WEB OF SCIENTIST: INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL
ISSN: 2776-0979, Volume 5, Issue 2, February, 2024

EXPLANATION ON THE PHYSIOLOGICAL AND BIOCHEMICAL INDICATORS OF BROILER CHICKS FED WITH CHITOSAN AND WHEY POWDER

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Abstract:
The production of poultry products has a high level of profitability and a relatively low price. It is not without reason that this field of poultry farming has been developing rapidly in the world over the last fifty years. According to the target program of the industry for the development of poultry farming, by 2023, poultry production in Uzbekistan has reached the planned ton.
Poultry intensification ensures the improvement of breeding and genetic methods and the creation of genetic forms at the level of world productivity based on them, as well as the development of methods of realizing the obtained genetic potential.

Keywords: Chitosan, Chitin, Broiler, Poultry, Feed, Whey Powder, Protein.

Introduction

In our republic, great attention is being paid to the development of chicken farming. Many studies show that poultry cannot consume enough nutrients by volume to fully express their genetic potential for productivity. For this, small amounts of balanced, easily accessible nutrients, minerals and biologically active components are needed. One of these nutrients is whey powder and chitosan. The milk protein contained in dry milk whey has a set of amino acids necessary for poultry. An important feature of milk proteins is their ability to be easily absorbed by the body when broken down. Whey proteins can serve as an additional source of arginine, histidine, methionine, lysine, threonine, and tryptophan. Whey is a relatively good source of calcium and phosphorus. Lactose in it helps maintain the optimal ratio of calcium, phosphorus and magnesium in the blood.

Chitosan biopolymer is also of great scientific interest for its use as an immunostimulant - a tool that increases the productivity of broiler chickens and improves the quality of broiler poultry products. Chitosan is a polysaccharide natural polymer that is one of the most common organic compounds in nature. The raw material for its production is chitin, a structural polysaccharide of crustacean epidermis.

The purpose of the study

The purpose of our work is to evaluate the adequacy of protein and energy nutrition to the physiological needs of Cobb broiler chickens when fed with chitosan and dry milk whey powder.

Literature analysis

Breeding of high-yielding poultry requires constant study and improvement of the norm of providing it with balanced mixed feeds that contribute to maximum productivity while maintaining high product quality. To organize rational feeding of agricultural poultry, the efficiency of using mixed feeds can be significantly increased [1, 2].

In addition to a high level of nutrition, keeping conditions, veterinary and preventive measures, reducing stress on the body, etc. have a significant impact on increasing the maximum productivity of farm animals and poultry [3, 4, 5, 6].

Poultry clinical dietetics aims to develop measures to reduce the harm caused by metabolic diseases, norms and feeding regimes. Probiotic drugs are of great interest in this field [7,8, 9, 10, 11].

Currently, several dozen probiotics are used in poultry and veterinary medicine [12, 13].

In world practice, there is a tendency to gradually abandon the use of feed antibiotics in poultry and poultry farming, so probiotics are of interest due to the manifestation of several types of activity: increase pathogenic and conditionally pathogenic microflora; enzymatic activity: production of amino acids; such as increasing immunity in animals [14, 15].

It was found that the chickens of the experimental groups improved the digestibility of nutrients, used nitrogen, calcium, phosphorus and energy more efficiently. An increase in the number of red blood cells and hemoglobin was observed in the blood, and protein metabolism was improved due to an increase in the total protein in the blood serum by 5.8%. Albumins increased by 6.7%, g-globulins by 8.7%. In the analysis of the chemical composition of the meat, an increase in protein and mineral

substances was noted, the chicken carcass of the experimental groups was characterized by the highest energy value. An advantage was observed in the experimental groups in terms of the mass of the edible part of the carcass [17, 18, 19, 20].

Ribav herbal preparation to increase the natural resistance and productivity of ducks has been successfully tested. The use of additives increases the natural resistance of poultry and meat, the quality of ducklings, the productivity of Class I carcasses improves by 14.8%; slaughter weight - by 2.7%, protein, important amino acids accumulate more in muscle tissue [21].

Summary

According to the analyzed literature, the inclusion of chitosan and dry milk whey in poultry feed can achieve good results. The main thing is that these substances are made in the form of a mixture with other high-protein components, and the synthesis of these substances on an industrial scale prevents environmental pollution.

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