

Comparative Effect of Miosta-H and Bodifors Preparations on The Quality Indicators of Bull Beef

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Annotation: This scientific article presents a veterinary and sanitary evaluation of the quality of meat obtained from bulls as a result of the effects of the biostimulants Miosta-H and Bodifors on the animal organism.

When Miosta-H was administered to fattening bulls at an initial dose of 2.5 ml, followed by a repeated intramuscular injection into the neck region after 30 days, and the animals were slaughtered for meat 60 days after the beginning of the experiment, the organoleptic quality indicators of the meat were assessed using a 9-point scale. The experimental group scored 8.65 points, whereas the control group scored 8.20 points.

In the case of Bodifors, the biostimulant was administered to experimental bulls at a dose of 8 ml, repeated four times at 14-day intervals. At the end of the experiment, the bulls were slaughtered, and the organoleptic quality indicators of the meat were evaluated at 8.6 points.

Biochemical quality indicators of meat from bulls treated with Miosta-H showed a pH value of 5.9, a positive peroxidase reaction, and a clear filtrate in the formalin test. In bulls treated with Bodifors, the pH was 6.0, the peroxidase

reaction was positive, and the formalin test filtrate was clear. In the control group, these indicators were pH 6.1, a positive peroxidase reaction, and a slightly clear filtrate.

The dressing percentage of bulls treated with Miosta-H was 58%, while it was 57% in the Bodifors group and 55% in the control group. The results obtained from the experiments confirm that the use of Miosta-H and Bodifors preparations has a positive and effective impact on the veterinary and sanitary quality indicators of bull beef.

Keywords: Miosta-H, Bodifors, preparation, biostimulant, bull, organoleptic, biochemical, percentage.

Introduction

At present, cattle breeding is one of the main branches of the livestock sector and plays an important role in continuously supplying the population of our country with high-quality beef and dairy products.

According to Resolution No. PQ-322 of the President of the Republic of Uzbekistan dated October 31, 2025, "On Additional Measures to Ensure Stable Provision of the Population with Food Products," it is planned over the next three years to increase the number of cattle by an additional 445 thousand head, sheep and goats by 1.7 million head, poultry by 10.3 million head, and fish production volume by 54 thousand tons. This resolution serves as a practical program for the development of various branches of animal husbandry [1].

In line with this, in order to supply the population with safe and high-quality livestock products and thereby ensure food security, experimental studies were conducted in veterinary practice to comparatively evaluate the effects of the biostimulant preparations *Miosta-H* and *Bodifors* on body weight gain in fattening bulls and on the quality indicators of the meat obtained from them [2-3].

Objects and methods of the study

The experimental studies were carried out using nine Red Desert breed bulls belonging to the cattle-breeding farm "ABDUOLIM QUDRATOV" located in *Sho'rchi* district of *Surkhandarya* region.

Based on the principle of matched pairs, the bulls were divided into two experimental groups and one control group, with three animals in each group. In the first experimental group, 2-year-old bulls were administered *Miosta-H* at a dose of 2.5 ml intramuscularly, followed by a repeated injection of 2.5 ml after 30 days. In the second experimental group, *Bodifors* was administered to three bulls at a dose of 8 ml, repeated four times at 14-day intervals. The remaining three bulls served as the control group.

Body weight gain indicators of bulls in both experimental and control groups were measured using a special scale. Meat quality indicators were assessed in accordance with **Uzstandart 7269-79**.

All bulls in the experimental and control groups were fed a standard farm ration and were kept

under constant veterinary supervision.

Results and their analysis

In bulls receiving *Miosta-H*, body weight at day 30 of the experiment reached 619.6 kg, while in the control group it was 595 kg (*Table 1*). By the end of the experiment, these values increased to 647.8 kg and 616.3 kg, respectively. The average daily body weight gain over the last 30 days was 940 g in the experimental group and 710 g in the control group [4-5].

When expressed as percentages, the body weight gain of bulls in the experimental group exceeded that of the control group by 5.11% [6].

Similarly, in bulls treated with *Bodifors*, live body weight at day 30 of the experiment was 620.1 kg, compared to 596 kg in the control group. By the end of the experiment, these indicators were recorded as 695.95 kg and 617.4 kg, respectively. The average daily body weight gain was 895 g in the experimental group and 713 g in the control group [7-8].

In percentage terms, body weight gain in bulls of the first experimental group treated with *Miosta-H* was 5.11% higher than in the control group, while in the second experimental group treated with *Bodifors*, this indicator was 4.78% higher [9-10].

At the end of the experiment, bulls from both experimental groups and the control group were slaughtered for meat. Accordingly, the average body weight of bulls treated with *Miosta-H* was 647.8 kg, with a dressing percentage of 58%. In bulls treated with *Bodifors*, the average body weight was 646.95 kg, with a dressing percentage of 57%. In the control group, the average body weight was 617.4 kg, and the dressing percentage was 56% [11-12].

Table 1. Changes in body weight indicators of experimental and control bulls (n = 9).

Groups	Animal type	Day 30	Day 60
Experimental I (<i>Miosta-H</i> + standard ration)	Bull	619.6	647.8
Experimental II (<i>Bodifors</i> + standard ration)		620.1	646.95
Control (standard ration)		596.0	617.4

Meat samples were taken from slaughtered bulls of both experimental and control groups, and their veterinary and sanitary quality indicators were evaluated under laboratory conditions.

