

DENSITY DYNAMICS OF RODENT SPECIES IN AGROCENOSES IN THE REPUBLIC OF MOLDOVA IN 2021

Sitnic Veaceslav*, Caraman Natalia, Caldari Vlad, Sitnic Victor

Institute of Zoology, Chisinau, Republic of Moldova

*E-mail: sitnicv@gmail.com

Research carried out in the autumn wheat field at the "Horasti" station showed that at the beginning of the second decade of April the relative density was 5%. The dominant species is *A. sylvaticus* (100%). The females are lactating, they reproduce in the third decade of March. In the willow plantation along the dry canal, the density was 2.5%, the dominant species is *A. uralensis* (100%), males being developed. From now on, into the third decade of May, an upward dynamic in relative rodent density has been determined. The values of this parameter are as follows: grassy cover near the acacia grove – 11.5%; fallow bordered by the wheat field – 10.9% and the edge of the wheat field bordered by the willow plantation – 43.4%.

As a result of favourable conditions, the wheat crop developed intensively and the spike was formed. In the fallow at the border with the wheat field the dominant species is *A. sylvaticus* (66.7%), which forms a community with *A. uralensis* (33.3%). The sex ratio for *A. sylvaticus* is 1:1, 50% of individuals being juveniles. This indicates a relatively strong reproductive potential. The highest relative density was recorded in the wheat field ecotone with the willow plantation (43.4%). An 8-fold increase in the relative density of rodent populations was recorded in the wheat field in the spring period concomitant with the upward trend in rainfall. In July, a relative rodent density of 26.7% was recorded in the wheat field ecotone with fallow. This crop is at the final ripening stage, but not yet harvested due to unfavourable weather conditions (heavy rainfall). Wheat dominates in the wheat field ecotone with fallow, with 33.3% of *M. spicilegus* species. Its presence was recorded only in July. It is followed by *A. sylvaticus*, *A. flavicollis* and *A. uralensis* with 16.7% each. The dominance of *M. arvalis* and *A. agrarius* is 8.3%. Following the harvest of the autumn wheat crop at the end of July, the relative density of small rodents decreased compared to the beginning of the month (15.8%).

In September, the following relative density values were recorded: in the forest belt bordered by the plowland – 17.3%, in the forest belt bordered by fallow – 11.8% and in the ecotone of acacia forest bordered by the sunflower field – 21.4%. The decrease in relative density values compared to the previous months is explained by the reduced amount of precipitation during this period, which is reflected by the lower aridity index (25). The small rodent community in the forest fallow biotope consists of three species, the dominant being *A. flavicollis* (50%). *A. agrarius* and *M. arvalis* are dominant with 25% each. At the end of October, the relative density of rodents in the forest strip was 6.7%, the ecotone of the forest strip with fallow and the ecotone of the unharvested maize field bordered by the forest strip along the dry canal – 20% each. In the poplar field the dominance of *M. arvalis* was 66.7%, followed by *A. agrarius*, *A. flavicollis*, *A. sylvaticus* with 11.1% each.

Keywords: rodent species, density dynamics, reproductive potential, relative density, dominant species.