



Extension of Cow Fasciolosis In the Fergana Region's Irrigated Regions

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Abstract: *Abstract.* The circumstances in the Fergana area were used to assess the fasciolosis outbreak in cattle as well as the size and severity of the invasion.

Key words: *Fasciola hepatica, Fasciola gigantica, L.auricularia, L.bactriana, trematode, helminth, macrohelminthoscopy.*

Relevance on the research. Fasciolosis is a widespread trematode that can manifest itself in chronic, acute, or mixed forms in all domesticated animals as well as some species of wild mammals. There are eight different kinds of causal agents in the globe, and two of them are widespread in Uzbekistan: *Fasciola hepatica* L., 1758, and *Fasciola gigantica*, Cobbold, 1856. They include *Fasciola hepatica* (L., 1758), which is widespread throughout the republic, and *F. gigantica*, which is located in the northwest. Both forms of fasciola may infect cattle, like other animals, although *F. hepatica* is more prevalent in them.

Both *F. hepatica* and *F. gianta* require two hosts to survive. Since molluscs (*Lymnae truncatula*), which live in a few small water bodies (streams, spring waters), are the intermediate host of *F. hepatica*, these parasites are found in rural areas, low foothills, and mountainous regions. During cestogony, the parasite forms an infectious larva in the mollusc called an adolescarium.

Large water molluscs like *L. auricularia* and *L. bactriana* serve as the intermediate hosts for *F. gigantica*. They frequently inhabit rice fields, springs, and lakes. *F. gigantica* infestations in cattle are a little less frequent than *F. hepatica* infestations.

It is important to stress that fasciolosis is a very harmful illness for other animal species. As a result, it is now vital to investigate fasciolosis' spread and create preventative strategies.

Inspection methods. Inspections are carried out by the method of epizootological, clinical, statistical and complete helminthological analysis (CHA).

Research object and size. Researches were carried out on 40 cattle that died from disease and were forcibly slaughtered in irrigated areas of 4 districts of Fergana region.

Result and discussion

The study's findings demonstrated that cattle reared in irrigated portions of the Fergana regions are frequently infected with *F. hepatica*. They have an invasion of this type of trematode to a degree of 8.0–17.5%, with an intensity of 6-235 copies. The most severely affected cattle (in the Uzbekistan region) passed away in March as a result of acute fasciolosis brought on by *F. hepatica*. It

was discovered that the cause of this was that the animals were kept in the fasciola hearth and given hay that was taken from this extremely unhygienic region in January and February. Despite the absence of adult fasciolae in the bile ducts of deceased cattle, 642 sexually immature *F. hepatica* with 1.0–1.6 cm and 0.4 cm body lengths were discovered.

In the pathologoanatomical examinations, the cattle fatness is lower than average, the subcutaneous fat layer is very thin, infiltration has developed in the body, 2-3 l of serum have accumulated in the abdominal cavity, the liver has grown larger, its consistency is hardened (cirrhosis), it is difficult to cut, the pancreas is swollen and enlarged, the gallbladder it was noted that it was filled with bile fluid, the surface of the liver paren

Although *F. hepatica* is relatively smaller (3–4 cm) than *F. gigantica*, acute fasciolosis induced by immature forms of *F. hepatica* has been reported in cattle. However, it has been discovered that cattle are resistant to it.

By inspecting the livers of 40 cattle kept in the conditions of cattle farms in Uzbekistan's Furkat, Beshariq, and Dangara districts—irrigated plain zones of the Fergana region—the causative agents of the disease, their intensity of invasion, and their indicators were studied.

Table 1

The degree of contamination of cattle with fasciolosis pathogens in the irrigated areas of Fergana region

Districts	Inspected cattle, number of heads	<i>F. hepatica</i>		Adult		
		In number	In percent	Young fasciolas	Adult fasciolae	Total
Uzbekistan	10	2	20	14	48	62
Furkat	10	1	10	15	45	60
Besharik	10	3	30	12	40	52
Dangara	10	1	10	16	35	61
Total	40	7	17,5	57	168	235

As noted in the table, the sole known cause of fasciolosis, *Fasciola hepatica*, was detected in 14 copies in the liver tissue and 48 copies in the gall bladder in the Uzbekistan area, where 2 out of every 10 heads were infected.



The process of examining damaged livers.

Two out of every ten heads in the Uzbekistan district were impacted, and the invasion damaged 20% of the area. The cause of fasciolosis, *Fasciola hepatica*, was discovered in 14 copies in the liver tissue and 48 copies in the gallbladder.

One head out of every ten in the Furqat district was impacted, and 10% of the area had been invaded. The cause of fasciolosis, *Fasciola hepatica*, was found in 15 copies in the tissues of the liver and 45 copies in the gall bladder.

Three out of ten heads in the Beshariq district were afflicted, and the extent of the invasion was 30%. Twelve copies of *Fasciola hepatica* were discovered in the liver tissues, and forty copies were discovered in the gall bladder.

One out of every ten heads in the Dangara district had the infection, and 20% of the area had been invaded. The cause of fasciolosis, *Fasciola hepatica*, was discovered in 14 copies in the tissues of the liver and 48 copies in the gall bladder.

Full helminthological examination of 40 cow livers in the irrigated districts of the Fergana region revealed that 7 calves had an average of 17.5 physes, and 57 and 168 copies (totaling 235 copies) of *F. hepatica* were found in the liver tissues, bile ducts, and gall bladder of the cattle.

Conclusions.

1. In the irrigated districts of the Fergana region, *Fasciola hepatica* was discovered in the liver and gall bladder of cattle being cared for.

2. When the liver of cattle was examined helminthologically in the irrigated areas of the Fergana region, the extent of invasion was 17.5 percent on average, and when the liver tissue, bile ducts, and gall bladder of cattle were examined, it was discovered to be infected with *F. hepatica* in 57 and 168 copies (235 copies in total).

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