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The Species Composition and Extent of Damage Caused by the Causative Agents of Paramphistomatosis in Cattle in the Republic of Karakalpakstan

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Abstract: This article discusses the species composition of paramphistomatosis in cattle in the conditions of the Republic of Karakalpakstan, as well as the extent and intensity of cattle infestation by these parasites.

Introduction.

The gastrointestinal trematodes known as paramphistomatoses affect both large and small horned hosts, as well as wild herbivorous mammals with ruminant pairs of hooves. These infections are spread through acute and chronic currents. The early preimaginal phase of the causative agents traverses the mucous membranes of the anterior compartment and the mucosa of the small intestine of the metastatic colon. Infectious young parasites induce severe inflammations in the catarrhal and hemorrhagic tissues of these digestive organs, leading to an acute conductive illness flow. Death is seen in animals exhibiting a high level of invasion intensity. Reports from IT indicate that instances of livestock mortality and coerced slaughter have been documented over an extended time. Paramphistomatoses have been observed to cause death in sheep for the first time in recent years. Reference 1

Over 100 distinct types of paramphistomatous triggers have been identified in scientific literature. German scientist Rudolphi first investigated and determined the position of paramphistomates in the systematics of helminths in 1801, by introducing all paramphistomates into the Pamphistoma taxonomic group. Szidat passed away in 1936, at the precise age of.I. Scriabin and R.S. Schulz established the extensive Paramphistomata (Szidat, 1936) Skrjabin et Schulz, 1937 junior series in 1937 on the basis of meticulous examination of several families. In this particular instance,

Szidat observed that the developmental process of gastric trematodes exhibits similarities. Meanwhile, K.I. Scriabin and R. The Shults derived their diagnostic characteristics, namely their morphology, from the work of Nestmark.[2,3] Sustained investigation of paramphistomates resulted in the emergence of subsequent generations. Parasitic species of trematodes from two families have been discovered on the territory of Uzbekistan, in both large and small horned animals. These species are cultivated under the climatic conditions of Uzbekistan and are found predominantly in mountainous biocenoses.[4]

The initial observation of cattle being significantly afflicted with various causative agents of paramphistomatosis in Uzbekistan occurred in the Republic of Karakalpakstan, namely in the Khorezm region. Subsequently, such infection spread to the Surkhandarya region, which is recognised as the southernmost region, during the 1960s and 1970s.[5,6]

Object and methodologies of study. The focus of our scientific study was on cattle farms in the districts of the Republic of Karakalpakstan, water sources within the district, natural habitats of freshwater molluscs, cattle on farms, and their milk samples. In the educational experimental laboratory of the Department of "Veterinary Medicine and Food Safety" at the Nukus branch of the University of Livestock and Biotechnology of the Republic of Karakalpakstan, located in Fourkul, Amudarya, Beruniy district, Khojayli district, and Samarkand State Veterinary Medicine, we conducted our scientific research.

To identify the specific cattle types infected with paramphistomats and predict whose progeny they will infect, a total of 10 cattle were selected from the Fourkul District, 10 from the Amudarya District, 10 from the Beruniy District, and 10 from the Khojayli District. The objective was to investigate the gastrointestinal organs of these cattle.I. Scriabin underwent examination using a comprehensive helminthological rupture (TGYo‘) technique. A macroscopic examination of these helminths was conducted using a microscope. Furthermore, the experiment involved the study of 40 cattle heads that were exposed to paramphistomates to study ecstasy damage (EZ). To accomplish this, the specimen obtained from each animal was divided into around 10 grammes, transferred into 200-millilitre glass cups, filled with water ranging from 5 to 10 millilitres, and blended using the tip of a specifically designed tin stick. An additional 150 cc of water was added to it and then thoroughly stirred. To extract the nutrient residues from the mixture, it was poured through a wire mesh with a diameter ranging from 0.15 to 0.20 mm into a separate glass. Subsequently, the combination was allowed to remain undisturbed for 5 minutes, and then a progressive pouring of 3/4 of it into another glass, allowing it to seep through the use of gauze. After 4-5 minutes, a portion of the rainwater was drained out after being poured over it. The aforementioned procedure was iterated until the sediment within the glass achieved clarity. The uppermost layer of the prepared transparent sediment was removed after 3-4 minutes, while the remaining sediment was combined and transferred into a sizable container for examination under 7-10 oculars and 8 lenses of the microscope.

Results

Table 1 presents the findings of the investigation on the extent of extensor and intensor injury in cow paramphistomates using TGYo methodology.

Table 1: Paramphistomates of cattle (P.ichikawai, L.Scotiae) with varied degrees of damage (in the case of GI TGYo resultalri) under the conditions of the Republic of Karakalpakstan.

Subdistricts	Checked cattle headcount	Total infestation (P.ichikawai, L.Scotiae)					
		Invasion extensibility invasion intensity		Invasion extensibility invasion intensity			
		Head	%	min	max	Total	Average
Turtkul	10	2	20	320	821	1141	570,5
Amudarya	10	2	20	287	979	1266	633
Beruni	10	1	10	-	769	769	769
Khojaili	10	1	10	-	862	862	862
Total:	40	6	15	607	3431	4038	673

K. I. The outcomes of the examination using Scriabin's comprehensive helminthological method of scientific investigation were as follows. In the four-legged District, two cattle were found to have paramphistomatous supplements, with a charging Gorge of 20 per cent. The species P. ichikaway and the L.Scotiae produced a minimum of 320 copies, resulting in a total of 1,141 copies. The maximum number of copies found was 821, resulting in an average charge of 570.5 copies. In the Amudarya district, two out of the ten cattle were found to be charged with songs of Paramphistomatoses, with an invasion extent of 20 per cent. The invasion intensity of P. ichikaway, whilst L.Scotiae ranged from a minimum of 287 to a maximum of 979 copies and stoned total of 1266 copies. The average number of animal heads per invasion decreased from 633 copies to 2 head of cattle. Out of the 10 cattle analysed in the Beruniy District, 1 head was afflicted with paramphistomatosis songs, with a 10% incidence rate. The maximum number of affected cattle was 769, while the average number of affected cattle was 579. In Khojaly district, 1 out of 10 cattle was affected by paramphistomatosis songs, with a 10% damage rate. The maximum number of affected stones was 862, resulting in an average of 862 stones across the 10 cattle.

Complete helminthological rupture learning processes

Our comprehensive scientific study on all districts revealed that the number of cattle infected with the paramphistamatosis viruses *P.ichikawai*, ranged from 40 to 6. The detection of the *L.Scotiae* and the extent of the invasion was 15 percent. The infestation strength of P.ichikawai, while L.Scotiae ranged from a minimum of 607 copies to a maximum of 3,431 copies, totalling 4,038

copies. The average invasion intensity decreased to 673 copies per 6 head of cattle. In conclusion, the study findings indicate that the parasitism of L.Scotiae by ichikawai and has been observed in the conditions of the Republic of Karakalpakstan. Overall, the invasion extent of paramphistamatosis infections *P.ichikawai*, *L.Scotiae* was determined to be 15 per cent, affecting a total of 40 cattle and 6 heads.

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