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PROVIDING VETERINARY WELFARE ON PARASITIC DISEASES OF FARM ANIMALS IN LLP "BAYSERKE-AGRO»

Abstract. The results of parasitological studies in LLP "Baiserke-agro"are presented. The horses were recorded strangelets in the form of monoinvasion and options parasitocenosis: strangulate+ anoplocephalidae; strangulate+precarity; strangulate+parserid+oxyuris; two abdominal gadflies: Rhinoestrus purpureus and Rhinoestrus latifrons; one type of gastric gadflies Gastrophilus intestinalis. 5 types of helminths have been registered in cattle: Dicrocoelium lanceatum, Fasciola hepatica, Moniezia autumnalia, Haemonchus contortus, Neoascaris vitulorum; one kind of protozoa- Eimeria bovis and subcutaneous gadfly. Sheep had 4 types of helminths: Dicrocoelium lanceatum, Moniezia expansa, Haemonchus contortus, Trichocephalus ovis, Neoascaris vitulorum. Echinococcus granulosus larva; one kind of intestinal protozoa - Eimeria faurei; cavity gadflies - Oestrus ovis and scabies mites Psoroptes ovis. Developed and proposed recommendations for each registered farm parasitic disease.

Keywords: epizootic situation, diagnostics, coprological methods, helminthiasis, protozoan, arachnos, antimony, ticks; bogowie disease, nags drug.

Relevance. Analysis of the literature, statistics and results of many years of own research allows us to draw conclusions about the deterioration of epizootic and epidemiological situation in many parasitic diseases, and lack of attention to the problems of Parasitology. The current catastrophic situation with the pollution of the environment by the invasive origin and the state of human and animal health in many regions of the CIS, including Kazakhstan, the reduction of life expectancy, inefficiency, and often insufficient hygienic justification of environmental and anti-parasitic measures urgently require a shift in emphasis on an adequate assessment of the potential and real danger of biological pollution by parasitic diseases.

Changes in the socio-economic living conditions of the population, the emergence of private property, the development of farming and individual production, increasing the migration of the population not only within the country but also from countries near and far abroad, the intensification of anthropogenic transformation of nature, leading to changes in the living conditions of parasitic diseases in the environment, indicate the need to review and adjust existing approaches to the diagnosis and prevention of parasitic diseases of animals and humans.

Today in Kazakhstan actively develops sports and breeding horse breeding, breeding cattle breeding and sheep breeding, cynology and other branches of animal husbandry, regularly held different levels of equestrian sports, exhibitions, auctions, made the import and export of breeding animals from both Near and Far abroad, active exchange and sale of animals between individual economic entities [1]. In carrying out such activities is relevant timely quality diagnosis of particularly dangerous, certified in the import and export of animal parasitic diseases, such as zoonotic helminthiasis, trypanosomiasis horses, piroplasmosis and anaplasmosis of cattle and others.

The southern region is dysfunctional in many parasitic diseases such as helminthiasis: strongylatosis digestive and respiratory tract of cattle, sheep, horses; protozoos: piroplasmosis of cattle, sheep, horses; noctalis horses; Trypanosomosis horses; anaplasmosis in cattle and sheep; arachnoentomoses: common scab, sarcoptic mange, ticks; bogowie disease: hypodermatosis, astros, gasterophilus.

In the CIS and in Kazakhstan marked increase in the incidence of people of parasitic diseases: giardiasis at 94.4 per cent, trichinosis in 6.1 times, toxocarosis 9 times, difillobotrioz 9.3 %, opisthorchiasis 11.3%. According to who, the most common are nematodes, which cause a wide range of diseases. In particular, ascariasis affected about 1 billion people, ankilostomidoze 900 million, trihozefaleza 600 million, enterobiasis – 350 million, strongyloidiasis, about 90 million, filariidae – more than 80 million [2, 3].

Epizootic and epidemic situation on echinococcosis in Kazakhstan is quite alarming, as evidenced by the results of research by a number of scientists. According to Y. M. Kereev (2010), 1931 sheep were infected with helminths out of 4724 examined sheep, which amounted to 40.9%, while 1562 heads were infected with echinococci, which amounted to 33.1 %. Among cattle infection with echinococcosis is also quite high and is 21.8 %. There is also infection with echinococcosis of pigs and horses, respectively 3.7% and 5.4 %. Infection of dogs-the main distributors of the disease, imaginal echinococcosis in the country is from 1.8 to 10.4% [3]. A number of researchers studied the epizootic situation of parasites in the southern regions [5-7].

