

Investigation on pathogenic antagonists of selected insect pests – an overview

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One recently occurred invasive insect pest has caught the attention for investigating biological control mechanisms and systems: The spotted wing drosophila (SWD, *Drosophila suzukii* Matsumura) is endemic in East China and Japan but has been introduced to the western hemisphere about 10 years ago and has been found in Europe since 2009. Nowadays, it has emerged to one of the most harmful pests to commercially grown fruit plants like stone fruits and nearly all kind of berries while it prefers ripe and overripe fruits. Our intention is to investigate the possible usage of natural antagonists for biological control.

Therefore, we examine the natural load of parasites and pathogens (i.e. fungi, bacteria, viruses, microsporidia and protista) in fruit flies, isolate them and re-infect lab populations of *D. suzukii* for investigating the antagonistic potential. Furthermore, we will integrate the fruit pest codling moth (*Cydia pomonella*), which is an ongoing problem in apple orchards also because the pest develops resistance against commercially available insecticides. The long-term aim is to establish a stable system for pathogen detection that can be used for rapid identification of microbial antagonists in natural populations.