



EFFECT OF CUFESTROL PREPARATION ON THE GROWTH, HEMATOLOGICAL INDICATORS AND DEVELOPMENT OF CHICKEN

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Article history:	Abstract:
Received: September 8 th 2021 Accepted: October 10 th 2021 Published: December 7 th 2021	This scientific article provides information about effects of kufestrol on the growth and development of chickens and some blood parameters.
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INTRODUCTION.

Relevance of the topic. Today, poultry farming in the world and in our country is the fastest growing sector of the agro-industrial complex and it provides the population with quality products. According to the latest informations, by 2050 the world's population will reach 9.1 billion. and the rate of scientific and technological progress slows down. Almost all of this population growth occurs in developing countries. About 70% of the population lives in cities (currently 49%). Compared to the current level, the income of the population will increase significantly. To provide with food large urbanized and moderately overpopulated populations, their production must increase by about 70% during this period. Despite this kind of big task, it is possible to ensure the necessary growth of food production and needs of humanity for the future.

Poultry farming is one of the leading sectors of agriculture not only in Uzbekistan but all over the world. First of all, this is due to the demand for cheap and quality food products.

Currently, the poultry market is one of the largest markets for food products. The potential of the domestic poultry market is huge, and the demand for this type of meat products often exceeds the supply. Increasing demand for local products is stimulating production.

Due to the acceleration of poultry farming, special attention is paid to the complete feeding of chicken. The ration of poultry should be full of proteins, fats, macro, micronutrients, biostimulants and vitamins. It would be advisable to use natural biostimulants in realizing the genetic potential of birds. Adding the biostimulator to the ration allows to enhance the necessary vital processes of the animal organism.

THE AIM OF RESEARCH.

Study the effect of the natural biostimulant cufestrol on the growth and development of chickens and some hematological parameters of the blood.

OBJECT AND METHODS OF RESEARCH.

Our research was conducted on the farm "Aqdaryo Ozodbek parrandasi" of Akdarya district of Samarkand region. 99 Carol chickens (10 days old) were selected for our research. The groups were kept in the experimental poultry house cages. The room temperature, ventilation and lighting system, feeding and drinking water fully responded to the zoohygienic requirements of the farm.

The experimental chickens were divided into 3 groups of 33 heads each.

The first was as a control group and fed with farm ration. The second experimental group was fed a mixture of Ecomix premix (1000 g / 100 kg) into the farm ration. The third experimental group was fed a mixture of Ecomix premix (1000 g / 100 kg) and kufestrol (1 g / 100 kg).

Morphological parameters of the blood were determined using the hematological analyzer BIOBASE BK6190. Blood serum biochemical parameters were determined using a half automatic Mindray BA-88A analyzer.

The results of research. During the experiment, the safety of chickens, weight, absolute, average daily growth and hematological blood parameters were determined. Zootechnical indicators were calculated in the following ways: for the group by daily feed consumption, dynamics of body weight growth - 15 chickens from each group were

weighed individually weekly before breakfast. During our experiments, we found that the weight gain of the chickens was observed on the 30th day of the experiment, in the second experimental group the weight gain was 15% compared to the control group, and 26% in the third experimental group. According to the results of the experiment, the weight in the experimental groups was 236.90–299.10 grams, which was the required criteria for this case. The chicks of the third experimental group had the highest average weight - 299.10 g and it was the 208 % higher than the control group. Significant differences in weight between the experimental groups and the control group at all stages of the study were also obtained only in the third experimental group (Table 1).

Live weight of chicks, g (n-33)

Table 1

Chicken age, day	Groups		
	First control	Second experimental	Third experimental
10	50,35±0,61	51,91±0,59	49,84±0,60
20	79,20±1,50	75,50±1,49	73,90±1,54
30	84,60±2,86	97,50±2,74 15	106,30±2,84 26
40	93,70±5,71	135,20±5,71 44	153,60±5,25 64
50	101,60±7,30	170,00±7,26 67	202,90±7,27 99
60	143,60±9,44	236,90±9,54 65	299,10±9,30 208
The difference than control group, %		0,48	99,25

One of the important indicators in the cultivation of agricultural poultry is the maintenance of this head count. In our research, this figure was 96.46–98.48%, more precisely, in the third experimental group, this figure was 100%.

