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RESEARCH ON THE IMPACT OF MIXED FEED ON THE DEVELOPMENT OF BROILER CHICKENS**BROYLER JO‘JALARNING RIVOJLANISHIGA OMIXTA YEM TA‘SIRINI O‘RGANISH****ИССЛЕДОВАНИЕ ВЛИЯНИЯ СМЕШАННОГО КОРМА НА РАЗВИТИЕ БРОЙЛЕРНЫХ ЦЫПЛЯТ****Yo‘lchiev Aslbek Bakhtiyorbekovich¹** ¹Andijon davlat universiteti, t.f.d., dotsent**Asqarov Ibrohim Rahmonovich²** ²Andijon davlat universiteti k.f.d., professor**Djamolov Kamronbek Shuxratbek o‘gli³** ³Andijon davlat universiteti, o‘qituvchi**Abstract**

This article presents research findings on the changes in broiler chickens when mixed feed samples are included in their feeding rations across different age categories. It has been determined that the minimum protein content in the mixed feed for broiler chickens should be above 26%, and a significant reduction in vitamin content can decrease the viability of the chickens by up to 20%.

Annotatsiya

Ushbu maqolada, omixta yem namunalarini broyler jo‘jalarning yosh kategoriyalari kesimida boqish ratsioniga kiritilganda, jo‘jalarning o‘zgarishi, yetilish davriyligi bo‘yicha tadqiqot natijalari keltirilgan. Bunda, broyler jo‘jalarni boqishda omixta yem tarkibidagi oqsilning minimal miqdori 26% dan yuqori bo‘lishi, vitamin miqdorini keskin kamaytirilishi jo‘jalarning yashovchanligini 20% ga qadar pasaytirib yuborishi aniqlangan.

Аннотация

В данной статье представлены результаты исследований изменений у бройлерных цыплят при включении образцов смешанного корма в их рацион на разных возрастных категориях. Установлено, что минимальное содержание белка в смешанном корме для бройлерных цыплят должно быть выше 26%, а значительное снижение содержания витаминов может снизить жизнеспособность цыплят до 20%.

Key words: vitamin, protein, fat content, agriculture, mixed feed, granule**Kalit so‘zlar:** vitamin, belok, yog‘dorlik, qishloq xo‘jaligi, omixta em, granula**Ключевые слова:** витамин, белок, жирность, сельское хозяйство, смешанный корм, гранула**INTRODUCTION**

As humanity develops, its need for food also increases. Among food products, meat and meat products are among the main products that satisfy human needs for protein and vitamins. The needs of the population for food products are increasing day by day. Meat and meat products The population's demand for food products is increasing day by day. One of the most important issues in the supply of meat and meat products is the development of livestock, poultry and fishery industries, providing them with cheap and high-quality feed products.

PQ-4576 of the President of the Republic of Uzbekistan dated January 29, 2020 "On additional measures of state support for the livestock industry" and No. 845 of the Cabinet of Ministers of the Republic of Uzbekistan dated October 18, 2017 "On measures to strengthen the feed base of the livestock and fishery industries" - a number of tasks were set as priorities [1-2].

Enriching the compound fodder with waste and secondary products of production enterprises, developing scientifically based recipes for preparation of fodder, and increasing their

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nutritional value are of great practical importance. Based on the above, a number of scientific researches have been carried out and are being continued today on the enrichment of mixed feed with vitamins and biologically active substances. development of livestock, poultry and fishery industries, providing them with cheap and high-quality fodder products is one of the most important issues [2].

In particular, positive results were obtained when certain heterometallic oxocarbylates with high biological activity were used to enrich the composition of mixed feed in the daily ration with biologically active substances to increase the live weight of chicks in poultry farming [3].

In the ongoing scientific and research work on the enrichment of the composition of mixed feed products, the main attention is focused on the enrichment of the amount of protein in the mixed feed. Along with enriching the amount of protein, vitamins and biologically active substances added to mixed feed also help to improve the quality of mixed feed [4]. In livestock, poultry and fisheries, animals are studied in three groups, regardless of sex, by age category. Depending on the age category of the animals, the formula of mixed feed, the amount of vitamins and biologically active substances in the daily ration given to them differs compared to other age categories. [5].

