

# EVALUATION OF THE BUJORUL VARIETY AGAINST DOWNY MILDEW AND POWDERY MILDEW ATTACK, COMPARED TO THE MOST CULTIVATED VARIETIES OF TABLE GRAPES IN TIMIȘ COUNTY

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**Abstract:** *text*The Bujorul grape variety is a relatively recent variety created in Galați, which has very good organoleptic qualities, but it is not a well-known variety, and its expansion in culture is low. The present article aims to bring some clarifications regarding the resistance of the Bujorul variety to downy mildew and powdery mildew, the most widespread fungal diseases that affect the foliage of vines every year of cultivation. In the article, the effects of manna and powdery mildew on the Bujorul variety are compared with the attack of these fungi on other popular grape varieties, such as the Nero, Victoria, Muscat Haburg, Moldova and Chasselas doré varieties. The research was done in 2022, in a private collection of table grape varieties located in Timiș County, in Urseni village. The year 2022, thanks to the water and temperature regime, influenced predominantly the powdery mildew attack than the downy mildew attack. The obtained results were interpreted statistically and comparisons were made with each variety, in order to get an overview of the influence of the climate on the attack of these diseases on the Peony variety compared to the other varieties, on which a lot of research has been done in different areas of the country regarding their response to the attack. In the paper, we tabulate only the degree of disease attack and graphically illustrate the obtained data.

## Introduction

Grapevine downy mildew (Ash, G. 2000; Ellis Michael A. 2016) and powdery mildew (Ellis Michael A., 2016; Popescu Gh., 1989; Ștef Ramona, 2018) are the most important diseases of this species, which almost every year do large harvest losses, mainly due to the reduction of the photosynthetic surface of the grapevine leaves (Wilcox, W., Gubler, W., Uyemoto, J. 2015). The main factor in the spread of these diseases is the water, in the form of rainwater and dew (especially at downy mildew), but also as relative humidity of the air (Oșlobeanu M. et al., 1978; Alexandri A., Olangiu M., Petrescu M., Rădulescu E., Rafailă C. 1972).

The year 2022 was a dry year, which made these diseases appear late, towards in the middle of September. The Bujorul grapevine variety is a variety intended for fresh consumption, characterized by medium-sized, yellowish-pink, aromatic berries. It is a relatively recent variety created in Galați, and this variety spread is low and is almost unresearched variety, especially in the western part of Romania.

The paucity of data about this variety, led us to carry out this research.

## Material and method

The research was done in a vineyard in Urseni, Timiș County, located in the metropolitan area of Timișoara.

In addition to the Bujorul grape variety, we compared five other table grape varieties; Nero, Victoria, Muscat Haburg, Moldova and Chasselas doré.

The varieties were the variant of the experiment, from each variant was made in three repetitions, and each repetition contained five plants. Each plant was fully studied with regard to the frequency and intensity of the attack of downy mildew and powdery mildew and finally the degree of attack of these diseases was calculated.

The experimental data was interpreted statistically and differences were made between each variety.

## Results and discussions

### Grapevine downy mildew results

Grapevine downy mildew degree of attack (Da%) compared between varieties

	Nero	Victoria	Muscat Haburg	Bujorul	Moldova	Chasselas doré
Nero	-	-7.50 <sup>000</sup>	-5.41 <sup>000</sup>	-3.64 <sup>000</sup>	1.63 <sup>**</sup>	-1.66 <sup>00</sup>
Victoria	7.50 <sup>***</sup>	-	2.09 <sup>**</sup>	3.86 <sup>***</sup>	9.13 <sup>***</sup>	5.84 <sup>***</sup>
Muscat Hamburg	5.41 <sup>***</sup>	-2.09 <sup>00</sup>	-	1.76 <sup>**</sup>	7.04 <sup>***</sup>	3.75 <sup>***</sup>
Bujorul	3.64 <sup>***</sup>	-3.86 <sup>000</sup>	-1.76 <sup>00</sup>	-	5.27 <sup>***</sup>	1.99 <sup>***</sup>
Moldova	-1.63 <sup>00</sup>	-9.13 <sup>000</sup>	-7.04 <sup>000</sup>	-5.27 <sup>000</sup>	-	-3.29 <sup>000</sup>
Chasselas dore	1.66 <sup>**</sup>	-5.84 <sup>000</sup>	-3.75 <sup>000</sup>	-1.99 <sup>00</sup>	3.29 <sup>***</sup>	-

DL5% - 0.70; DL1% - 1.36; DL0.1% - 2.45.

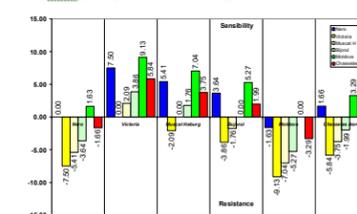


Fig 1

Moldova and Nero varieties are the most resistant, followed by the Chasselas doré variety, and the more sensitive than the Bujorul is the Muscat de Hamburg variety, and the most sensitive is the Victoria variety

### Grapevine powdery mildew results

Grapevine powdery mildew degree of attack (Da%) compared between varieties

	Nero	Victoria	Muscat Haburg	Bujorul	Moldova	Chasselas doré
Nero	-	-4.02 <sup>000</sup>	-8.36 <sup>000</sup>	-5.31 <sup>000</sup>	-7.71 <sup>000</sup>	-2.25 <sup>000</sup>
Victoria	4.02 <sup>***</sup>	-	-4.35 <sup>000</sup>	-1.29 <sup>*</sup>	-3.70 <sup>000</sup>	1.77 <sup>*</sup>
Muscat Hamburg	8.36 <sup>***</sup>	4.35 <sup>***</sup>	-	3.05 <sup>***</sup>	0.65 <sup>*</sup>	6.11 <sup>***</sup>
Bujorul	5.31 <sup>***</sup>	1.29 <sup>*</sup>	-3.05 <sup>000</sup>	-	-2.41 <sup>00</sup>	3.06 <sup>***</sup>
Moldova	7.71 <sup>***</sup>	3.70 <sup>***</sup>	-0.65 <sup>*</sup>	2.41 <sup>**</sup>	-	5.47 <sup>***</sup>
Chasselas dore	2.25 <sup>**</sup>	-1.77 <sup>0</sup>	-6.11 <sup>000</sup>	-3.06 <sup>000</sup>	-5.47 <sup>000</sup>	-

DL5% - 1.30; DL1% - 1.85; DL0.1% - 2.69.

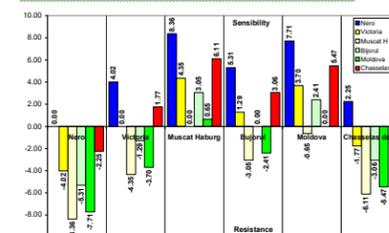


Fig 2

Nero (-5.31) and Chasselas doré (-3.06) were more resistant to the degree of powdery mildew attack compared to the Bujorul variety.

The Victoria variety and the Bujorul showed low, statistically unsecured differences between them (-2.84).

The most sensitive to powdery mildew are Muscat Hamburg (5.02) and Moldova (4.33) varieties

## Conclusions

The Bujorul variety behaved much better against the downy mildew attack than the Victoria and Muscat de Hamburg varieties, and in terms of powdery mildew it behaved better than the Muscat de Hamburg and Moldova varieties.

Among the varieties studied, the Nero variety was shown to be the most resistant to both diseases, and the Victoria variety the most sensitive. The Peony variety proved to be medium resistant, confirming the authors' description of the variety