
Anhang - nach Redaktionsschluss noch eingereichte Beiträge

o62 - Kann der Einsatz von Semiochemikalien die biologische Bekämpfung verbessern? – Verhaltensbeeinflussende Substanzen der Raubwanze *Xylocoris flavipes*

Improvement of biological control by semiochemicals? – Behavior-modifying chemicals of Xylocoris flavipes

Tina Gasch¹, Matthias Schöller²

¹ Julius Kühn-Institut, Institut für ökologische Chemie, Pflanzenanalytik und Vorratsschutz, Königin-Luise-Straße 19, 14195 Berlin, Deutschland; ² Biologische Beratung Ltd., Storkower Straße 55, 10409 Berlin, Deutschland.

With a growing demand for alternatives to chemical plant protection, the need for improvement of existing options increases. Biological control is considered an effective control measure against insect pests as long as pest population densities are low. To improve biological control, semiochemicals, molecules that are involved in communication between organisms and their environment, can be used. Kairomones, for example, can be used to prevent beneficials from leaving crops targeted for biological control (Lewis et al., 1982).

To test whether biological control can be enhanced by the application of semiochemicals, we chose the generalist predator, *Xylocoris flavipes* (Anthocoridae) (Arbogast, 1978) which is used to control various stored-product pests. Associations of several individuals are often accompanied by a lemon-like scent. This scent indicates the presence of an aggregation and/or alarm pheromone, which has been described for many other representatives of the insect order Heteroptera (Remold, 1963). However, neither the substances involved nor the biological function of this scent have been investigated so far. To close this gap we sampled the scent of male and female adults, as well as 5th instar nymphs via a needle trap device (NTD) and analyzed it chemically via gas chromatography coupled to mass spectrometry (GC-MS). We furthermore analyzed hexane extracts of the different sexes and developmental stages. To gain more information on the potential behavioral activity, two-choice tests were performed. This contribution will present our first results and discuss the use of semiochemicals to improve biological control in stored-product protection.

Literature

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