The study and evaluation the effects of new drugs, biological supplements and biostimulants on the poultry organism is impossible without studying the morphological and biochemical parameters of the blood, because the blood in the body performs many functions aimed to survive. It ensures the transport of oxygen to the cells and the release of carbon dioxide from them, as well as provides thermoregulation of the body and increases its specific resistance. Changes in blood composition lead to increase in metabolic processes.

Blood test for morphological parameters did not deviate from the norm at all. There was also a tendency to increase the number of erythrocytes and hemoglobin in the experimental groups depending on the daily dose of the drug Kufestrol.

The highest levels of red blood cells and hemoglobin were observed in the chicks of the third experimental group. Besides, erythrocyte and hemoglobin levels in all groups showed an increase with age of the chicks. Data obtained by counting white blood cells in the blood of experimental chicks showed that there was a slight age-related decrease in the number of white blood cells in the chicks of the experimental groups than the chicks of the control group.

Morphological and some biochemical parameters of chicken blood.

(n-33)

Table 2

Indicators	Chicken age, day	Groups		
		1 st control	2 nd experimental	3 rd experimental
Erythrocytes, $10^{12}/l$	45	3,22±0,06	4,20±0,05	4,58±0,05
	60	2,26±0,04	2,28±0,04	2,37±0,06
Leukocytes, $10^9/l$	45	24,38±0,66	24,78±0,64	24,30±0,63
	60	24,66±0,70	24,54±0,67	24,12±0,76
Hemoglobin, g/l	45	74,80±1,07	75,60±1,21	76,20±1,28
	60	77,20±1,59	77,60±1,50	81,00±1,48
Total protein, g/l	45	42,90±0,61	43,08±0,47	43,54±0,45
	60	53,02±0,69	53,54±0,66	53,90±0,68
Albumins, g/l	45	18,21±0,35	18,30±0,21	18,58±0,27
	60	20,38±0,31	20,49±0,26	20,87±0,23
Globulins, g/l	45	24,69±0,55	24,78±0,45	24,96±0,35
	60	32,64±0,70	33,05±0,65	33,03±0,47
Ca, mmol /l	45	1,47±0,04	1,40±0,05	1,64±0,04
	60	3,79±0,06	3,82±0,05	3,86±0,04
P, mmol /l	45	1,44±0,06	1,56±0,07	1,43±0,05
	60	2,83±0,05	2,84±0,03	2,84±0,03
Glucose, mmol /l	45	12,92±0,07	14,39±0,09	12,44±0,10
	60	10,40±0,05	10,27±0,07	10,10±0,07

This changes shows that its within in physiological norm (Table 2).

Some biochemical parameters of the chickens blood were also at the physiological norm. It should be noted that the chickens in the experimental groups had little higher serum protein levels. According to the results of the experiment, in the third experimental group, the total protein content of chickens increased by 1.66%, albumins - by 2.40%, globulins - by 1.19%.

Decreases in glucose concentrations were detected in chickens of the experimental groups. Significant differences in these indicators were obtained only between the control and the third experimental group. The amount of phosphorus in the serum of all chickens was approximately the same as in the physiological norm. The concentration of calcium in the blood showed significant differences between the groups.

Based on the data obtained from the analysis of morphological and biochemical parameters of the blood shows that the chickens in all groups were clinically healthy and any pathological processes in the body were detected. It should be noted that the best results were most pronounced in the chicks in the third experimental group.

During the evaluation of the effectiveness of feeding chickens, it is important to know the feed consumption per 1 kg of weight. In the experimental groups, this figure ranged from 1.69 to 1.74 kg. In the third experimental group, the lowest feed consumption (1.69 kg, 2.87% less than the control) was observed.

CONCLUSIONS

1. Kufestrol has a positive effect on weight gain by enhancing the growth and development of chickens
2. Kufestrol does not have a detrimental effect on the hematological parameters of chicken blood.
3. At the end of the experiment, the total protein content of chickens in the third experimental group increased by 1.66%, albumins - by 2.40, globulins - by 1.19% than the control group.

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