



UNIVERSITY OF LIFE SCIENCES
"KING MIHAI I" FROM Timisoara
**Multidisciplinary Conference on
Sustainable Development**
30-31 May 2024



Assessment of birth weight in calves in selected breeding of the Montbéliarde cattle

Jozef Bujko^{*1}, Juraj Candrák¹, Cyril Hrnčár², Stanislav Dzimko¹, Radovan Kasarda¹

¹*Institute of Nutrition and Genomics, ²Institute of Animal Husbandry, Faculty of Agrobiological and Food Resources, Slovak Agricultural University Nitra,*

Abstract: The objective of the study was to evaluate the calf birth weight of the Montbéliarde cattle in Eastern Slovakia according to years of birth, period of birth, the sex and breed type. In this study was used the records from 2022 to 2024 and 474 calves from Montbéliarde cattle.

• **Introduction**

Calf growth traits such as birth weight (BW) are of major economic importance for cow-calf producers and for farmers in general, as other authors have shown. The objective of the study was to evaluate the calf birth weight of the Montbéliarde cattle in Eastern Slovakia according to years of birth, period of birth, the sex and breed type.

• **Material and method**

The material for evaluation of agricultural enterprise Karpatovka in Eastern Slovakia.

In this study was used the records from 2022 to 2024 and 474 calves from Montbéliarde cattle for the birth weight (BW).

The basic statistical and variability characteristics were evaluated using the SAS, version 9.4 (TS1M2) Enterprise Guide 7.1 (SAS, 2016).

• **Results and discussions**

The average value of BW of calves was 38.52 ± 2.89 kg, ranging from 28.5 to 55 kg. The linear model to represent $R^2 = 0.2138\%$ in case of birth weight (BW) of calves for all fixed effects. According analyses of the effect to BW of calves were most influenced by the sire $R^2=0.106\%$ after that the effect of HYS $R^2 = 0.0929\%$ and the effect of years of birth (YB) $R^2=0.0916\%$, ($P<0.001$). These results are similar with conclusions of different authors, who engage in similar analysis.

• **Conclusions**

Based on the available data, we calculated the R^2 for calf birth weight for all fixed effects. We can conclude that the birth weight of the calves was most affected by the sire and the HYS.

Acknowledgement: This work was supported by the Slovak Research and Development Agency (Projects No. APVV-17-0060, APVV-20-0161) and project Erasmus+ 2021-1-SK01-KA220-HED-000032068 (ISAGREED).