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MODELLING OF LIVE WEIGHT DYNAMICS IN BROILER-CHICKENS AND ENRICHMENT OF RATION BY NANOMOLIBDEN AND COMPLEX FEED ADDITIVE "PROBICS"

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The modeling of broiler chickens body weight dynamics with addition to the diet citrate nanomolibdena and feed additives «Probiks» has been done. It has been shown, that the most effective on the growth and development of broiler chickens during their feeding affects feed probiotic «Probiks» supplements without nanomolibdena citrate.

Broiler chickens, body weight, modeling, nanomolybdenum citrate, feed «Probiks»

To define the dynamics of the live weight and the live weight gain in broiler-chickens nanomolibden citrate and the complex feed additive "Probics" have been used. Two experimental groups and a control one were formed by the principle of the analogues.

The necessity of the use of the complex feed additive "Probics" as well as the combined use of the nanomolibden citrate at the optimal concentration (0,24 mg/dm ^{3}) and the complex feed additive "Probics" has been determined.

The statistical treatment of the results received has been done with the use of the methods of variation statistics, regression and correlation analysis as well as the methods to check statistical hypothesis with the help of the computer calculation system "Maple – 12".

The experimental data for two experimental and one control groups (dots) that prove the dependence of the live weight of the chickens on the period of fattening were obtained. They were equal to the regression equations of the 3rd degree by the time that model very well the processes of fattening the chickens with the highest indices of the coefficients of the determination: $M = a_0 + a_1 t + a_2 t + a_3 t$.

The results of the experimental investigations prove that on the 5th day of the postnatal period of ontogenesis the live weight of the chickens in all experimental groups had no trustworthy difference as compared to the live weight of chickens in the control group.

But on the 15th day of the postnatal period of ontogenesis the live weight of the broiler-chickens in all experimental groups was trustworthy different from the control ones.

On the 25th day of the live weight of the chickens in group 1 was trustworthy higher but the live weight of the broiler-chickens in group 2 had the tendency to increase as compared to the live weight of chickens in the control group.

The live weight of the broiler-chickens on the 42nd day of the postnatal period of ontogenesis had the same tendency as on the 25th day.

The analysis of the dynamics of the increase in the live weight of the chickens in the period from the 5th day to 15th day after hatching prove that the chickens of the first experimental group had the largest weight – 4, 94 times and the chickens of the second experimental group had a little lower index (4,85 times) as compared to the live weight of chickens in the control group (4,63 times).

In the period from the 15th day to 25th day the live weight of the broiler-chickens in the experimental groups 1 and 2 increased by 2,22 and 2,12 times, respectively, but the results did not exceed the control group in which the increase in the live weight of the chickens was by 2,27 times.

In the period from the 25th day to 42nd day the increase in the live weight of the broiler-chickens was of the same intensity in all the groups: in the experimental group 1 - by 2,62 times, in the experimental group 2 - by 2,63 as compared to the

control group in which the increase in the live weight of chickens was only by 2,27 times.

The results received during the experiment allowed us to develop the regressive models of the processes of the growth of the broiler-chickens when different feed additives were used, they trustworthy reflect the processes of their fattening.

The single use of the complex feed additive "Probics" (600g/t of concentrates up to the 28^{th} day and 300g/t – up to 42^{nd} day, from 42^{nd} day up to the end of the experiment) in the ration of the chickens of the experimental groups had the highest effect on the growth and development of broiler- chickens in the period of their fattening. It was proved by the most intensive growth and increase in the live weight of the chickens of the above group at the end of the experiment.

The phases of the changes in the average daily weight gain in the broiler-chickens were determined when the ration was enriched by the complex feed additive "Probics" in the recommended doses: the phase of active stimulation (1-10 days of feeding), the phase of adaptation (11-20 days of the experiment), the phase of productive weight gain (21-28 days of the experiment).

Further investigations have been planned. Veterinary and sanitary inspection will be carried out and the parameters of safety and quality of the slaughter products of broiler-chickens will be determined when the ration is enriched by nanomolibden citrate and the feed additive " Probics".

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