Known postulate that the contamination of animals, we can assume and make predictions on the contamination of the population by parasites, so many of the parasitic diseases are zoonotic, ie common to humans and animals.

The incidence of echinococcosis has increased dramatically, regardless of place of residence, profession, age and sex. According Agabekova S. O., S. A. Amireev, G. A. Abdrakhmanova, J. F. Vyshpolskiy for 15 years in Kazakhstan was 3794 cases of human echinococcosis, among which 2990 or 78,8% were residents of the southern regions of the country [3]. YM Ker (2010) indicates that in 10 years, the incidence of echinococcosis increased 4.6-fold [4]. During this period 4529 patients with echinococcosis were operated. Mortality varies from 2.4 to 6.8%, disability-from 3.5 to 8.7%, relapse in 6.2–16.0% (S. A. Amireev, 2002) [2]. The average contamination of soils with eggs ehinokokka in Kazakhstan amounted to from 3.3 to 30.0 %. The damage caused by echinococcosis is significant. So according Kireeva J. M. (2010) an average of one sick animal loses 9,5 % wool, 7 % milk, a 3.2 % increase, of 8.1% meat 18.5% of internal fat, 84.2% of the liver, 76.1% of light for the sum about 5 thousand tenge. From every 1000 patients with echinococcosis of sheep per year receive less than 262 kg of wool, 7.8 tons of milk, 1.7 tons. growth, 1.4 tons of meat, 88 kg of internal fat, 529 kg of liver and 354 kg of lungs. From every 100 patients with echinococcosis ewes receive less than 13 lambs and 8 die in the first two months of life. The average amount of damage during echinococcosis of sheep is more than 1.5 thousand tenge per sheep, and per cow – 3100 tenge [4].

For example, nematodes of horses are the most common helminthic diseases, occur in 70-100% of the population and cause significant economic damage. Thus, the case among young animals, especially foals of the current year, from the migration stage of parascaris sometimes reaches 20-30% of the number of cases. Despondos or thromboembolic colic also frequently leads to direct loss – the mortality among horses [6].

In connection with the above, the study and clarification of the issues of regional epizootology of animal parasites, the development of effective means and methods of their therapy and prevention is of great practical and prognostic value.

The purpose of the research: clarification of the epizootic situation on parasitic disease among animals of LLP "bayserke-agro", contained in different conditions: stationary, pasture, and mixed environments.

Material and methods. The research was carried out within the framework of the program "Scientific and methodological support of veterinary and sanitary well-being and increase of livestock productivity, on the example of LLP "Baiserke-agro". The following materials and methods were used in parasitological studies: 1. Scatological research methods darling,., Berman-Orlov with the definition of intensity of infestation (AI, ind.) and extensiveness (EI, %); 2. Entomological studies the methods of visual inspection and palpation of the skin in the back and sacrum, diagnostic irrigation of the nasal cavity 1% solution of trichlorfon, an examination of stomachs at slaughter animals; 3. Acarological research methods and clinical examination of scrapings of the vital method of Priselkova; 4. Protozoological studies by examining peripheral blood smears; 5. Anatomic and histological examination by autopsy of the fallen and slaughtered animals by the method of partial helminthological dissection (NGV) in

combination with a complete helminthological dissection of individual organs and systems (PRTs) corpses, K. I. Skryabin systems and organs. The detected helminth eggs and cysts of protozoa are differentiated by means of drawings, photographs, verbal descriptions given in the handbooks on the diagnosis of helminthiasis [8]. The found larvae of gadflies and ticks are differentiated on the basis of specificity of parasites to species of animals, and also by means of drawings, photos, the verbal descriptions given in reference books and the monograph [9,10]. Upon detection of intra-erythrocyte forms of the simplest determination of their genus and species was carried out on the basis of "Atlas of blood parasites".

