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Title: **LACTATION ACTIVITY OF COWS WITH DIFFERENT ETOLOGICAL TYPES**

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LACTATION ACTIVITY OF COWS WITH DIFFERENT ETOLOGICAL TYPES

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Аннотация. В статье освещены результаты научно-исследовательский работ по изучению коэффициента молочности и оплата корма продукцией первотелок разных этологических типов. Самый высокий показатель месячного удоя наблюдалось у коров сверхактивного типа поведения (I группа) во втором месяце лактации, что составляет 12% от общего удоя за лактации. У первотелок среднеактивного и слабоактивного типов поведения эти показатели составили 11,3 и 11,1 % соответственно. Во всех подопытных группах оплата корма продукцией была на высоком уровне.

Ключевые слова: Корова, голштинская порода, деятельность, коэффициент молочности, раздой, аванс корма, оплата корма и др.

Abstract. The article highlights the research work results on milk production coefficient and feed products payment study of first different ethological type heifers. The highest rate of monthly milk yield was observed in overactive behavior type cows (group I) in the second lactation month, which is 12% of total milk yield during lactation. These indicators were 11,3% and 11,1%, respectively, in the first medium-active and low-active behavior heifers. In all experimental groups for food products payment was at a high level.

Keywords: cow, Holstein breed, activity, milk yield coefficient, distribution, feed advance, feed payment, etc.

Introduction. The cows milk productivity is inextricably linked to their lactation activity. While the cows milk yield coefficient is important in assessing the cows use level on the farm, the economic efficiency indicator is determined by the feed coverage level consumed by cows with dairy products.

It is known that the milk production process in cows during lactation is not the same. If cows are kept and fed normally, their milk yield will increase to 1-3 months after birth. Then a slow decline is observed.

Cows are divided into 4 types according to lactation activity:

type 1 - cows with high and stable lactation activity (such cows are healthy, have a rapid metabolism in the body, show high productivity);

type 2 - this cow type has a high lactation activity but a short stagnation period (constitution-type thin cows);

type 3 - cows with high but sharply reduced lactation activity (cows that give less milk during lactation);

type 4 - low-lactation cows (low-yielding cows) [5; p.-97].

According to the [3;p.-24-26], [11;p.-251-255], [14;p.-126-130] researches, it emphasizes that there is a direct correlation between behavioral indicators and milk productivity. The same opinion was expressed by [8; p.21-23], [12; p. 55-58], [7; p. 9-11], [15; p. 46-47].

[9; p.3-5] emphasizes that body structure type plays an important role in the cattle breeds development. This is because there is a direct organic link between the exterior-constitution types of cows and their milk productivity.

[4; p.-10-11] showed the thin-dense constitution type cows with a broad body structure, higher milk productivity than cows with a narrower body structure than their peers. The milk quality was also in demand.

As [10; p. 5-9] writes that the cows body composition determines not only their milk yield but also their economic value and fertilization efficiency. It is therefore advisable to take these characteristics into account in the selection work.

As [13; p. 4] noted that holstein cows imported from Canada were more likely to produce productive herds when they were artificially inseminated with the pedigree bulls offspring with proportionate body composition.

According to [6; p.-28-31], cows are classified according to their body type, their feeding and care conditions are carried out in accordance with their physiological condition, i.e. they are provided with optimal feed ration and reduce the cost and product productivity allows you to fully realize its potential.

[2; p.-18-20] data show that target body availability type and herds

development, external indicators, significantly increase milk production and expand opportunities to improve the industry economic efficiency.

Research materials and methods.

The experiments were carried out at "Chortut" breeding farm, Pastrogom district of Samarkand region, in first-generation holstein cows of different types activity on ethology. 10 heads per group for the experiment, three on character; I-overactive cows, II-moderately active and III-passively active type were excluded. The cows were kept under the same storage and feeding conditions. Ethological characteristics of experimental cows were studied using V.I. Velikjanin method in their activity types terms (2000). The milk amount given by the cows during lactation was determined by organizing a control milking every decade. The feed amount consumed to the cows was determined by monthly controlled feeding. The lactation curve, the lactation coefficient, the feed characteristics coverage with milk were studied in the generally accepted methods in zootechnics.

Obtained results and its analysis. The milk amount produced by cows during the lactation months allows them to accurately assess their productivity. To this end, we studied the change in cows milk productivity by lactation months in the experiment (Table 1).

In all cows groups, regardless to behavioral characteristics, milk productivity was high in the first II and III lactation months.

The highest monthly milk yield was observed in the most active type I group cows in the 2nd lactation month (790,0 kg), while in the remaining groups the highest milk yield was observed in the 3rd lactation

month (714,0 kg and 681,0 kg, respectively). During these months, the first-born cows were weaned, that is, zootechnical complex measures aimed at increasing milk production - cows udder massage, advance milk feeding. These measures ensured that cows had high milk yields in the coming lactation months. In all cows groups, regardless to their etiological parameters, a steady decrease in milk yield was observed from the 4th lactation month to lactation end.

and 4,1 kg or 18,0% higher in III group cows than in II group cows .

Figure 1.

Activity of different cows activity types on etology during lactation months

The highest monthly milk yield in lactation is in the 2nd lactation month in very active type I cows, if it was 12% of the monthly milk yield, in II and III groups, respectively 11,3 and 11,1% in the 3rd lactation month. In the following months, the average daily and average monthly milk yields declined evenly.

Body type is practical importance in the milk production from cows. The milk yield ratio plays an important role in assessing the cows use effectiveness on a farm. The milk yield ratio is determined by dairy production products per 100 kg live weight of a cow. When determining the milk yield cows coefficient in the experiment, the following results were obtained (Table 2).

