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ABSTRACTS

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***Aeromonas media* in compost amendments contributing to suppression of *Pythium ultimum* in cress**

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Introduction: Soil-borne diseases such as damping-off caused by *Pythium* sp. are responsible for high yield losses in organic vegetable production and are difficult to control. Compost amendments have been shown to be able to improve survival and growth of plants in soils infested with soil-borne diseases. Yet, not all composts are equally disease suppressive and little is known about the microbial species directly involved in disease suppression.
Objectives: The objective of this study was to compare the microbial community in the rhizoplane of cress grown in substrates amended with composts suppressing *Pythium ultimum* damping-off at different levels.
Materials and methods: Cress was grown in a standard peat substrate amended either with coco fibre (conducive control) or with composts differing in their disease suppressive abilities. Bacteria were isolated from the rhizoplane and the most abundant species determined by Maldi-Tof MS. In a second experiment the most abundant bacterial species isolated of protected plants was added to all treatments to evaluate its role in disease suppression.
Results: The bacterial composition was essentially different with *Aeromonas media* being the main species present in the highly suppressive compost whereas *Enterobacter cloacae* was the dominating species in the less suppressive one. Addition of *Aeromonas media* improved suppressiveness against *P. ultimum* of less suppressive compost to the level of the highly suppressive compost.
Conclusion: We can therefore conclude that presence of *Aeromonas media* in composts is indeed contributing to disease suppression at least in this particular test system.

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Identification of endophytic microorganisms from *Olea europea* L. for the biological control of *Colletotrichum acutatum* and *Verticillium dahliae*

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The olive tree is one of the most important crops in the Mediterranean basin countries including Portugal. Anthracnose and verticillium wilt are two of the major olive diseases due to their high incidence and related losses. In Portugal and Spain, anthracnose is mainly caused by the fungus *Colletotrichum acutatum*, leading to losses in production up to 100%. Verticillium wilt is caused by the fungus *Verticillium dahliae*, causing yield losses up to 89%. The main control strategy is based on the use of fungicides, which is not completely effective and is associated with environmental risks and toxicity problems. For this reason, the biological control is a sustainable alternative for this problem. The endophytic fungi are a group of microorganisms with great potential to be explored as biologic control agents. In this work we evaluate the endophytic microorganisms community inhabiting roots, leaves and twigs of three olive cultivars (Picual, Galega and Cobrançosa) with different susceptibilities to the abovementioned diseases through sequencing (Illumina) of the amplicons ITS (fungi) and 16S (bacteria). The correlation between the presence/absence of each endophyte in different olive cultivars is discussed.
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Entomophages in the modern industrial greenhouses: survival strategies and tactics

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At the present time, the main and the most effective method of biological control of pests in hothouses is preventive colonization of entomophages.
When preventive introducing, the key requirements to entomophages are: