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FUNDAMENTALS OF BIOTECHNOLOGY TO INCREASE THE MEAT PRODUCTIVITY OF POULTRY

Tulaganova Zilola Kamoliddin kizi
Scientific Research Institute of Livestock and Poultry, Republic of Uzbekistan
E-mail: zilolade@gmail.com

Abstract: It is known that in recent years the provision of the population with food products, especially meat, dairy and egg products, is one of the most important tasks of strategic importance.

Particular attention is paid to poultry, from which it is possible to quickly and efficiently prepare meat and egg products.

However, there are many challenges in providing them with essential nutrients such as nutritious, well-balanced nutrition, essential protein, vitamins, amino acids and minerals, and addressing them is an important issue. After all, there are still shortcomings in the import of nutrients from foreign countries, the assessment, use, storage and proper nutrition of their quantitative and qualitative indicators in the global standards.

Keywords: Poultry, biotechnology, egg products, well-balanced nutrition, essential protein, vitamins, amino acids, minerals.

Introduction

The aim of this work is to prepare local nutrients with the help of highly efficient, non-pathogenic microorganisms, feed rationing, to create a feed ration based on morphological, physiological and biochemical indicators of poultry of different ages and directions and to provide quality and high- yielding poultry meat.

The research was conducted on the experimental farm of the Livestock and Poultry Research Institute.

Feeding experiments were carried out on ROSS- 308 broiler chickens for 100 heads of meat per day.

Normally, the main indicator in the feeding of birds is directly related to the composition of the feed and water given to them, the quality of meat is assessed by measuring the appropriate dimensions of its body structure, palpation of the meat tissue and skin, as well as a number of indicators when slaughtered and anatomical separation of the body.

Meat quality of young poultry, the length of his trunk and sternum, the width of the chest, around, body formation based on the measurement of depth and angle measurements, rapid growth, weight of half body, the ratio of the consumable parts of the body, is determined by the category of half body and the quality of the meat.

The weight of the chick increases several tens of times relative to its live weight after hatching.

Therefore, the live weight of broiler chicks increases more than 40 times at 4 weeks of age.

Broiler chickens are distinguished by their rapid growth rate compared to other farmed poultry, Therefore, from the first day itself they are fully fed a mixed diet, and the most important is to feed the composition a balanced diet.

Broiler chickens are not fed 5-6 times a day on the farm, on the contrary, feeding is free and when the birds want to be fed, they can consume as much as they want. In order to improve metabolism and make more efficient use of the energy and protein generated, the addition of premixes containing biologically active substances to the diet of broilers gives good results. The types of mixed feeds given to chickens on the farm are as follows: 1st type – restart for 0 – 10-day-old chicken; 2nd type - start for 11 – 25-day-old chicken; 3rd. type – growth for 26 – 30-day-old chicken; 4th type – finish – intended for 31 – 45-day-old chicks.

This composition of the mixed feeds, the composition of the nutrients is given in the following tables.

Table 1

Ingredients for broiler chicks, %

Composition of the mixed feeds		**Start period, 1 - 7 days**	**The period of fattening, 8-18 days**	**Finish period, 19-42 days**
Corn	%	45	49.50	51.50
Wheat	%	10	13	15
Soybean meal	%	30.50	18.50	13.50
Sunflower seed	%	-	5	6
Vegetable oil	%	4.50	4	4
Start period premix	%	10	10	-
Finish period premix	%	-	-	10
Total:	%	100	100	100
Ration				
Interchangeable MJ / kgs		13	13.15	13.20
Energy kcal / 100 grams		311	314	315
Unrefined protein	%	23	20.50	18.50
Unrefined oil	%	7.50	7.20	7
Untreated fiber	%	3.20	3.20	3.20
Lysin	%	1.30	1.05	0.85
Methionine	%	0.55	0.52	0.42
Methionine + cystine	%	0.94	0.87	0.75
Linoleic acid	%	3.80	3.60	3.70
Calcium	%	1	1	0.85

1 Phosphorus total	%	0.70	0.70	0.65
Phosphorus is digestible	%	0.45	0.45	0Ж1
Sodium	%	0.15	0.15	0.15
Vitamin A	HB/kgs	10000	10000	6800
Vitamin D3	HB/kgs	3000	3000	2200
Vitamin E	HB/kgs	30	30	23

An indicator of post-meat quality is the presence of an integral link between the growth rate of young poultry feathers and the growth rate of the body. The growth rate of poultry has a significant impact on its slaughter output and meat quality. The growth rate of feather of a one-day-old chick can be easily determined from the development of its fluffy feathers. The growth rate of a species of bird, consumption of meat products, its quality, feed consumption and other indicators depend on the compatibility of the poultry breed and the interbreeding of the lines.