Results and analysis of the data. Based on the coprological studies have found that invasion by helminths of the horse farms are significant, the overall extensity of invasion (EI) with helminths in horses ranges from 56.4 per cent to 69.2 per cent. Strongylata met in the form of monenvasia horses fattening (33.3 per cent). There are several options of parasitocenosis: strongylata+anoplocephalidae; strangulate+precarity; strangulate+parserid+oxyuris. Helminths from the order of Ascaridia, Parascaris eguorum in its pure form is not registered. A mixed invasion of helminths in the form of 2-and 3-membered parasitocenoses composed of the following components was noted: Strongylidae SPR.+Parascaris eguorum in horses of Kurchum breed (63,6%) and mares (100,0%). Cestodes Anoplocephalata excl.planed in its pure form is not registered, met the horses of the Kurchum breed in a mixed infestation of the two components, together with strangulate in 3 samples, which accounted for 27.3% of the number of infected samples. Combined infestation is composed of 3 components was observed in 1 stallion imported from Russia. He was worms Strongylidae excl.planed+Parascaris eguorum+Oxyuris egui. In mixed form AI ranges from 3 to 17 copies in 20 p. s. microscope (figures 1–4).

Figure 1 – Helminth eggs of *Strongylus equinus*

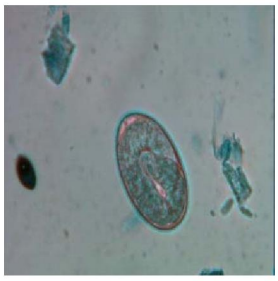

Figure 2 - Egg Strongylus spp., with larva

Figure 3 – Combined strongylidae-prasarita invasion

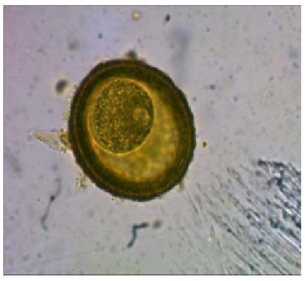

Figure 4 - The egg of Parascaris equorum (Mature)

Significant invasiveness of cattle of different ages was established. The total extent of invasion (EI) by parasites from different systematic groups is high – from 94.4 to 100.0%.

5 species of helminths, particularly trematodes: Dicrocoelium lanceatum and Fasciola hepatica, the cestodes: Moniezia autumnalia; nematodes: Nemesi contortus and Neoascaris vitulorum. And also noted one type of protozoa-Eimeria bovis.

Marked 2 version mixed helminth-protozoan infestations: 1. *Haemonchus contortus+Fasciola hepatica+Moniezia autumnalia+Eimeria bovis*; 2. *Fasciola hepatica+Dicrocoelium lanceatum+Moniezia autumnalia+Haemonchus contortus+Eimeria bovis* (figures 5–7).

Figure 5 – Oocyst Eimeria *Eimeria bovis*

Figure 6 – Trematode egg *Dicrocoelium lanceatum*

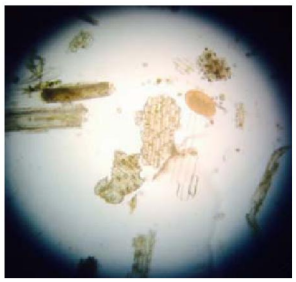

Figure 7 – Trematode egg *Fasciola hepatica*

Figure 8 – Egg *Trichocephalus ovis*

During scatological studies, 60 samples of feces of sheep, was 4 species of helminths, in particular, the trematode is Dicrocoelium lanceatum; intestinal cestodes - Moniezia expansa; nematodes: Nemesi contortus, Trichocephalus ovis (figure 8) and Neoascaris vitulorum. And also noted one type of intestinal protozoa-Eimeria faurei. Marked mixed invasions: parasitoses, composed of two types of worms Nemesi contortus+Dicrocoelium lanceatum was at 15.0 per cent. Parasitoses, composed of two types of worms Nemesi contortus+Moniezia expansa was observed in the 5.0%; consisting of two types of helminths Dicrocoelium lanceatum+Trichocephalus ovis in 5.0% of the studied fecal samples. Marked parasitoses made of several variants of the three types of worms: made up of the types of Nemesi contortus+Dicrocoelium lanceatum+Trichocephalus ovis was observed in 25.0 percent; the second of the three components helminth Dicrocoelium lanceatum+Trichocephalus ovis+Moniezia expansa in 22.5% of cases.

