



EFFECT OF PROBIOTIC ADDITIVE TO THE QUALITY OF BROILER CHICKEN MEAT

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Abstract

Low feed grade affects meat quality parameters along with physiological condition of farm poultry. Due to the fact that many countries have abandoned the use of antibiotics, there is a need for further development and introduction of alternative preparations. An important role in this situation is occupied by the use of probiotics. According to the results of scientific research, the probiotic "Activil-3" had a positive effect on the meat quality of broiler chickens.

Keywords: Probiotic, organoleptic indicators, state standards, tasting assessment, broiler chicken meat.

Introduction

The active growth of the total population determines the continuously increasing demand for food products of both plant and animal origin. In this regard, the issue of maintaining high standards of quality and safety (for humans and the environment) of food products remains relevant [1]. According to experts, the solution to this problem in livestock farming is the use of feed additives that have a positive effect on animal health and at the same time increase the volume and quality of meat, eggs, milk and fish produced [2].

According to the definition formulated in 2002 by FAO and WHO experts, "probiotics" are "live strains of microorganisms that, when administered in sufficient quantities, confer a health benefit on the host." The effectiveness of probiotic preparations depends on many factors, so the choice of bacterial strains



and optimal dosage are important when using them. Currently, probiotics are widely used in animal feed, especially poultry [3].

Materials and Methods

Chickens of all groups were kept in the same conditions in compliance with all optimal zoohygienic requirements. Group I served as a control and received the basic diet without any additives. II and III were experimental groups. The 1st experimental group received 10 l/1 g of the probiotic “Activil-3” as a supplement, and the 2nd experimental group received 10 l/1.5 g.

Research on the quality of broiler chicken meat was carried out in accordance with GOST 31470-2012 and UzDSt 3308-2018.

Research Results and Discussion

The consumer properties of meat are largely related to organoleptic evaluation. Organoleptic evaluation is an assessment of the response of human senses to the properties of a product as an object under study. However, when conducting a tasting, it is necessary to take into account the correctness of its setting and the high professionalism of the taster. Often, the results of organoleptic evaluation are decisive and final in determining the quality of meat. The main advantage of such an assessment is the ability to fairly quickly and simultaneously identify a complex of organoleptic indicators of the product: color, taste, aroma, juiciness, tenderness.

In this regard, a commission of experts carried out an organoleptic assessment of the broth and boiled meat of broiler chickens on a five-point scale.

Table 1 Tasting assessment of the quality of broiler chicken broth.

Indicators	Groups		
	control	I experimental	II experimental
Aroma (smell)	3,84	3,96	3,99
Taste	3,79	3,98	4,21
Transparency and color	3,54	3,83	3,94
Richness	3,68	3,94	4,03
Overall quality rating	3,71	3,92	4,04



Research has shown that when assessing the tasting qualities of broiler chicken broth, superiority was revealed in experimental groups I and II. Thus, the overall score for assessing the quality of the broth was 3.92 and 4.04 points, in the control group - 3.71 points. Accordingly, 0.21 and 0.33 points higher compared to the control group (Table 2).

Table 2 Tasting assessment of the quality of boiled broiler chicken meat

Indicators	Groups		
	control	I experimental	II experimental
Tenderness, toughness	3,61	3,85	3,97
Juiciness	3,73	3,89	3,99
Aroma (smell)	3,60	3,73	3,86
Taste	3,52	3,64	3,79
Overall quality rating	3,61	3,77	3,90

The studies showed that the overall score for assessing the quality of boiled meat was 3.77 and 3.90 points in broiler chickens of the I and II experimental groups, and 3.61 points in the control group. Accordingly, 0.16 and 0.29 points higher compared to the control group (Table 3).

To comply with the requirements of GOST 31470-2012 and UzDSt 3308-2018, the quality indicators of broiler chicken carcasses must be as follows: well bled, clean, without feathers and down residues, without stumps and hairy feathers, without foreign inclusions (glass, metal, sand, fecal contamination, etc.), without expelled blood clots, cold burns and bile stains. The muscles are well developed. It has a characteristic odor characteristic of fresh meat of this type and does not contain foreign odors. The color of the muscles is pale pink to pink, the skin is pale yellow with a pink tint. Subcutaneous and internal fat is pale yellow or yellow in color. The skin surface is free of tears, stains, abrasions, cuts and bruises. The skeletal system is without fractures or deformation. The consistency of the meat is elastic; when pressed with a finger, the resulting pit quickly levels out.



All broiler chicken carcasses of the control and experimental groups met the quality requirements of the state standard.

Conclusions

Thus, the results obtained allow us to conclude that the use of the probiotic "Activil-3" had a positive effect on the organoleptic and physico-chemical parameters of broiler chicken carcasses, however, it is worth noting that in all cases they comply with the requirements of GOSTs and other regulatory documents related to veterinary sanitation of poultry meat.

The highest indicators were in experimental group 2, the quality of broth from broiler chickens was 4.04 points, respectively 0.33 points higher compared to the control group. The quality of money of the statutory assessment of the quality of boiled meat of broiler chickens is estimated at 3.90 points, 0.29 points higher, compared to the control group.

References

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