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Ectoparasites of Sheep, Their Treatment and Prevention Measures

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Abstract: *This article provides information based on the analysis of the literature on ectoparasites, which partially hinders the development of sheep breeding, one of the leading sectors of animal husbandry in the country.*

Keywords: *sheep, ectoparasite, bovicoliosis, linognatosis, psoriasis, sarcoptosis, alveonasosis, estrosis, melaphagosis, Siperfos, Siperfos, Sumi-alfa, benzophosphate, carbophos, kinmix, uzfen, sirax.*

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Introduction. The president of the Republic of Uzbekistan held a meeting on increasing the volume of production of meat, milk and eggs through the support of the livestock network on February 16, 2022, the broad application of advanced technologies in the field. It also touched upon the issue of providing the population with a pet animal. At the meeting on the basis of cooperation within ten days, the population was instructed to start work on the distribution of 350 thousand head sheep and goats. This is directed to 100 million dollars by the state. Industry experts are tasked with starting work on the establishment of 67 large sheep and goat farms within a week along with regional and district governors. In 2022, the governors of the region were obliged to ensure employment of 150 thousand people on the account of development of cattle-breeding, sheep-breeding, goat-breeding and wool industry. By the end of the year, measures were set for the launch of 123 large projects, the establishment of at least 500 head of livestock in each cluster.

Relevance of the topic. In our republic, a wide range of measures are being implemented aimed at reducing the damage of pet animals with ectoparasites, treating, preventing and combating them. These pests have received cases of forced slaughter and extinction as a result of ectoparasites in the body of cattle, as well as the development of large and small-horned animals due to various infectious and invasive diseases, a sharp decrease in productivity and severe morbidity.

The main purpose of these specialists is to increase the number of sheep of the karakul breed in our country and the production volumes of the karakul production and raw materials, improve the breeding activities on a scientific basis, deep processing of the karakul production and raw materials. Sheep breeding is one of the most profitable spheres, the further development of the industry, and the increase in the number of sheep heads, the improvement of offspring and the increase in productivity are affected by a number of negative etiological factors. In particular, as a result of damage to sheep with ectoparasites, their meat and wool productivity may decrease by 10-30%, as well as create conditions for the development of secondary infections and invasions.

Literature analysis: According to the information given by S.I. Mavlonov and collaborator scientists, the highest peak of the level of damage to sheep with ectoparasites is observed in winter and spring, while the decrease in the level of damage in summer and autumn is noted. In the winter period, the extensiveness of damage to animals with ectoparasites is 45-65%, the average intensity of damage is 15-40 copies of ectoparasites. In the spring months, the ecstaticity of animal damage shows 85-100%, the intensity of damage indicates 55-70 copies of ectoparasite, in the summer the ecstaticity of sheep damage is 15-25%, the intensity of damage is 15-20 copies of ectoparasite, in the autumn the ecstaticity of sheep damage is 25-35%, and the intensity of damage is 5-10 copies of ectoparasite [1.7.8].

The ecstaticity and intensity of ectoparasites are different according to seasons, climate and farm sanitary conditions, livestock breeding structures and many other environmental factors [13].

Classification (systematics) of disease pathogens. Veterinary Arachnology studies the Class of Arthropoda type Arachnoidae and Parasitiformlis (Acarid carrying disease pathogens) and Acaridefrormes (Acarid carrying disease pathogens) in two categories. Despite the fact that the body of the Acarines is attached to each other, they are divided into parts-the head, chest and abdomen. There will be four pairs of sexually mature Acarids, and larvae-three pairs of legs. The parasitiform will not be the border separating the front and back of the body of the Acarids. The parasitoformes category is divided into two sub-categories Ixodidea and Gamasoidea. The Ixodidea large family includes two Ixodidea and Argasidae families. The Gamasoidea large family includes a very large number of families, but the Dermanyssidae family is of great importance in veterinary medicine [4,10].

Classification (systematics) of disease pathogens. Acarines develop and multiply by laying some genus, eggs. One female lays eggs from 3-4 thousand to 10-15 thousand in the lifetime of the ticks. Eggs are very thin, oval in shape with a yellowish tinge. The fertilized female mite falls to the Earth after it is saturated, sucking the blood of the animal (boss) and begins to lay eggs, and after laying all the eggs die. From the eggs it turns out a larva, the tulle turns into a nymph, and she again turns into a tulle – shaped sexual adult. The period of embryonic development of the larvae lasts from a month and even more, the transformation into imagoga and Imago takes from several days to a month. The period of absorption of animal blood, depending on the development of canes (larvae 3-7 days, nymphs 3-10 days, imagosi 8-10 days) lasts 3-10 days [6.9].

Anatomo-morphological structure of the Acarine. The body is oval or ellipsoid in shape and is not divided into joints. The length and color of the Sagittarius acarines depends on their light consistency, and the hungry Acarine are flat and elongated. The body of the blood-sucking saturated Acarine can be up to 1,5 mm, while the length of the hungry acarine about 2-7 CM, as if in the form of an egg. Hungry ticks are light yellow, yellow-brown, dark, even in black tones, that is, they depend on their hunger-satiety and the character of the feed. In the charters, the dorsal part of the body of the mite looks good, it acts as a mouthpiece and a fixation organ. It consists of two upper jaw or Helix, the lower jaw hypostomia, the base of four or six-pointed snout, and fenders [3,12].