Entomological studies of cattle showed that the total invasion of cattle by hypodermatosis was 35.4%. The intensity of invasion (II) was, on average, for each group of animals from 9 to 23 larvae (ex.) per 1 head (figure 9).

Invasion is astrosom in adult sheep 62.8% II=3-7 copies; of the lambs - 64,7%=1-5 specimens studied Total infested sheep of different ages abdominal gadflies reached 63.3% (figure 10).

Figure 9 – Larvae of II and III stages of subcutaneous cattle gadflies (*Hypoderma bovis*)

Figure 10 – Larvae of the III stage of the cavity sheep gadflies (*Oestrus ovis*)

Figure 11 – Larvae of the III stage of horses cavity gadflies (*Rhinoestrus purpureus*)

Figure 12 – Larvae of the III stage of gastric gadflies of horses (*Gastrophilus intestinalis*)

In the study of horses for the presence of cavity gadflies, the total invasion of rhinestruses of horses of different ages was 45.0%, and adult horses and youngsters of the last year of birth are affected approximately the same - more than 60.0%. This year's foals are affected by 20.0%. The intensity of infestation, on average, ranges from 2 to 11 individuals in Almost all the cases are two types of abdominal gadflies: Rhinoestrus purpureus (figure 11) and Rhinoestrus latifrons, which corresponds to the literature data on the prevalence of various types of Anastrozol in the regions of Kazakhstan. Foals observed one species: *Rhinoestrus latifrons.*

Study horses at gasterophilus (gastric gadfly) was carried out on the basis of the results of the examination of the stomach in the slaughter of animals and the collection of larvae of gastric gadflies. Were scored 3 horses productive breeds, the invasion amounted to 100.0% with an intensity of from 3 to 59 specimens of larvae of gastric gadflies of the species Gastrophilus intestinalis (figure 12).

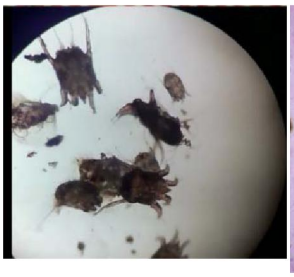

Figure 13 – Mites of the species Psoroptes ovis in the skin scrapings from the sheep

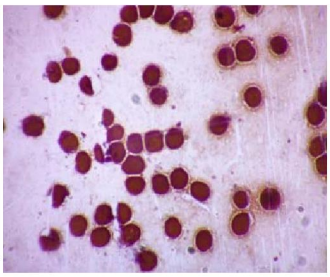

Figure 14 – Nags is a drug from the liver: poikilocytosis

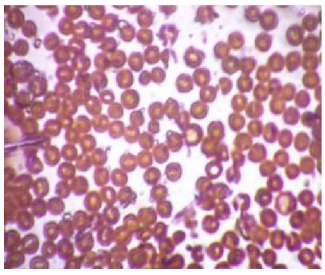

Figure 15 – Nags is a drug from the liver: hemolysis of red blood cells

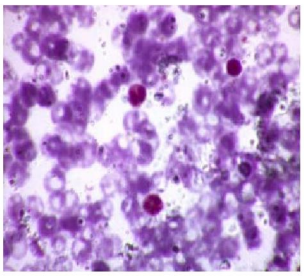

Figure 16 – Key-preparation of the spleen: adhesion of red blood cells and hemolysis of red blood cells

Bacteriological studies for the presence of various sarcoptosis (scabies mites) were carried out. The greatest number of clinically expressed skin lesions was noted among the last year of birth and accounted for 8.52% of the number of examined. In adult sheep psoroptosis was confirmed in 53.13% of cases. the species Psoroptes ovis, the causative agent of psoroptosis or scabies (figure 13).

During protozoologica studies taken of the blood smears troweprice not detected. On the basis of pathoanatomical autopsy, microscopic examination of blood smears from peripheral and internal vessels; smears-prints from the liver, spleen and intestines, the presumable diagnosis of blood parasitosis was excluded (figures 14–16). Preventive measures were proposed to prevent blood parasitic diseases of animals.

Based on the results of the study of the epizootic situation in the economy for all registered parasites, recommendations for their treatment and prevention are proposed [10].

