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COMPARATIVE EFFICIENCY OF DISINFESTATION OF EXCREMENTS OF DIFFERENT KINDS AGRICULTURAL ANIMALS BY CHEMICAL REAGENTS

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The results of influence of oxide of calcium on efficiency of disinfection of organic wastes are given. The disinfection effect of chemical solutions on the excitors of widespread nematodosis of animals is set. It is set that maximal efficiency of disinfection of pus arrives at at a temperature 70 – 100°S and thermal effect of 120 – 220 kDzh. A high disinfection action is certain 1,5 % solution of brovadez-20 under ascarosis of pigs and 2 % krystal-1000, vetoks, brovadez-plus under strongilyatoses of horses. Dezinvasive effect of compounds in relation to the excitors of parasitosis depends on the concentration of workings solutions.

Keywords: *disinfection, thermal effects, worms.*

Statement of the problem. Organic waste from livestock – is a valuable fertilizer, but mostly manure it's contains a large number of pathogens and helminthic eggs, which creates a threat of infectious and parasitic diseases of animals in the environment. However, take into account the epizootic, sanitary-epidemiological and environmental hazards, that can cause manure and sewage, we can't forget about the high value of manure in terms of soil fertility [6]. Therefore, the development and improved technologies decontamination, including disinfection, are remains an important environmental and veterinary task.

Analysis of recent research and publications. Implementation of effective disinfection encountering some problems: not specified deadlines disinfection at various helminthosis of animals, pathogens of invasive diseases quickly become resistant to the action of chemicals, many of which are corrosive substances in environmental terms [2, 4].

Decontamination manure with using drugs sanitizing chemical nature (caustic soda, sodium hydroxide, potassium hydroxide, chloride, iodine, quicklime and bleach etc.) remains one of the most common ways to combat helminthosis for CIS countries [5]. With the development of manufacturing technologies through increased efficiency and environmental safety of new drugs, these events get more and more priority.

Based on the above, **the objective of our research** was:

- investigate the effect of different amounts of calcium oxide (CaO) on the efficiency disinvasion of organic waste from livestock;
- establish disinvasion efficacy Brovadez-20 and Crystal-1000 to the pathogens of askariosis, eymeriosis of pigs and rabbits;
- determine the efficacy of solutions of Crystal-1000 and Brovadez-plus, Vetox for disinvasion manure from horses, which ill on strongyloidosis.

Materials and methods. Laboratory experiments were conducted at the Zhytomyr Regional State Veterinary Laboratory and Department of Parasitology, vet.-san. expertise and zoohygiene ZHNAEU.

The first part of the research included the study of the disinvasion process of samples by calcium oxide from cattle farmyard content. To investigate selected cattle infested *Fasciola hepatica* and *Trichostrongylus sp.* Over 5 h. determined by the dynamics temperature in the control sample (without manure handling CaO) and options: variant № 1 – manure and lime in a ratio of 1:0.5, variant № 2 – 1:0.2, variant № 3 – 1:0.1, variant № 4 – 1:0.05.

The second part of the research was to test the efficacy of drugs Brovadez-20, Brovadez-plus, Crystal-1000 and Vetox for disinvasion farms against major nematodosis of pigs and horses.

Drugs series "Crystal" are made from dialdehyde, quaternary ammonium salts and bihuanidyn, have a wide range of bactericidal prolonged action. Brovadez-20 and Brovadez-plus ("Brovafarma") are made based on quaternary ammonium compounds observed broad spectrum bactericidal, virucidal, nematodocidal and fungicidal properties.

Manure (n=12) for the study was selected from pigs that were held on the basis of educational laboratory animal ZHNAEU, age 6 months. They was spontaneously infected of *Ascaris suum*. To test the drugs used test-objects – wooden planks on the designated square 10 × 10. Samples of manure applied to the surface of a square test facility, it were dry at 18-21 ° C for 15-20 min. Then of aerosol treated dezinvation solution (15 cm³ per sample). Crystal-1000 studied at a concentration of 2.0%; Brovadez-20 - 1.0 and 1.5%.

The next part of the experiment was determined dezinvation effects listed above solutions on eggs *Strongylidae sp.* Manure samples were collected from horses infected spontaneously strongyloidosis. Research conducted at the equestrian complex "Allure" in Zhytomyr region. To determine the effect of drugs on the development of egg samples made in dishes of Petri and sprayed them by test solution (20 cm³ per sample). Then the dishes were placed in an incubator (25-26 ° C) for 7 days. Crystal-1000 were studied in 0.3 - and 2.0% concentration, Brovadez-plus - in 1.0-, 2.0% and Vetox – 0.5- and 2.0%.

In the final part of our work was able to experiment to determine dezinvation of Brovadez-20 and Crystal-1000 on oocysts of eymeries. For the experiment, fecal samples were collected from rabbits (n = 12), infested *Eimeria stiedae* and *E. perforans*. Experimental rabbits were kept in private households in Zhytomyr region. Method of experiment was similar to that in the second part of the research.

In the control group were selected clinically healthy animals.

