

**Sledovanie efektu účinných látok proti peronospóre viničovej (*Plasmopara viticola*) v
pestovateľskom ročníku 2023 v Nitrianskom vinohradníckom rajóne**

**Monitoring the effects of active substances used to treat *Plasmopara viticola* in Nitra
wine district during the 2023 growing year**

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Downy mildew (*Plasmopara viticola*) is grapevine's most severe fungal disease. The purpose of this study was to test the ability of active substances (AS) to provide chemical protection of the Veltlín green variety during the 2023 growing year, in Nitra wine district, in the area of Nitrianske Hrnčiarovce, plot number 979/5. The plot was divided into 2 sections, each containing 120 vines of their respective variant. The vineyard was 52 years old and the technique used was simple curtain with the K5BB rootstock.

Dates and AS used in the treatment of variant 1: 4.6.2023 Azoxystrobin 93.5 g.l⁻¹ + folpet 500 g.l⁻¹; 12.6.2023 metalaxyl-M 40 g.kg⁻¹ + mancozeb 640 g.kg⁻¹; 23.6.2023 mandipropamide, 250 g.kg⁻¹ + zoxamide, 240 g.kg⁻¹; 9.7.2023 copper oxychloride 658 g.kg⁻¹ and benalaxyl 37.5 g.kg⁻¹ + folpet 480 g.kg⁻¹.

Dates and AS used in the treatment of variant 2: 4.6.2023 copper hydroxide 770g.kg⁻¹; 12.6.2024 mancozeb 750 g.kg⁻¹; 23.6.2023 metiram 550 g.kg⁻¹ + pyraclostrobin 50 g.kg⁻¹; 9.7.2023 cooper oxychloride 658 g.kg⁻¹.

The method utilising a combination of contact and systemic AS proved to be reliable (variant 1). However, direct contact AS failed to suppress the tremendous infectious pressure of downy mildew in the 2023 growing year. The use of contact AS in the treatment of variant 2 caused severe damage to the inflorescences during the BBCH 60-69 phenophases. The systemic mixture was administered during the second treatment due to the acute symptoms present on the inflorescences and leaves. By this point, the administration of systemic AS no longer yielded any desired effects. Variant 2 suffered additional indirect damage caused by the so-called peak downy mildew, as a result of exposure to a contact mixture on 9.7.2023 (BBCH 77 – 79), which decreased the wood's assimilation and maturation rates. Gentle protection regimens applied during critical growing years require that the vines be treated every 7 days, at the bare minimum, using suitable combination of approved AS, in addition to auxiliary substances. In the future, gentle protection regimens will likely be succeeded by the cultivation of PIWI varieties.

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