

Interspecific activity of sex pheromone components of *Sesamia nonagrioides* (Lefèbvre) and *S. cretica* (Lederer) (Lepidoptera: Noctuidae)

G. Rotundo, G.S. Germinara, A. De Cristofaro

Dipartimento di Scienze Animali, Vegetali e dell'Ambiente, Università del Molise, Via De Sanctis, I-86100, Campobasso.

The Mediterranean stem borer, *Sesamia nonagrioides* (Lefèbvre) and the Dura stem borer, *S. cretica* (Lederer) (Lepidoptera: Noctuidae) are two important insect pests of maize crops in the Mediterranean basin.

The identified sex pheromone components are Z11-hexadecenyl acetate (Z11-16:Ac), Z11-hexadecenol (Z11-16:OH), Z11-hexadecenal (Z11-16:Ald), dodecanyl acetate (12:Ac), hexadecanyl acetate (16:Ac) for *S. nonagrioides* and Z9-tetradecenol (Z9-14:OH), Z9-tetradecenyl acetate (Z9-14:Ac) for *S. cretica*.

The aim of this research was to investigate any interspecific activity of sex pheromone components between the two sympatric species.

EAG dose-response curves were calculated by applying increasing doses (from 10^{-3} to 10^2 μg) of the different sex pheromone components on male antennae of both species.

Z9-14:Ac doses above 10^{-1} μg evoked, from *S. nonagrioides* males, increasing EAG responses and higher than those to its secondary sex pheromone components. Z11-16:Ald elicited, from *S. cretica* males, dose dependent responses with a threshold dose of 10^1 μg .

Field studies showed that *S. nonagrioides* male catches are significantly reduced by Z9-14:Ac when it was added to a synthetic sex attractant blend or placed near virgin females (n. 2) used as lure in oil traps.

In highly infested (4 larvae/plant) maize fields, multilayer laminate dispensers baited with 50 mg of Z9-14:Ac and distributed in small plots (144 m², 12x12 m) at a distance of 2x2 m significantly reduced the attractant power of traps activated with virgin females (n. 2) and placed at the centre of each plot.

Results show that Z9-14:Ac is apt to be involved in the reproductive isolation between *S. nonagrioides* and *S. cretica*. The interspecific semiochemical could contribute to *S. nonagrioides* control by male orientation disruption.

Research funded by a grant (PRIN 2000) from Italian Ministry of University and Scientific Research (MURST) and a contribution from the University of Molise.

Authors have contributed equally to the present paper.