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PRODUCTIVITY FEATURES OF MONTBELIARD COWS WITHIN UZBEKISTAN'S ENVIRONMENT

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ABSTRACT

In recent years, Montbeliard cattle have been imported to France from Uzbekistan in order to strengthen the breeding base of cattle and create high-yielding herds and increase livestock production. However, the productivity characteristics of cattle of this breed have not been studied in our hot climate conditions in special studies depending on various factors. Studies have shown that the level of milk yield of co-breeding Montbeliard cows imported to Uzbekistan depends on the type of production. It was found that the milk yield of lactating cows is 672.5 and 958.5 kg higher than that of dairy and meat-milk cows, respectively, and the level of feed coverage is higher than that of dairy products. It is based on the fact that the milk yield of cows also depends on the biomass index and service life. It was found that cows with a biomass of 531-550 kg, typical of the milk type, produced high milk yields. The level of milk productivity of cows is inextricably linked to the service life. Dairy cows with a service life of 81-90 days are characterized by high milk content, milk fat consumption and 4% milk yield. The selection of cows for the optimal service life is an important factor in the creation of productive dairy herds.
Keywords: productivity, characteristics, Montbeliard, breed, cows, conditions, Uzbekistan.

1 INTRODUCTION

Today, Montbeliard cattle are bred in many countries on five continents. Cattle of this breed are world-famous and are considered in the direction of double production, cows are characterized by high milk yield and quality of milk, its nutritional value, bulls are illustrated by high and high-quality meat production. Cattle of this breed are also characterized by good adaptability to different soil and climatic conditions [1-6].

In recent years, Montbeliard cattle have been imported to France from Uzbekistan in order to strengthen the breeding base of cattle and create high-yielding herds and increase livestock production. However, the productivity characteristics of cattle of this breed have not been studied in our hot climate conditions in special studies depending on various factors. However, the study of milk productivity of cows of this breed in relation to various factors is relevant in the full disclosure of productivity characteristics in our conditions [7- 12].

The purpose of the study is to study the genetic potential of cows of different types of production of Montbeliard, imported to Uzbekistan from France, depending on various factors.

2 MATERIALS AND METHODS

The research was conducted in the breeding herd of “Ergash ota” LLC, Yukori Chirchik district, Tashkent province of Uzbekistan, in III lactation cows of the Monbellar breed. Dairy productivity of cows was studied in generally accepted methods in zootechnics. In the

experimental herd, the feeding and care conditions of cows in different groups were the same. Three groups of Montbeliard III lactation cows imported from France were selected for the experiment, taking into account their origin, pedigree, age, biomass, parental productivity, type of production. The origin of the cows was studied on the basis of breeding documents. Group I milk, group II milk and meat group III were allocated 12 cows in each group. P D Pshenichny (1961), A S Vsyakix (1981) methods were used to classify cows into different types of production [10-12].

3 RESULTS AND DISCUSSION

The milk yield of different types of Monbellard cows is given in Table 1. According to Table 1, the milk yield of lactating cows of group I was 672.5 kg (P> 0.999) compared to cows of group II, 958.5 kg (P> 0.999) of cows of group III, milk yield was 20.2 and 29.4 kg, respectively. P> 0.999) and 4% milk were found to have higher values of 507.4 (P> 0.999) and 735.4 (P> 0.999) kg.

Table 1. Milk productivity indicators of different types of cows.