B.Sayidkulov and other scientists noted that 24 species of acarine parasitize on domestic animals and poultry in the territory of Uzbekistan. If these are also added to the mites that parasitize in wild animals, their species reaches 29 units.

Insect acaricidal drugs applied against acarines. Chemical prophylactics are also important in the fight against parasites. A lot of chemical preparations have been developed and applied to practice by our scientists against Iksod Acarines. These inside, relatively low-toxic chemical insecticide preparations are divided into the following groups.

Carbamate insecticides: Diazinone (Neacidal)

Pyrethroid insecticides: Sipermetrin; Siperfos; Sumi-alfa; Uzfen; Talstar; Kinmiks, etc.k. It is known that when using insecticide and acaricid preparations, consisting of the same chemical compounds, for several years, a strong elasticity (durability) appears on them in the Canes, and the drug does not effectively affect them. To prevent such a condition or maintain the effect of the effect, it is recommended to use drugs in the following order: 1. Increase the range of drugs, apply them alternately. 2. Application of several different mixtures of drugs or binary preparations. For example, siperfos consists of a mixture of two different chemical groups of drugs, such as 5% sipermetrin + 50% chlorpyrifos. Our «Navoi electrochemical» plant produces a lot of different insecticide and acaracid preparations. For example, there are many different types of Sipermetrin, Siperfos, Sumi-alfa, benzophosphate, carbophos, kinmix, talstar, uzfen, sirax and more. These drugs are 2-3 times cheaper than drugs imported from abroad, and the effect is more effective than groundbreaking ones. The tables provide information on the processing of animals and poultry, raw cattle, sheep and poultry against acarine, the drugs used, their concentration and dosage, the method of processing, season and interval. To ectoparasites of cattle, sheep and poultry (iksod, argas, acarine, lice, itchy mites - pseudoptosis, sarcoptosis, etc.k.), table of the method of application of insectoacaricidal drugs against moths and terihors in households where leather, wool, karakul leather are stored [2].

Research studies have shown that in the following years in various forms of ownership of sheep breeding, the degree of damage to sheep with parasitic diseases and ectoparasites is varied. In particular, bovicoliosis, linognatosis, psoriasis, sarcoptosis, alveonacosis, estrosis, melaphagosis diseases cause the growth and development of sheep and lambs, meat productivity, lamb production, skin and wool supply [11].

Conclusions. It is worth noting that the fight against ectoparasites should be carried out in full, on a permanent and clear plan. The invasion can be avoided only if the measures are carried out on the basis of a plan of measures developed taking into account the characteristics of each geographic-climatic region, a separate and specific relay, weather, water supply, fauna of plants, the degree of salinity of the earth (soil) and others. Today, it is worthwhile to use science and advanced technologies in the fight against various infectious, non-infectious diseases, ectoparasites that cause economic damage. In particular, it is necessary to identify the main ectoparasites of sheep, to conduct timely and qualitative treatment-prophylactic measures on the basis of plans of measures against them, to use group dezacarization methods, widely and effectively in the implementation of these measures.

Based on the data of the researchers, significant work has been carried out to combat and prevent ectoparasites that are causing significant economic damage to the Sheep Breeding Network today. But taking into account the fact that the biological properties of parasites vary with the intensity of climatic zones, the use of low-toxicity, high-efficiency encyctoacaricid preparations remains one of the important problem in our country these days.

Application of insect acaricidal drugs against ticks

Animal or object type	**Type of parasite**	**Concentration of the drug (%feel compared to the active substance)**	**The ratio of the drug to the mixture with water**	**1 (dose per head (liter)**	**Processing method**	**Repeatability (times)**	**Processing interval (days)**	**Slaughter of an animal after processing (day)**

Concentration emulsion of 25% of the Sipermetrin								
Sheep, goat	**Iksad ticks**	0,025	1:1000	1,0-2,0	Bathe or spray in the bath	5-10	10	10
Sheep, goat	**Itching-rashes**	0,05	2:1000	1,0-2,0	Bathe or spray in the bath	2	7-10	15
Cattle, sheep and chickens	**Canes of Iksod, agras, gamaz, gang, itchy-scabies**	0,1	4:1000	0,2m-l^2	Splashing	1 times in 2 years	-	-
Siperfos-55% concentrated emulsion								
Sheep, goat	**Iksad ticks**	0,055	1:1000	1,0-2,0	Bathe or spray in the bath	5-10	10	10
	Itching-rashes	0,011	2:1000	1,0-2,0	Bathe or spray in the bath	2	7-10	15
Cattle, sheep and chickens	**Canes of Iksod, agras, gamaz, gang, itchy-scabies**	0,22	4:1000	200 ml per 1 metre 2 area	Splashing	1 times in 4-2 years	April, May, September, October	-
Uzfen 20% li concentrate emulsion								
Stables, Rams, chicken stables	**Iksod, agras, gamaz, gang and itch mites**	0,08	4:1000	200 ml per 1 metre 2 area	Splashing	1 times in 4-2 years	April, May, September, October	-

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