

Natural enemies associated with the cabbage whitefly in Germany

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Abstract

1. A three-year survey on the natural enemies of *Aleyrodes proletella* was conducted at five locations across Germany. For this purpose, parasitoids and predators were sampled from organic Brussels sprouts fields that were highly infested with *A. proletella*.
2. *Encarsia tricolor* (Hymenoptera: Aphelinidae) was, with 89-100% parasitism rate, the dominating parasitoid species. Other parasitoids were *Encarsia inaron* (Hymenoptera: Aphelinidae) and *Euderomphale chelidonii* (Hymenoptera: Eulophidae).
3. Most sampled predators were hoverfly larvae (49.6%) followed by spiders (33.8%), ladybeetles (14.2%), predatory bugs (1.6%) and lacewing larvae (0.8%). *Harmonia* (Coleoptera: Coccinellidae), *Sphaerophoria*, *Episyrphus* (Diptera: Syrphidae) and *Tetragnatha* (Araneae: Tetragnathidae) were the most abundant genera of predators. The only whitefly specialist among the predators was *Clitostethus arcuatus* (Coleoptera: Coccinellidae).
4. A detailed list of identified natural enemies is provided, their relevance in naturally regulating *A. proletella* populations discussed and possible implications for pest management strategies are proposed.

Keywords: *Aleyrodes proletella*, Aleyrodidae, Araneae, Coccinellidae, *Encarsia tricolor*, functional biodiversity, parasitoids, Syrphidae