

THE IMPORTANCE OF MICROCLIMATE INDICATORS IN THE DAIRY

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Annotation. The article provides information on the conditions of storage of Holstein cows bred at the breeding farm "Chortut" in Pastdargom district and the microclimate of the cowshed.

Keywords. Chortut, Holstein, German selection, microclimate indicators, gases, condensate, DENTA SCREPER, etc..

Introduction.

In our country, large-scale measures are being taken to meet the needs of the population in dairy and meat products, mainly dairy breeds and the use of hybrid animals of different genotypes obtained as a result of their crossbreeding. The Action Strategy for the further development of the Republic of Uzbekistan for 2017-2021 states "Sustainable provision of the population with quality and sufficient food products through the development of the breeding base in animal husbandry, the establishment of modern breeding and genetic centers on the basis of breeding farms and the expansion of research in breeding" important strategic tasks such as

Many external factors affect the milk yield of cows. One of these factors is the microclimate indicators in the cow shed. These figures vary according to the weather conditions of the area where the farm is located. That is, it can vary by season. However, it is possible to artificially control the negative effects of the microclimate in the herd on the body and health of cows. In order for a zootechnician to take advantage of this opportunity, he or she must have the knowledge, skills and qualifications.

The barn must meet the following requirements; the roof should have an open space for natural circulation of air, it should be convenient to close the walls. When choosing a construction site for a barn, it is important to determine which side the wind will blow the most (3). It is difficult to control the normal microclimate in the barn. This is due to the natural ventilation system. It is easier to control the air exchange from the wall side. For this purpose, it is advisable to equip the side of the barn with polyethylene (raised and lowered). The barn should be constantly ventilated, which allows the cows to excrete the moisture. If the air is not exchanged normally, the relative humidity, the concentration of gases in the barn increases, condensate is formed. It should be borne in mind that the cows reduce their productivity from the disruption of air exchange in the barn, not from the cold. In doing so, they get sick. Depending on the external weather conditions, the internal microclimate indicators are controlled by opening or partially opening the holes in the roof, which cannot be completely closed even during severe cold. It is only partially closed when necessary. A 5 cm open space is left at the bottom of the cornice, where the polyethylene walls are held. This has a positive effect on air exchange even in cold weather. On warm winter days, the side walls of the cow shed also open in autumn, spring and summer. In order to dissipate excess heat in the barn, polyethylene can be opened in some cases at a height of 1.2 m above the rain level of the cow to improve air circulation. It should be noted that the lifting and lowering of polyethylene is convenient. Metal nets are often held in place towards the wall so that there are no elves in the barn, which reduces the strength of the wind and prevents birds from entering the barn. In winter, the servants often cover all sides of the barn in order to maintain a comfortable environment in the barn, ie a warm temperature. This condition has a negative effect on the body of cows. Cows, if in the form of a shed, provide good protection of animals from rain and sun. Protecting the roof from mud worms in the lower part gives a very good result if the ceiling part is made. Protects cows from heat pressure. In addition, fans should be installed in the high places of the barn facing the manger. Cows consume nutrients well in such conditions and increase milk productivity. In a poorly ventilated barn, the cow's wool coat becomes wet, coughs, breathes faster, and fluid builds

up in the nostrils. If the number of breaths exceeds 60 beats per minute, saliva appears, food intake decreases, it is an indication that the temperature in the barn has exceeded 25°C and the air movement has decreased. If the ventilation or ventilation system in the barn is poor, then the amount of relative humidity, carbon dioxide, ammonia, hydrogen sulfide gases in the barn will increase. Fresh air should normally contain 21% oxygen and 0.03% carbon dioxide. Carbon dioxide is formed in the barn due to wet sediments, garbage, residual nutrients. When cows store large amounts of carbon dioxide for long periods of time, milk productivity and the amount of fat in the milk decrease. Ammonia and hydrogen sulfide gas also have a negative effect on the cow's body. Cows remain susceptible to respiratory and infectious diseases. Ammonia gas is collected in the air of the barn due to the accumulated urine, feces and feces. Hydrogen sulfide gas is formed from the breakdown of protein in undigested nutrients in waste.

