

# Milk Productivity of the Austrian Selection Holstein Cattle Stock in Uzbekistan Condition

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**Abstract:** *In the investigations cattle that have been brought from Austria manifested in high hereditary features on dairy productivity in our specific climatic condition. It was detected that the amount of milk made 36.7%, milk amount of 4% made 36.8%, mass weight made 35.8%. Except lactation cattle produced high amount of dairy products per 100kg mass weight and it was developed selection groups of high heredity cattle on productivity level. Cattle which belong to “Nasl o’zagi” with 4.02% butter, made 6890.4 kg while growing bull group with 3.98 %, butter made 8131.2 kg of dairy products. It has been arranged to select and breed calves which are of high heredity value of herd.*

**Keywords:** Holstein breed, cattle, milk, productivity, herd

## 1. Introduction

Improvement productive peculiarities of the cattle breed which arranged to insinuate in order to enhance dairy and meat production and usage various fruitful factors have great practical importance in our Republic. In the last years the calves, which have productiveness on high heredity capabilities, are being brought to our republic from stock developed countries [1]. Fully manifesting of productive characteristics of cattle in the condition of insemination as well as studying the influencing factors are top priorities in the research [2, 3, 4].

## 2. Methods of Research

The objects of our research are Holstein breed cattle which brought from Austria in various lactations. The researches were conducted based on the similarity signs requirements of chosen cattle herd in “Khantemir” pedigree farm of Okkurgan district, Tashkent region. Productive indicators of cows were studied by general received methods in zootechnics. Cows were kept in the same condition, nutrition was the same too, milk productiveness, a live mass as well as physiologic state were considered.

## 3. Results and discussion

In the studies Holstein breed cows manifested milk productivity highly in regardless of lactation (Table 1).

According to the data of the table, Austrian cattle manifested well on milk production heredity rate regardless of lactation in our condition and milk productiveness was high in lactation intervals. For example, milk amount increased by 1039,5 kg (35,4%) mature - year-old cow and above compare to the I lactation, milk butterfat yield made 74,5 kg, milk amount of 4% made 1861,3 kg, live mass 174,8 kg. Milkiness coefficient was characterized with high indicators

regardless of lactation and it evidenced that they had a clear type of milk. We formed the selection groups in return for the most productive cows in the researches (Table 2).

As the shown data on the table 2, in the experiment herd, productive selection group of Holstein breed cows were created, these cows existed high heredity capability. It was determined that the milk amount of the “growing bull group” made 1240,8 kg (P.0,999), milk butterfat output 46,6 kg (P.0,999), with 4% milk was 1165,7 kg (P.0,999), and milkiness coefficient was much higher than the group “Nasl o’zagi”. The database showed that productive Holstien breed cows of herd have been created which available high heredity capabilities.

**Table 1:** Indicators of live mass and milk productivity of cattle for various lactations of Holstein breed in experiment herd

Indicators	Lactation			
	I		III and above	
	$\bar{X} \pm S_{\bar{x}}$	Cv, %	$\bar{X} \pm S_{\bar{x}}$	Cv, %
Head of cows	83		49	
Milk amount, kg	5050,9±57,8	10,30	6890,4±182,6	18,36
Milk butterfat, %	4,01±0,01	2,25	4,02±0,01	1,48
Milk butterfat yield, kg	202,5±7,34	11,1	277,0±7,16	10,8
4% - milk amount, kg	5063,5±186,7	11,2	6924,8±190,5	11,7
Milkiness coefficient, kg	1033,3±28,3	8,72	1038,3±30,6	8,8
Live mass, kg	488,8±2,24	4,15	663,6±6,41	6,70

**Table 2:** Milk productivity and live mass of “Nasl O’zagi” and “growing bull group” cows

Indicators	Selection groups of cow			
	“Nasl o’zagi”		“growing bull group”	
	$\bar{X} \pm S\bar{x}$	Cv, %	$\bar{X} \pm S\bar{x}$	Cv, %
Head of cattle	49		8	
Milk amount,kg	6890,4±182,6	18,36	8131,2±107,8	3,51
Milk butterfat,%	4,02±0,01	1,48	3,98±0,02	1,16
Milk butterfat output,kg	277,0±7,16	10,8	323,6±4,13	3,42
4 %-milk amount, kg	6924,8±190,5	11,7	8090,5±103,7	3,46
Milkiness coefficient,kg	1038,3±30,6	8,8	1117,7±11,8	2,78
Live mass,kg	663,6±6,41	6,7	727,5±7,49	2,72

We studied in our researches milk productivity of the III and above lactation cows connected with live mass (Table 3).

