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Effects of Raspberry leaf blotch emaravirus infection on raspberry (*Rubus idaeus* L.) pollen performance in vitro

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Raspberry leaf blotch emaravirus (RLBV) is recently characterized virus infecting *Rubus* species. Recent studies in Serbia confirmed its wide presence in red raspberry orchards. The objective of our study was to investigate RLBV presence in the plants and its possible effects on pollen performance *in vitro* in two cultivars ('Meeker' and 'Willamette') in the region of west Serbia. In both cultivars, pollen vitality and pollen germination were compared between healthy and infected plants. From all tested plants, flowers were picked randomly in late balloon phase. Samples were analyzed on RLBV presence by RT-PCR. Pollen vitality was determined after staining with fluorescein-diacetate while pollen germination was observed after 1h, 3h and 24h incubation time on agar-sucrose medium. In both cultivars, in healthy plants, a high percentage of pollen vitality was got (75,94% in 'Meeker', 64,97% in 'Willamette'). Also, in these plants with longer incubation time pollen germination *in vitro* increased significantly. In infected plants, a different picture was obtained. With a longer incubation period, pollen grain germination in 'Willamette' had slower growth, while the 'Meeker' varieties were in decline.

Keywords: *Rubus idaeus* L., Raspberry leaf blotch emaravirus , pollen grain germination, vitality

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