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Study of the Effectiveness of the Drug Cypra 20% Ce Against Ectoparasites in Sheep

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ABSTRACT

This article identifies the types of sheep ectoparasites present in sheep farms in some areas of the Tashkent region, and also studies the effectiveness of the insectocaricidal drug “CYPRA” 20% CE against these ectoparasites in laboratory and production conditions.

KEYWORDS: Ectoparasites, ixodidosis, tick, parasite, aqueous emulsion, concentration, CYPRA, disinfestation, disinfestation, pyrethroid, insectocaricide

Introduction. The development of sheep breeding plays a special role in the economic growth of our republic. For the development of sheep breeding and increasing its profitability, factors and measures such as increasing the number of sheep in limited liability companies, farms and peasant farms, increasing their productivity, obtaining healthy lambs, proper care for them, providing various conditions of maintenance and protection from various diseases are necessary.

In recent years, due to the decrease in the natural resistance of farm animals under the influence of unfavorable environmental factors, there has been an expansion of the distribution area of ectoparasites in sheep farms, as well as an intensification of the epizootological process. In particular, ticks (*Arachnidae, Acari*), belonging to the order (*Arthropoda*), are widespread in ecotones and ecotopes; they are also dangerous as carriers of transmissible infectious, viral-transmissible-parasitic diseases of the population and livestock.

One of the important tasks in this regard is the protection of sheep from various infectious and non-infectious diseases and their carriers, especially ectoparasites.

Purpose of the study. The aim is to develop new effective methods and means of combating ectoparasites parasitizing sheep in sheep farms and households in the Akhangaran, Parkent and Kibray districts of the Tashkent region.

Research methods. In conducting scientific research, parasitological, entomological, clinical, morphological, ecological, phenological, arachnological, toxicological and statistical methods were used.

Research results. Scientific research was conducted in the farms of "Kholturaev Oybek HM" of

Akhangaran district of Tashkent region, specializing in sheep breeding, in sheep pens in private households in the microdistricts of "Sukok Turtkul" of Parkent district, "Iktidor", "Alisherobod", "Chingeldi" and "Hyderabad". Upon examination of these sheep, it was found that they were heavily infested with ectoparasites.

In these farms, sheep ectoparasites were collected and laboratory experiments were conducted to determine the parasiticidal action of the concentrated emulsion of the insectoacaricidal preparation "*Cypra*" 20% CE and to study the optimal doses.

In this work, the insectoacaricidal properties of the new pyrethroid preparation "*Cypra CE*" in the form of an aqueous emulsion and powder in various concentrations against ixodid ticks of sheep and wool-eating ticks were studied in laboratory and production conditions. In this regard, water emulsions of the drug "CYPRA" in various concentrations were prepared and tested in laboratory conditions against sheep ticks. For the first time, an aqueous emulsion of the new pyrethroid drug "CYPRA" was prepared in various concentrations, namely 0.008, 0.01, 0.015, 0.02, 0.025, 0.03, 0.035, 0.04 percent and filter paper placed in a Petri dish was sprayed with an aqueous emulsion of the experimental drug using a sprayer, and 30 freshly selected ixodid ticks were released onto the surface of this treated filter paper. As a result of test experiments, it was found that the most minimal and highly effective (100%) these drugs. To determine the concentration (in percent) the following experimental works were carried out:

Figure 1. The process of studying the effectiveness of aqueous emulsions of the CYPRA preparation in various concentrations against sheep ticks in laboratory conditions.

Thus, based on the results of laboratory studies, it can be concluded that 0.025 and 0.03% aqueous emulsions of the drug Cypra have 100% acaricidal efficacy against ixodid ticks of sheep (Figure 1, Table 1).

Table 1. An experiment to study the acaricidal action of aqueous emulsions of the CYPRA preparation in laboratory conditions

S/n	Drug concentration (s.e., percent)	Number of ticks treated (specimens)	Number of dead ticks after 24 hours (specimens)	Efficiency (percent)
1	0,008	30	-	0
2	0,01	30	9	30
3	0,015	30	18	60
4	0,02	30	24	80
5	0,025	30	30	100
6	0,03	30	30	100
7	0,035	30	30	100
8	Control	30	0	0

Tests of a 0.025% aqueous emulsion of the Cypra preparation were also conducted on sheep farms, showing 100% acaricidal effectiveness under laboratory conditions.

Experiment 1. During the examination of 13 sheep (8 females and 5 rams) belonging to the private farm of T. Khudoynazarov in the Chingeldi massif of the Kibray district of the Tashkent region, ectoparasites were found, namely Rhipicephalus bursa (EI - 100 percent, 5-8 specimens / head) were infected with Bovicola ovis (EI - 100 percent, II - very high). As a result, deacarization and disinsection were carried out with 0.025% aqueous emulsion of the Cypra preparation against these ectoparasites at the rate of 1000-2000 ml / per head.

