

# *Damage Of Zoophil And Sinbovil Flies In Livestock And Their Fight Against Them*

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**Abstract** – The article provides data on the harm of zoophilic, synovyl and synanthropic insects that damage livestock. The results of studying the seasonal dynamics of zoophilic and synanthropic insects are presented, for which the drug Cypermethrin, 25% of Belarus production, was tested and a high insecticidal effect was obtained.

**Keywords** – Damage Of Zoophil, Sinbovil Flies, Livestock.

## I. INTRODUCTION

One of the main obstacles to the animal breeding and livestock production development is pests, especially zoophilic and sinbovil mosquitoes. Among animals, mosquitoes like cattle most of all – they parasitize 30 species of mosquitoes: 17 species in sheep and 15 species (2) in pigs. Even today, the damage caused to livestock by sinbovil mosquitoes is significantly observed. During the mass flight of these insects, the farm animals productivity decreases sharply that is, milk yield decreases by 10–20%, obesity is reduced by 100–120g (3, 4). The sanitary quality of manufactured dairy products decreases. In addition, some sinbovil mosquitoes are intermediate hosts of helminths (telasia, setarius, stefanofilaria, etc.) (3, 4) and spreads pathogenic microorganisms into the environment - pathogens of dysentery, cholera, anthrax, tuberculosis and many other dangerous diseases (4).

Therefore, timely and effective control of these extremely harmful parasites is a topical issue in all livestock farms and pastures.

## II. RESEARCH PURPOSE

The aim was to study the sinbovil and zoophilic insects ecology and their seasonal migration on livestock farms and pastures, to create measures to combat them.

## III. RESEARCH METHOD

In order to study the ecology and phenology of zoophilic and synbovil mosquitoes, the main administrative and laboratory building of Veterinary Research Institute and the farm "Plem Chorvadori" in Payarik district were selected as ecological corners. The glass surface of the ecological corner was disinfected (sprayed) using a sprayer with a 0.025% aqueous emulsion of the insecticide - cypermethrin 25%. During the year, insects that fell into the ecological corner were collected. In zoobiocenoses, insects were captured at different times of the day during the season using an entomological catcher (gauze catcher) and their species were identified using an identifier (1) in the arachnoentomology laboratory of Veterinary Research Institute.

## IV. RESEARCH RESULTS

In our study, representatives of zoophilic and synbovil mosquitoes of great veterinary and medical importance, which are common in ecological corners and zoobiocenoses, were studied.

Experiments to study the aqueous emulsion effect of cypermethrin 25% on biodiversity, which is expected to be used in veterinary practice in the fight against parasitic diseases, were conducted in the administrative building Veterinary Research Institute (ecological corner). The inner surface of the Veterinary Research Institute administrative building corridor, where synanthropic, zoophilic, exophilic and endophilic insects are collected, was disinfected. The phenoecological condition of the insects was observed daily. As a result, all synanthropic, zoophilic, exophilic, and endophilic insects types that came in contact with the disinfected surface were knocked down and knocked out. At the same time, a 0.025% aqueous emulsion of the insecticide cypermethrin 25% of Tashkent-1 sample was observed to be 100% insecticide (LD100) effective against zoophilic, synanthropic, exophilic, endophilic insects.

In phenological observations, zoophilic, sinbovil, and synanthropic mosquitoes were most common, mainly in June and July. In August, September, and October, their numbers were minimal.

Table – 1. Seasonal dynamics of zoophilic, synbovil and synanthropic (exo- and endophilic insects) species