**Table 3:** Milk productivity connected with the live mass of III and above Holstein breed lactation cows

Indicators	Seasons							
	Winter		Spring		Summer		Autumn	
	( $\bar{X} \pm S\bar{x}$ )	Cv, %	( $\bar{X} \pm S\bar{x}$ )	Cv, %	( $\bar{X} \pm S\bar{x}$ )	Cv, %	( $\bar{X} \pm S\bar{x}$ )	Cv, %
Head of cows	14		9		8		18	
Milk amount, kg	7385,3±222,8	10,9	6984,4±248,4	10,1	6530,0±249,6	10,1	6965,8±182,7	10,8
Milk butterfat, %	4,02±0,019	1,74	4,04±0,019	1,3	4,00±0,02	1,34	4,01±0,014	1,45
Milk butterfat output, kg	296,9±8,6	11,3	282,2±6,8	8,0	261,2±8,4	9,8	279,3±7,7	9,2
4%-milk amount, kg	7422,2±203,1	10,1	7054,2±196,5	9,9	6530±216,3	10,4	6983,2±178,5	9,0
Milkiness coefficient, kg	1073,1±34,7	9,6	1060,0±30,2	7,9	1036,5±28,9	8,5	1052,7±33,2	9,1
Live mass, kg	688,2±13,2	6,9	648,9±11,6	5,0	630,0±11,2	4,7	661,7±10,6	6,6

According to the analysis of the table 3, exceeding of the live mass of mature -year-old cow provides milk butterfat output exceeding, as well as 4% of milk amount during their lactation. For instance, when the live mass of cows was 721-750 kg, the milk amount made 2216,7 kg (P.0,999), milk butterfat output 110,4 kg (P.0,999), milk amount of 4% made 1758,4 kg (P.0,999), it was high compare with 600 kg live mass of cow. It is obvious that to exceed the live mass of cow is important to being much milk productiveness.

Furthermore, the milk productivity of Holstein breed cattle herd closely connected with live mass. Like such kind of herd, conducting with high live mass cows selection tasks are the main issue in order to create and breed productive and record breaking cows for development of productiveness.

In the investigations we also study the covering foodstuffs with milk features of lactation cows (Table 4).

**Table 4:** Indicators of covering foodstuff with milk in various lactation Holstein breed cows

Indicators	Lactation	
	I	III and above
Average spent foodstuff unit for per head in lactation, kg	5158,9	6857,5
Milk amount, kg	5050,9	6890,4
4%-milk amount, kg	5063,5	6924,8
Spent foodstuff unit for 1 kg natural butter production, kg	1,02	0,99
Spent foodstuff unit for 1 kg with 4%-milk production, kg	1,02	0,99
Produced for each 100 kg foodstuff unit:		
Natural butterfat milk, kg	97,91	99,52
4%-milk, kg	101,88	99,03

On the table it is obvious, that Holstein type cows covered the foodstuff fully with milk regardless to lactation. Exceeding of cows lactation allows not only high milk productivity but also to cover the foodstuff with milk. For example, for mature-year-old cows was spent relating to 3,0 and less 3,0% foodstuff unit to produce 1 kg natural 4% milk compare to the young lactation I cows, however, for per 100 foodstuff unit produced at the expense of 1,6% much milk with natural butterfat.

Thus, it was observed that Holstein breed cow existed covering foodstuff features with milk high percentage regardless of lactation and these features improved once again with growing of age in the condition of our republic.

#### 4. Conclusions

1. Holstein breed cattle, which brought from Austria, manifested in high milk productiveness and availability with high heredity possibilities in our republic.

2. It is highly recommended excessively usage of filling herd with pedigree calves that taken Holstein stock Austrian cows which made available on high heredity capabilities to create productive herd.

## References

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