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**THE INFLUENCE OF MILK PRODUCTION ON REPRODUCTIVE INDICES
 IN COWS INSEMINATED WITH HEIFERPLUS SEMEN**

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Abstract: More and more dairy cows with high milk producing are experiencing infertility problems caused by both negative postpartum energy balance and the inhibitory action of the hormone prolactin on the hormones GN-RH and FSH. The present paper analyzes the relationships between milk production and reproductive indicators in a population of dairy cows that were artificially inseminated with HeiferPlus semen. This semen, according to those who sell it, increases the percentage of fecundity by 5-15% and the sex ratio is 65-85% in favor of the calf with the predetermined desired sex. The work was carried out at the Balotesti Bovine Development Research Institute, on a herd of 50 heads, Romanian Black Spotted cows, owned by the institute. The analyzed data capture the farm's activity between years 2020 -2021. Milk production was monitored by the specialists who carry out the Official Control of Milk Production and the reproduction data were taken from the TAURINE.EXE farm program. The reproductive indicators monitored were: conception rate, services per conception, non-return rate, service period interval and sex ratio.. The statistical processing of the data was carried out using the Microsoft Excel program.*text*

Introduction

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Material and method

The work was carried out at the Balotesti Bovine Development Research Institute, on a herd of 50 heads, Romanian Black Spotted cows, artificially inseminated with HeiferPlus semen. The analyzed data capture the activity on the farm between the years 2020-2021. Milk production was monitored by the specialists who carry out the Official Control of Milk Production and the reproduction data were taken from the TAURINE.EXE farm program. The reproductive indicators monitored were: conception rate, services per conception, non-return rate, service period interval and sex ratio.. The statistical processing of the data was carried out using the Microsoft Excel

Results and discussions

The analyzed cows recorded milk productions between 5000 kg milk/lactation and 8700 kg milk/lactation. They were divided into productivity groups as follows: the first group included cows with productions between 5000 kg and 6000 kg of milk/lactation; the second group included cows with productions between 6001 kg and 7000 kg of milk/lactation; the third group included cows with productions greater than 7000 kg of milk/lactation. For each productivity group, the analyzed reproduction indicators were reported in order to determine the influence of productivity on the reproduction activity. Table 1 shows the influence of milk production on reproductive activity.

• **Table 1**

Reproduction indicators	5000 - 6000Kg milk/lactation	6001- 7000 Kg milk/lactation	>7000 kg milk/lactation
%NON RETURN	88%	85%	78%
NSC	1,68	1,83	1,88
%FEC	83,00%	82,00%	74,00%
SP	81,93	90,66	96,88
sex ratio (obtained females)	56,5	57,5	58,5
SP for cows with productions between 5000 kg-6000 kg of milk/lactation ~ SP for cows with productions between 6001 kg-7000 kg of milk/lactation			0,447487579
SP for cows with productions between 5000 kg-6000 kg of milk/lactation ~ SP for cows with productions >7000 kg of milk/lactation			0,057824894

Table 1 shows significant differences regarding ($p \geq 0.05$) the duration of the SP between cows with milk production between 5000 kg - 6000 kg milk/lactation and those with productions greater than 7000 kg milk/lactation . It is also found that the highest percentage of non-return, 76%, was found in the group of cows with low productions. The best NSC (number of services per conception), 1.68, was recorded in the same batch with low performances.

Conclusions

Milk production influences reproductive activity in cows artificially inseminated with HeiferPlus frozen semen.