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EVALUATION OF MEFENTRIFLUCONAZOLE 200 G/L AGAINST GRAPE POWDERY MILDEW (*Uncinula necator*)

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Purpose. The aim of the research is the comparative evaluation of the biological efficacy and determination of the optimal application rates of the fungicide Mefentrifluconazole, 200 g/l in controlling grape powdery mildew (*Uncinula necator* Burr.) under the conditions of the Republic of Moldova.

Materials and methods. The experiments were conducted in 2025 on the experimental plot of the Immunology and Horticultural Plant Protection Section, on the Sauvignon variety, on an area of 2,0 ha. The efficacy of the tested product (mefentrifluconazole 200 g/l) at application rates of 0,4-0,6 l/ha was evaluated in comparison with the untreated control and the standard variant (mefentrifluconazole 75 g/l – 1,5 l/ha). The treatments were carried out using the Agromehanika AGP-350 sprayer, with a spray volume of 600 l/ha, during the sensitive growth stages of the grapevine. The first treatment was applied at the „pre-flowering" stage - on June 3, and the second at the „post-bloom" stage – on June 18; the following two treatments were applied during the „berry growth" stage at 12 - 14 days intervals (on July 1 and July 12). The fifth treatment was applied at the „cluster compaction" stage on July 23. The last treatment (the fifth) was applied at the „berry softening" stage on August 9.

Results obtained Following the assessments carried out in the variants using the product mefentrifluconazole 200 g/l at rates of 0,4-0,6 l/ha, a significant reduction in the frequency and intensity of the attack was observed with increasing application rates. Thus, in the variant using the rate of 0,4 l/ha, the average attack frequency reached a level of 18,14% - 16,75% with an intensity of 4,76 – 4,41 on

leaves and berries, respectively. At the maximum application rate of the product, the attack frequency recorded values of 8,90 – 6,64 with an intensity of 2,31 – 1,68 on leaves and berries, respectively.

The biological efficacy of the product at the maximum application rate reached average values of 94,95% and 95,38%, being at the same level as the values recorded in the Standard variant (95,60% and 94,20%).

In the variant with the minimum application rate (0,4 l/ha) of the product mefentrifluconazole 200 g/l, biological efficacy values were recorded within the range of (89,40% - 87,80%) on leaves and berries, respectively, being significantly lower compared to the efficacy of the product at the maximum application rate (0,6 l/ha), a fact confirmed by the statistical analysis of the obtained data.

Conclusions. The fungicide Mefentrifluconazole, 200 g/l demonstrates high efficacy in controlling grape powdery mildew and is recommended for inclusion in disease control programs under the conditions of the Republic of Moldova, at an application rate of 0,6 l/ha.

Keywords: Mefentrifluconazole, *Uncinula necator* Burr., grapevine, biological efficacy, grapevine protection.

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