

Melanin cho'kmasi melanin to'liq erishiga qadar 12% li ammiak eritmasida eritiladi, qoldiq ammiak va suv rotorli bug'latkichda bug'latilganidan keyin melanin eritmasi liofil shkafda quritildi.

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## ENRICHED FEED: NON-TRADITIONAL USE OF RAW MATERIALS FOR POULTRY

**Associate Professor. A.M. Normatov, Assoc. N.U. Yusupov, Master. U.Z. Azamatov**

*Tashkent Institute of Chemical Technology, Department of Biotechnology*

+998 94 162 29 59

It is known that up to 70% of feed costs in the poultry industry are accounted for by cereal crops, including wheat, barley and corn. These cereals are essential in the sphere of feeding the population and occupy the main position among food crops. The search for new types of grain fodder to partially replace traditional and use them to maintain and increase the productivity of poultry is urgent.

One way to solve this problem is to use non-traditional types of feed in the diet of poultry as sources of protein (sorghum, triticale) and mineral (limestone, bentonite, palygorskite) nutrition.

**The aim of the study** is to study the chemical composition of the above non-traditional feeds and determine the optimal level of their partial replacement of traditional grain and mineral supplements in the diet of farm birds.

**Results of the study.** The results of the study of the chemical composition and use of grain of some non-traditional feeds (sorghum, triticale) in the feeding of laying hens showed that these feeds were not inferior to the main grain cereals (wheat, corn, barley) both in the level of nutrients and efficiency of influence on bird productivity. Thus, the crude protein content of sorghum ranges from 11.7-12.2%, crude fiber and fat - 1.5-5.8 and 4.3-4.4%, respectively. Sorghum is almost on a par with triticale in terms of the content of most essential amino acids, and surpasses maize in terms of some of them. However, the limiting factor in the use of sorghum in laying hens is its tannin content. Depending on the tannin content, the rate of use of sorghum in the diet of birds is determined. If the components of the basic diet do not contain tannin, it is possible to include 15-20% sorghum in the feed for young birds and 30-35% for adult birds. Brown sorghum varieties have a high tannin content, so you should limit the possibility of using them in feeds to 5-20%. Another complete substitute for the main grain feed in the diet of birds is the wheat-rye hybrid triticale, which has a number of advantages compared with wheat and rye. Triticale contains more protein (15-18%), its high energy content (285 kcal/100 g) allows it to replace up to 60% of wheat in the diet.

The results of chemical studies showed that the content of protein, fat and fiber in triticale grown in Uzbekistan is 13.2; 2.2; 2.9%, respectively. The content of amino acids (lysine, cystine, etc.) of triticale is significantly superior to sorghum and other traditional grain crops.

The first experiment to partially replace traditional grain sorghum was conducted on chickens-Locks of the Loman Brown cross, of which five groups of 50 birds each were formed according to the principle of peer groups.

The data obtained for 8 months. productivity of laying hens showed that the tested levels of sorghum at partial replacement of cereals (corn, wheat, barley) by 5, 10, 15 and 20% had unequal effects on the productive qualities of the experimental birds (Table).

In the second experiment, the task was to partially or completely replace wheat and barley with triticale. Five groups of laying hens of the same cross were also formed for the experiment, but in the diet of laying hens 20, 40, 60 and 80% of traditional grain components of feed were replaced by triticale.

The results of the experiment showed that the preservation of livestock in all groups was high - from 93.33 to 96.67%. The highest live weight was found in Group II (1987.77 g) where triticale replaced 20% of traditional cereals and the hens of Group II were 0.52-1.17% superior to their counterparts in other experimental and control groups. The average egg production per hen and egg laying rate during the first 4 weeks of the experiment were 6.13 and 6.84, 21.9 and 24.4%, respectively. At the end of the study, the egg laying rate was higher in birds of experimental Group III (142,7 eggs per hen, 78,4%) than in birds of other experimental groups, while the control group exceeded the control group by 1,04%. The average daily consumption of feed by experimental birds ranged from 123.58 to 130.60 g. The greatest consumption of feed was observed in group III where 40% of traditional cereals were replaced by triticale in the diet of the birds, - higher by 2.7% as compared with the control. It was found that as the doses of triticale in the diet increased to 60 and 80%, the level of feed consumption decreased.

Thus, an effective rate of grain feed replacement in the diet of laying hens is sorghum in the range of 10-15% and triticale 20-40%. Minerals also play a significant role in the nutrition of poultry. They play the role of plastic material in the formation of the skeleton and egg shells and take an active part in metabolism.

Results of a comparative study of the effectiveness of the use in the diet of egg chickens imported and local limestone as mineral supplements showed that while maintaining the recommended level of calcium in the diet (3.1% of the weight of feed) local raw materials provide the same productivity layers, as imported.

It was found that to increase the efficiency of the use of local limestone and

It is necessary to increase the calcium content in the diet to 3.5%, i.e. to increase the recommended norm (3.1%) by 0.4%. This contributes to the increase of chick retention by 2%, egg production per average laying hen by 6.4%, egg yield of the 1st category (D-1) by 7.5%, reduction of feed expenses per unit production by 5.8% and increase in the egg production efficiency index by 16.5%.

Thus, the introduction of local limestone in the ration allows to increase the preservation of livestock, egg production and reduce feed consumption. The use of natural sorbents such as bentonite and palygorskite clays in cattle breeding allows to realize the potential of the gene pool with great efficiency, which leads to an increase in production without additional costs of feed.

Bentonites are clay substances of volcanic origin with certain physical properties (dispersity, plasticity, etc.), consisting of at least 60-70% of mineral groups of montmorillonites and characterized by high binding capacity, adsorption and catalytic activity.

The results of the experiment showed that the most optimal rate of introducing bentonite from the above deposits in the diet of laying hens of the parent flock is a dose of 2.5% of dry matter weight. It was found that adding this dose to the diet increased the safety of laying hens of the parent flock by 5%, their egg production by 5.5%, the average weight of eggs by 4%, the yield of hatching eggs and hatching chickens by 4.2%, and also reduced feed costs per 10 eggs by 7.3%.

**Conclusion.** The use of local non-traditional feed in general has a positive effect on the performance of egg birds and may well replace expensive components of mixed fodder imported from outside the country.

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