

MILK PRODUCTION COEFFICIENT OF COWS OF POLISH, GERMAN, AND DENISH BREEDING AND THE AMOUNT OF FEED CONSUMED BY COWS FOR MILK PRODUCTION

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Abstract This article discusses the milk yield coefficient of cows of Polish, German and Danish breeds and the amount of feed used for milk production by cows. Currently, with the increasing population, it is becoming a pressing issue to pay great attention to proper feeding and care conditions for livestock to meet the demand for food products. Therefore, it is necessary to approach animal feeding criteria with great responsibility.

Keywords genetic origin, milk productivity indicators, dairy cows, milk quality indicators, milk production efficiency.

Introduction. Today, deep economic, organizational, social, and political reforms are continuing in all sectors of the national economy in our country. The main goal of this is, in the words of our esteemed President, to make the people, our compatriots, satisfied with life, to create the basis for a prosperous life, to raise our children healthy. In a word, ensuring the population's food security. In carrying out these works, agriculture, which is considered a priority area of the national economy, and animal husbandry, which is its important link, occupy a special place.

Research objective. Study of the milk yield coefficient of cows of Polish, German, and Danish breeds and the amount of feed used for milk production.

Source and methods of research. The object of our experiment was the "Siyob-Shavkat-Orzu" farm in the Samarkand region.

Research results. When analyzing the effectiveness of using dairy cows, regardless of their genetic origin, age, and feeding conditions, it is important to know the milk yield per 100 kg of live weight. Therefore, we calculated milk productivity indicators per 100 kg of live weight of cows in the experimental groups and presented them in Table 1.

From the analysis of the table data, it can be concluded that the milk yield coefficient of cows in the experimental groups was at a high level. For example, if in cows of the Polish breed of group I this indicator was equal to 1054.4 kg, then in cows of the German breed of group II it was equal to 1046.6 kg, and in cows of the Danish breed of group III this indicator was equal to 1028.4 kg. The difference between the groups was 7.8 kg or 0.7% and 26.0 kg or 2.5% in the first experimental group.

When evaluating the effectiveness of using dairy cows in the herd, it is important to know the 4% milk production per 100 kg of live weight, milk fat yield, and milk protein yield. For every 100 kg of live weight, cows of group I produced 1007.0 kg of 4% milk, which is 10.1 kg or 1.0 percent and 27.4 kg or 2.7 percent higher than cows of groups II and III, respectively.

Table 1

Milk yield coefficient of cows in the experimental groups, ($\bar{X} \pm S_x$)

Indicators	Groups					
	I		II		III	
	$\bar{X} \pm S_x$	$C_v, \%$	$\bar{X} \pm S_x$	$C_v, \%$	$\bar{X} \pm S_x$	$C_v, \%$
Live weight of cows, kg	503,6 \pm 3,9	5,9	490,2 \pm 5,44	5,9	480,9 \pm 5,9	5,7
Milk obtained during lactation, kg	5310,1 \pm 51,6	5,46	5130,6 \pm 46,1	6,11	4945,7 \pm 39,5	8,46
4% milk yield, kg	5071,1 \pm 40,4	5,40	4886,9 \pm 31,5	4,24	4710,8 \pm 29,8	6,41
Milk yield coefficient, kg	1054,4 \pm 7,80	4,93	1046,6 \pm 8,81	4,73	1028,4 \pm 9,11	5,74
Produced per 100 kg of live weight:						
4% milk, kg	1007,0 \pm 8,52	6,67	996,9 \pm 9,65	5,78	979,6 \pm 9,21	7,38
Milk fat yield, kg	40,3 \pm 0,33	5,25	39,9 \pm 0,25	4,80	39,2 \pm 0,37	5,31
Milk protein yield, kg	36,5 \pm 0,29	5,14	36,1 \pm 0,36	4,26	35,5 \pm 0,28	4,56

In dairy farming, the quality indicators of cow milk are initially understood as the fat and protein content of their milk, expressed as a percentage. The yield of milk fat and milk protein per 100 kg of live weight in highly active cows was 40.3 and 36.5 kg, respectively, while in their peers of highly active and moderately active cows this indicator was 39.9 and 36.1 kg, 39.2 and 35.5 kg, respectively. The difference was in favor of the animals of group I: 0.4 kg or 1.0 percent and 0.4 kg or 1.1 percent, 1.1 kg or 2.7 percent and 1.0 kg or 2.7 percent, respectively.

