CZU: 632.7(478)

PRELIMINARY DATA ON THE DEVELOPMENT OF THE INVASIVE SPECIES *HALYOMORPHA HALYS* (STAL) 1855, (HEMIPTERA; PENTATOMIDAE) IN THE REPUBLIC OF MOLDOVA

Rusu Iuliana
Institute of Genetics, Physiology and Plant Protection, Chisinau, Republic of Moldova
E-mail: iulianarusu@igfpp.md

The brown marmorated stink bug, *Halyomorpha halys* (Stal), 1855 (Hemiptera: Pentatomidae) (BMSB) – an invasive species with a natural range of China, Japan, the countries of the Korean peninsula. The bug is a dangerous quarantine pest included in the Common List of quarantine facilities of the Eurasian Economic Union. In 2019, an invasive species was first discovered on the territory of the Republic of Moldova. In recent years, BMSB has been rapidly accelerating population development, supported by favourable climatic conditions for this species, as well as abundant plant food. Studies of biological features of invasive pests always have a strict local binding, so their conduct is necessary and on the territory of the Republic of Moldova.

The research was carried out both in the laboratory and in the field, on IGPPP test fields of the Republic of Moldova.

To determine the pest's survival after wintering on November 1, 2021, imago BMSB in the amount of 50 individuals were distributed in two insulated gardens and placed on an open terrace. After 140 days (the third decade of March), the count of surviving bugs after wintering was carried out with a further calculation in percentage.

When analyzing the data, we noted that the survival rate of the population after wintering exceeds 50%. The survival rate of females is 12.9% higher than that of males, which we believe will lead to a faster rate of population density.

In native conditions, we marked the period of release of the bug from the diapause from the third decade of April - the second decade of May. In the aftermath, there is a period of intensive feeding lasting from 1 to 2 weeks, and only then comes the period of mating. Visual observations have shown that BMSB females produce eggs 3-4 times within 6-13 days. The number of eggs in one egg range from 10 to 32. The fertility of one female averages 96 eggs (68-124).

Thus, based on the preliminary data we proved that in the agroclimatic conditions of the Republic of Moldova, this species can develop favorably and can cause economically important crop losses of various crops.

***Acknowledgments*:** Research was carried out within the project of the State Program 20.80009.5107.27 "Elaboration of the alternative methods based on environmentally friendly means and procedures for harmful arthropods control in different agricultural crops", financed by the National Agency for Research and Development.

Keywords: *Halyomorpha halys*, invasive species, wintering, survival, fertility.