As a rule, the amount of carbon dioxide in the dairy should not exceed 0.25%, and ammonia gas should not exceed 20 mg / m³. It can only be the smell of sulfur dioxide.

In a well-ventilated cow shed, the gases are blown away by water vapor. Relative humidity in the barn should not exceed 75 - 80% [3. - 22-25 p.].

The body of cattle loses more heat at relatively low temperatures than at dry temperatures. Therefore, when the barn is constantly ventilated, excess moisture is released, increasing the level of resistance of animals to cold.

Cows feel good when the ambient temperature is 13 to 25 degrees. If the cow's rectal temperature rises to 0.55 degrees, the need for dry matter in the feed decreases from 1.4 to 1.8 kg [4. - s. 55].

The method of keeping cows has a direct impact on the costs associated with the construction of the cow shed, mechanization of basic and additional processes in production, selection of equipment for milking, manure treatment and the creation of veterinary-sanitary and zoohygienic conditions. [2. - s. 23-26.].

When animal storage conditions are poorly organized, productivity is reduced by 15-20%. In this case, air temperature, air velocity, relative humidity play an important role [5. - s. 100.]

The microclimate indicators of the dairy are formed on the basis of a number of factors. Examples of this are the climate of the area where the cows are reared, the season, the characteristics of the construction of livestock buildings, the effective operation of the main technological processes [7,8. p. 413-414].

Materials and methods.

The experiments were conducted in the conditions of the farm "Chortut" in Pastdargom district of Samarkand region. The farm breeds Holstein cattle of German selection. The condition of the cows in the barn was assessed by sensory organs. Attention was paid to touching the wool cover, hearing it breathing, visually assessing the nose and mouth, and appetite. In addition, air temperature, relative humidity, air velocity, amounts of carbon dioxide and ammonia gas, natural light coefficient, thermometer, UG-2: Assman psychrometer, spherical catothermometer and luxmeter were determined.

The main part.

At the Chortut farm, where the experiment was conducted, 6 awnings were built to keep cows. The porches are 720 meters long and 200 meters wide. In winter, the sides of the cowsheds are covered with polyethylene. There are feeding areas on one side of the cowshed, from where the feed is distributed to the cows using a mixer mechanism. The corridor is 3.2 meters wide, followed by a polyethylene retaining wall. The height of the roof of the barn is 6 m and the roof is covered with slate. There is space for air exchange in the roof, which provides a moderate microclimate in the barn. The manure is periodically removed from the cowshed by a special tractor. This measure prevents the accumulation of carbon dioxide, ammonia and hydrogen sulfide gases in the barn. It uses the DENTA SCREPER mechanism and manure cleaning is carried out every 6 hours. On the porches there are stables for group watering of cows. The barn is equipped with automatic German-made electronic feeders on each porch for cows to move comfortably.

Due to the hot climate in Uzbekistan, the weather will not be very cold until late autumn. As the weather gets colder, the area around the barns is covered with polyethylene. In winter,

the microclimate indicators in the barn vary depending on the external weather conditions. Therefore, we tried to study the microclimate indicators in the barn during the winter in the barns where the experimental cows are kept. In assessing the ventilation system, the concentration of gases in the air at a height of 1.5 m above the floor in the cowshed was studied. At this altitude, the concentration of gases, pathogenic microbes, dust, air temperature should be below the norm, the relative humidity should be the same as in outdoor weather. As a result of observations, the air temperature in the barn in winter is 100 C, relative humidity is 75%, air velocity is 0.3 m / s, carbon dioxide content is 21%, ammonia gas content is 0.13 mg / l, natural light coefficient 0.87%. From these data, it can be seen that all the microclimate indicators in the cow shed during the winter were at the normal level, which has a positive impact on the milk yield and health of the cows.

Conclusion.

Thus, in the first months of spring, summer and autumn, as the weather conditions did not change dramatically, there was no need to cover the side of the awnings with polyethylene. As all microclimate indicators in the cowshed were within the norm during the winter, no adverse effects were observed on the physiological condition of the cows. This is a sign that the right place was chosen for the construction of the barn on the farm, that the construction project was perfect and that the decision was made correctly.

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