Table 1
Experimental cows' milk yield changes By lactation months n-10, (X ± Sx)

Lactation months	Groups		
	I	II	III
	Milk yield, kg	Milk yield, kg	Milk yield, kg
I	740,5 ±10,0	630,0 ±12,1	575,0±9,5
II	790,0±11,5	640,5±10,3	580,0 ±8,2
III	773,5±13,2	714,0±12,2	681,0 ±11,0
IV	723,0±11,0	700,0 ±11,0	669,0 ± 7,9
V	700,0 5±9,6	690,0 ±8,5	657,0 ± 11,0
VI	682,0±11,2	674,0 ±9,2	645,0 ±9,1
VII	660,0±9,8	659,9±7,8	631,0±5,8
VIII	615,0±10,3	640,0±9,3	625,0±6,9
IX	470,0±9,5	500,0 ±8,6	584,0 ±9,4
X	410,5 ±7,9	432,0 ±15,0	465,1 ±6,3
Total:	6564,5	6284,9	6112,1

This is explained by the hormonal changes that occur in their body as cows subsequent fertilization result and the decrease in lactation dominance.

The highest daily milking was observed in the 2nd lactation month (26,8 kg) in cows with group I behavioral over activity. The highest average daily milk yield in II group cows with moderate activity and III group of weakly active type corresponded to the third lactation month (23,8 and 22,7 kg, respectively). At the same time, the average maximum daily milk yield was 3,0 kg or 12,6% higher in II group cows

Table 2

Experimental cows' milk yield n-10, X±Sx

Groups	cows live weight, kg	Actual milk amount in lactation, kg	Milk yield, kg	Produced per 100 kg live weight:		
				4% milk content, kg	Milk fat consumption, kg	Milk protein consumption, kg
I	586,9±8,02	6564,5±140,7	1118,5±14,0	1104,0 ±6,1	44,2 ± 2,34	39,3± 1,18
II	577,6±7,73	6284,9±109,5	1088,1±12,0	1067,4 ±5,2	42,7 ± 1,7	38,0 ± 0,98
III	565,5±7,70	6112,1±111,3	1080,1 ±11,0	1056,5±5,0	42,2 ± 1,5	37,8 ± 0,94

The milk yield was observed to be higher in cows in all experimental groups (Table 2). These figures are fully consistent with milking lacteal type cows characteristics. The highest milk yield was in the most active in group I cows, with 1118,5 kg milk per 100 kg live weight. This figure was 30,4 kg or 2.8% (P<0,05) higher than moderately active II group cows and 38,4 kg or 3.6% higher than low-activity III group cows. 4% fat milk amount produced per 100

kg live weight is the highest (1104,0 kg) in highly active cows group type, which is 36,6 kg or 3,4 % more than the moderately active type cows group, with 47,5 kg or 4.5% advantage ($P < 0.05$) compared to inactive III group cows.

I group cows also have the highest milk fat content per 100 kg live weight (44,2), this was 1,5 kg or 3,5% higher than II group cows and 2,0 kg or 4,7% higher than III group cows ($P < 0.05$).

Protein consumption per 100 kg live weight is the highest in group I the most active behavioral type cows (39,3 kg), which is 1,5 kg or 3,9% of II group cows and 1,7 kg or 4.5% higher in III group cows. ($P < 0.05$).

One of the economic level indicators of cows milk production efficiency is the ability to cover the feed with dairy products. In productive herds, this figure is important. This indicator is in practical importance in assessing the cow effectiveness use in the herd.

Table 3 shows milk feed coverage consumed by the cows in the experimental groups.

The data in the table show that the cows milk coverage level with high milk yield also indicates that it is more cost-effective than cows in the other group. The hypothesis that nutrients amount used in milk production decreases as the cows milk yield increases has been confirmed in experiments.

Table 3

Feeds used to produce milk from cows
(at 1 head expense)

Indicators	Groups		
	I	II	III
Feed unit consumed per 1 head of cow during lactation, kg	5071	5071	5071
milk amount in lactation, kg	6564,5	6284,9	6112,1
4% fat milk, kg	6482,4	6159,2	5974,5
1 kg feed unit used for milk production in natural fat, kg	0,77	0,81	0,83
1 kg feed unit used for the production of 4% fat milk, kg	0,78	0,82	0,85
Produced per 100 kg feed unit:			
natural milk fat, kg	129,4	124,0	120,5
milk with 4% fat, kg	127,8	121,5	117,8

The first group cows belonging to highly active ethological type consumed 5,0% and 7,3% less feed units, respectively, than II and III groups cows for milk production at 1 kg natural fat. When analyzing this indicator for milk production at 1 kg 4% fat, it was found that in group I cows consumed less feed units than in groups II and III. For per 100 kg feed unit of dairy products production, including natural fat milk, group I cows were 5,4 kg (4,4%) and 8,9 kg (7,4%), respectively, compared to II and III groups cows; for 4% fat milk, 6,3 kg (5,2%) and 10,0 kg (8,5%) respectively were produced. Similar results were obtained in experiments. [1; 77-78-p.] .

Conclusion. Thus, cows with different behavioral characteristics had higher milk productivity rates in the first second and third months of lactation. No tension was observed in the cows as the milk yield decreased over the months. The highest milk yield was in the most active group I cows, with 1,118.5 kg milk per 100 kg live weight. This figure was 30.4 kg higher than that moderately active II group cows and 38.4 kg higher than that low-activity type III cows. High-yielding cows

also showed a higher feed coverage rate with the product. Although experimental group I had a higher milk coverage than cows in groups II and III, it was found that the cows use in all groups in dairy herds was more effective.

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