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ВЕТЕРИНАРЕН

Candidate of Veterinary Science Kassymbekova L.N.

Senior researcher of a branch of PLL Kaz SRVI Pavlodar SRVS, Kazakhstan Republic

Master of Engineering Science Kopeyeva K.K.

Innovative University of Eurasia, Kazakhstan Republic

MEASURES AND PREVENTION OF SPREAD OF INVASIVE DISEASES AMONG FARM ANIMALS

Contemporary measures and prevention of spread of invasive diseases include two kinds of sanitary actions such as an attack and a defense. Among the methods of offensive prevention there are active extermination and physical destruction of the pathogenic agent at all the phases of the life cycle by mechanical, physical, chemical and biological influence. Methods of defense (passive) prevention are actions which prevent infection of a human being and animals through the contact with the pests by influence not at the causative agent but on a human or animal.

Preventive actions in a case of invasive diseases are different at prevention of infectious diseases. Vaccine against anthrax prevents disease within a year whereas at deworming the receptive animal can be infected again on condition of presence of infestation agent in the environment. Anthelmintics do not form immunity, and availability of a specific vaccine against helminthes is extremely rare. There are such parasitic diseases in parasitology with causative agents that can infect as human beings as animals. Therefore, prevention of animals against invasive diseases prevents human beings from the disease.

Currently, there are two methods used in the agriculture such as a biological and chemoprophylactic. The basis of the biological method is in death of the eggs and larvae, adults and alternate hosts or carrier, which breaks contact of the pathogen with the recipient. It can be reached by plowing of lands and through the ameliorative work on pastures as well as its change and isolation of an unfavorable area or creation of long-term cultural pastures, annihilation of hummocks and small shrubs, and thermal manure treatment. Change of pastures is supposed to be efficient in the prevention of invasive diseases. Nevertheless, this method must be used in accordance with the

territorial opportunities by alternation of pastures. By a condition of dictyocaulosis, depending on a time of the year, it goes in a period of three to five days or from ten to fifteen days, while at a fasciolosis from a month to a month and a half. In a case when there is an alternate host such as oribatidae, that can live till the period of two years, this method cannot be used. Chemoprevention is one of the most efficient ways against of such diseases like arachkoentomoses, protozooses and helminthosis.

Chemical drugs are injected to animals parenterally with the aim of preventing protozoal diseases. Healthy stallions receive Naganin before the beginning of the breeding season and in a month and a half after. In a case of a pyroplasmosis outbreak, in epizootic focus, cattle are injected with such drugs as Berenit and Azidin, which prevents cattle from the disease in a period of two or three weeks. Sometimes it happens so, that use of the chemical drugs leads to a decrease of virulence of protozoa and it may cause to appearance of non-sterile immunity or premunity of infected animals. Such kind of prevention of protozoan diseases was called a mitigating prophylaxis.

Chemical drugs are often used for prophylaxis of helminthiasis. Planned deworming has a preventive effect. In these cases development of pathological processes in the organism of the invaded animal is limited and the dispersion of invasion in the surrounding environment is prevented. For strongylatosis and monieziasis of sheep are used phenothiazine salt in such a relation as 9 to 1 and saltphenothiazine-copper-carbonate mixtures in the ratio of one portion of copper sulphate plus 10 parts of phenothiazine and 100 parts of the table salt. The mixture is prepared in a wooden pan for a rather long time and that is covered with an awning from the rain. Whereas, briquettes made of this mixture for prevention are less efficient.

In a case of monieziasis it is recommended to take copper carbonate in dose of one or one and a half gram of mixture with seventy or one hundred grams of mixed fodder in estimation for one animal at the age of three months as well as at the age of a year, while for an adult sheep the dosage is of one and a half or two grams with one hundred or one hundred and fifty grams of fodder. The mixture is given for three months with intervals of fifteen days. Required effect is achieved when there is a strict adherence to term which is scientifically restricted; multiplicity, and duration of use taking into account the characteristics of spread and development of the invasion.

First, in order to prevent measles there is preference to a method of outdoor keeping year round. Second, it is vital to do preliminary examination and treat animals during selection. Third, it is necessary to build barns on a high and dry territory, use tap water, and clean the room from manure and feeders from the garbage. Fourth, it is

significant to perform disinfection procedures and disinvasion. Fifth, it is essential to do heat treatment of manure and then use it for field fertilization. Cultivated grasslands must be enrooted at farms as well as there must be assessment on the helminthological situation of parasitic diseases; prevention of thelaziosis and other diseases. Attention should be given to conditions of pastures, availability of puddles and small ponds at farms, where animals are kept at pastures.

It is worth to complete farms with calves at the age of ten or fifteen-days-old or young species that did not graze. Also, it is advisable to keep animals on slotted floors and remove manure by water wash during the process of animal selection. Groups of animals are selected considering the age and animal condition. Besides, sanitary regulations must be kept as indoors as outdoors. Young species can be fed with favorable grass from cultivated grasslands. At the stage of farming formation it is advantageous to do diagnostic dehelminthization of animals that are kept on pastures.

Machines and feeders are cleaned daily. Preference should be given to slotted floors with water wash. 10 percent of the piglets' population is surveyed to observe the helminthic situation at the age of fifty days. During the process of weaner piglets deworming effectiveness of performed treatment is monitored. In the case of esophagostomiasis detection there must be done deworming at least once every ten days and at a strongyloidosis once every five days. At selection of livestock animals are dewormed by drugs of wide spectrum during the isolation period. In the future it is necessary to carry out sanitary measures. Volume of liquid manure (liquid or semi-liquid) is accumulated in a large number at industrial livestock farms.

Birds are grown by using combined method and floor management. At a combined maintenance of chickens of the first and second age that is at the age of one-day and to the 30th day and respectively, from the 31st to the 60th day are kept in the cages. As for the chickens of the third age which is from the 61st to 160th day in the cages or on the floor.

When chickens are grown in the cages it prevents from infection with helminthiasis and eimeriosis. Invasion usually occurs through the fodder contaminated with eggs of ascaridia, heterakidae and eimeria oocytes.

At the entrance to the poultry house there are disinfection rugs and the whole implements is kept in a 5 percent xylonaphth-5 solution. Specific prevention measures are used at necessity. Measures that prevent invasive diseases are filling crevices and cracks on the walls of rooms, garbage collection, daily cleaning of feeders and cages, strict observance of sanitary conditions in poultry houses.

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