

UO‘T: 636. 082. 11: 636.088.5

STUDY OF THE FEEDING ENVIRONMENT OF HOLSTEIN COWS OF NETHERLANDS, GERMANY AND DANISH SELECTION

q.x.f.f.d (PhD); Mirsaidova Zuhra Shukhrat kizi, q.x.f.f.d (PhD) associate professor; Khuzhamov Jurabek Nayimovich.
Samarkand State University of Veterinary Medicine, Animal Husbandry and Biotechnology

Annotation. This article presents data on the comparative study of the feeding conditions of Holstein cows of Dutch, German, and Danish selection, depending on their constitutional type.

Keywords: diet, metabolic energy, digestible protein, nutrient unit, protein, carotene.

Relevance of the topic. In recent years, in order to develop cattle breeding based on scientific achievements and advanced experience, great attention has been paid to breeding work, strengthening the feed base, and improving the technology of product production and processing. In this regard, it is important to improve the breed of cattle, enrich and preserve its gene pool. In recent years, farms have been importing improved breeds of cattle such as Holstein, Swiss, Aberdeen Angus, Kazakh Akbash and Flagfix Simmental from Germany, the Netherlands, Denmark, Austria, Kazakhstan, and Poland. Therefore, in recent years, black-and-white and red-and-white Holstein cattle, which differ sharply from other cattle breeds with their economic useful characteristics typical of the world gene pool, have been imported from abroad to various regions of our country.

Materials and methods. Feeding cows in the experiment according to the type of constitution Using the literature of A.P. Kalashnikov et al. (2003), it was found that feeding cows with high-quality and nutritious feeds has a positive effect on the amount of milk and its quality. The diet of cows should be balanced in terms of all necessary nutrients and be very valuable. Dairy cows should consume a large amount of high-quality roughage and juicy feeds in their diet. Because these feeds allow the normal activity of the digestive system and the production of high-quality milk. The transition to high-quality nutritious feeding increases the amount of milk and improves its quality. [112; 4-5-b] was organized on the basis of the standards. In this regard, their live weight, milk productivity and physiological condition were taken into account.

The results obtained and their analysis. The data in Table 1 indicate that during the second lactation, three groups were formed for the experiment, each of which was divided into thin-dense and strong constitution types. We studied the feed consumption of experimental cows of the thin-dense constitution type of group I by comparing them with their peers. Alfalfa hay consumed more feed in the thin-dense constitution type of group I than in the strong constitution type of group I; 305 kg or 33.3%; 549 kg or 60%; 457.5 kg or 50%; 305 kg or 33.3%; 457.5 kg or 50%; 457.5 kg or 50%; 305 kg or 33.3%; 457.5 kg or 50%; 457.5 kg or 50%; 305 kg or 33.3%; 50% compared to the strong constitution type of group II. Straw group I solid constitution type consumed 152.5 kg or 14.3% less feed than group I fine-dense and group II solid constitution type, 305 kg or 28.5% less feed than group II fine-dense and group III fine-dense; 152.5 kg or 14.3%. Group III solid consumption was 305 kg or 28.5% more feed than group III solid. From juicy feeds Hay group I solid constitution type consumed 305 kg or 20% more than group I fine-dense, group II fine-dense; and solid constitution type; group III fine-dense and solid constitution type. Nimqand beetroot group I solid constitution type and fine-dense; group II fine-dense and solid constitution type; group III fine-dense and solid constitution type, respectively, 610 kg or 11.76%; 1220 kg or 23.5%; 915 kg or 17.6%; 1825 kg 35.2% and 915 kg or 17.6% prevailed. Corn silage Group I strong constitution type Group I thin-dense constitution type; Group III thin-dense constitution type consumed the same amount of feed as Group II thin-dense and strong constitution type and Group III strong constitution type. Wheat bran Group I thin-dense constitution type Group II thin-dense; Group III thin-dense consumed 305 kg or 50% more.

