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THE USE OF ENERGY FEED SUPPLEMENT «КАУДЖОЙ» IN THE DIETS OF HIGHLY PRODUCTIVE COWS

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***Abstract:** in the system of complete feeding of dairy cows, the energy supply of animals is of paramount importance. The basis of the diet of ruminants is voluminous feed. However, they cannot fully provide highly productive cows with sufficient nutrients and energy. A particularly busy lactation period is a new lactation period, when the high energy costs of milk production cannot be fully covered by the nutrients from the feed. Therefore, as a rule, in the new body period, highly productive cows use a concentrated type of feeding in order to increase the level of metabolic energy in the dry matter of the diet.*

***Keywords:** Кауджой , cows, energy, feed supplement, highly productive*

Relevance of the topic general description of work. It is known that an excess of concentrated feed in the diet leads to metabolic disturbances in animals, the occurrence of various diseases, a decrease in productivity and an increase in the cost of milk [3].

Therefore, along with factors such as improving the quality of feed and rations, various feed additives, which are metabolic regulators and additional energy sources for animals, are widely used. The effectiveness of feed additives is due to the regulatory influence on the intensity of the processes of digestion and use of nutrients, which has a positive effect on the productivity and health of animals [5].

In this regard, the new feed additive «Кауджой» is of scientific and practical interest to address these issues. The biological properties of the feed additive are due to its constituent components, such as glycerin, propylene glycol, fructose, maltose, glucose, water-soluble calcium salts, enzyme complex.

Research objective: to study the effectiveness of the use of the feed additive «Кауджой» in the diets of highly productive newborn cows.

Research Objectives:

1. To establish the effect of the feed additive «Кауджой» on the level of milk productivity and quality indicators of milk;
2. To study the effect of feed additives on the digestibility of nutrients and nitrogen balance;
3. Determine the microflora of the scar and the concentration of volatile fatty acids in the scar content;
4. Assess the biochemical parameters of blood;
5. To study the reproductive function of cows;
6. To study the eating behavior of animals;
7. To determine the economic efficiency of using different levels of feed additives in the composition of diets.

Scientific novelty. For the first time, a comprehensive assessment of the use of the «Кауджой» feed additive in the diets of highly productive cows will be carried out and the influence of the studied additive on the digestibility and use of nutrients in the feed ration, milk productivity, nutritional behavior and reproductive qualities will be established.

Practical relevance of research. Based on the conducted comprehensive studies, recommendations will be developed on the use of feed additives of various dosages to optimize metabolic processes and increase the productivity of dairy cattle.

Research Methodology. The research will be carried out in the conditions of the Kirovskoye meadow-labeled experimental experimental plant. FSC VIC named, Williams. Animals on the farm are in conditions of tethered keeping. Feeding is carried out 3 times a day, milking 3 times a day according to the daily routine adopted at the farm. Animals for the experiment will be selected according to the principle of analog pairs, taking into account age (lactation number), live weight, average daily milk yield, origin. The breed of animals is black and motley. For the experiment, 3 groups of animals with 10 animals each will be formed. The animals of the 1st control group will be fed the main diet. The animals of the 2-experimental group will be fed the main diet with the addition of 100 ml of «Кауджой» per head per day. The animals of the 3-experimental group will be fed the main diet with the addition of 150 ml of feed additive per head per day. Animals of the second and third experimental groups will receive a feed supplement for 14-21 days before calving in the amount of 200 ml per head per day. On the day of calving, in the first 30 minutes, 1 liter of feed additive dissolved in 20 liters of water is fed to the cows. In the future, «Кауджой» will be fed to animals for 30 days according to the experimental design (table).

Table

Experience outline (n=10)

Group	**Main diet**	**Feeding before calving**	**On the day of calving in the first 30 minutes**	**Feed supplement «Кауджой»**
1-я control	Main diet (Hay Hay, silage from annual cereal grasses, grain mix from barley and oats, sunflower meal, feed syrup, mineral top dressing).	Main diet	Main diet	Main diet
2-я experienced		14-21 days before calving «Кауджой» in the amount of 200 ml per head per day	1 liter of feed additive dissolved in 20 liters of water.	**100** ml / h./day
3-я experienced				**150** ml / h./day

The studied indicators. During the experiment, milk productivity, fat and protein content in milk, blood biochemical parameters, rumen content indicators, and animal nutritional behavior will be studied. Accounting for quantitative and qualitative indicators of milk will be carried out every decade of the month. To study cicatricial digestion in animals using a food probe, cicatricial fluid samples will be taken 3 hours after feeding. Biochemical blood parameters of experimental animals will be studied on the basis of the Kirov Regional Veterinary Station according to generally accepted methods. Blood will be drawn from the jugular vein 2 hours before feeding. In the blood, total protein, creatinine, bilirubin, ALT, AST, glucose, hemoglobin, red blood cells, calcium, phosphorus, carotene will be determined.

After the experiment, a production check will be carried out to confirm the results. Two groups of animals, 15 animals each, will be fixed per day using the pair-analogue method. The animals of the first control group will be fed the main diet adopted on the farm. The animals of the second experimental group will be fed the main diet adopted on the farm, and the most effective rate of input of the feed additive «Кауджой» which will be established during the experiment. During the production check, the milk productivity of the animals that live according to the results of the control milks, which are held every ten days, as well as the content of fat and protein in milk, biochemical blood parameters, will be pinched.

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ОЦЕНКА ВЛИЯНИЯ ПОСЕТИТЕЛЕЙ НА ПОВЕДЕНИЕ ПУМ *PUMA CONCOLOR* (LINNAEUS, 1771) В ИСКУССТВЕННЫХ УСЛОВИЯХ

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***Аннотация:** В настоящей работе представлены результаты исследования по изучению влияния разного количества посетителей на поведение пум и использование ими пространства вольера в условиях зоопарков России.*

***Ключевые слова:** пума Puma concolor, зоопарк, поведение, благополучие животных, зоокультура.*

Согласно современным подходам к содержанию животных во главу угла ставится обеспечение их благополучия, в понятие которого, помимо удовлетворения физиологических потребностей животного, включается и забота о его психическом состоянии. Важнейшим критерием благополучия является уровень стрессированности животного и возможность реализовывать инстинкты и проявлять естественное поведение [1]. Вместе с тем при содержании в неволе животные ежедневно оказываются под влиянием различных стрессирующих факторов, с которыми они никогда бы не столкнулись в природе [2]. К таким факторам относятся недостаточная площадь клетки или вольера, физическое удержание, погодные условия, техногенные шумы, зоотехнические и ветеринарные мероприятия и т. д. Одним из важнейших внешних факторов стресса, с которым неизбежно сталкиваются животные в зоопарках, является присутствие посетителей возле вольеры [3, 4].

Исходя из вышесказанного, ***целью*** нашей работы стала оценка влияния посетителей на поведение пум *Puma concolor* (Linnaeus, 1771) в условиях Московского зоопарка и зоопарка г. Сочи.

Материалы и методы. Исследования проводили в период с сентября 2019 г. по март 2020 г. на базе вольерных комплексов Московского зоопарка и зоопарка при санатории «Октябрьский» (г. Сочи, Краснодарский край).

Объектами исследования послужили 3 взрослые особи пумы (1♂ и 1♀ – в г. Сочи, 1♂ – в г. Москва).