Table 2. Veterinary and Sanitary Organoleptic Indicators of Meat Samples from Experimental and Control Groups (n = 9)

№.	Preparations	Color	Odor	Taste	Consistency	Average score
1	<i>Miosta-H</i>	8.5	8.7	8.7	8.7	8.65
2	<i>Bodifors</i>	8.5	8.6	8.7	8.6	8.60
3	Control	8.0	8.2	8.2	8.4	8.20

As shown in *Table 2*, when the organoleptic indicators of meat from bulls in the first experimental group treated with *Miosta-H* were evaluated using a 9-point scoring system, the color of the meat was scored at 8.5 points, odor at 8.7 points, taste at 8.7 points, consistency at 8.7 points, with an overall average score of 8.65 points.

In the second experimental group treated with the *Bodifors* biostimulant, meat color was evaluated at 8.5 points, odor at 8.6 points, taste at 8.7 points, consistency at 8.6 points, and the average organoleptic quality score was 8.60 points [13].

In the control group, these indicators were evaluated at 8.0, 8.2, 8.2, and 8.4 points, respectively, with an average score of 8.20 points.

Table 3. Biochemical Indicators of Meat Samples from Experimental and Control Groups

№.	Preparations	Hydrogen ion concentration (pH)	Peroxidase reaction	Formalin test filtrate
1.	Miosta-H	5.9	Positive	Clear
2.	Bodifors	6.0	Positive	Clear
3.	Control	6.1	Positive	Slightly clear

Similarly, as shown in *Table 3*, when veterinary and sanitary evaluation of meat quality indicators was conducted, the biochemical parameters of meat obtained from bulls treated with *Miosta-H* in the first experimental group were as follows: hydrogen ion concentration (pH) of 5.9, a positive peroxidase reaction, and a clear filtrate in the formalin test [14].

In bulls treated with *Bodifors*, the peroxidase reaction was positive and the formalin test filtrate was clear, with a pH value of 6.0. In the control group, the pH value was 6.1, the peroxidase reaction was positive, and the formalin test filtrate was slightly clear [15].

Conclusion

- The use of the *Miosta-H* biostimulant in *Red Desert* breed fattening bulls increased body weight by 5.11% compared to the control group, while the use of *Bodifors* resulted in a 4.78% increase.
- The dressing percentage of bulls treated with **Miosta-H** was 58%, while it was 57% in bulls treated with **Bodifors** and 56% in the control group.
- According to veterinary and sanitary quality indicators, meat obtained from bulls treated with **Miosta-H** and **Bodifors** was evaluated as high-quality, whereas meat from control bulls was assessed as good quality.
- The application of *Miosta-H* and *Bodifors* preparations as biostimulants for fattening bulls in cattle breeding positively affects body weight gain and the quality indicators of meat products, thereby ensuring economic efficiency at the farm level.

References

1. Resolution of the President of the Republic of Uzbekistan No. PQ-322, On Additional Measures to Ensure Stable Provision of the Population with Food Products, Oct. 31, 2025. [Online]. Available: <http://www.lex.uz>
2. Instructions for the Use of the Veterinary Preparation *Miosta-H*, LLC “*Biostim*”, Russia, 2023.
3. Guidelines for the Use of the Veterinary Preparation *Bodifors*, “*Toshbolta Ota*” LLC, Uzbekistan, 2023.
4. U. N. Nasirov, *Cattle Breeding*, Tashkent, Uzbekistan: Fan, 2001.
5. H. B. Yunusov, Yu. Salimov, I. Yu. Salimova, and T. T. Khatamov, *Pharmacology and Toxicology*, Tashkent, Uzbekistan: Lesson Press, 2023.
6. UzDST 7269–79, *Veterinary and Sanitary Evaluation of Meat Quality*, Uzstandart Agency, Tashkent, 1979.
7. J. Lawrie and D. A. Ledward, *Lawrie’s Meat Science*, 8th ed., Cambridge, UK: Woodhead Publishing, 2006.
8. R. A. Lawrie, “Meat quality and muscle biochemistry,” *Meat Science*, vol. 36, no. 1–2, pp. 1–19, 1994.

9. M. F. Miller, L. C. Hoover, K. D. Cook, A. L. Guerra, K. L. Huffman, and K. B. Tinney, "Consumer acceptability of beef steak tenderness," *Journal of Animal Science*, vol. 79, no. 12, pp. 3062–3068, 2001.
10. J. A. Scanga, K. E. Belk, J. D. Tatum, T. Grandin, and G. C. Smith, "Factors contributing to the incidence of dark cutting beef," *Journal of Animal Science*, vol. 76, no. 8, pp. 2040–2048, 1998.
11. F. Toldrá, *Handbook of Meat Processing*, Ames, IA, USA: Wiley-Blackwell, 2010.
12. M. Koohmaraie and S. D. Shackelford, "Beef tenderness: The biological basis," *USDA Agricultural Research Service*, pp. 1–12, 2002.
13. Yulchiyev J. et al. Comparing of some treatment methods of canine oral papilloma in Samarkand condition (71 cases) //BIO Web of Conferences. – EDP Sciences, 2024. – T. 126. – C. 01014.
14. Ruzmetov A. et al. Synthesis, crystal structure and Hirshfeld surface analysis of hexaaquanickel (II) bis (4-hydroxybenzoate) dihydrate //Structure Reports. – 2022. – T. 78. – №. 6. – C. 660-664.
15. Ravshanov M. et al. Current status of coenurosis in Uzbekistan //BIO Web of Conferences. – EDP Sciences, 2025. – T. 181. – C. 01036.