Indicators	Groups					
	I		II		III	
	$\overline{X} \pm S_{\bar{x}}$	C_v,%	$\overline{X} \pm S_{\bar{x}}$	C_v,%	$\overline{X} \pm S_{\bar{x}}$	C_v,%
Milk yield, kg	4077,0±71,9	5,86	3404,5±66,6	6,40	3118,5±75,9	8,07
Milk fat, %	3,98±0,053	4,46	4,17±0,045	3,62	4,26±0,048	3,79
Milk fat yield, kg	162,2±0,37	5,30	142,0±1,72	4,03	132,8±1,96	4,90
Milk 4% yield, kg	4056,6±35,5	2,91	3549,2±43,1	4,03	3321,2±49,1	4,91
Milk productivity, kg	817,5±9,83	3,98	652,3±8,53	4,34	588,8±10,2	5,77
Biomass, kg	498,7±7,97	5,30	521,9±6,36	4,04	529,6±7,15	4,48

The milk yield of cows of group I was 377 kg (10.2%) higher than the standard requirements of the Monbellard breed, the fat content in milk was 0.18%, and the milk fat consumption was 22.2 kg higher.

In the study, the highest monthly milk yield was observed in the third month of lactation in group I cows, which was 14.59% of the milk yield in lactation, the highest monthly milk yield in group II was found in the second month of lactation, and 14.45% of the lactation milk yield. In group III, this figure was also observed in the second month of lactation, which was equal to 15.39% of the total amount of milk in lactation. This is a data confirmation (Fig. 1). Analysis of this picture data shows that in all groups, the amount of milk in the cows remained well until the sixth month of the milking period, and then gradually decreased.

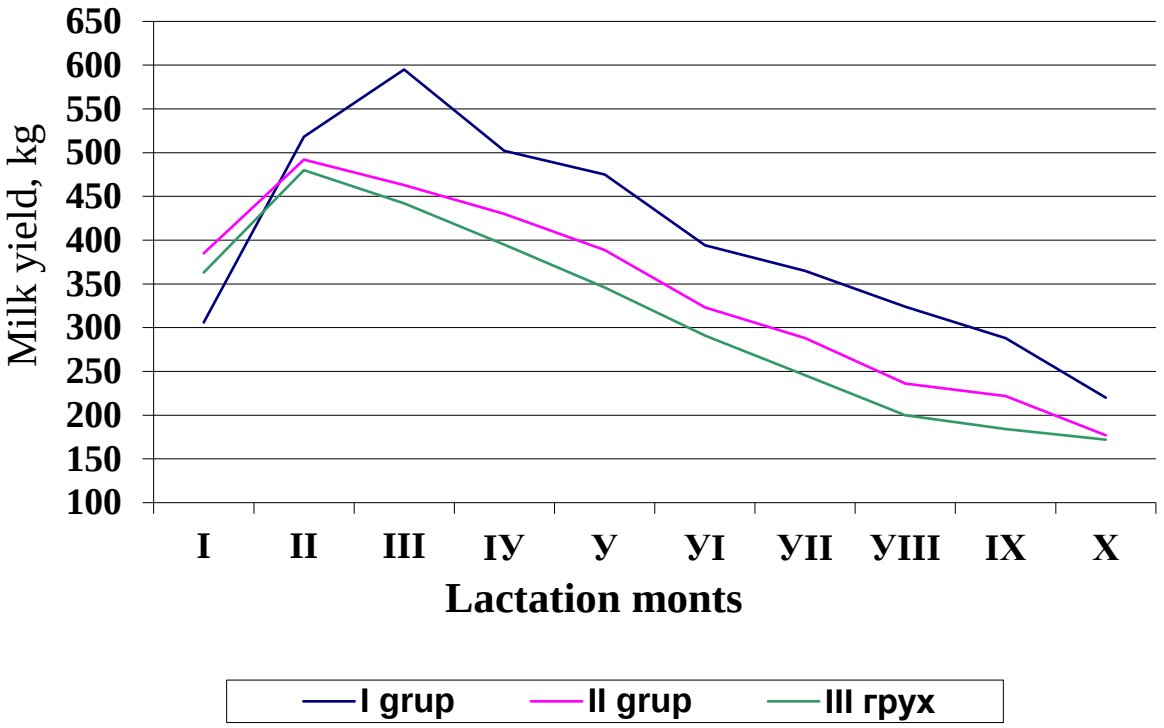

Fig. 1. Total amount of milk in lactation.

