

# Deleterious Activity of Natural Products on Postures of *Spodoptera frugiperda* (Lepidoptera: Noctuidae) and *Diatraea saccharalis* (Lepidoptera: Pyralidae)

Wagner S. Tavares<sup>a</sup>, Ivan Cruz<sup>b</sup>, Felipe G. Fonseca<sup>c</sup>, Natalia L. Gouveia<sup>d</sup>, José E. Serrão<sup>e</sup>, and José C. Zanuncio<sup>f,\*</sup>

<sup>a</sup> Departamento de Fitotecnia, Universidade Federal de Viçosa, 36570-000, Viçosa, Minas Gerais State, Brazil

<sup>b</sup> Embrapa Milho e Sorgo, Rodovia MG 424, Km 65, Caixa Postal 151, 35701-970, Sete Lagoas, Minas Gerais State, Brazil

<sup>c</sup> Departamento de Agronomia, Universidade Federal dos Vales do Jequitinhonha e Mucuri, 39100-000, Diamantina, Minas Gerais State, Brazil

<sup>d</sup> Instituto Luterano de Ensino Superior de Itumbiara, Avenida Beira Rio, nº 1001, Bairro Nova Aurora, 75523-200, Itumbiara, Goiás State, Brazil

<sup>e</sup> Departamento de Biologia Geral, Universidade Federal de Viçosa, 36570-000, Viçosa, Minas Gerais State, Brazil

<sup>f</sup> Departamento de Biologia Animal, Universidade Federal de Viçosa, 36570-000, Viçosa, Minas Gerais State, Brazil. Fax: +55-31-38 99-25 37. E-mail: zanuncio@ufv.br

\* Author for correspondence and reprint requests

Z. Naturforsch. **65c**, 412–418 (2010); received November 19, 2009/January 8, 2010

The control of Lepidoptera pests should be carried out before hatching of their caterpillars to avoid damage to the crops. The aim of this work was to assess the activity of neem (trade name: Natuneem<sup>®</sup>, producer: Base Fértil, Chapadão do Sul, Brazil) and pyroligneous extracts (trade name: Biopirol 7M<sup>®</sup>, producer: Biocarbo, Itabirito, Brazil) at 10 mL/L (1%) and 20 mL/L (2%) contents on egg masses of different ages of *Spodoptera frugiperda* Smith (Lepidoptera: Noctuidae) and of *Diatraea saccharalis* F. (Lepidoptera: Pyralidae) at Embrapa Corn and Sorghum in Sete Lagoas, Minas Gerais State, Brazil. The tests took place in an unbiased casualized design with 12 treatments and four replications. The insecticides were diluted in water, and 0.04 mL of the solution was applied to recently laid and one- and two-day-old eggs of *S. frugiperda* and *D. saccharalis*. Caterpillars hatching from recently laid egg masses of *S. frugiperda* was lower with 2% pyroligneous extract [(0.02  $\pm$  0.00)%]. Recently laid eggs and one- or two-day-old eggs of *D. saccharalis* presented lower caterpillar hatching with 1% neem extract [(0.00  $\pm$  0.00)%, (0.00  $\pm$  0.00)%, and (1.00  $\pm$  0.01)%] and 2% neem extract [(0.00  $\pm$  0.00)%], compared to 1% pyroligneous extract [(27.30  $\pm$  3.22)%, (28.40  $\pm$  3.32)%, and (37.80  $\pm$  4.14)%] and 2% pyroligneous extract [(42.20  $\pm$  4.49)%, (48.70  $\pm$  4.97)%, and (56.60  $\pm$  5.52)%], respectively. Neem and pyroligneous extracts had impact on hatching of *S. frugiperda* and *D. saccharalis* caterpillars.

**Key words:** Lepidoptera, Neem, Pyroligneous Extract