Conclusion. The article presents the materials of diagnostic studies conducted in the framework of the program "Scientific and methodological support of veterinary and sanitary well-being and increase the productivity of livestock, on the example of LLP "Bayserke-Agro". In parasitological studies used scatological research methods of Darlin, Vyshnuskas, Berman-Orlov with the definition of intensity of infestation (AI, ex.) and extensiveness (%); entomological studies by methods of visual examination and palpation of the skin in the back and sacrum, diagnostic irrigation of nasal cavities with 1% solution of chlorophos, examination of stomachs at slaughter of animals; acarological studies by clinical methods and study of scrapes by vital method of Priselkovoy; protozoological studies by studying blood smears and nag drugs; anatomic and histological examination by autopsy of the fallen and slaughtered animals by the method of partial helminthological dissection (PHD) in combination with a complete helminthological dissection of individual organs and systems (CHD) corpses, K.I.Skryabin's systems and organs.

Established in LLP "bayserke-agro" in horses were recorded parasites from different systematic groups: strongylata in the form of monoinvasion and options parasitocenosis, in particular, strangulate+anoplocephalidae; strangulate+precarity; strangulate+parserid+oxyuris; two abdominal gadflies: Rhinoestrus purpureus and Rhinoestrus latifrons; it is one kind of gastric gadflies Gastrophilus intestinalis.

In cattle was 5 helminth species: Dicrocoelium lanceatum, Fasciola hepatica, Moniezia autumnalia, Haemonchus contortus, Neoascaris vitulorum; one species of protozoa - Eimeria bovis and subcutaneous gadfly Yu sheep observed 4 species of helminths: lanceatum Dicrocoelium, Moniezia expansa, Haemonchus contortus, Trichocephalus ovis, Neoascaris vitulorum. Echinococcus granulosus larva; one type of intestinal protozoa-Eimeria faurei; cavity gadflies-Oestrus ovis and scabies mites Psoroptes ovis.

On the basis of the obtained data, recommendations for the treatment and prevention of each parasitic disease registered in the farm have been developed and proposed.

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«БАЙСЕРКЕ-АГРО» ЖШС АУЫЛ ШАРУАШЫЛЫҚ МАЛДАРЫНЫҢ ПАРАЗИТТІК АУРУЛАРЫНАН ВЕТЕРИНАРЛЫҚ ТҰРҒЫДАН САУ БОЛУЫН ҚАМТАМАСЫЗ ЕТУ

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ОБЕСПЕЧЕНИЕ ВЕТЕРИНАРНОГО БЛАГОПОЛУЧИЯ ПО ПАРАЗИТАРНЫМ БОЛЕЗНЯМ СЕЛЬСКОХОЗЯЙСТВЕННЫХ ЖИВОТНЫХ В ТОО «БАЙСЕРКЕ-АГРО»

Аннотация. Приведены результаты паразитологических исследований в ТОО «Байсерке-Агро». У лошадей регистрировались стронгиляты в виде моноинвазии и варианты паразитоценозов: стронгиляты+анаплоцефалиды; стронгиляты+параскариды; стронгиляты+параскариды+оксиурисы; два вида полостных оводов: *Rhinoestrus purpureus* и *Rhinoestrus latifrons;* один вид желудочных оводов *Gastrophilus*

intestinalis. У крупного рогатого скота зарегистрированы 5 видов гельминтов: *Dicrocoelium lanceatum, Fasciola hepatica, Moniezia autumnalia, Haemonchus contortus, Neoascaris vitulorum;* один вид простейших - *Eimeria bovis* и подкожные овода. У овец отмечены 4 вида гельминтов: *Dicrocoelium lanceatum*, M*oniezia expansa, Haemonchus contortus, Trichocephalus ovis, Neoascaris vitulorum. Echinococcus granulosus larva;* один вид кишечных простейших - *Eimeria faurei;* полостные овода – *Oestrus ovis* и чесоточные клещи *Psoroptes ovis*. Разработаны и предложены рекомендации по каждому зарегистрированномув хозяйстве паразитарному заболеванию.

Ключевые слова: эпизоотическая ситуация, диагностика, копрологические методы, гельминтозы, протозоозы, арахнозы, энтомозы, иксодовые клещи; оводовые болезни, кляч препарат.

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