MATERIALS AND METHODS

Proper feeding of broiler chicks in poultry farming has a positive effect on their main indicators, i.e. rapid growth, well-developed bone tissue, absence of leg weakness, health and other indicators. Since the growth of the broiler mainly depends on the protein content of the mixed feed, it is advisable to include protein-rich feed in the diet. The main sources of protein are nutritional supplements obtained from animals and plants. It is required that 20-25% of the raw protein content of the fodder should be proteins belonging to animal feeds [6-7]. Broiler chickens are characterized by a faster growth rate than other agricultural poultry. Therefore, it is important to feed them from the first day with a complete ration and balanced feed. The mixed feed recipe for age categories of broiler chicks whose live weight exceeds 50 grams per day is presented in the table below. Age category of broiler chicks 1-10 days I-category; 11-35 days, II- category and 36-50 days are divided into III- categories.

Table 1**Composition of mixed feed in the diet of broiler chicks by age categories**

№	Mixed feed composition	Age category		
		I	II	III
1	The set of vitamins, %	0,1-0,3	0,1-0,3	0,1-0,3
2	Protein, %	18,1-21,7	24,8-25,1	23,7-24,2
3	Essential amino acids: %	0,95	1,15	1,05
	- Lysine; - Methionine	0,3	0,5	0,4
4	Fat, %	3,0-3,2	3,8-4,3	4,0-4,2
5	Carbohydrate, %	2,9	4,5	4,5

It can be seen from the table that the amount of protein in the mixed feed intended for broiler chickens of category I is up to 21.7%, while the percentage of protein in the mixed feed of category III chicks is up to 24.2%. As the age categories of broiler chickens change, the percentage of fat in their mixed feed increases to 1.0%, while the percentage of non-exchangeable amino acids decreases to 0.05%.

Research methodology

Analysis of results.

9.3.2. x_1 , the mass percentage of the crude oil taken for analysis, relative to the absolute substance, is calculated according to the following formula.

$$X_1 = \frac{m_2 - m_3}{m_2 - m_1} \cdot 100$$

m_2 - the mass fraction of the oil placed for drying when it is placed together with the byuks, gr

m_3 - the mass fraction of the fat after drying when it is placed together with the byuks, gr

m_1 is the mass of dry baguettes in gr

100 – percent conversion factor

The natural moisture content of x_2 , % crude oil taken for analysis is calculated by the following formula.

$$X_2 = \frac{X_1 \cdot (100 - W)}{100},$$

X_1 is the mass percentage of crude oil in the sample, %

100 is the calculation coefficient in %,

W is the moisture content of the sample taken for analysis, % according to GOST 13496.3

9.3.3. Experiments to determine the mass fraction of crude oil taken for analysis are carried out in two parallel experiments.

Analysis of results.

The formula for calculating the mass fraction of insoluble carbohydrates (sugars) in the sample x , %

$$X_2 = \frac{m \cdot v \cdot v_1 \cdot 100}{m_1 \cdot V_2 \cdot 2},$$

Here:

m is the mass fraction of glucose, in 2 cm³ extract, mg

v – the volume of unwashed extract, cm³

v_1 – the volume of the elegant extract, cm³ (100 cm)

100 is the calculation coefficient

m_1 is the mass of the drawer, mg

v_2 – volume of extract taken for whitening, cm³

2 – the volume of the extracted extract for whitening, cm³

The formula for calculating the mass fraction of rapidly hydrolyzable hydrocarbons (starch) in the tested sample:

$$X_1 = \frac{m \cdot v \cdot v_1 \cdot 100 \cdot 0,9}{m_1 \cdot V_2 \cdot 2},$$

Here:

m – mass fraction of glucose in hydrolyzate (2 cm³), mg

v – the volume used for unwashed hydrolyzate, cm³

v_1 is the volume of quenched hydrolyzate, cm³

100 – calculation coefficient, %

0.9 is the ratio of soluble carbohydrates (sugars) to rapidly hydrolyzable carbohydrates (starch)

m_1 is the mass of the drawer, mg

v_2 is the volume of the hydrolyzate given to whitewash, cm³

2 – volume of hydrolyzate obtained for dyeing, cm³

Discussion of the obtained research results

It is important to scientifically develop mixed feed recipes for the production of mixed feed products rich in protein, balanced with vitamins and biologically active substances based on the age categories of broiler chickens based on local raw materials[8].