The study also examined the milk coverage of different types of cows (Table 2).

Table 2. Indicators of feed coverage of cows with dairy products. Indicators

Indicators	Groups		
	I	II	III
Average unit of feed consumed per 1 head of cow during lactation, kg	3920,2	3152,3	2784,3
Milk yield, kg	4077,0	3404,5	3118,5
Milk 4% yield, kg	4056,6	3549,2	3321,2
1 kg feed unit used for natural milk production, kg	1,04	1,08	1,12
1 kg feed unit for 4% milk, kg	1,03	1,12	1,19
Produced for every 100 feed units: milk wit natural fat, kg	96,15	92,59	89,28
Milk 4%	96,64	88,82	83,83

From the data in Table 2, it can be seen that dairy cows were characterized by higher milk productivity than other types of cows, which also covered feed consumption with a higher level of dairy production. In particular, group I cows consumed 3.8 and 7.2% less per 1 kg of natural fat milk and 8.1 and 13.5 feed units less per 1 kg of 4% milk, respectively, than cows of groups II and III. but for every 100 feed units, 3.56 kg (3.84%) and 6.87 kg (7.69%) of natural fat milk, respectively, and 7.82 kg (8.80%) and 12.81 kg (15.28%) produced more than 4% milk.

During the study, we also studied the milk yield in relation to the biomass of cows in the experimental groups (Table 3).

Table 3. Productivity indicators in relation to biomass of cows in III lactation in experimental groups.

Biomass, kg	Cattle head	Milk yield, kg	Milk fat, %	Milk fat extraction, kg	Milk 4%	Average biomass, kg
I group						
470 >	3	3814,7±122,8	4,17±0,15	159,1±1,90	3976,8±48,1	463,3±5,4
471-500	4	3875,2±372,5	3,99±0,09	154,6±2,99	3866,5±74,5	496,2±0,7
501-530	3	4093,0±21,9	3,88±0,03	158,8±1,37	3970,2±33,7	510,3±3,2
531-560	2	4350,0±73,0	3,84±0,08	167,0±0,56	4176,0±14,6	539,0±9,9
II group						
500 >	2	3197,0±155,5	4,38±0,09	140,0±4,31	3500,7±107,9	494,0±2,8
501-520	5	3297,5±75,3	4,22±0,04	139,1±3,34	3478,9±83,2	512,0±3,6
521-540	2	3526,5±309	4,07±0,13	143,5±8,06	3588,2±202,3	532,0±9,9
541-560	3	3582,0±145,4	4,06±0,01	145,4±4,04	3635,7±101,4	549,7±2,0
III group						
510 >	4	2948,7±95,9	4,36±0,06	128,5±3,76	3214,1±94,0	506,2±2,8
511-520	1	2900	4,36	126,4	3161,0	520
521-540	4	3173,5±105,1	4,20±0,11	133,3±2,49	3384,6±62,3	530,7±2,4
541-560	1	3098,0	4,37	135,4	3384,6	546
561 <	2	3417,5±289,2	4,10±0,13	140,1±7,3	3502,9±182,1	570,5±13,4

According to the table, in group I, III lactation cows with a biomass of 531-560 kg produce the highest milk yield. The amount of milk in lactation III of cows of group I with such a biomass is about 470 kg, 471-500, 501-530 kg of biomass of cows in this group is 535.3 kg (P> 0.999), 474.8 and 257 kg (P> 0.999), respectively. , milk fat yield was 7.9 kg (P> 0.999), 12.4 kg (P> 0.999) and 8.2 kg (P> 0.999), respectively, and 4% milk was 199.2 kg (P> 0.999), respectively. 310.5kg (P> 0.999) and 205.8kg (P> 0.999) were higher.