| Zoological taxa - family, family, generation, species names. | The special experimental studies results on the cypermethrin 25% k.s effect universal Belarusian pyrethroid on the zoophilic and synanthropic (exo- and endophilic insects) species diversity |     |     |    |   |    |     |               |                       |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|----|---|----|-----|---------------|-----------------------|
|                                                              | Results of post-disinsection observations (migration)                                                                                                                                         |     |     |    |   |    |     |               |                       |
| Biodiversity condition.                                      | Months                                                                                                                                                                                        |     |     |    |   |    |     |               |                       |
|                                                              | VI                                                                                                                                                                                            | VII | VII | IX | X | XI | XII | Total (times) | Months                |
| <b>A.DIPTERA</b>                                             |                                                                                                                                                                                               |     |     |    |   |    |     |               |                       |
| 1. L. irritans                                               | 0                                                                                                                                                                                             | +   | +   | 0  | 0 | 0  | 0   | 2             | VII, VIII.            |
| 2. S. calcitrans                                             | +                                                                                                                                                                                             | +   | 0   | 0  | 0 | 0  | 0   | 2             | VI, VII.              |
| 3. M. simplex                                                | 0                                                                                                                                                                                             | +   | 0   | 0  | 0 | +  | 0   | 2             | VII, XI.              |
| 4. F. scalaris F.                                            | +                                                                                                                                                                                             | +   | +   | +  | 0 | 0  | 0   | 4             | VI, VII, VIII, IX.    |
| 5. F. incisurata                                             | 0                                                                                                                                                                                             | +   | +   | 0  | 0 | 0  | 0   | 2             | VI, VII.              |
| 6. F. leucosticta                                            | 0                                                                                                                                                                                             | +   | +   | 0  | 0 | 0  | 0   | 2             | VI, VII.              |
| 7. F. canicularis                                            | +                                                                                                                                                                                             | +   | +   | 0  | 0 | +  | 0   | 4             | VI, VII, VIII, XI     |
| 8. F. barbata                                                | 0                                                                                                                                                                                             | +   | +   | 0  | 0 | 0  | 0   | 2             | VI, VII.              |
| 9. M. stabulans                                              | +                                                                                                                                                                                             | +   | +   | +  | 0 | +  | 0   | 5             | VI, VII, VIII, IX, XI |
| 10. M. assimilis                                             | +                                                                                                                                                                                             | 0   | 0   | 0  | 0 | 0  | 0   | 1             | VI                    |
| 11. D. asiatica                                              | 0                                                                                                                                                                                             | 0   | 0   | +  | + | 0  | 0   | 2             | IX, X.                |
| 12. C. vicina                                                | +                                                                                                                                                                                             | +   | +   | +  | 0 | 0  | 0   | 4             | VI, VII, VIII, IX.    |
| 13. L. sericata                                              | 0                                                                                                                                                                                             | +   | 0   | 0  | 0 | 0  | 0   | 1             | VII.                  |
| 14. P. rudis F.                                              | +                                                                                                                                                                                             | +   | 0   | 0  | 0 | +  | 0   | 3             | VI, VII, XI           |
| 15. B. haemorrhoidalis                                       | 0                                                                                                                                                                                             | +   | +   | +  | 0 | 0  | 0   | 3             | VI, VII, VIII.        |
| 16. P. hirtipes                                              | 0                                                                                                                                                                                             | +   | 0   | 0  | 0 | 0  | 0   | 1             | VII.                  |
| 17. P. albiceps                                              | +                                                                                                                                                                                             | +   | 0   | 0  | 0 | 0  | 0   | 2             | VI, VII.              |
| 18. Ph. regina                                               | 0                                                                                                                                                                                             | +   | 0   | 0  | 0 | 0  | 0   | 1             | VI.                   |
| 19. D. funebris                                              | 0                                                                                                                                                                                             | +   | 0   | 0  | 0 | 0  | 0   | 1             | VII.                  |
| 20. Drosophila sp.n.                                         | +                                                                                                                                                                                             | 0   | 0   | 0  | 0 | 0  |     | 1             | VI.                   |
| 21. E. tenax                                                 | +                                                                                                                                                                                             | +   | +   | 0  | 0 | 0  | 0   | 3             | VI, VII, VIII.        |
| 22. M. glabra                                                | 0                                                                                                                                                                                             | 0   | 0   | +  | 0 | 0  | 0   | 1             | IX.                   |

|                       |   |   |   |   |   |   |   |    |          |
|-----------------------|---|---|---|---|---|---|---|----|----------|
| 23. Phlebotomus sp.n. | 0 | + | + | 0 | 0 | 0 | 0 | 2  | VI, VII. |
| 24. V. crabro         | 0 | 0 | 0 | 0 | + | 0 | 0 | 1  | X.       |
| <b>Total</b>          |   |   |   |   |   |   |   | 52 |          |

“Plem Chorvadori” private farms in Poyarik district, cattle infected with parasites, weaned and reared cattle were treated with an aqueous emulsion of Tashkent №1 sample of cypermethrin 25%(1,5-2,0; 2,5-3,0 liters / head of working emulsion was consumed).

The most insect-infested areas of livestock buildings - barns, manure, sewers were disinfected with a 0.025% aqueous emulsion of cypermethrin 25% using a sprayer. The aqueous solution was sprayed on non-absorbent surfaces at 50-100 ml/m<sup>2</sup> rate, on absorbent surfaces at 150-200 ml/m<sup>2</sup> rate.

The study found that all (100 percent) of the cattle on these farms were infested with zoophilic insects. *Lyperosia titillans*, *Lyperosia irritans*, *Fannia canicularis*, *Stomoxys calcitrans*, *Musca domestica* species dominance was observed.

During the experiments, it was found that 0.025% aqueous emulsion of cypermethrin 25% does not adversely affect the physiological state and animals productivity, is 100% insecticidal and larvicidal against zoophilic mosquito imago and larvae.

#### **V. CONCLUSION**

1. 24 species of insects were identified in the БИТИ "Ecological Corner" and their dominance was observed in June, July and August.

2. A 0.025% aqueous emulsion of cypermethrin 25% preparation against zoophilic, sinbovil, synanthropic mosquitoes showed 100% parasitic and entomocidal efficacy.

3. Timely decontamination and livestock disinsection against ectoparasitoses with 0.025% aqueous emulsion of cypermethrin ensures epizootiological safety of livestock and livestock farms.

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