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Efficacy of Eimeriostat Preparations In Experimental Eimeria of Chickens

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Abstract:

There are stated the specific activity of preparations of precede at experimental eymerios of towel and also their influence on the formation of antieymeriyous immunity and on intensity of invasion

Key words. *Experiment, stop koksid-2,5%, DD-toltra-25, birds, hens, chicken, transovorial, alimentary, treatmentinvasion, oosist, inxasion, immunity.*

Introduction

Poultry farming receives significant focus as a prominent sector of animal husbandry in Uzbekistan. The advancement in this field is mostly ccomplished through the breeding of poultry in both large-scale farms and smaller private farms and limited liability organizations. Presently, some diseases, including eimeriosis (coccidiosis), a parasite disease, are prevalent in chicken farms, resulting in significant economic losses for the farms. This includes the mortality of numerous young animals, as well as stunted growth and development in the remaining ones. The productivity and quality metrics of hens in both egg and meat production have decreased.

Chemical preparations play a crucial role in the treatment and prevention of eimeria in hens. Improving their effectiveness, exploring different usage methods, developing new treatments, and implementing them in practice are important objectives for specialists in this sector. The efficacy of the eimeriostat, which contains 2.5% coccid, is being evaluated through various studies and indicators on poultry farms. This preparation is used for the prevention and treatment of eimeriosis in hens.

Methodology. In the laboratory studies, 60-day-old chickens of the "Lohmann Braun" breed were obtained from a poultry farm. They were then placed together in a clean area with

bedding, ensuring there was no risk of infection with eimeriasis bacteria. At the age of 14 days, 15 chicks were weighed using live weight scales based on the rule of analogues. The weights were equalized and the chicks were then divided into 4 groups. The first group of chickens acted as a control group for comparative purposes and were given feed without the medication throughout the whole experiment. Chickens in Group 2 were given injections with carefully measured and matured oocysts (E. acervulina - 200,000, E. maxima - 15,000, E. tenella - 40,000 units in 1 ml3 of liquid) of disease-causing organisms (LD50-75) using a syringe-probe. The chicks were provided with drug-free diet. The chickens in the 3rd experimental group were deliberately exposed to infections and administered the medicine Stop-Coccid-2.5% mixed with 1 ml of water for a period of 10-12 days. The chickens in the 4th experimental group were administered DD-toltra-25 (4th group) mixed with water for a duration of 3 days starting from the day of infection, following the provided instructions. The effectiveness of the utilized eimeriostats in combating the disease was assessed based on the percentage of chicken survival, the percentage of live weight increase per chicken, and the anti-eimeriosis index (AEI) at the conclusion of the trial.

The method developed by M. V. Krylov in 1969 was used to determine the live weight gain and quality of life index. The impact of previously employed coccidiostatics on the immune response against the disease was assessed by subjecting the organism to repeated infection with lethal doses of sporulated oocysts, specifically a dose OD100, on the 21st day of the experiment. The invasion's strength was assessed on the 5th, 7th, 10th, 15th, and 20th day of the experiment using the guidelines outlined in GOST 25383-82 (ST SEV 2547-80) titled "Methods of laboratory diagnostics of coccidiosis".

Results and discussion. The findings from laboratory trials indicate that the survival rate of chicks in the untreated control group was 46%. On average, each chick had a live weight gain of 37.2%, and the EQI index scored 55.1 points. The chickens in the third experimental group had complete protection against eimeria when given stop-coccid-2.5% at a dosage of 1 ml per liter of water for a duration of 3 days. Additionally, these chickens experienced a live weight gain of 139.8% and an EQI score of 196.5 points. When the chickens in the 4th experimental group were given DD-toltra-25, they had a 100% survival rate, a live weight gain of 138.1%, and an EQI score of 192.3 points.

Efficacy of coccidiostats on experimental chicken Eymer

Table 1

No	Group title	Drug name	Amount of drug (mg/kg with food)	Number - number of chicks	Preservation survival rate (%)	Прирост живой массы (%)	EI (score)
1.	Comparative	-	-	15	100	145,5	200
2.	Healthy control	-	-	15	46	37,2	55,1
3.	Untreated control	Stop Coccid-2.5%	1 мл	15	100	139,8	196,5
4.	Experience	DD-toltra-25	1 мл	15	100	138,1	192,3

In order to determine the effect of eimerostats tested on chicken eumeriae, on the 21st day of the experiment, when chickens of all groups were re-infected with a dose of sporulated O'D100 oocysts, 60% immunity was found in chickens of the 1st healthy control group, and chickens in all other groups had 100% immunity.

