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► To cite this version:

Estelle Turc, Noadya Monnier, Philippe C. Nicot, Marc Bardin. Is the protective efficacy of microbial biocontrol agents stable regardless of the diversity of *Sclerotinia sclerotiorum* strains?. 18. International Botrytis Symposium & 17. International Sclerotinia Workshop, Unité de pathologie végétale, Avignon, INRAE; Unité de recherche Plantes et systèmes de culture horticoles, INRAE; Unité Biologie gestion des risques en agriculture, INRAE; Avignon université, Jun 2022, Avignon, France. hal-03695758

HAL Id: hal-03695758

<https://hal.inrae.fr/hal-03695758>

Submitted on 15 Jun 2022

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Is the protective efficacy of microbial biocontrol agents stable regardless of the diversity of *Sclerotinia sclerotiorum* strains?

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Sclerotinia sclerotiorum has a destructive impact on oilseed rape crop and its control still relies mainly on chemicals. Therefore, the development of biocontrol agents is of great interest to reduce the amount of chemical inputs in this disease management.

Two candidate microorganisms among several others isolated in our laboratory gave promising results under controlled conditions and in experimental fields to protect oilseed rape against *S. sclerotiorum*. Preliminary results concerning the mode of action of these microorganisms have shown a reduction in the *in vitro* development of *S. sclerotiorum* when confronted with biocontrol microorganisms, presumably due to the secretion of diffusible antifungal molecules.

Different biotic and abiotic factors can have an impact on the level of protection provided by a microbial biocontrol agent. Among these factors, the reduced sensitivity of certain strains of the pathogen to the biocontrol agent may affect their protective efficacy in the field. Thus, the aim of this study was to determine whether the effect of the biocontrol microorganisms is stable against different strains of *S. sclerotiorum*.

To this end, the inhibition of the development of the fungal pathogen by the two candidate microorganisms was evaluated on dual culture plate assays against fifty strains of *S. sclerotiorum*. These *in vitro* assays revealed a significant effect of *S. sclerotiorum* strains on the antifungal activity of both biocontrol agents, suggesting that some strains of the pathogen are significantly less impeded in their development by the biocontrol agents than others. These results also allowed the selection of strains that represent the diversity of sensitivity to the biocontrol microorganisms for testing on plant detached leaves of oilseed rape. These results will be further discussed.