Group II strong; Group III strong constitution type consumed the same amount of feed as Group I strong. Group I consumed 152.5 kg or 25% more feed than Group I strong. Cottonseed meal group I, strong constitution type, consumed 152.5 kg or 25% more feed than group I, fine-dense type and group II, strong constitution type.

In terms of cottonseed meal consumption, group I, strong constitution type, group II, fine-dense constitution type; 213.5 kg or 35%; group III, fine-dense and strong constitution types consumed 305 kg or 50%; 183 kg or 30% more feed than group I, strong constitution type; 152.5 kg or 25%; group II, strong constitution type; 305 kg or 50%; group III, strong and thin-dense constitution types prevailed by 244 kg or 40%; group II, fine-dense. Wheat groats group I, strong constitution type, group I, fine-dense; group II, strong; Group III consumed 152.5 kg or 33.3% more feed than the thin-dense and strong constitution types, group III consumed 91.5 kg or 20% more feed than the thin-dense constitution type. Maize groats Group I cows of strong constitution type consumed the same amount of feed as Group I cows of thin-dense constitution type. Group II thin-dense; Group III thin-dense constitution types; consumed 305 kg or 33.3% more feed than the strong constitution type, group II consumed 61 kg or 6.67% more feed than the strong constitution type, group III consumed 152.5 kg or 16.67% more feed than the strong constitution type. Meat and bone meal was consumed equally in all groups, 21.35 kg. Diamaniphosphate was consumed equally in all groups, 30.5 kg.

Indicators	Groups											
	I				II				III			
	thin-dense		solid		thin-dense		solid		thin-dense		solid	
	kg	feed unit	kg	feed unit	kg	feed unit	kg	feed unit	kg	feed unit	kg	feed unit
Spring wheat flour	1220	244	1067.5	213.5	1372.5	274.5	1220	244	1220	244	762.5	152.5
Alfalfa hay	915	402.6	610	268.4	366	161.04	457.5	201.3	610	268.4	457.5	201.3
Alfalfa hay	1220	427	1525	533.75	1220	427	1220	427	1220	427	1220	427
Nimqand beetroot	4575	777.75	5185	881.45	3965	674.05	4270	725.9	3660	622.2	4270	725.9
Mecca silo	7930	1586	8540	1708	8540	1708	8540	1708	7930	1586	8540	1708
Wheat bran	610	457.5	457.5	343,125	305	228.75	610	457.5	305	228.75	610	457.5
Cottonseed meal	457.5	407,175	610	542.9	396.5	352,885	457.5	407,175	305	271.45	427	380.03
Barley cereal	457.5	526,125	610	701.5	366	420.9	305	350.75	305	350.75	305	350.75
Wheat groats	305	387.35	457.5	581,025	366	464.82	305	387.35	305	387.35	305	387.35
Mecca cereal	915	1216.95	915	1216.95	610	811.3	976	1298.08	610	811.3	762.5	1014,125
Meat and bone him/her	21.35	22,204	21.35	22,204	21.35	22,204	21.35	22,204	21.35	22,204	21.35	22,204
Diamond phosphate	30.5	X	30.5	X	30.5	X	30.5	X	30.5	X	30.5	X
Feed unit	X	6454.65	X	7012.80	X	5545.45	X	6229.26	X	5219.40	X	5826.66
Alternating energy , MDj	75352.08	X	79986.56	X	64968.97	X	72204.48	X	61573.71	X	66913.95	X
Dry matter , kg	7479.8	X	7757.5	X	6603.1	X	7122.9	X	6285.7	X	6525.6	X
Digestive protein , kg	708.2	X	781.7	X	586.1	X	659.2	X	554.1	X	629.5	X
Raw fiber , kg	1635.8	X	1613.6	X	1540.8	X	1557.4	X	1483.8	X	1384.9	X
Sugar , kg	577.5	X	640.6	X	488.4	X	543.7	X	455.3	X	531.8	X
Cooking salt , kg	47.27	X	49.71	X	39.95	X	44.83	X	37.51	X	42.39	X
calcium , kg	54.1	X	53.6	X	44.7	X	46.8	X	46.8	X	45.03	X
phosphorus , kg	29.7	X	31.04	X	23.3	X	28.5	X	21.9	X	26.7	X
Carotene , g	261.3	X	275.5	X	250.7	X	255.03	X	248.9	X	252.5	X

