

# ANALYSIS OF THE PHAUNISTIC COMPOSITION OF PESTGRAIN'S NORTHERN STEPPE OF UKRAINE

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One of the important factors in maintaining quantitative and qualitative indicators of grain is reducing its losses from pests during storage. The fauna of such pests in Ukraine has more than 116 species of mites and insects. Every year, this loses from 5-10 to 25% of the collected grain. The systematic analysis of the faunal composition of all types of grain pest pests is of great importance for the development of measures to limit their numbers. It can be used for the correct detection of collateral pests at places of their possible reservation and, especially, for the early diagnosis of contaminated grains, with the aim of organizing the timely application of measures at the initial stages of settlement, until the pests have not had time to cause significant damage, to organize the proper storage of grain without loss of its quantity and quality decline.

In Ukraine, ticks account for 34% of the total number of collateral pests, insects - 60% (beetles - 51, butterflies - 9), harmful rodents - 6% [1]. In addition, numerous quarantine species, which are often encountered in food cargoes imported from countries of Europe, Asia, Africa, and America, are potentially dangerous. They

can penetrate the country and cause significant damage [1, 2, 3]. On the territory of grain-processing enterprises, feed mills, elevators of Ukraine the most harmful are considered as 13 types of insects: 9 - beetles; pimples and moles - 3 and 1 type of ticks [1]. These include weevils (collar and rice), horseradish (honey and small flour), flour mash (Surinam and short cow), corn shishles, southern collar and mill flint, corn moth, flour mite [2]. Pests of grain and grain products include about 10 species of butterflies, which belong to 4 families [2].

Significantly increased grain loss from pests in recent years, when, in place of state elevators, most of the grain is stored in small farmhouses, where storage rules are not always followed, and over long, especially old, storage, collateral pests are extremely fast multiply and cause large damage to the grain.

The stocks of grain stored in elevators, warehouse premises, storage depots of farmers in Ukraine are most damaging 9 types of insects and 1-ticks [6]. For pests, stocks of grain mass stored in enclosed spaces, in which there is no sharp fluctuations in temperature and humidity - the main habitat environment. Under such optimum conditions, high fertility and survival of populations are ensured. A short period of ontogenetic development, the absence of most types of diapause contributes to the extremely rapid multiplication of arthropods.

A survey conducted in the storage business for 2015-2018 years studied the seasonal dynamics of species composition and pests of grain reserves. To do this, samples of grain were taken, and the total number of pests of grain reserves was determined. The analyzes were carried out using conventional methods [4] according to traditional methods for recording arthropods of stockpile pests. Sampling was carried out for seed grain (11 places in 3 layers) and for product lots in 6 places in 3 layers.

According to the results of the records, 7 species were identified in order to clarify the species composition of stock pests in the years of research. The characteristics of the species diversity were significantly influenced by the conditions and modes of grain storage, the abiotic factors, the use of means of protection against inventory pests. In the new conditions of grain storage, a constantly-recorded pest

system was formed, represented by prevailing species: flour mite (4.1-4.7%), common predatory mite (2.1 - 2.9%), rice weevil (9, 6%), weevil (9.8% -10.1%), grain shishlas (9.0-9.1%). The hollow bug, the southern collar fires made 7.3-7.5 and 4.2-4.4% of the total number of pests detected. It is this entomacarocomplex now significantly affects the quality of stored grain. The largest number of arthropods was observed during the last months of the summer and early autumn.

Our long-term research [5] has shown the dynamics of the number of pests in recent years fluctuates. The total density of contamination / contamination depended on the terms and conditions of storage, the use of chemical methods of protection, in particular fumigation (the highest level of pollution was detected), from culture, its class. It has been established on average for the years 2015-2018 that soft wheat or common wheat (*Triticum aestivum* L.) (*Triticum vulgare*) has a relatively higher degree of total density of contamination and contamination, as opposed to other crops. During the research period, the levels of contamination of the grain by collateral pests were determined from I (<1) - III (3,5-5), IV- (10,0-90,0 ec / kg) depending on the indicator of the total density of the infection. On average, the IV degree is most often detected. A slight density of populations, even of relatively dominant species, was noted; it was only about 2 individuals for a common predator.

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