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THE EFFECT OF PROBIOTICS ON VETERINARY AND SANITARY ASSESSMENT OF BROILER CHIKENS MEAT

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ABSTRACT

This scientific article provides information about effect of the "Activil-3" probiotic on growth indicators, product quality, productivity, bloods hematological and morphological indicators of broiler chickens.

KEYWORDS: *Probiotic, "Aktivil-3", Hematology, "Dekavit", Vitamins, BIOBASE BK6190 Analyzer, Mindray BA-88A Analyzer, Erythrocyte, Hemoglobin, ESR, Hematocrit, Leukocytes.*

INTRODUCTION

Actuality. In order carry out the state requirements on "food safety" and to fulfill the tasks set for us in the provision of food, it is necessary to obtain high quality products from farm animals and poultry. To provide the population of our country with livestock products, we must pay great attention to the health, productivity and protect livestock and poultry from various diseases.

Today, our country produces a lot of mixed feeds for farm animals and poultry. It is important that their composition and nutrition, quality, safety and other parameters are responding to the state standards requirements.

We know that in addition to the growth and development of poultry based on physiological norms uses not only highly nutritious and safe feed to obtain quality meat products but also uses various vaccinations and antibiotics to prevent infectious and invasive diseases. This leads to change the quality of the products obtained from them, which has a specific effect on the body of chickens. Another example of this is that pharmaceutical preparations used in poultry primarily affect the gastrointestinal microflora, which leads to the death of beneficial bacteria involved in the digestive process.

Relevance of the topic. A lot of pharmaceutical preparations, biological additives and others used in poultry farming should prevent adverse effects on poultry and also obtain safe and quality products from them. The influence of probiotics on the complete assimilation of a variety of mixed feeds, vitamins and protein supplementsto broiler chickens makes us pay special attention. As such a drug, the Ukrainian pharmaceutical company "Vetsintez" produced a probiotic in powder form "Aktivil-3".

The lack of scientifically based data on veterinary-sanitary assessment regarding to use new probiotic “Aktivil-3” in ration indicates the importance of learning effects of this probiotic on broiler chicken meat and veterinary-sanitary properties.

Scientific novelty of research. The experiment results of probiotic "Aktivil-3" on the quality and safety of broiler chicken meat are obtained, and on the basis of organoleptic, physicochemical, microbiological and biochemical indicators of broiler chicken meat scientifically assessed by veterinary-sanitary.

The effect of probiotic Aktivil-3 (produced by the Ukrainian pharmaceutical company “Vetsintez”) on broiler chickens’meat and its veterinary sanitary assessment studied for the first time.

The purpose of the research. -To determine the positive effect of probiotics ongeneral parameters of the broiler chicken’s body used in veterinary practice of the Republic of Uzbekistan;

-Determination the effect of probiotic "Activil-3" on intensive growth of broiler chickens’ weight.

Materials and methods of research

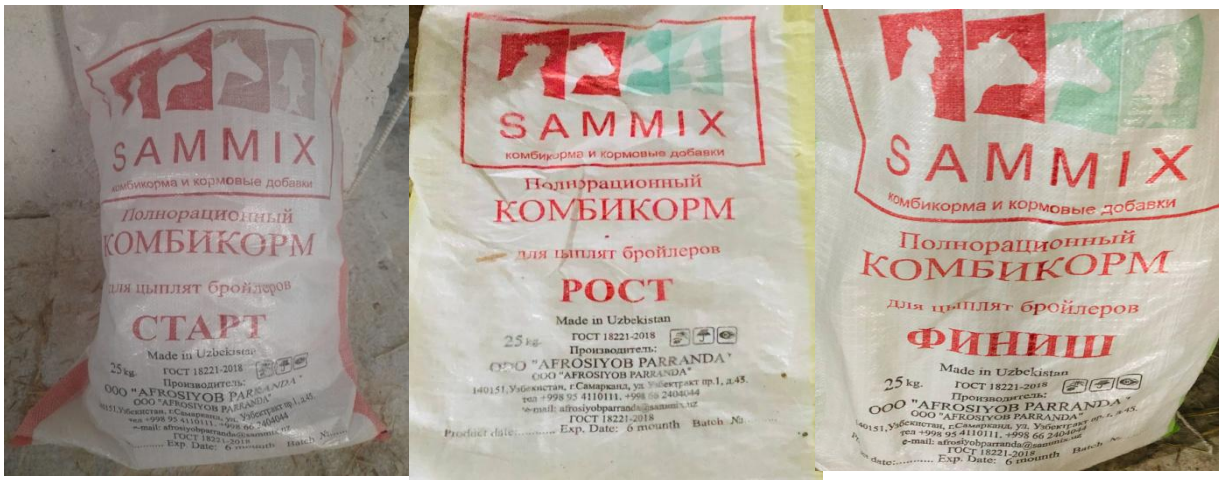
The research was conducted at “MironqulAgrozoovetservis Scientific and Practical Center” of Samarkand city Kavsar street. For our research 90 Ross-308 broiler chickens were selected. The experimental chickens were divided into 3 groups of 30 heads each. Our research was started from the time the chicks were 7 days old.

