



Indicators of Growth And Development of Cows of Different Genotypes

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Abstract: This article presents information obtained during research on the external characteristics of pure-bred spotted and its descendants obtained as a result of crossbreeding with the Holstein breed, as well as Holstein cows of Polish, German and Dutch selection.

Key words: Live weight, exterior, black and white, Holstein, lactation, selection, genotype.

Introduction

. In order to further improve the stable supply of cheap and high-quality milk and meat products to the population of our country, a number of systematic measures have been implemented in recent years. In the "Development Strategy of New Uzbekistan" for 2022-2026, "...Implementation of new projects to increase the volume of production of livestock products by 1.5-2 times, increase the number of head of livestock and increase productivity increase, artificial insemination of 2.4 million cows (52 percent) and calves of breeding age in households, strengthening of livestock feed base, increase of high-yielding varieties of nutritious crops, harvesting 2-3 times a year and increasing productivity 1 Important tasks such as "doubling" have been defined.

At the moment, the most important tasks facing livestock breeders and experts in the field are to increase the number of livestock, to improve their productivity, to quench the people's demand for food from livestock, and to provide the industry with raw materials. For this, it is necessary to achieve a strong connection of all the links of the natural food chain. This chain consists of soil-fertilizer-plant-animal-man and is always in need of science and technology innovations.

As the object of the study, spotted cows (group I) and their first (group II) and second (group III) generations obtained as a result of crossing them with Holstein bulls, as well as Polish (group IV), Germany (V-group), purebred Holstein cows of Dutch (VI-group) selection were selected.

The purpose of the study. The purpose of the research is to study and analyze live weight indicators, body sizes and body structure indices of cows belonging to different genotypes.

The obtained results and their analysis. We have determined the live weight of cows that differed in genetic origin in our research and presented in Table 1 below.

Table 1

Live weight indicators of cows in experimental groups

Groups	Live weight of experimental cows, (n=15)		
	Age, month		
	18	24	30
I	386,7±4,6	425,9±4,2	446,6 ±5,1



II	409,4±3,9	432,4±4,7	471,4±8,5
III	412,4±5,8	442,0±5,3	521,9±6,9
IV	425,5±6,1	501,7±7,8	563,0±13,3
V	421,0±7,9	569,3±10,2	651,9±16,5
VI	470,7±8,3	582,6±7,9	716,0±12,1

Table 1 indicates that the live weight of cows before artificial insemination was 470.7 kg. This is proportionally more than the indicator of cows in other groups: 84.0 kg (P<0.01) or 21.7 percent, 61.3 kg (P<0.01) or 15.0 percent, 58.3 kg (P<0.01) or 14.1 percent, 45.2 kg (P<0.05) or 10.6 percent, 49.7 kg (P<0.05) or 11.8 percent higher achieved.

In the next considered period of the study, the live weight of cows in group VI was equal to 763.2 kg, compared to cows in experimental groups I, II, III, IV, V, respectively: 281.4 kg (P<0.001) or 58.4 percent, 244.9 kg (P<0.001) or 47.3 percent, 193.8 kg (P<0.001) or 34.0 percent, 149.5 kg (P<0.01) or 24. percent, 58.5 kg (P<0.01) or 8.3 percent. In general, Holstein cows belonging to various selections of pure breed are distinguished by their large live weight. Their offspring also have a live weight of 36-40 kg and are characterized by rapid growth.

During the study of the growth of cows in the experimental groups, it was found that the cows of the Dutch breed grew faster than their peers in the other experimental groups.

When evaluating the level of growth, development and body structure of cows of different genetic origin, it is important to determine their external indicators. Therefore, we took the main body measurements of the cows in the experimental group and listed them in Table 2.

