

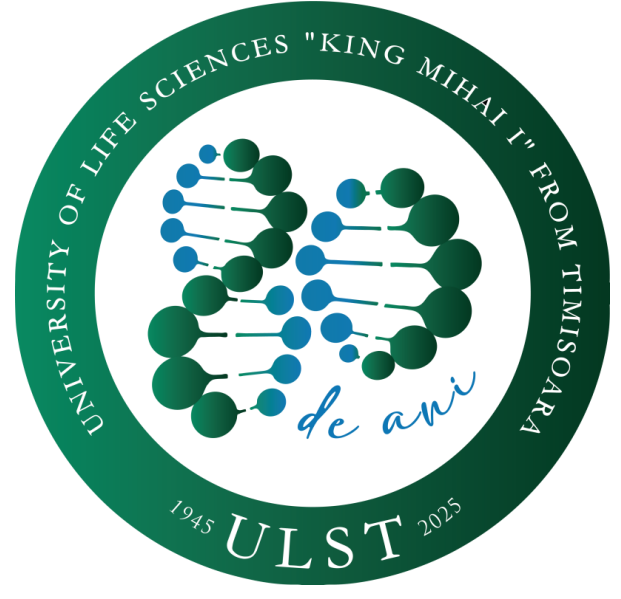


UNIVERSITY OF LIFE SCIENCES "KING MIHAI I" FROM
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Effects of Non-Genetic Factors on Service Period Length in Brown Breed

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Abstract: The aim of the study was to assess the effects of calving year, season of calving, parity and calving ease on service period length in Romanian Brown cows. A total of 750 data records, obtained from 150 lactations of 50 Romanian Brown cows were collected between years 2018 and 2020. Year of calving ($P \leq 0.05$), parity ($P \leq 0.01$) and calving ease ($P \leq 0.001$) were strongly linked to the cows' service period length. No significant differences in terms of service period length were recorded according to the season of calving ($P > 0.5$). In conclusion, year of calving and calving ease were the main influential factors for this reproductive trait. In this respect, additional studies should be performed in order to include other factors and validate their results.

• Introduction

The sustainability of farms are mainly dependent on fertility. Recent data indicated that 52% of the cows have a SP length larger than 120 days .

• Material and method

- Period - 2018-2020
- Herd - 50 Brown cows, 150 lactations , 750 data recorded
- Procedure - The SP length was evaluated related to: year of calving; dam's parity; calving ease;
- Method - The SP length according to different influential factors was investigated using factorial ANOVA protocol;

• Results and discussions

Table 1. Least square means, significance, and multiple comparison test results for duration of service period

Factors	SP (day)
Overall Mean	104.55±11.8
Year of calving	
2018	98.56±13.8 ^a
2019	103.12±12.76 ^b
2020	111.98±7.74 ^c
Season of calving	
Summer	104.9±4.2 ^a
Winter	101.6±5.7 ^a
Lactation parity	
2 nd	107.3±8.66 ^a
3 rd	102.8±11.24 ^a
4 th	99.6±9.16 ^b
Calving ease	
Eutocya	104.2±8.12 ^a
Dystocia	126.6±13.19 ^b



• Conclusions

To determine the measurable effects could be profitable in order to set up the breeding programs capable to be adjusted for the environmental sources of variation related to reduce known environmental differences among animals. Reproduction traits, such as service period and number of insemination per pregnancy were generally within standard values and reproduction management program seemed to be properly performed in the farm. Concluding, year of calving and calving ease were the main influential factors.

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