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## BOOK OF ABSTRACTS



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##### **Evaluation of selected fungal biological control agents for the protection of grapevine pruning wounds against *Diplodia seriata***

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Grapevine Trunk Diseases (GTDs) are among the most destructive grapevine diseases, causing significant economic losses due to vineyard decline and replanting costs. The lack of effective chemical measures highlights the urgent need for environmentally and consumer-friendly alternatives. Biological Control Agents (BCAs) offer a promising, sustainable approach, targeting multiple GTD-associated fungi. This field study was conducted in the viticultural region of Nemea to evaluate the efficacy of four BCAs - *Trichoderma atroviride*, *T. citrinoviride*, *T. ghanense*, *Talaromyces pinophilus*—and a mixture (*T. ghanense* + *T. pinophilus*) in controlling infections by *Diplodia seriata*, a key GTD pathogen in Greece. Two Greek grapevine cultivars with contrasting susceptibility - Roditis (susceptible) and Limnio (tolerant) were used. BCAs were applied as conidial suspensions on fresh pruning wounds, followed 24 hours later by artificial inoculation with *D. seriata*. Wounds were covered for two days to maintain moisture and promote infection. After six months, samples were collected and analyzed using a culture-based method. Pathogen reisolation was conducted on PDA medium, and all obtained fungal isolates were identified molecularly. The results revealed that *T. pinophilus* and its mixture with *T. ghanense* provided strong protection in the susceptible cultivar Roditis, substantially reducing pathogen recovery. Conversely, *T. atroviridae* was more effective in the tolerant cultivar Limnio, indicating a potential cultivar-specific interaction. All BCAs demonstrated the ability to colonize and persist on pruning wounds. These findings reinforce the potential of BCAs as effective, sustainable tools for GTD management and support their integration into future vineyard protection strategies.

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