Features of the bioconversion of trace elements into eggs and poultry meat with bioresonance exposureA.G. Avakova, D.Yu. Lotnikova, E.V. Bondarevskaya

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Abstract: the authors draw the attention of specialists to the features of bioconversion nutrients and microelements in the meat of broiler chickens and eggs of laying hens under the influence of SES BAA "Junior" on breeding objects.

In the world, products fortified with micronutrients have been in steady demand for a long time, but in our country their range is very limited. Chicken meat and eggs make up a significant part in the diet of Russian citizens, and manufacturers are forced to pay more and more attention to the biological quality of these products, the content of micronutrients, the most important of which are essential microelements [1].

The microelements introduced into the feed are not fully absorbed by the bird, however, the artificial effect of the electromagnetic frequency spectrum (EFS) of microelements on the bird activates the assimilation of the same elements from feed, which increases the level of bioconversion and their accumulation in greater quantities in poultry products. At the same time, there are peculiarities in the accumulation of various substances in broiler meat and chicken eggs.

The work was carried out at the Phoenix Poultry Farm LLC in the Krasnoarmeisky District of the Krasnodar Territory in two identical poultry buildings (experimental and control) with a capacity of 13 thousand broilers. The conditions of keeping, feeding and age of broiler chickens were the same. The difference consisted in the fact that the apparatus "IMEDIS-BRT-A" was installed in the experimental building, designed to read and broadcast the spectrum of electromagnetic frequencies (EFS) of biologically active substances, and a bioresonance effect on broilers was carried out according to the SKNIIZh method [2, 3], with the addition of SECh biologically active supplement for children "Junior" (composition: β-carotene, vitamins E, C, $B_{1, 2,5,6,9,12,}$ PP, H, calcium hydrogen phosphate, magnesium carbonate, ferrous gluconate, copper sulfate, manganese carbonate, zinc oxide, sodium selenite).

At the age of broilers 35 days, samples of pectoral muscles of control and experimental chickens were examined for biochemical composition. As you can see from the table. 1, the meat of chickens raised using bioresonance technology has a positive advantage over control in almost all studied parameters.

Table 1

Biochemical composition of broiler chicken meat

Indicators	Control	An experience	Experience in% k control
Protein, %	22.57	24.17	107
Fat,%	2.93	0.77	26
Ash,%	1.25	1.25	-
Calcium, g / kg	0.80	0.90	112.5
Phosphorus, g / kg	2.92	3.00	103
Iron, mg / kg	4.67	6.38	136.6
Copper, mg / kg	0.13	0.37	285
Zinc, mg / kg	3.79	4.15	110
Manganese, mg / kg	0.01	0.04	400
Magnesium, mg / kg	137.5	143.0	104

Of particular interest is the ratio of protein to fat in the test sample:

protein content in meat increased by 7%, and fat decreased to 26% compared to control. In addition, in the prototype, more deficient micro- and macroelements were identified: the level of calcium increased by 12.5%, iron - by 36.6%, copper - by 185%, sodium - by 44%, and manganese - 4 times.

Work to increase the level of microelements in eggs was carried out at the Krasnodarskaya Poultry Farm LLC, Krasnodar, in two identical production buildings (experimental and control) with 30 thousand laying hens at the age of 18–68 weeks; the duration of the experiment was 50 weeks. Chickens were kept in optimal conditions, feeding was carried out with the same balanced compound feed.

The differences consisted only in the fact that in the experimental building a bioresonance effect was applied on laying hens [2, 4] with the addition of SES BAA "Junior". The selection of eggs for biochemical studies was carried out in accordance with GOST - food eggs, and the average sample of at least 30 eggs was examined for biochemical composition.

The biochemical composition of the average sample of the egg mass of the experimental and control groups is presented in table. 2. The content of the main elements - water, protein, fat in the eggs of the experimental and control groups did not differ. However, the level of all investigated microelements in eggs obtained under the influence of SES BAA "Junior" is higher in the experimental group than in the control group.

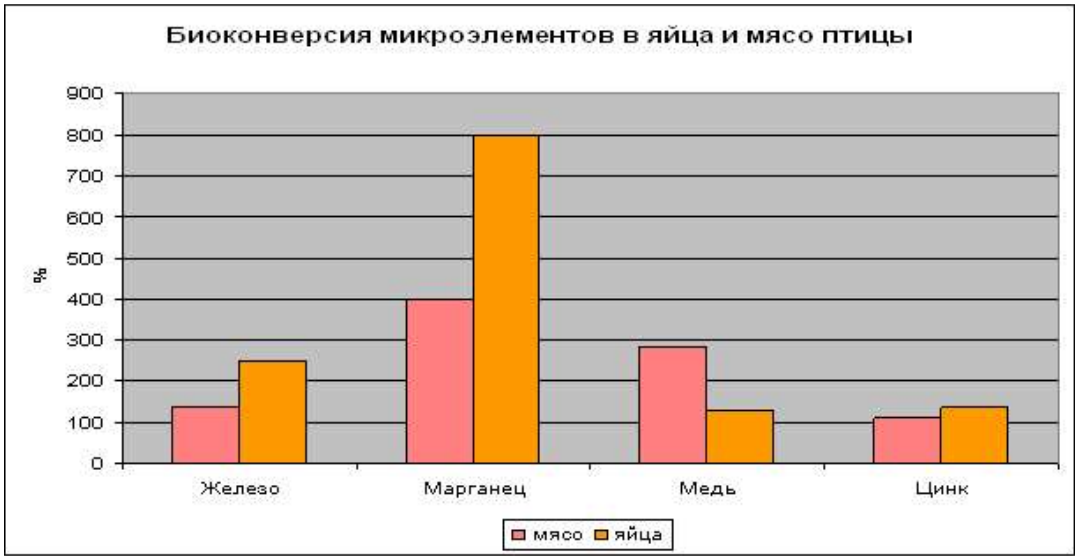
table 2

Biochemical composition of eggs

control	An experience	Experience to control,%
13.30	13.38	-
8.80	8.27	-
0.90	0.90	-
5.50	5.80	102
2.00	2.25	112
14.9	37.5	250
0.60	0.77	129
8.80	12.2	136
0.03	0.24	800
150	150	100

The highest difference was found in the level of manganese content - 24 μg per 100 grams of egg mass, which is eight times higher than the level in the control. The level of iron in the eggs of the chickens of the experimental group is 3.75 mg /%, which is 2.5 times higher than its level in the control. The zinc content was 1.22 versus 0.88 in the control, which is 36% higher. The level of copper in the eggs of the control group is 60 μg, the experimental one - 78, which is 29% higher.

From the above data, it follows that with bioresonance exposure, there is a change in the biochemical composition of both meat and eggs, but with its own characteristics. If in meat there is a significant change in the content of basic nutrients - protein and fat, and to a lesser extent trace elements, then in eggs, an increase in trace elements is more significant. The bioconversion of trace elements into eggs and meat is shown in detail in Fig. 1.



Rice. 1

The diagram shows that the bioconversion of iron in eggs is 82% manganese twice, zinc is 24% higher than in meat. And copper accumulates 2.2 times more in meat.

Thus, differences in the levels of bioconversion of trace elements in meat and eggs were revealed.

chickens.

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