

REPRODUCTIVE ABILITY OF HIGHLY PRODUCTIVE OF HOLSTEIN COWS UNDER THE CONDITIONS OF INDIVIDUAL FREE STALLS

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The reproductive ability of cows is one of the most important factors in the efficiency of milk production, as it affects both the herd enlargement and the profitability of the dairy industry [1, 121].

The results of a number of studies indicate that with the productivity of cows, their reproductive parameters become worth: fertilization decreases, service and calving periods are prolonged. This is especially true for highly productive cows, as they are more sensitive to inferior and unbalanced feeding, to deviations from optimal microclimate parameters, breach of milking technology, recreation regimes, etc., as compared to medium and low productive animals, which leads to metabolic disorders and the emergence of a number of gynecological diseases, including infertility [2, 3; 3, 7].

The purpose of the work was to study the reproductive capacity of highly productive cows under conditions of free-stall-box housing, depending on age in lactation.

Material and methods of research. The research was carried out at the ALLC

“Agrosvit”, Kyiv Region, with cows of the Holstein breed of 1-3 lactations under the conditions of the individual free stalls. Milking was carried out at the plant of “Parallel” type, produced by the company “De Laval” using milking equipment “Duovak-300”.

Research results and their discussion. According to the results of the research, reproductive ability indices of cows were ambiguous (Table 1).

Thus, the insemination index which characterizes fertility of firstborn cows was 0.27 lower as compared to cows of the II lactation and 0.49 as compared to cows of the III lactation. Calving interval of the animals turned out to be too prolonged. At the same time, for cows of the I and III lactations, it was, respectively, 27,1 and 10,0 days longer, as compared with animals of the II lactation. The calving interval of the cows of the II lactation II cows was the lowest and constituted 461.2 days.

Among the indicators of herd reproduction, the duration of the service period is especially important, because, on the one

Table 1

Indicators of the reproductive ability of cows at ALLC "Agrosvit"

Indicator	Lactations		
	I (n=50)	II (n=50)	III and elder (n =50)
Insemination index	1,51±0,30	1,78±0,30	2,00±0,25
Service period, days	162,0±9,17	153,0±5,63	157,0±4,05
Calving interval, days	440,3±24,15	418,0±22,56	428,0±18,25
CRA	0,85±0,03	0,87±0,16	0,83±0,25
Dry period, days	70±3,5	67±4,1	72±4,3
Duration of lactation, days	429,3±24,54	399,0±12,18	417,2±34,63

hand, the overall milk yield from a cow per lactation and, on the other hand, calf crop depends on The longer the duration of the service period, the longer the cycles of the herd reproduction and, as a result, the low calf crop percent per 100 cows. According to scientists, [4, 11; 5, 124], getting from the cow of annual offspring and high milk yield per lactation the service-period should not exceed 80-85 days, although fluctuations within 80-120 days are considered to be quite acceptable.

Our studies have shown that the service period of cows was quite long and fluctuated within 152-166 days. The lowest value of this indicator was at cows of the II lactation - 153 days. In this connection it is obvious that there was a hidden hunting, which was also the reason for the extension of the service period.

Such a consistently unchanged dynamics of the service-period duration for cows over the years also predetermined the identity of their calving intervals duration. Thus, the greatest duration of the calving interval was observed at firstborn cows - 440 days, which is more as compared with cows of the II and III lactations per 22.3 and 12.3 days.

Among the numerous indicators that characterize the reproductive ability of highly productive cows, the reproductive ability coefficient plays an important role. So, if the optimum value of the reproduction rate is at the level 1, then for cows of the I lactation, it was equal to 0.85, respectively, for cows of the II and III lactations - 0.87 and 0.83 respectively.

As is generally known, the productivity and reproductive ability of cows to a certain extent depends on the duration of the dry period, during which the animals create in their bodies the necessary reserves of nutrients and biologically active substances for the future production of milk and reproduction.

The analysis of the researched indicator showed that, unlike the duration of the calving interval and service periods, the dry period in these years was on average at a relatively optimal level and fluctuated within 67-72 days

The reproductive ability of cows is also affected by the duration of lactation. In our studies, the lactation of the first-born cows was the longest - 429.3 days. Cows of the II and III lactations had 30.2 and

12.1 days shorter lactation period as compared with the firstborn cows.

Conclusion. According to research results, it can be affirmed that older cows are better adapted to individual free stalls and milking in the milking room.

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