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**ANALYSIS OF REPRODUCTIVE INDICATORS IN DAIRY COWS  
 INSEMINATED WITH HEIFERPLUS FROZEN SEMEN**

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**Abstract:** More and more dairy cows are experiencing infertility problems caused by both the quality of the semen after thawing and the timing of artificial insemination. The present paper analyzes 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 since 2020. The reproduction data were taken from the TAURINE.EXE farm program. The reproductive indicators monitored were: %fecundity, services per conception, service period interval, %fertility and sex ratio. From the analyzed data, an increase in fecundity was found by 4.03% and the proportion females obtained was 57.5%. The statistical processing of the data was carried out using the Microsoft Excel program.

**• Introduction**

• More and more dairy cows are experiencing infertility problems caused by both the quality of the semen after thawing and the timing of artificial insemination.

**• 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, owned by the institute. They cows were artificially inseminated with HeiferPlus semen. The semen was thawed in a water bath at a temperature of 35°C. The cows were divided into two groups. The first batch of 22 cows was inseminated at the middle of the estrus phase and the second batch of 28 cows was inseminated at the end of the estrus phase. The analyzed data were taken from the TAURINE.EXE program. and capture the reproductive activity on the farm in 2020. The reproductive indicators monitored were: % fecundity, services per conception, service period interval, % fertility and sex ratio.

**• Results and discussions**

The duration of the estrous cycle in cow has an average duration of 21 days and consists of four phases. The estrus phase lasts between 4 and 24 hours. In this phase, the artificial insemination of cows takes place, and specialized studies show that this should be done towards the end of the estrous phase without knowing exactly the optimal moment. Table 1 shows the reproduction situation of the cows depending on the moment of

Reproduction indicators	10 -12 hours estrus phase	13-20 hours estrus phase
%fecundity	77,24	83,21
NSC	1,9	1,7
SP	97,38	82,3
SEX RATIO	58,5	56,5

**• Conclusions**

Cows inseminated towards the end of the estrus phase recorded better reproductive performances than those inseminated in the middle of the estrus phase.