. Methods: (Co)variance components and genetic parameters were estimated using the single and two-trait animal model analyses via Bayesian inference for loin eye dimensions (area, length, and depth), sternal fat thickness, rump height, chest circumference and depth, leg perimeter, and body weight. Results: Heritability estimates were higher when two-trait analyses were used. This finding implies that it is possible to recover part of the additive genetic variance included in the residual variance due to the correlation between traits. Genetic correlations between carcass and body size traits showed different magnitudes. On the other hand, genetic correlations between the traits related to muscularity showed high magnitudes. Conclusions: Body weight was not a good indicator of muscularity; therefore, it is not recommended as a criterion for indirect selection to improve carcass traits of Anglo-Nubian goats. Leg perimeter and chest circumference may be important to construct selection indexes in meat goat breeding programs
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