The feed unit, exchangeable energy, dry matter, digestible protein, crude fiber, sugar, table salt, calcium, phosphorus and carotene content of the feed consumed by the cows in the experimental group were determined and the results are presented below. In terms of feed unit, group I had a strong constitution type compared to the thin-dense; group II had a thin-dense and strong constitution type; group III had a thin-dense and strong constitution type, respectively, by 558.1; 1467.3; 783.5; 1793.4 and 1186.1 units or 7.94; 20.9; 11.2; 25.5; 16.9%. Exchangeable energy group I had a strong constitution type compared to the thin-dense; group II had a thin-dense and

strong constitution type; group III had a thin-dense and strong constitution type by 4634.5; 15017.6; 10175.7; 18412.8; 13072.6 MDj or 5.8; 18.7; 12.7; 23.02 16.3% more. Dry matter group I strong group I thin-dense; group II thin-dense and strong; group III thin-dense and strong constitution types consumed 277.7; 1154.4; 1048.4; 1471.8; 1231.9 kg or 3.6; 14.9; 13.5; 18.9; 15.8% more.

Digestible protein group I strong group I thin-dense; group II thin-dense and strong; group III thin-dense and strong types consumed 73.5; 195.6; 126.9; 227.6; 152.2 kg or 9.4; 25.02; 16.2; 29.1; 19.5% more. Raw cellulose Group I strong Group I fine-dense; Group II fine-dense and strong; Group III fine-dense and strong types consumed 22.2 kg or 1.37% less raw cellulose; 72.8; 227.4; 129.8; 228.7 kg or 4.5; 14.1; 8.04 and 14.2% more. The amount of sugar differed as follows, 63.1; 152.2; 98.4; 185.3; 108.8 kg or 9.8; 23.7; 15.3; 28.9; 16.9% more. Cooking salt 2.44; 9.76; 4.88; 12.2; 7.32 kg or 4.91; 19.63; 9.82; 24.54; 14.72% more. Calcium group I consumed 0.5 kg or 0.9% less than group I, strong, thin-dense constitution type. Group II, thin-dense and strong; Group III, thin-dense and strong types. 8.9; 8.5; 6.8; 8.6 kg or 16.6; 15.8; 12.7; 15.9% more than group I, strong, thin-dense and strong types. Phosphorus group I, strong, thin-dense and strong group I, strong, 1.34; 2.99 kg or 4.3; 9.6% more than group II, thin-dense; Group III, thin-dense and strong; 7.74; 9.14; 4.34 kg or 24.9; 29.4 and 13.9 % more. Carotene group I was 14.2; 24.8; 22.9; 26.6; 23.0 g or 5.1; 9.0; 8.3; 9.6 and 8.35 % higher than group I, group I, group II, group III When analyzing the data in the table, in terms of the consumption of coarse and dense feed in the diet, in the second lactation, the Holstein cows of the Dutch selection of group I with a fine-dense constitution type were superior to the experimental Holstein cows of the German selection of group II and the Danish selection of group III with a fine-dense constitution type by 2.17; 0.2 percent, while in terms of the consumption of juicy feed, the II group with a fine-dense constitution type consumed 7.42; 0.16 percent more feed than the I and III groups with a fine-dense constitution type. The consumption of nutritious feed was 5.3; 7.1 percent more than the I and III groups with a fine-dense constitution type.

Group II Holstein cows with a strong constitution consumed 0.25; 1.02 percent more roughage and 4.57; 3.17 percent more juicy feed than Group I and III cows with a strong constitution. Our experiments revealed that Group I Holstein cows with a strong constitution consumed 1.7; 4.0 percent more nutritious feed than Group II and III Holstein cows with a strong constitution, respectively.

