



FISIOLOGIA DO PARASITISMO

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A black foot extract can delay downy mildew progress in grapevine under greenhouse conditions.

(Atraso no progresso do míldio da videira associado a um extrato de tecido radicular infectado por pé-preto)

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Microbial-associated molecular patterns (MAMPs) are microorganism- or parasitism-derived elicitors that may be recognized by host's parenchymal cells receptor(s) and do trigger plant basal defenses. The perception of these MAMPs is conserved among plant families and the possibility of some signaling events activating grapevine defenses was investigated in leaves pre-exposed to an aqueous extract made of roots with black foot symptoms. Sixty day old 'Cabernet-Sauvignon' plants were sprayed with aqueous suspension of grounded flour of 65°C/48h dried roots infected by *Cylindrocarpon destructans* (EPP, 40% w/w), Acibenzolar-S-Methyl (ASM, 0.2 g/L), commercial K₂HPO₃ (Ctrl+, 150 mL/100L) and water (Ctrl-). Inoculation was performed with a spore suspension of *Plasmopara viticola* at 10⁵ spores/mL two days after treatment. Downy mildew severity was assessed for 45 days by evaluating 25 leaves per plant, 3 plants per plot in randomized block design. Downy mildew severity was assessed by visual rating of lesions on a modified Pedro Junior et. al. (1998) scale. Plants treated with ASM showed delayed DPCs at the same level that the Ctrl+ plants, treated with K phosphite, with 578.0 and 506.8 AUDPC values (46.2 and 54.2 % protection), respectively. EPP-treated plants have reduced severity also, but with 39.1% (684.6 AUDPC) they did not reach the same significant levels of protection of ASM or Ctrl+. Tested substances were assayed for *Plasmopara viticola* and *Botrytis* sp. spore germination and Botrytis mycelial growth and they did not perform any fungitoxic inhibition.

Host: *Vitis vinifera*, grapevine

Pathogen: *Plasmopara viticola*

Disease: Downy mildew, Black foot

Subject: Physiology

Apoio: CNPq.