It should be noted that the milk yield of cows with a biomass of 531-560 kg in group I was 768-1153 kg (P> 0.999), the consumption of milk fat was 21.6-27.9 kg (P> 0.999) compared to the biomass of cows in group II. The amount of 4% milk was 540.3-697.1 kg (P> 0.999) higher, and these figures were 932.5-1401.3 kg (P> 0.999), 26.9-38.5 kg, respectively, compared to group III cows. (P> 0.999), 673.1–1015 kg (P> 0.999) were found to be high.

It was found that the level of milk productivity of cows in the experimental groups depends on the service-period periods (Table 4).

Table 4. Productivity indicators of cows of III lactation in experimental groups depending on the service period.

Service period, days	Cattle head	Milk yield, kg	Milk fat, %	Milk fat extraction, kg	Milk 4%, kg
I group					
80 >	3	3949,3±118,7	4,10±0,16	161,9±2,90	4048,3±72,5
81-90	4	4157,0±136,9	3,92±0,08	162,9±2,71	4073,9±67,6
91-100	3	4082,0±60,8	3,98±0,11	162,5±2,12	4061,6±19,6
101 <	2	3970	3,97	157,6	3940,2
II group					
80 >	2	3234,0±94,3	4,31±0,10	139,4±2,4	3484,6±59,7
81-90	5	3359,5±156,2	4,14±0,05	139,1±4,81	3477,1±120,3
91-100	2	3564,7±99,1	4,08±0,08	145,4±3,21	3635,9±80,3
101 <	3	3391,3±122,2	4,17±0,12	141,4±5,76	3535,4±144,4
III group					
80 >	4	3022,0±183,4	4,30±0,15	129,5±3,35	3248,6±83,7
81-90	1	3240,0±189,5	4,18±0,07	135,4±5,91	33,85±147,5
91-100	4	3134,0±159,3	4,24±0,11	132,9±3,47	3322,0±86,9
101 <	1	2997,0±142,8	4,43±0,08	132,8±3,82	3319,2±94,7

The table shows that the highest milk yield in group I was obtained by cows with a service period of 81-90 days, their milk yield was up to 80 days, respectively, from 91-100 days of cows with 101 and more days, respectively 207.7; 75 and 187 kg, milk fat consumption was 0.4-5.3 kg, 4% milk was 12.3-133.7 kg higher.

In group II, the amount of milk in cows with a service period of 91-100 days is up to 80 days, in cows with 81-90 days, 101 and more, respectively, 330.7; 205.2 and 173.4 kg higher, milk fat consumption 6.0; 6.3 and 4.0 kg and 4% milk 151.3; 158.8 and 100.5 kg were found to be high.

According to the amount of milk of cows with a service period of 81-90 days in group I, cows with different service periods in group II were 592.3-923 kg (P> 0.999), the amount of 4% milk was 438-596.8 kg (P> 0.999). Also, the milk yield of cows with a service period of 81-90 days in group I up to 80 days in group III with a service period of 81-90, 91-100, 101 days and above is 917-1160 kg (P> 0.999), 4%, respectively. milk was found to be 688.1–825.3 kg (P> 0.999) higher [11,12].

4 CONCLUSIONS

The level of milk productivity of Montbeliard cows depends on the type of use. In lactation of dairy cows, the amount of milk is 672.5 and 958.5 kg, respectively, higher than that of dairy and beef and dairy cows. Dairy cows have a higher feed coverage than dairy and meat-and-milk cows.

The milk yield of Montbeliard cows in Uzbekistan depends on their biomass, regardless of lactation. In lactation III, cows with a biomass of 531-550 kg, typical of the milk type, produce high milk yield. These data suggest that increasing the weight of these biomass cows in the herd is an important measure in the creation of productive dairy herds.

The level of milk productivity of cows is inextricably linked to the service life. Dairy cows with a service life of 81-90 days are characterized by high milk content, milk fat consumption and 4% milk yield. The selection of cows for the optimal service life is an important factor in the creation of productive dairy herds.

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