

Results of preventive treatment of infertility in productive cows

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Annotation: The article describes the clinical signs of infertility in these cows, blood parameters, and the effect of the drug “Multivit+Meniral” and “Microvit” on the normalization of the sexual cycle in cows.

Keywords: morphobiochemical indicators. alimentary infertility, dispensary examinations, clinical signs, skin, skin elasticity.

The relevance of the topic

The development of animal husbandry, providing the population with high-quality animal products, and adequately supplying the industry with raw materials, is an urgent requirement of the current period. One of the main factors in the development of the industry is the creation of a strong feed base, the improvement of livestock breeds, and the development of animal husbandry technologies. In addition, various infectious, parasitic, and non-infectious diseases, including infertility in productive cows, which are widespread among livestock and cause significant economic damage, as well as threatening the health of productive cows and causing social problems, pose particular challenges to the development and prosperity of the industry. Among productive cows imported to farms from abroad, there is a high incidence of obstetric and gynecological diseases, such as infertility in mother animals, placental retention, uterine hypotension, and uterine subinvolution, which are caused by diseases that disrupt vitamin and

mineral metabolism, such as osteopathy, hypokalemia, hypocobalminemia, nutritional anemia, and increased consumption in cattle. These diseases have a significant impact on the economic losses incurred by farms due to reduced nutritional value of their products. Therefore, the development of measures for the timely detection and prevention of observed and symptomatic infertility caused by metabolic disorders in maternal animals is one of the most pressing issues today.

Materials and methods of research

Our experiments were conducted at the “Bakhrin” livestock farm in the Urghut district of the Samarkand region. We determined the clinical indicators of infertility in high-yielding cows in order to select preventive treatments.

For the experiments, 15 cows were selected based on the principle of “similar pairs,” and three groups of 5 cows were formed. The first and second groups were designated as experimental groups, while the third group was designated as a control group.

In the first experimental group, cows were given 50 g of the vitamin and mineral feed additive “Mikrovit” per head per day for 60 days in addition to their regular diet.

The cows in the second experimental group were injected with 20 ml of Multivit+Meniral per head between the muscles once every 10 days. The experiments lasted for 60 days.

The cows in the control group were fed exclusively with farm rations.

During the experiment, the cows underwent clinical tests once a month. In the clinical study, the cows' general condition, appetite, body shape, skin, skin cover, skin dermatitis, condition of mucous membranes, lymph nodes, motor organs, reaction to external influences, movement of the large abdomen for 5 minutes, and the number of respiratory and cardiac contractions for 1 minute were assessed (Table 1).

Table 1

Results of clinical trials on cows in the experiment.

Groups	Experiment time	Body temperature, °C	Quantity		
			Pulse, for 1 minute	Breathing, for 1 minute	Rumination, for 5 minutes
I experience	at the beginning	38,2±0,02	75,4±2,3	27,1±2,4	5,2±0,5
	30 days	38,3±0,02	72,5±2,6	25,8±1,8	6,5±0,6
	60 days	38,3±0,02	70,3±2,2	23,8±2,8	8,2±0,8
II experience	at the beginning	38,2±0,02	75,3±2,2	26,9±2,6	5,9±0,5
	30 days	38,3±0,03	72,3±2,3	24,8±1,9	7,3±0,7
	60 days	38,4±0,02	68,9±2,3	20,8±2,9	9,9±0,7
III control	at the beginning	38,2±0,03	73,3±2,9	25,9±3,6	4,6±0,5
	30 days	38,3±0,04	77,9±3,8	26,4±2,9	4,4±0,4
	60 days	38,5±0,06	78,1±2,9	26,9±3,6	4,3±0,5
	R<	0,05	0,01	0,01	0,001

At the beginning of the experiments, the following clinical and physiological indicators were detected in cows in all experimental and control groups: the symptoms included low levels of

obesity in the average weight, flaccid skin and reduced skin elasticity, changes in appetite, pale mucous membranes, retraction of the last tail vertebrae in some cows, cracking of the incisors and swelling of the horns, spinal deformity (lordosis), and sagging of the buttocks. They showed clinical signs of metabolic disorders. By the end of the experiments, in addition to the previous clinical and physiological indicators, the cows of the control group showed insensitivity to external influences, decreased and altered appetite, thinning of the rumen and reduced contractions of the foregut, thinning and pigmentation of the skin around the eyes and lips, on the skin of the neck, and varying degrees of absorption of the last tail vertebrae, as well as skin rashes. Clinical signs characteristic of mineral and vitamin metabolism disorders, such as reduced shine of the coat, horns, and hooves, were also observed.

The body temperature of cows in the first experimental group was $38.2 \pm 0.02^\circ\text{C}$ at the beginning of the experiments, and $38.3 \pm 0.02^\circ\text{C}$ at the end of the experiments. While the number of heartbeats per minute was on average 75.4 ± 2.3 times, by the end of the experiments, an increase of 70.3 ± 2.2 times was recorded, a decrease in the frequency of breathing within 1 minute from 27.1 ± 2.4 times to 23.8 ± 2.8 times, and a 5-minute movement of the large abdominal wall. from 5.2 ± 0.5 times to 8.2 ± 0.8 times (normal - 8-12 times per 5 minutes).

In the second experimental group, the average body temperature of the cows was $38.2 \pm 0.02^\circ\text{C}$ at the beginning of the experiments and $38.3 \pm 0.02^\circ\text{C}$ at the end of the experiments. While the average number of heartbeats per minute was 75.3 ± 2.2 , by the end of the experiments, it had decreased to 68.9 ± 2.3 , and the breathing rate had decreased from 26.9 ± 2.6 to 20.8 ± 2.9 , while the movement of the abdominal wall had increased from 5.9 ± 0.5 to 9.9 ± 0.7 .

However, the cows in the control group showed a deterioration in their clinical indicators by the end of the experiments. By the end of the experiments, the animals in this group had an increase in their heart rate per minute by an average of 71.1 ± 2.9 times, an increase in their respiratory rate by 26.9 ± 3.6 times, a decrease in the movement of their abdominal wall by an average of 4.3 ± 0.5 times, and the observation of clinical signs characteristic of micronutrient deficiencies. Table 1.

Conclusion

The main etiological factors of infertility in cows are the incomplete satisfaction of the body's needs for nutrients, vitamins, macro - and microelements, a low ratio of sugar-protein and phosphorus-calcium, and insufficient distribution and keeping of cows in unsanitary conditions. For the prevention of infertility in cows, the drug Multivit+Meniral, which contains trace elements and vitamins, is used for 60 days, once every 10 days, compared to the control group of injections of 5 ml between the muscles per 100 kg of live weight. This improves the clinical status of cows and increases their milk production by 40.0%.

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