The analysis of the data in Table 2 showed that the body size indicators of purebred Holstein cows were higher compared to purebred and Holstein-bred spotted cows. In this case, cows belonging to the Dutch selection have priority, and their peers I, II, III, IV, V - cows in experimental groups according to the height of the udder, respectively: 5.1 cm or 4 percent, 4.4 cm or 3.4 percent, 4.1 cm or 3.2 percent, 2.0 cm or 1.5 percent, 3.0 cm or 2.3 percent; 2.8 cm or 4.1 percent, 1.1 cm



;l Table 2

Body dimension of lactating cows, cm

<i>Body dimensions</i>	Groups					
	I		II		III	
	n=15		n=15		n=15	
	X±Sx	Cv,%	X±Sx	Cv,%	X±Sx	Cv,%
Shoulder height	127,9±0,86	2,5	128,6±0,95	2,8	128,9±0,96	2,8
Chest depth	69,1±0,30	0,87	70,8±0,23	0,65	70,9±0,24	0,69
Chest width	46,9±0,27	0,77	47,0±0,22	0,64	47,3±0,23	0,64
Chest circumference	195,8±0,54	1,6	197,2±0,52	1,5	198,0±0,56	1,6
Oblique length of the body	160,0±0,62	1,8	160,4±0,61	1,8	161,1±0,54	1,5
The width of the hind femur	49,8±0,57	1,7	50,0±0,53	1,5	50,7±0,56	1,6
Food circumference	18,9±0,15	0,42	19,1±0,18	0,53	19,4±0,19	0,55

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<i>Body dimensions</i>	Groups					
	IV		V		VI	
	n=15		n=15		n=15	
	X±Sx	Cv,%	X±Sx	Cv,%	X±Sx	Cv,%
Shoulder height	131,0±1,05	3,0	130,0±0,94	2,7	133,0±0,89	2,5
Chest depth	71,8±0,29	0,85	71,6±0,27	0,78	71,9±0,28	0,80
Chest width	48,6±0,35	1,0	48,8±0,38	1,1	49,0±0,39	1,1
Chest circumference	200,5±0,50	1,4	199,7±0,44	1,2	200,8±0,39	1,1
Oblique length of the body	170,5±0,64	1,8	169,9±0,59	1,7	172,8±0,70	2,0
The width of the hind femur	52,3±0,49	1,4	52,0±0,39	1,1	52,4±0,40	1,2
Food circumference	20,0±0,22	0,63	19,6±0,22	0,64	20,0±0,21	0,60



or 1.6 percent, 1.0 cm or 1.4 percent, 0.1 cm or 0.1 percent, 0.3 cm or 0.4 percent; 2.1 cm or 4.5 percent, 2.0 cm or 4.3 percent, 1.7 cm or 3.6 percent, 0.4 cm or 0.8 percent, 0.2 cm or 0.4 percent; 5.0 cm or 2.6 percent, 3.6 cm or 1.8 percent, 2.8 cm or 1.4 percent, 0.3 cm or 0.2 percent, 1.1 cm or 0.6 percent; 12.8 cm or 8.0 percent, 12.4 cm or 7.7 percent, 11.7 cm or 7.3 percent, 2.3 cm or 1.3 percent, 2.9 cm or 1.7 percent; 2.6 cm in width of the back femur. or 5.2 per cent, 2.4 cm or 4.8 per cent, 1.7 cm or 3.4 per cent, 0.1 cm or 0.2 per cent, 0.4 cm or 0.8 percent; 1.1 cm on the circumference of the leg. or 5.8 percent, 0.9 cm or 4.7 percent, 0.6 or 3.1 percent, no difference was observed for cows of group IV, 0.4 cm or 2.0 percent behind. 1.1 cm on the circumference of the leg. or 5.8 percent, 0.9 cm or 4.7 percent, 0.6 or 3.1 percent, no difference was observed for cows of group IV, 0.4 cm or 2.0 percent behind.

Table 3

Body structure indices of cows in the experimental group, %

Body structure indexes	Groups					
	I	II	III	IV	V	VI
	I – Lactation (n=15)					
Long-leggedness	73,7	75,3	77,8	84,9	85,2	87,0
Elongation	125,7	125,3	125,5	124,8	124,5	124,4
Chestiness	67,6	67,2	67,4	65,9	66,9	69,4
Pelvis chest	92,7	92,5	93,6	89,7	91,4	100,7
Density or compact	121,8	121,2	120,4	116,0	115,9	118,4
bony	14,8	14,8	14,8	14,4	14,4	14,2

Summary. Thus, the analysis of the obtained results showed that, regardless of the genotype of the cows and the number of lactations, purebred Holsteins had well-developed udder indicators and proportional body structure compared to their counterparts, purebred and Holstein-bred Black-Ola cows. , showed that in terms of productivity, it belongs to the milk sector. In this case, cows belonging to the Dutch and German selections were superior to tengurs in other experimental groups.

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