Table 2

The percentage composition of feed amounts in relation to the nutritional value of the diets of cows in the experimental groups.

Type of feed	I I Lactation (n= 10)					
	Groups					
	I		II		III	
	thin-dense	solid	thin-dense	solid	thin-dense	solid
Spring wheat straw	3, 8	3.0 4	4.9 5	3.92	4, 7	2.6 2
Alfalfa hay	6.2 4	3.8 3	2.9	3, 23	5.1 4	3.4 5

Alfalfa hay	6.6 1	7.6	7.7	6, 85	8, 2	7.3 3
Nimqand beetroot	12.0 5	12, 6	12.1 5	11, 65	11.9	12.4 6
Mecca silo	24, 6	24.3 5	30.8	27, 43	30, 4	29.3 1
Wheat bran	7, 1	4, 9	4.1	7, 36	4, 4	7.8 5
Cotton meal	6.3 1	7.7	6, 4	6, 54	5.2	6.5 2
Barley cereal	8.1 5	10.0 1	7, 6	5, 6	6.7	6.0 2
Wheat groats	6.0	8, 3	8, 4	6 .22	7.4	6.6 5
Mecca cereal	18.8	17, 35	14.6	2 0.84	15.5 4	17.4 1
Meat and bone him/her	0.34	0.3 2	0.40	0.36	0.42	0.38
Total	100	100	100	100	100	100

Conclusion. Thus, the conducted studies and numerous literature reviews show that the first 200 days of Holstein cows during lactation are considered very important, and in addition to full-value feeding, advance feeding is also important. Holstein cows of different selections consumed a lot of feeds with high nutritional value during lactation. This was important in ensuring their high milk productivity.

References.

1. Narbaeva M.K., Kakharov A.K., Sharapov R.Sh. Milk productivity of Holstein and Holsteinized black-and-white cows. //Zooveterinaria Tashkent, 2011.№11-12. 49-50p.
2. Narbaeva M.K. Productivity of Holstein black-and-white breeds and their crosses in the conditions of the southern zone of Uzbekistan. Author's abstract of dissertation candidate of agricultural sciences. Tashkent.2001.P.21
3. Khuzhamov, J. N., Mirsaidova, Z., Hamidova, R., & Jo'rayev, B. (2023). STATE OF LIVESTOCK DEVELOPMENT AND PROSPECTIVE PLANS OF OUR REPUBLIC. SCIENTIFIC JOURNAL OF APPLIED AND MEDICAL SCIENCES, 37-44.
4. Khuzhamov Jurabek Nayimovich. Ways to increase milk productivity of cows of different breeds and breeding. Abstract of the dissertation for the degree of Doctor of Philosophy (PhD) in Agricultural Sciences. Samarkand 2019, 41 pages.
5. Z.S. Mirsaidova, Yu.N. Khudzhamov, Kh.S. Mirsaidov, Dependence of milk productivity of Holstein cows of different breeds on the type of constitution, Agrobiotechnology
6. Zukhra Mirsaidova, Mokhigul Narzullayeva, Rasul Amonov, Jurabek Khujamov, Kadyken Rizabek Clinical and hematological indicators of cows belonging to different selections of the holshstin breed by seasons. <https://doi.org/10.1051/bioconf/20249501022> *BIO Web Conf.* **Volume 95**, 2024 *III International Conference on Current Issues of Breeding, Technology and Processing of Agricultural Crops and Environment (CIBTA-III-2024)*
7. Khujamov Jurabek Nayimovich, Soyibjonov Ahmadillo Tohirjono 'g'li, Mirsaidova Zuxra Shuxratovna, Kurbanova Shahnova Ergashevna, Gapparov Shovkhiddin Tazhievich *WAYS TO INCREASE MILK PRODUCTION USING BIOLOGICAL CHARACTERISTICS AND PARATYPICAL FACTORS OF COWS. Journal of Advanced Zoology ISSN: 0253-7214 Volume 44 Special Issue-2 Year 2023 Page 4687:4694*