

The Strategy of Optimization for Combat the Black Rot of Vine (*Guignardia bidwelli*), in the Ecoclimatic Conditions from Vineyard Târnave

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SUMMARY

The black rot of the vine (*Guignardia bidwelli*) can be considered one of the most serious mycoses reported in the plantations of the Târnave vineyard. In years with heavy and prolonged rainfalls, the fungus can affect all green parts of the grape-vine, but the most damaging attack is directed on the grain (Tomoioagă, 2006). In case the disease is not adequately controlled, the harvest losses can range from 5% to 80%. This being an outbreak disease, the research focused on estimating the risk of infection and establishing a combat strategy, by linking all factors favorable to the attack: temperature, moisture, biological reserve, varietal susceptibility. The experiments took place in 2008-2009 in the experimental polygon of SCDVV Blaj, on the Fetească regală variety. Treatments were performed in two variants. In the first variant three treatments were applied. In the second variant, two treatments were applied. Preventively, the strategy was completed with methods for reducing the primary inoculum biological reserve. A review of the results showed that, for the successful eradication of the black rot, treatments must be applied every 12 days, starting with the phenostage of swelling buds. This time interval is reduced to 7-10 days during periods of prolonged and heavy rainfall. All fungicides were efficient, when they were preventively applied in the first growing period of the vine. Applying correct vine growing measures had a crucial role in the prevention of black rot. These measures were: removal and burning of the mummified grapes; removing spores carrying leaves and strings, by deep plowing; correctly applied cutting, for a better aeration of the grapes; rational application of nitrogen fertilizers.

Tab. 1

Biological effectiveness of some of the tested products, used for the eradication of black rot (*Guignardia bidwelli*) in 2008-2009 on an experimental lot, by SCDVV Blaj

No.	Product (Commercial name, etc.)	Dose kg,l/ha	Degree of attack (GA %)	Effectiveness (E %)
1.	Mikal Flash (fosetil de aluminiu 50% + folpet 25 %)	3.0	0.79	95
2.	Topsin 70 PU (tiofanat metil 70%)	1.0	1.59	90
3.	Sulf muiabil (sulf 80 %)	2.0	1.74	89
4.	Secure (fenamidon 10% +mancozeb 50%)	1.5	1.43	91
5.	Antracol (propineb 70 %)	2.0	2.06	87
4.	Untreated control sample	-	15.9	-

Keywords: grape vine, black rot, treatments

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