The results of the experiment were observed and recorded for 24-48 hours. It was noted that the Rh. Bursa tick was 100 percent dead, but since it had no effect on the Bovicola eggs, the experiment was repeated a second time after 10 days. As a result, when the sheep were examined after 24 hours, it was found that 100 percent of the B. ovis ectoparasites were dead.

No negative changes such as fatigue or restlessness were observed in the sheep.

From this experiment it can be concluded that 0.025% aqueous emulsion of Cypra provides 100% insecticidal acaricidal efficiency against Rh. bursa and B. ovis and their ectoparasites.

Experiment 2. 80 sheep from private farms of the Alisherabad massif of the Kibray district of the Tashkent region were examined. As a result of the studies, it was established that the sheep were infected with ixoid and wool-eating ticks. Sick sheep were dewormed and disinfected with 0.025% aqueous emulsion of the drug "Cypra" against ectoparasites at the rate of 1000-2000 ml / head.

Table 2. Efficiency of 0,025% aqueous solution of 20% Cypra against ectoparasites

S/n	Name of the farm where the experiment was conducted	Number of sheep processed (heads)	Type of parasite	Volume of working solution (l/head)	Directions for use	Efficiency (%)
1.	Mahalla “Chingeldi” of Kibray district	13	*Rhipicephalus bursa, H.anatolicum*	1	Complete spraying	100
2.	Mahalla "Alisherabad" of Kibray district	80	*Rhipicephalus bursa, Bovicola ovis*	1	Complete spraying	100
3.	Farm "Kholturaev Oybek HM" Akhangaran district.	65	*Rhipicephalus bursa, Bovicola ovis*	1	Complete spraying	100
4.	Farm "Sukog Turtkul" Parkent district	50	*Rhipicephlus bursa, Bovicola ovis*	1	Complete spraying	100
	Total: (number of heads)	**208**				
5.	**Control group** Farm "Sukog Turtkul" Parkent	**10**	*Rhipicephlus bursa,*	1	Spraying (clean water)	0

	district		*Bovicola ovis*			

The results of the experiment were observed and recorded. It was noted that 100% of the ixoid ticks on the sheep's body died, but since this had no effect on the bovicola eggs, the experiment was repeated a second time after 10 days. As a result, when examining the sheep after 24 hours, it was found that 100% of the B. ovis ectoparasites had died. No negative changes, such as fatigue or restlessness, were observed in the sheep. The insectoacaricidal efficiency of the preparation was 100 percent (Table 2).

In addition, in the farm "Kholturaev Oybek HM", specializing in breeding sheep in the Akhangaran district of the Tashkent region, 65 sheep were treated against ixodid ticks and ectoparasites Bovicola ovis, and in the farm "Sukog Turtkul" of the Parkent district, treatments were carried out against ixodid ticks and ectoparasites Bovicola ovis, measures were taken to treat 50 sheep in the farm "Sukog Turtkul" of the Parkent district from ectoparasites, namely ticks of the genera *Hyalomma* and *Rhipicephalus* (ixodidosis), as well as disacarization and disinsection measures were carried out with 0.025% aqueous emulsion of the drug Cypra against ectoparasites Bovicola ovis at the rate of 1000-2000 ml / head.

The results of the experiment were monitored and studied after 24-48 hours and it was noted that 100 percent of the Ixodid ticks on the body of the sheep were killed, but since this had no effect on the Bovicola eggs, the experiment was repeated a second time after 10 days. As a result, when the sheep were examined after 24 hours, it was found that the B. ovis ectoparasites were also 100% killed.

No negative changes such as fatigue or restlessness were observed in the sheep. The acaricidal and therapeutic effectiveness of the preparation was 100 percent.

It follows from the table that 100% efficiency was achieved when treating sheep infected with ectoparasites *Rhipicephalus bursa, H.anatolicum* and *Bovicola ovis* with a 0.025% aqueous solution of 20% pyrethroid preparation “Cypra” at the rate of 1 l/head (Table 2).

Conclusions.

1. In the summer and autumn seasons, sheep kept in farms specializing in sheep breeding and households in the Tashkent region are more affected by ticks *Hyalomma anatolicum, Hyalomma detritum, Rhipicephalus bursa* than in other seasons of the year, and in these seasons, sheep are heavily affected by acarosis (especially in July-August), with 82-85% of cases being affected.

2. It has been noted that spraying with a 0.025% aqueous solution of the pyrethroid preparation "Cypra" 20% at a rate of 1 l/head is effective in 100% of cases against ectoparasites parasitizing sheep.

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