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EVALUATION OF BIRTH IN SIMMENTAL BEEF CALVES UNDER DIFFERENT BREEDING CONDITIONS

Jozef BUJKO^{*1}, Juraj CANDRÁK¹, Peter STRAPÁK², Klára VAVRIŠINOVÁ², Radovan KASARDA¹
¹*Institute of Nutrition and Genomics, ²Institute of Animal Husbandry, Faculty of Agrobiological and Food Resources, Slovak University of Agricultural in Nitra*

Abstract: *Birth weight (BW) and other calf growth traits play a key role in the economic efficiency of cow-calf farming systems. The aim of the study was to evaluate the calf birth weight (BW) of the Simmental beef calves under different breeding conditions of the Slovakia according to sire, year of birth, rating period, sex, and breed type.*

• Introduction

Calf growth traits, particularly birth weight (BW), represent an important economic factor for cow-calf producers and livestock farmers.

• Material and method

In this study was used the records from 2022 to 2024 and 1,209 calves from Simmental beef cattle for the birth weight (BW). A linear model (GLM) was used to evaluate the influence of factors on calf birth weight, in which factors such as the influence of the sire, breed type, year-season of evaluation, year of birth, and calf sex were assessed. The basic statistical and variability characteristics were evaluated using the SAS, version 9.4

• Results and discussions

The average value of BW of calves was 37.94 ± 6.0 kg ranging from 30 to 64 kg. In the evaluated set, the most recurrent mean weight was 35 kg. According to the years of evaluation, we found the average birth weight for calves was 38.61 ± 6.27 kg in 2022, 38.55 ± 6.32 kg in 2023 and 36.23 ± 4.77 kg in 2024, respectively. The highest average weight was recorded in herd C namely 47.85 kg and the lowest in herd G namely 30.71 kg.

• Conclusions

In conclusion, we can state that the greatest effect is that of the father, followed by the effect of breed type and the combined effect of the year and season of the calf's birth. These factors were also statistically significant ($P < 0.001$).

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