

RESEARCH ON FUNGICIDE NEW IN THE FIGHT AGAINST DISEASES AT AUTUMN BARLEY IN THE CONDITIONS OF THE REPUBLIC OF MOLDOVA

BIVOL ALEXEI^{1,2}, BĂDĂRĂU SERGIU², ȘARGU LILIA³,
BIVOL ELIZA², IURCU-STRĂISTARU ELENA^{1,3},

¹Institute of Zoology, Chișinău, Republic of Moldova,
bivolalexiei65@gmail.com, iurcuelena@mail.com,

²Technical University of Moldova(UTM), Faculty of
Agricultural, Forestry and Environmental sciences,
bivolalexiei65@gmail.com, badoreusergiu@gmail.com,
bivoleliza@gmail.com

³University of European Studies of Moldova, Faculty of
Economic Sciences, isargu@mail.ru,
iurcuelenastraistaru@gmail.com

Autumn barley crop is annually subject to pathological invasions causing severe plant diseases during the growing season. The climatic conditions in the autumn of 2023 and in the spring-summer 2024 vegetation period were unfavorable both for the growth and development of autumn cereals, and for the achievement of primary infection and the subsequent evolution of brown rust, powdery mildew, septoriosi, helminthosporiosis, fusariosi and other infectious diseases estimated in plantations. Barley plants are subject to the intervention of a complex of pathogenic agents, which include over ten species of diverse mycotic nature, as key objects of economic importance that annually cause serious damage such as: *Ustilago tritici*; *Tilletia caries*; *T. foetida*; *Puccinia recondita*; *P. glumarum*; *P. graminis*; *Erysiphe graminis*; *Fusarium graminearum*; *Septoria tritici*, *S. graminum*; *Helminthosporium tritici-repentis*. We have as aim and objectives in research testing remedies: *Amistar PRIME*, *SE*, *Ampir*, *SC* and *Lot nr.1*, *SC* with fungicidal action in combating key diseases in barley culture. The frequency and intensity of the attack was established, in the years

2023-2024, in values of 13-22%, in impact with environmental factors, and the biological efficiency of the treatments on test soils of the new remedies as a fungicide were 85-93% , at the level of the benchmark variant compared to the variants and doses applied. These new remedies tested to barley culture are in the lead in the conditions of the Republic of Moldova, are efficient, current in reducing the pathological impact on plants.

Key words: autumn barley, fungicides, disease, integrated protection system, biological control