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Interactions of Some Species of Collembola with *Pseudomonas fluorescens* and Their Antagonistic Influence on *Pythium ultimum* on Sugar Beet

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Abstract: Investigations were carried out to the influence of the species of Collembola *Onychiurus fimatus* Gisin (Collembola: Onychiuridae), *Folsomia candida* Willem (Collembola: Isotomidae) and the Isolate B5 of *Ps. fluorescens* on the infection of the sugar beet with *P. ultimum* as well as to the reciprocal effects of these antagonists.

In the food selection experiments, the feeding behaviour of *O. fimatus* and *F. candida* was examined with selection between sugar beet seedlings, *P. ultimum* and *Ps. fluorescens*. The offered microorganisms were clearly preferred by *O. fimatus* compared to seedlings of sugar beet. However, *Ps. fluorescens* possessed smaller attractiveness for this species than *P. ultimum*. The species of Collembola *F. candida* likewise showed a clear preference for *P. ultimum* and *Ps. fluorescens* B5 compared to the seedlings of sugar beet, between the microorganisms did not exist a difference.

With the selection between *P. ultimum* and *Ps. fluorescens* B5, which were offered on sugar beet seeds resp. cellulose disks, the preference of the species *O. fimatus* for fungus *P. ultimum* was confirmed. In contrast, *F. candida* showed an identical preference for fungus or bacterium.

Key words: *Onychiurus fimatus*, *Folsomia candida*, *Pseudomonas fluorescens*, *Pythium ultimum,* sugar beet, interaction