It should be noted that in all experimental groups, a significant difference was observed in the milk yield coefficient and milk yield of 4% per 100 kg of live weight, milk fat yield, and milk protein yield, where cows of the highly active type of the I experimental group prevailed over their peers of the highly active and moderately active type. This can also be seen in Figure 3 below.

When assessing the effectiveness of milk production in cows, the study of feed units consumed per 1 kg of milk is of great practical importance. Cows replace their consumed feed with dairy products, and the change in this indicator depends on milk productivity. If the cow produces more milk during a certain period, the amount of feed consumed per 1 kg of milk will be less. Conversely, if milk yields less, more feed is consumed. We studied these indicators in our research and presented them in Table 2 below.

Analysis of the table data showed that cows of group I consumed 5223.6 kg of feed units during lactation, while cows of groups II and III consumed 5114.7 and 4996.4 kg of feed units, respectively. The difference was 108.9.3 kg or 2.1 percent in favor of group I and 227.2 kg or 4.3 percent.

Table 2

The amount of feed consumed by the cows of the experimental groups for milk production

Indicators	Groups		
	I	II	III
Average feed consumption per 1 cow during lactation, kg	5223,6	5114,7	4996,4
Milk yield during lactation, kg	5310,1	5130,6	4945,7
Feed unit consumed per 1 kg of natural fat milk, kg	0,98	1,00	1,01
Feed units consumed to produce 1 kg of 4% milk, kg	1,03	1,05	1,06
Produced per 100 kg of feed units			
Milk, kg	101,65	100,31	98,98
4% milk yield, kg	97,08	95,54	94,28

Milk fat yield, kg	3,88	3,82	3,77
Milk protein yield, kg	3,51	3,46	3,41

The amount of milk obtained during lactation in animals of group I was 5310.1 kg, while in animals of groups II and III this indicator was 5130.6 kg and 4945.7 kg, respectively. The difference was 179.5 kg or 3.4 percent and 364.4 kg or 6.9 percent, respectively, in favor of group I cows.

If the amount of feed consumed for 1 kg of milk with natural fat content in cows of group I was 0.98 kg, then in cows of groups II and III this indicator was 1.00 and 1.01 kg, respectively. The difference was 0.02 kg or 2 percent in favor of cows in group I and 0.03 kg or 3 percent, that is, cows of the highly active type in group I gave more milk and consumed less feed. The feed units consumed for 4% milk production in the groups of cows were respectively 1.03; 1.05 and 1.06 kg.

Conclusion

In determining the effectiveness of the amount of feed consumed by dairy cows and their correct and objective assessment in this regard, determining the indicators of milk production per 100 kg of feed units, 4% milk yield, milk fat yield, and milk protein yield is of great practical importance. Taking this into account, we determined these indicators in our research and obtained the following results. The milk yield per 100 kg of feed units in the cows of the experimental groups was 101.65; 100.31 and 98.98 kg. The difference was 1.34 kg or 1.3 percent in favor of cows of group I and 2.67 kg or 2.6 percent.

Accordingly, there was an intergroup difference in the amount of 4% milk produced per 100 kg of feed units, and cows in group I produced 1.54 kg or 1.6 percent and 2.8 kg or 2.9 percent more 4% milk than their peers in groups II and III.

In terms of milk fat yield, cows of group I produced 0.06 kg or 1.5 percent and 0.11 kg or 2.8 percent more milk fat than their peers of groups II and III.

The difference between the groups in milk protein was 0.05 kg or 1.4 percent and 0.1 kg or 2.8 percent. The ability of cows to replace the feed consumed during the experiment with a unit of product was different, where cows of group I, characteristic of the highly active type, gave more milk than their peers of groups II and III, and, on the contrary, consumed less feed.

Thus, our studies showed that cows of the highly active type of group I, compared to their peers of the highly active and moderately active type, are more

productive in milk production, and also have the ability to compensate for consumed feed with milk products.

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МАНСУБ СИГИРЛАРНИНГ СУТДОРЛИК КОЭФФИЦИЕНТИНИ
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