

CHANGE IN MILK YIELD OF COWS AT THE IDENTICAL FEEDING STANDARD

Eshmuratova Suluxon Tulegenovna

Ph.D., Associate Professor, Karakalpakstan Institute of Agriculture and Agrotechnologies

email: sulukhaneshmuratova@gmail.com

Arpadinova Erkinay O'mirboy qizi

Master of Animal Breeding and Breeding

Karakalpak Institute of Agriculture and Agrotechnologies

e-mail: erkinayarpadinova02@gmail.com

Annotation. The article provides information on feeding cows, types of feeding, feeding cows during lactation, cows' need for dry matter in feed, cows' year-round ration under the same feeding type, and changes in cow milk yield under the same feeding type standard.

Keywords. Dairy cows, lactation, milk yield, feed types, feeding, black-and-white Holstein breed cows, Holstein breed cows.

Feeding the cows. Increasing cattle productivity is primarily linked to providing livestock with complete nutrition. For livestock, the main feeds are rough hay, hay flour, straw, green mass of succulent grasses, silage, haylage, root vegetables (fodder beets, etc.); fortified feeds - grains (grain, oats, corn, etc.), oilcake, meal, barley, dry drobin, etc.; feed mixtures - mixed feed, protein-mineral-vitamin supplements.

Properly organized feeding and the sequential distribution of nutrients affects the digestion of nutrients in the rumen and facilitates better absorption of nutrients.

There are two types of animal feeding: regular (differentiated) feeding, where different types of feed are given separately.

- Monofeed (feed mixture) - various types of feed are mixed and served as a mixture;

In a differentiated feeding system, concentrated and succulent feeds are distributed three times a day in the morning and in the evening (with 1/2 portion feeding), and hay is fed in the middle of the day. If feeding is organized twice, the daily ration of roughage and concentrated feed is distributed at the same rate in the morning and evening, 1-2 times depending on the amount of silage and haylage. Cow beets are fed twice before the distribution of silage or roughage.

Food mixtures (mono-food) are usually distributed twice a day. If distributed to feeding tables, it can be switched to single feeding.

All components (types) of feed are introduced into the feed mixture, which is crushed and mixed into a mixture, ensuring the full utilization of all feed, and reducing labor costs for feed distribution and removal of residual feed.

Currently, the following nutritional components are considered when creating a ration for cattle: metabolic energy, dry matter, raw and digestible protein, sugar, starch, fat, crude fiber, table salt, macro and microelements, carotene, and the amount of vitamins D and E.

Feeding cows during lactation. Feeding directly affects the milk productivity of cows. The feeding practices of dairy cows are determined based on their productivity and the physiological state of the organism.

The most crucial period for organizing nutritious feeding for cows is the first period of lactation - the process of rapid milk production from the first to the third month. During this period, cows are capable of producing 40-45% of their annual milk yield. Cows' energy and protein requirements increase by 1.5-2 times during this period. If the cows' need for feed is not met, they will produce less milk. Currently, the feeding rate for cows that have matured during lactation has been calculated based on 34 feed indicators for medium-fat cows. The nutritional energy of feeds and the ration is consumed in energy units of feed (EAU), which is equivalent to 10 MJ of exchangeable energy. The main source of exchangeable energy is the dry matter of food (rations). Therefore, when compiling a ration for cows, the need for exchangeable energy and its quantity per 1 kg of dry matter in the ration are determined first. A cow's need for dry matter depends not only on milk yield but also on its live weight, diet composition, and the amount of energy it contains.

Table 1

Cows' need for dry matter in feed
(one head per day, kg)

Daily milk yield, kg	Live weight, kg				
	500	550	600	650	700
10	12,5	13,3	14,1	14,9	15,7
15	13,7	14,6	15,6	16,3	17,1
20	15,2	16,1	17,1	18,0	18,9
25	15,7	17,8	18,4	19,7	20,6
30	18,5	19,4	20,4	21,2	22,0
35	19,7	20,8	21,9	22,8	23,8
40	21,0	22,0	23,1	24,1	25,2
45	22,5	23,5	24,6	25,6	26,6

The amount of metabolizable energy in 1 kg of dry matter is an important indicator of feed and ration quality. High-yielding cows should have a higher ration than average. In particular, the amount of energy in 25-30 kg of milk is equal to 10.0-11.8 MJ, and in 10-15 kg of milk it is equal to 8.0-9.8.

