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ECONOMIC EFFICIENCY INDICATORS OF LOHMANN BROWN AND LOHMANN SANDY CROSS CHICKENS

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Abstract

Based on the eggs obtained from Loman-Brown and Loman-Sandy cross chickens and the profit obtained from them, the consumption of food given to chickens, food costs, and production costs, the economic efficiency of cross chickens was determined.

Key words: Loman-Brown, Loman-Sandy, feed consumption, eggs, cost, crossbred chickens, economic, efficiency, sum and profitability.

Poultry farming is one of the main branches of livestock agriculture and is widely распространен among the population engaged in raising poultry both in farms and household settings, and it is rapidly developing.

In our country, due to the increasing attention to the poultry sector year by year, positive changes have been observed in the industry. "...Currently, the annual production of poultry meat amounts to 600 thousand tons, which corresponds to an average of 14 kg per capita, meeting 77% of consumption demand." In the Republic, the wholesale price of poultry meat products ranges on average from 23,000 to 50,000 UZS, which helps meet the population's demand for poultry products. Tasks have been set to increase the production of poultry meat and eggs to 1,000.0 thousand tons and 10,500.0 million units, respectively, by 2025.

At present, increasing the number of poultry, applying modern technologies in poultry farming, strengthening the feed base, improving product quality, and meeting the growing demand of the population for poultry products, as well as ensuring food security, are of great importance. In this regard, organizing proper feeding and watering systems with the use of biological additives, and increasing the scope of work aimed at improving the growth, development, and meat productivity of chicks, has significant scientific and practical importance.

In different countries, the development trends of egg poultry farming and the demand for white- or brown-shelled eggs are largely determined by consumer preferences regarding eggshell color. The demand for brown-shelled eggs is increasing, particularly in countries such as Ecuador, Ghana, Zimbabwe, Morocco, Lebanon, Malaysia, Singapore, and Thailand, which leads to the распространение of egg-laying breeds that produce brown eggs. In England, France, and Italy, brown-shelled eggs account for 85–95% of total production. In Saudi Arabia and Kuwait, consumers prefer white-shelled eggs.

In general, in Latin America, white-shelled eggs constitute the main part of egg production, with hens laying white eggs accounting for approximately 65% of the laying flock. At the same time, in the USA and Colombia, white and brown eggs are produced in equal proportions. In Tunisia, consumers are indifferent to shell color. Brown-shelled eggs are usually sold at higher prices. In countries such as the USA, Canada, Japan, Brazil, and France, the price difference is around 6%, while in Italy, England, and Germany it is approximately 1.1–1.4%.

In many countries, consumer preferences for colored eggs are mainly determined by subjective factors, although it is believed that brown shells are stronger than white ones.

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However, it is also believed that negative changes in the internal composition of brown-shelled eggs become more noticeable during long-term storage.

Studies conducted in the Fergana Valley on consumer demand for white and brown eggs in different seasons showed that the demand for brown-shelled eggs is higher in markets. This indicates that the demand for eggs does not depend on seasonal factors.

The economic efficiency of poultry farming is characterized by a system of indicators, the most important of which include productivity (egg production of hens and average daily live weight gain), labor costs per 1,000 eggs and per centner of weight gain, feed consumption per 1,000 eggs and per centner of gain, and production cost. Profit from the sale of poultry products, the level of profitability of egg production, and poultry meat production determine the overall performance of the sector.

In poultry farming, there is a tendency for increased labor costs and feed consumption per unit of production. The decline in labor productivity in the industry is primarily associated with the wear and tear of existing equipment and the inability to replace it, which leads to a reduction in the level of mechanization. In recent years, the production cost per unit of poultry products has sharply increased, and its growth rate has exceeded the growth rate of selling prices. As a result, profitability in poultry farms has decreased.

In market conditions, the problem of stabilizing poultry farming and increasing its economic efficiency can be solved through the intensification of production. Intensification of the industry should be accompanied by improving the breeding and productive qualities of poultry and switching to the most efficient breeds. Hybrid poultry obtained by crossing specialized lines is used in egg and meat production. For egg production, breeds such as White Leghorn, Lohmann Brown, and Lohmann Sandy are widely used, while for meat production, breeds based on Cornish and Plymouth Rock are utilized.

For the successful development of poultry farming, it is also necessary to improve production technologies. Technological schedules at poultry farms should be based on rational schemes for raising young chicks and managing adult hens.

Economic Efficiency of Lohmann Brown and Lohmann Sandy Cross Chickens

Indicators	**Lohmann Brown**	**Lohmann Sandy**
1. Number of hens at the beginning of the experiment	200	200
2. Number of hens at the end of the experiment	195	194
3. Eggs obtained (pieces)	62,400	61,692
4. Total mixed feed consumed during the experiment (kg)	8,094,372	8,039,049
5. Production and feed costs (UZS)	26,647,000	26,481,032
6. Revenue from egg sales (average, UZS)	38,117,000	37,574,852
7. Net profit (UZS)	11,470,000	11,093,820
8. Profitability level (%)	43%	41%

The analysis of the economic efficiency of the scientific research experiment conducted on a poultry farm showed that, out of the initial 400 birds, with a survival rate of 98%, Lohmann Brown hens produced 62,400 eggs and consumed a total of 8,094,372 kg of mixed feed, while Lohmann Sandy hens produced 61,692 eggs and consumed a total of 8,039,049 kg of mixed feed. It was observed that feed consumption was higher in Lohmann Sandy hens compared to Lohmann Brown hens.

Production and feed costs amounted to 26,647,000 UZS for Lohmann Brown hens and 26,481,032 UZS for Lohmann Sandy hens.

Revenue from the sale of eggs obtained from Lohmann Brown cross hens amounted to 38,117,000 UZS, while for Lohmann Sandy cross hens it was 37,574,852 UZS.

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The net profit obtained from Lohmann Brown cross hens was 11,470,000 UZS, whereas for Lohmann Sandy cross hens it was 11,093,820 UZS.

In conclusion, as can be seen from the table above, the profitability level was 41% for Lohmann Sandy cross hens and 43% for Lohmann Brown cross hens. This indicates that the profitability of Lohmann Brown cross hens is 2% higher compared to Lohmann Sandy cross hens.

Thus, the use of Lohmann Brown and Lohmann Sandy cross hens in poultry farming shows that, from an economic perspective, it is more efficient for farmers, poultry enterprises, and household producers to raise Lohmann Brown cross hens.

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