The chickens were kept in the same conditions in accordance with all the requirements of optimal animal hygiene. Before the beginning of our experiments all chickens were clinically inspected and found healthy.

All 3 groups fed with fam ration produced at the enterprise "Afrosiyobparranda" in Samarkand on the basis of State standards 18221-2018. But irrigation was different. First group performed the control function. The second and third groups were experimental. The first group irrigated with water, without any additions. The second group irrigated with water and “Aktivil-3”

probiotic (10 Lwater/ 1 gr). And the last third group irrigated with water,"Aktivil-3" probiotic (10 L water/ 1 gr) and "Dekavit" vitamin (10 L water / 10 ml).

Morphological parameters of blood were determined using the hematological analyzer BIOBASE BK6190.



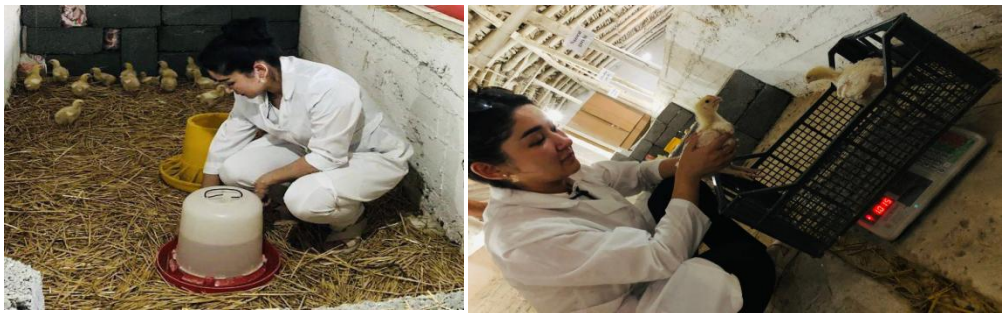
The results of research. The weekly weight, body temperature, and blood morphology of broiler chickens were routinely studied. The body temperature of broiler chickens in the experimental and control groups remained normal during the study. (40,5-42 ° C).

Dynamics of broiler chickens' weight

TABLE 1

Day	weight		
	1 st Control group	**2 nd Experimental group**	**3rd Experimental group**
7	206±15,80	206±5,37	206±5,37
14	494±21,81	505±15,81	540±12,54
21	916±13,43	985±12,54	1040±21,81
28	1328±16,18	1485±20,12	1560±16,18
35	1718±20,12	1880±21,81	2010±10,43

The daily weight of broiler chickens increased by 8.1% compared to the control group of chickens when the probiotic Aktivil-3 was added to the main diet, and by 14% when the vitamin complex Decavit was given together with the probiotic.



It is known that blood parameters are the main indicators of metabolism in animals and birds. Many scientists considered that the composition of the blood depends not only on physiological state of the whole organism, but also on the condition of organs and tissues. Therefore, we performed a general blood test to compare blood parameters between control and experimental broiler chickens' groups.The number and composition of blood cells, the amount of hemoglobin and hematocrit in the erythrocyte, ESR (erythrocyte sedimentation rate) and others were determined.

The 2nd table shows information about hematological examination of broiler chickens' blood while using the probiotic "Aktivil-3" and vitamin complex "Decavit".

Morphological parameters of chicken blood

Indicators	**1 st Control group**	**2 nd Experimental group**	**3rd Experimental group**
Erythrocytes, mln/mm^3	3,54±0,23	3.60±0,36	3,76±0,082
Leukocytes r, 10^9/l	22,16±0,33	21,74±0,85	21,68±0,6Z
Hemoglobin, g/l	109,16±2,97	111,12±1.79	112,05+5,10
Hematocrit	31,01±1,50	31,67+0,89	32,41±0,89
The amount of hemoglobin in erythrocyte, %	57.76±1,52	58,60±0,05	60,56±1,52
ESR, mm/soat	2,71	2,49	2,37

The table shows that the used combination of probiotics "Aktivil-3" and vitamin complex "Decavit" for broiler chickens had a significant effect on morphological parameters of the blood. However, we can note increasing amount of erythrocyte and hemoglobin concentration, reducing the number of leukocyte and ES Rindicated that the probiotics have a positive effect on metabolic processes and the clinical condition of broiler chickens.

According to our research, using of probiotics "Activil-3" increased the number of erythrocytes in the blood of broiler chickens by 1.69%, and the using of vitamin complex "Decavit" with probiotics increased by 6.21%. By the way, hemoglobin levels were 1.79% and 2.64% higher, than in control group. Number ofleukocytes decreased by 1.90% in thesecond experimental group and by 2.17% in the third experimental broiler chickens group compared to controls. In experimental groups the ESR decreased till 0.22 to 0.34 mm /s. During theexperimental research no cases with disease or death have been reported. So, it means that probiotic"Aktivil-3" has no any bad effects to chicken's organism.

CONCLUSION

During the experiment we determined that using of Aktivil-3 probiotics by adding to broiler chickens' water increased their weight up to 8.1% compared to the control group, and also using vitamin complex "Dekavit" in combination with probiotics "Aktivil-3" increased their weight up to 14.8%.

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