When increasing the milk yield of cows in the first 2-3 months of lactation, "advanced" feeding should be used starting from 10-12 days after calving, that is, normalization by 4-6 kilograms higher than in practice. The nutritional value of the ration of highly productive first-calf cows should be 5 kilograms higher in the first 3 months of lactation, 4 kilograms in 4-6 months, and 3 kilograms in the last third half of lactation compared to the existing milk yield.

Currently, the genetic milk productivity potential of black-and-white cows bred in breeding farms in our Republic averages 3000 kilograms, and their Holstein genotype offspring is 3600 kg. Cows with this milk yield require 40-45 tons of feed throughout the year (during 305 days of lactation and 60 days of pregnancy).

Therefore, to ensure the nutritional value of the provided feed, at least 0.71-0.75 hectares of irrigated fodder crop area are required per standard breeding cattle at the current fodder crop yield (56-60 centners per feed unit).

If the yield of fodder crops in households increases by 20-25% (67-70 centners of feed), the demand for fodder crops may decrease by 0.60-0.63 hectares per conditional livestock. Based on these requirements, measures should be implemented to strengthen the fodder base,

create fodder reserves, and transition to a uniform feeding regime throughout the year. As a result, it will be possible to increase the milk yield of cows from the current average of 1700 kilograms to 3000 kilograms, and reduce the cost of feed for the production of 1 kilogram of milk by 40 percent.

Feeding norms and rations are aimed at realizing the productive genetic potential of cows. The uniform feeding type is very convenient here. Its biologically beneficial effect is that a colony of microflora develops and matures in the gastrointestinal system, which is adapted to the breakdown of nutrients. Due to the complete assimilation of nutrients, the production process proceeds effectively. A decrease in milk yield (20-30%) during the transition from winter feeding to summer feeding prevents a decrease in ovarian reactivity and a prolongation of the gestation period.

In breeding farming, when transitioning cows to a uniform feeding system, a reserve of silage, haylage, and roughage is first created. In winter feeding, cows are fed only a mixed mass of crushed and mixed winter succulent and roughage during the summer (without grass). All dairy cows in the farm are raised using this method with the same feeding schedule throughout the year.

Feeding rations were determined taking into account the live weight and milk yield of the experimental black-and-white Holstein breed cows (n=10) and Holstein breed cows (n=10).

Table 2

The same feeding ration for cows throughout the year (per 1 head), kg.