Effect of eimeriostats on the formation of immunity against the disease

Table 2

No	Group name	Name of drug	Total number (fledglings) of chicks at re-infestation	Number (heads) of dead chicks from Eimeria spp.	Preservation (%)
1.	Comparative healthy control	-	15	6	60
2.	Untreated control	-	8	-	100
3.	Experience	Stop coccid-2.5%	15	-	100
4.	Experience	DD-toltra-25	15	-	100

To know the intensity of infection on the 5th, 7th, 10th, 15th and 20th days of the experiment, the number of oocysts in 1 gram of faeces was determined by counting on a Goryaev counting grid. Maximum multiplication of oocysts was observed in the faeces of chickens of the second comparison, infected and untreated groups on the 5th and 7th days of the experiment, i.e. 1,117,000 on the 5th day, 1,914,000 on the 7th day, 255,000 on the 10th day, 44,000 on the 15th day and 4000 copies of oocysts on the 20th day were released into the environment.

Effect of eimeriostats used in experimental eimeriosis of chickens on the intensity of infestation

Table 3

T/p	Group name	Name of drug	Amount of preparation(ml/litre with water)	Total number (fledglings) of chicks at re-infestation	Preservation (%)	Intensity of infestation (thousands of oocysts in 1 g faeces)				
						Inspection days				
						5	7	10	15	20
1.	Comparison	-	-	15	-	-	-	-	-	-
2.	Healthy control	-	-	15	-	1,117	1,914	255	44	4
3.	Untreated control	Stop coccid-2.5%	1	15	-	341	596	57	6	1
4.	Experience	DD	125	15	-	435	612	61	5	2

The chickens in the experimental groups were infected with pathogens, specifically eimeriostat and stop-coccid-2.5% 1 ml/l in the 3rd group, and DD-toltra-25 with 1 ml/l of water in the 4th group. This infection was initiated on the 5th day of the experiment and continued for 3 days. The reproduction of oocysts was observed in the feces, with 341,435 thousand specimens on the 7th day, 612,57 thousand specimens on the 10th day, 61,6 thousand specimens on the 15th day, and 5,1 thousand specimens on the 20th day. Additionally, individual oocysts were observed in the amount

of 2 thousand specimens.In conclusion. The efficacy of the preparation stop-koktsid-2,5% in experimental eimeriae of chickens was found to be high, with a prevention rate of 100%. It did not adversely affect the immunity against the disease developed in the organism and reduced the intensity of invasion by 4-5 times.Considering the information provided above, the recommended eimeriostat is stop-coccid-2.5%. A dosage of 1 ml of water per 1 litre for 3 days has been determined to be effective as a chemical and immunochemical prophylactic in broiler and breeding chicken farms for the prevention of eimeriasis.

References:

1. Davlatov R.B., Xudjamshukurov A.N. “Jo’ja eksperimental eymeriozida qo’llanilgan eymeriostatlar”, International scientific-practical online conference on “Emergency management and public health research in asia” – ISBN: 978-83-956810-3-5/ may 23, 2020.
2. Разбицкий В.М. и др. “Никарбазин препарат для профилактики кокцидиозов бройлеров и ремонтного молодняка кур”. Болезни птиц в промышленном птицеводстве. Современное состояние проблемы и стратегия борьбы. Ст. Петербург – 2007. С. 282-285.
3. Разбицкий В.М. и др. “Эффективность полэфирных ионофорных антибиотиков при эймериозе цыплят”. М. Птицеводство. 1994. № 3, с.25-27.
4. Хованских А.Е. и др. “Кокцидиоз сельскохозяйственных животных”. Ленинград. ВО, Агропромиздат. 1990. С. 16-108.
5. Xudjamshukurov A.N. “Improvement Of Chemoprophylaxis Of chiken Eimeiosis”. Nat.Volatiles & Essent. Oils, 2021;8 (6): 884-887.
6. Xudjamshukurov A.N., Xo‘jaxonov Sh. “Effests of drugs on blood indicators in mixing chicken eimeriosis and pullorosis”, ACADEMICIA An International Multidisciplinary Research Journal// https:// saarj.com, Impact Factor: SJIF 2021 = 7.492 // Vol.11, Issue 5, May 2021.
7. Holkova, J. Livacox T: ten-year experience in broiler fattering / J. Holkova, P. Bedrnic. //Praxis veter, 2002. №3. – P 213-220.