

Factors Affecting Cattle Milk Productivity.

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Introduction. Cattle breeding is one of the leading branches of animal husbandry, providing the population with meat, dairy products and light industry, leather and other raw materials. 98-99% of milk and 63-65% of meat produced in Uzbekistan are cattle. Each of the cows bred in the country can produce an average of 3,000-3500 kilograms of milk, 200-250 kilograms of meat, 25-30 kilograms of skin and up to 10 tons of organic fertilizer per year. Cattle skin is used to make durable tag leather and other valuable leather raw materials. By-products of cattle slaughter include blood, bones, horns, wool, and so on. At the same time, in China, India, Pakistan and other countries, cattle are used as working animals in plowing, transportation and other agricultural activities. Cattle waste is widely used in agriculture as an organic fertilizer to increase soil fertility.

All of the above products and raw materials are digestible food plants in cattle - raw hay (alfalfa, hay, straw), weeds, silage and haylage, hay beet and cotton-oil industry wastes (shelukha), kunjara, shrot, etc.). Natural pastures and hayfields are the most nutritious, nutritious and inexpensive fodder for cattle. In the foothills and mountainous regions of Uzbekistan, rich in natural pastures, in the dry hills, in the vast meadows of rivers and seashores, rich breeds of cattle are raised. Sersut and dairy-meat breeds of cattle are bred on collective, company, farm and private farms of adapted irrigated lands. In order to meet the demand of the population for meat and dairy products, it is important to accelerate the development of cattle breeding and increase its productivity.

Cows of different breeds give milk in different amounts and compositions. Some breeds have high milk yields and some have high dry matter content. Cows of different breeds differ in the amount of fat and protein in their milk. The Bushuyev and Swiss breeds bred in Uzbekistan are superior to other breeds (black-and-white, Holstein, red desert). In terms of fat and protein content of milk (4.1% fat, 3.6% protein), the Bushuyev breed ranks first, the Swiss breed (4.0 and 3.5%) second, and the red desert breed (3.8 and 3.4%) - third and black (3.4 and 3.2) last. The composition of cow's milk obtained from the crossbreeding of Angler and Red Denmark of red breeds, American and Austrian selection of brown breeds is positive, the technological properties are high. The fat and protein content of their milk is especially important among breeds. This ratio is 1: 1 in the black-and-white breed, 1: 0.9 in the Kostroma breed; red gorbato breed - 1: 0.94, Simmental breed - 1: 0.90.

There is little difference in the acidity of the milk between the breeds, ie the difference between the breeds is 4.20. Similarly, casein fractions differ in weight and dispersion of casein micelles.

table-1

Quantity and composition of cow's milk of different breeds,%

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People	The amount of milk during lactation is kg	Milk content, %				The ratio of protein to grams of fat	One kilogram of milk is nutritious
		Dry matter	Fat	Protein	Sugar		
Qora-ola	4250	12.18	3.42	3,25	4,90	95,0	70,4
Xolmagor	4850	12,53	3,68	3,28	4,95	89,1	753
Qizil cho'l	3396	12,68	3,82	3,48	4,66	91	744
Jersey	3038	15,40	5,87	4,08	4,78	69,5	981
Kostroma	4960	13,09	3,88	5,56	5,12	91,6	77,4
Simmental	3502	12,73	3,89	3,32	4,80	85,3	749
Bushuyev	3200	12,80	4,10	3,60	5,10	87,8	-
Qora-ola	380	11,80	3,40	3,20	5,20	94,1	-
Shvits	3000	13,40	4,00	3,50	5,20	87,5	-

The average diameter of casein micelles is 679 A, which varies from 630 (black) to 748 A (mouse). The mass of casein micelles is on average 132 million. in molecular units from 1.6 (black-and-white) to 171 million. can be up to a molecular unit (mouse)

Colostrum. It differs from ordinary milk in its composition, properties and effects on the body of the calf.

The first cow's milk has a sweeter taste, yellow in color, and after 3-4 days its organoleptic characteristics are similar to normal milk.

Table 2

Chemical composition of cow's milk (according to G.S. Inihov), %

From birth the next milking order	Total protein	Casein	Albumin and globulin	How is the milk?	Fat	Mineral matter lar	Sourness, OT	Density 0A
1	14,9	5,1	8,4	4,0	6,3	1,01	53	40
2	9,9	4,1	4,8	4,3	5,7	0,96	42	39
3	6,6	3,4	2,3	4,5	5,5	0,83	42	38
4	5,9	4,5	1,7	4,8	5,2	0,87	40	36
5	5,0	3,1	0,8	4,7	4,9	0,82	32	38
10	4,5	3,2	0,6	4,8	4,7	0,80	28	34
15	4,2	3,0	0,5	4,7	4,8	0,77	25	32
20	4,0	3,0	0,6	4,7	4,2	0,71	22	32
25	3,8	2,9	0,4	4,4	4,2	0,77	21	30
30	3,6	2,5	0,5	4,6	3,9	0,77	20	30

The yellow color of colostrum is explained by its high content of carotene. Colostrum is thick, elongated, and sometimes granular.

It is characterized by an abundance of albumin and globulin, the amount of which gradually decreases. Albumin, and especially globulin, is involved in the formation of the immune system of young animals. Sometimes the total protein content is 23-24%, including albumin and globulin 20%. Colostrum is much higher in cow's milk because it is a source of energy for the calf. It decreases with each milking and returns to normal by the 30th milking. Milk sugar is low at first and reaches its norm in 3-4 days. The high density and especially high acidity (500 T) of the newborn animal creates a sour environment in the gastrointestinal tract and prevents the development of various unpleasant microorganisms that enter the body.

Colostrum is orange-yellow in color, as it contains a lot of carotene, 3.4-8.1 mg per kg, which is 10-20 times higher than in milk. Colostrum also contains more vitamins D and A than milk.

Colostrum contains a lot of immune cells, antitoxins, enzymes and hormones, which increase its biological value.

Colostrum has important physiological properties, it is reminiscent of blood in its composition, so the newborn receives the nutrients that it consumes in the mother's womb. Its composition changes from day to day, from milk to milk, during which time the calf gets used to the new conditions and becomes more mature. Globulin is absorbed from the intestine and passed into the blood of calves, which do not yet have immune cells and protect against various bacteria.

Antitoxins, on the other hand, protect against various infectious diseases. Due to the high content of magnesium in colostrum, it accelerates bowel movements, resulting in the ability to excrete primary feces.

The composition of cow's milk depends on the type and level of feeding during the prenatal rest period, its duration (45-60) and fatness.

Colostrum has a sour-salty taste and is difficult to ferment or not fermented at all under the influence of milk enzymes. Therefore, it is not used directly as food or in the production of dairy products. If such cow's milk is added to the milk during the cheese making process, the biochemical processes during the cheese ripening process will be disrupted, and the cheese will be of low quality, so milk for cheese and butter is obtained 7 days after calving. Cow's milk is drunk from the cow's own calf, if the cow gives a lot of milk, it is drunk from her calf, if the cow gives a lot of milk, the rest of her calf is milked from other calves is drunk instead. In recent years, butter is made from cow's milk cream and used in medicine, but it can also be used for diarrhea of calves.

Depending on the individual characteristics of the cows, they begin to produce normal milk after 5-7 days, although the composition and properties of the milk change throughout lactation.

The first month of lactation is characterized by high milk density, high dry matter, high fat and protein content, and slightly low milk sugar.

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