

# IMPACT OF NON-GENETIC FACTORS ON GROWTH TRAITS ACROSS TELEORMAN BLACK HEAD, SUFFOLK AND ILE DE FRANCE SHEEP BREEDS

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## **Abstract**

*Evaluating the effect of non-genetic factors on growth traits, such as birth weight and weaning weight, is essential for optimizing production within sheep farming systems. Factors such as sex, type of lambing (single or twin), and year of birth can significantly influence lamb development, with direct implications for their growth performance and, consequently, the economic yield of farms.*

*The aim of this study was to investigate the influence of sex, type of lambing, and year of birth on birth weight and weaning weight in three sheep breeds: Teleorman Black Head, Suffolk, and Île de France, using t-tests and ANOVA.*

*The results indicate that the studied non-genetic factors have a variable impact on growth traits. Birth weight is significantly influenced by the type of lambing and year of birth in the Teleorman Black Head breed ( $p < 0.05$ ). For Suffolk, the type of lambing and year of birth have significant effects on birth weight ( $p < 0.05$ ), and for Île de France, the same factors influenced birth weight ( $p < 0.05$ ), while sex did not have a significant impact on birth weight in Teleorman Black Head and Suffolk breeds ( $p > 0.05$ ), but had a significant impact in Île de France breed ( $p < 0.05$ ). Regarding weaning weight, type of lambing, and year of birth significantly influence this trait in all three breeds ( $p < 0.05$ ), while sex significantly influenced weaning weight ( $p < 0.05$ ) in Teleorman Black Head and Île de France breeds and insignificantly ( $p > 0.05$ ) in Suffolk.*

*These results highlight the importance of non-genetic factors in influencing birth weight and weaning weight, and are relevant for optimizing management strategies in sheep farming.*

**Key words:** ANOVA, sheep, Teleorman Black Head, Suffolk, Île de France