Table 2

Dynamics of change in live weight of chickens, kgs (n=100)

Age, by day	1-control group	2-Experimental group
1-day-old	39,2 ± 0,25	39,4 ± 0,58
10-day-old	280 ± 3,12	291 ± 2,87
20-day-old	790 ± 3,70	844 ± 3,81
42-day-old	2557 ± 30,4	2850 ± 19,5

The meat productivity of poultry depends not only on its offspring, but also on the conditions of cultivation and feeding.Good efficiency in meat production can be achieved on the basis of specialized breeding of hybrid chickens. Meat-oriented chicks grow rapidly in the first 2-3 weeks of life and consume less feed per unit of weight gain. The earlier the birds are slaughtered, the less feed is consumed per unit of product. However, the choice of slaughter time for poultry depends on the size of their live weight, the quality of the meat and meat after slaughter, and the amount of feed per unit weight gain.

The size and weight of the bones of birds significantly affect the quality of slaughter output. Various defects in body structure, such as a crooked sternum tumor, reduce the quality of the slaughter expenditure, among other reasons.

Table 3

Results of 34-day control broiler chicks in the experiment

№	Indicators	Control group	Experimental group
1	Slaughter received live mass, grams	1950	2022
2	Semi-cleaned body, mass, grams	1650	1900
3	Slaughter expenditure on semi-cleaned body, %	86.8	90.4
4	Purified body mass, grams	1430	1670
5	Slaughter expenditure on cleansed body, %	75.2	79.5
6	Internal organs, grams	120	145

Poultry meat has less connective tissue than meat from other animals. In poultry, breast and hip tissue are well developed. Breast meat tissue makes up 30-40% of all meat tissue in the poultry body. In meat-oriented 5-week-old chicks, a positive and very large correlative correlation was found between the size of the breast angle and the relative weight of the breast meat.

Poultry meat has a unique taste and smell, which is due to the presence of extractives in them. Poultry meat is a rich source of complete amino acids, minerals and vitamins that are part of proteins.

Obesity of poultry depends on the level of development of meat and fat tissue. Slaughtered and unfeathered poultry is called nimta (meat).Depending on the wet processing methods, uncleaned,divided into semi-cleaned and refined meats.When meat is not cleaned, it means the body of a bird whose internal organs, head and legs have not been cut off. Semi-cleaned poultry nimtas mean intestines removed and cleaned poultry meats mean all internal organs, the head of the second cervical spine, legs, heels and joints cut off from the top, skinless, neck cut off.

Nowadays, as a semi-finished product for consumption of chicken meat, the leg part of the meat "okorochka" (a part of chicken leg) is the most common and in high demand.It has a nutritional value: 100 grams of meat contains 17.7 grams of protein and 10 grams of fat. The energy value of 100 grams of meat is 150 kcal.

Table 4

The chemical composition of the meat of broiler chickens in the experiments (At 34 days-old),% n = 3

The indicators studied	Control group M±m, n=3	Experimental group M±m, n=3
Water	75,24±0,033	74,55±0,22
Dry matter	24,76±0,16	25,45±0,24
Protein	20,5±0,40	22,3±0,56
Fat	2,05±0,44	1,22±0,48
Ash	2,21±0,14	1,93±0,49
	P≤0,001	P≤0,001

Broiler meat is a dietary product. It is quick and easy to digest. The fat content is much lower than the meat of other animals. Depending on the fatness of the body of the bird and the quality of its performance, the meat is divided into categories I and II, and the qualities of the brand are described.

Currently, the maturation period of broiler chicks lasts from 32 to 45 days. It is mainly used for grilling 32-day-old broiler meat and “Tabaka” (flattened and grilled on charcoal) for 45-day-old broiler meat.

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