A Model System for Studying the Behaviour of Fungi Antagonistic to Sclerotinia sclerotiorum^{*}

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Biological control of soil-borne diseases has often been carried out by either spraying the soil directly with antagonistic organisms or incorporating the biological agents in some form of carrier. This is both expensive and does not always control the pathogen. In the glasshouse, however, because of the closer environmental control and regular planting regimes another possible system of incorporation is possible. After cropping lettuce and celery for instance, the cut stumps could be inoculated with fungi which are both capable of colonizing the plant residue as well as being antagonistic to pathogens such as Sclerotinia and Rhizoctonia. After incorporation, these inoculated fungi could use the occupied residues as a food base and spread through the soil, gradually developing suppressive soils after several cropping sequences. They would also ideally outcompete any pathogens already in stump tissue. With this aim in mind, a model system has been developed for studying the behaviour of fungi antagonistic to Sclerotinia sclerotiorum using lettuce, celery and tomato tissue pieces. It also shows promise as a test for organisms antagonistic to Rhizoctonia solani.

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