Table 2

Composition of mixed feed

Mixed feed samples	Chemical composition		
	Vitamin	Protein	Fat
Sample I	0,20	23,4	3,1
Sample II	0,20	26,6	3,7
Sample III	0,10	24,05	4,2
Sample IV	0,10	22,7	3,7

As a result of our research, 4 samples of mixed feed with different composition were prepared. The amount of protein in the chemical composition of the prepared mixed feed samples

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was 23.4% in sample-1, 22.7% in sample IV, and the highest amount was 26.6% in sample 2. At the same time, the amount of vitamins in the mixture feed samples was left unchanged at 0.2% in all 4 samples, and the samples were prepared by changing the amount of fat in the range from 3.1% to 4.2%.

The prepared 4 mixed feed samples were included in the daily ration of broiler chicks according to age categories, and research was conducted on the weight of chicks and the period of readiness for sale. [9-10].

In order to study the effect of the prepared mixed feed sample on chicks by age category, 40 chicks from each category were divided into 4 groups of 10, and a total of 120 chicks were selected by age category. Chicks belonging to each category were fed with mixed feed samples for 20 days and the changes of chicks were recorded. It was carried out by random selection when the chicks were divided into groups according to the relevant category. The weight of one of the selected chicks was 35-40 g of one-day-old hatchery chick of category I, 11-day chick of category II was 550-600 g, 36-day chick of category III was 1500-1600 g. The following table shows the results of the research on the changes in the feeding period for 20 days on the samples of the mixed feed prepared by the chickens in the age category section. [11].

Table 3

The results of the analysis of the dynamics of the change of chicks in the category section.

№	Indicator name	Mixture feed products taken for sampling			
		I	II	III	IV
Category I chicks					
1.	Weight of 1 chick, gr	620-700	750-870	650-700	580-620
2.	viability of chicks, %	85%	90%	90%	90%
3.	Period of broiler chicken ready for sale, day	48-52	45-47	48-50	52-54
Category II chicks					
1.	Weight of 1 chick, gr	1610-1720	1930-2010	1870-1915	1550-1780
2.	viability of chicks, %	88%	93%	92%	91%
3.	Period of broiler chicken ready for sale, day	37-39	30-33	35-38	38-42
Category III chicks					
1.	Weight of 1 chick, gr	2090-2260	2430-2580	2100-2210	1980-2010
2.	viability of chicks, %	80%	80%	80%	80%
3.	Period of broiler chicken ready for sale, day	13-15	8-10	10-12	14-18

As can be seen from the table above, when category I chicks are fed with sample I for 20 days, the weight of 1 chick is 620-700g, according to sample II, the weight of 1 chick is 750-870g, and according to the other samples, it is 650-700g and 580-620g. Chickens fed according to category II gained weight of 1600-1720 grams according to sample I, and gained weight of 1900-2000 grams according to sample II. Chicks weighing 1870-1900g, 1550-1780g were obtained in samples III and IV, respectively. Weight gain of category III chicks was also observed in this way. [12].

At the same time, the viability of chicks was 85% in category I, 92% in category II, and the loss increased sharply in category III, and the viability was 80%.

The period of readiness for sale of broiler chicks, (fattiness) when chicks are reared according to traditional technology is 45-47 days, while chicks belonging to I-category gained the required weight of 2000-2200 g in 48-50 days. Category II chicks reached marketable weight in 30-33 days, and category III chicks in 8-10 days.

CONCLUSION

It can be concluded from the results of the research that when feeding broiler chicks, the minimum amount of protein in mixed feed is higher than 26%, and a sharp decrease in the amount of vitamins reduces the viability of chicks by 20%. Also, the addition of 10% of the composition of the bioproduct and the optimal amount of vitamins in the amount of 0.2%, as well as feeding mixed feed prepared according to the 2nd sample to 11-35-day-old broiler chicks belonging to category II, allows to reduce the period of chicks' readiness for sale by 2-3 days. . Reduction of broiler chick maturity by 2-3 days and increase in viability is economically beneficial for poultry farms.

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