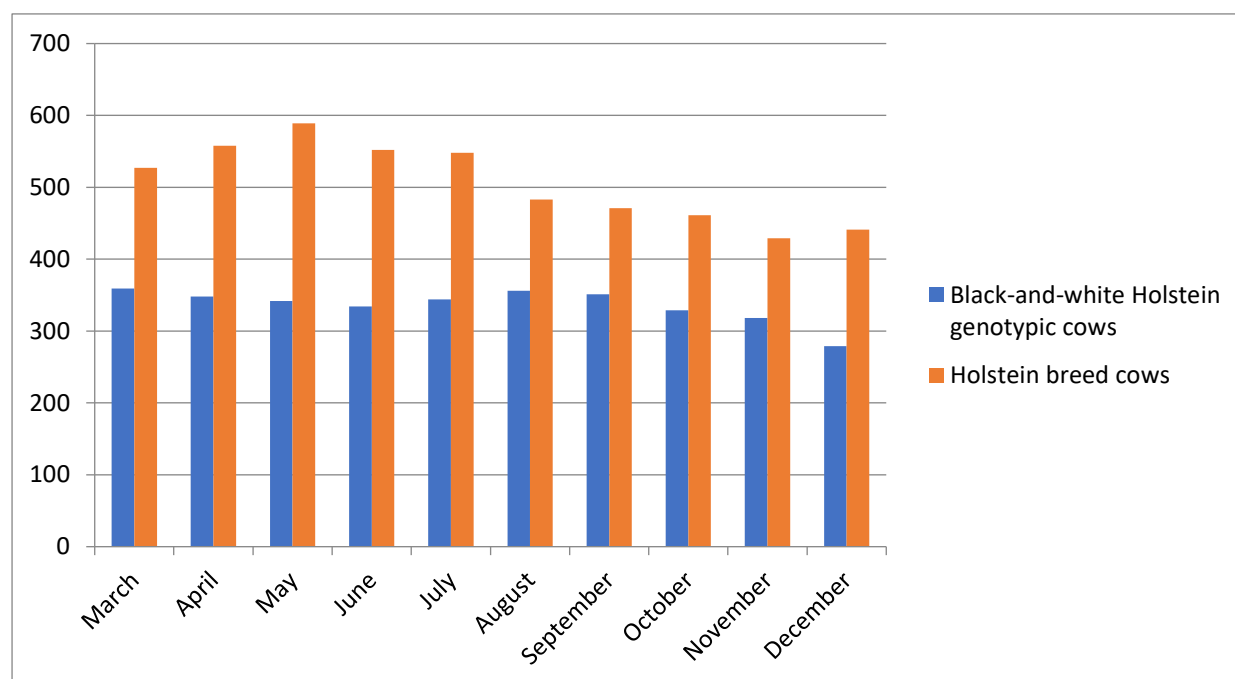
Feed	Black-and-white Holstein breed cows		Holstein breed cows	
	In one day	During lactation	In one day	During lactation
Natural hay	5	1525	5	1525
Intermediate crops and alfalfa haylage	10	3050	15	4575
Corn silage	20	6100	28	8540
Tubers	10	3050	20	6100
Middlings	2	610	4	1220
salt	80	-	100	-
Nutritional value of feed:				
Dry matter, kg	16,45	5017	23,40	7137
Food unit	12,10	3691	18,00	5490
Exchangeable energy, MJ	145,65	44423	213,05	64980
Digestible protein	1,454	443,5	2,278	694,8

This ration is designed to produce 11-12 kilograms of milk per day from black-and-white breed cows and 17-18 kilograms from Holstein breed cows. The nutritional value of the ration 1 kg corresponds to 0.74-0.77 feed units, 8.85-9.10 MJ of exchangeable energy, and 88.4-97.4 grams of digestible protein based on dry matter in the experimental groups.

The proportion of succulent feeds in the feeding type is 71.9-73.6%, concentrated feeds 13.1-17.6%, and roughage 15.0-8.8%. The amount of concentrated feed (low-concentrate) is designed to produce 200-240 grams of "" milk, depending on the farm's resources.1 kg

It should be noted that it is advisable to give 3000 grams of concentrated feed to black-and-white dairy cows that produce $<1/2>$ milk per $<1/2>$ milking, and 500 grams to Holstein dairy cows that produce $<3/4>$ milk per $<3/2>$ milking. 3000 kg 1 kg 5000 kg

When checking the feeding ration and milk yield of the experimental cows in March-December, the following results were obtained.



As can be seen from the data presented in the table, the average daily milk yield of black-and-white cows under the same feeding type and norm was 11.60 kilograms in March-April, while during the summer period (May-September) they produced no less than 11.05-11.73 kilograms. The average daily milk yield of Dutch cows was 17.0-18.6 kilograms in March-April, rising to 19.0 kilograms in May and decreasing to 18.4-15.6 kilograms during the hot summer months. The monthly milk yield in March-September was 9.94-10.68 percent, while in dairy cows it was 10.41-9.31 percent. These indicators confirm the consistent course of lactation during winter and summer months. Milk yield remained high during the transition from summer to autumn. 1.10 and 1.08 feed units were consumed for milk production in the experimental groups.

Therefore, feeding cows with a uniform feeding schedule throughout the year has had a positive effect on their milk production.

References

1. Nosirov U.N. va boshqalar. Chorvachilikda klassik va zamonaviy selektsiya usullari. Toshkent. Fan. 2008 yil.
2. Hamroqulov R. "Qishloq xo'jalik hayvonlarini ozuqlantirish" Darslik. Toshkent, 2011.
3. Turganbaev R.U., Tleumuratov A.K. Qaramalshılıq. Nokis. 2023 jıl.



4. Владимиров Н.И., Черемнякова Л.Н., Лунисын В.Г., Косарев А.П., Попеляев А.С., «Кормление сельскохозяйственных животных» Учебное пособие, Барнаул. Издательство АГАУ, 2008.