



Afr. J. Agric. Res.

[Vol. 2 No.4](#)

Viewing options:

- Abstract
- Full text
- [Reprint \(PDF\)](#) (111K)

Search Pubmed for articles by:

[Ngamo TLS](#)

[Hance T](#)

Other links:

PubMed Citation

Related articles in PubMed

African Journal of Agricultural Research Vol. 2(4), pp. 173-177, April, 2007
ISSN 1991- 637X© 2007 Academic Journals

Full Length Research Paper

Persistence of insecticidal activities of crude essential oils of three aromatic plants towards four major stored product insect pests

Ngamo T. S. L¹, Ngatanko I^{1*}, Ngassoum M. B. ¹, Mapongmestsem P. M. ¹, Hance T. ²

¹University of Ngaoundéré BP 454, Cameroon,

²Laboratory of Ecology and Biogeography, Research Center on the Biodiversity, 4-5 Place Croix du Sud, 1348, Louvain-la-Neuve, Belgium.

Corresponding author. E-mail: iliassangatanko2000@yahoo.fr

Accepted 16 February, 2007

Abstract

Essential oils of aromatic plants with insecticidal properties are more and more considered as alternative insecticides to protect stored products. Many banned insecticides have high persistence which allow them to occur at several levels of trophic chains. The aim of the present work is to analyse the persistence of insecticidal activity of crude essential oil of three most used local aromatic plants : *Annona senegalensis* Pers. (Annonaceae), *Hyptis spicigera* L. (Lamiaceae) and *Lippia rugosa* L. (Verbenaceae) towards the four majors stored product insect pests: *Sitophilus zeamais* Motsch., *Sitophilus oryzae* L., *Callosobruchus maculatus* Fab. and *Tribolium castaneum* Herbst. This research revealed that *H. spicigera* essential oil was the most active towards *S. oryzae* with a LD50 = 20.18ppm. *T. castaneum* was the less sensitive insect to the three essential oils tested. During a period of 24 hours *L. rugosa* essential oil was the most persistent, showing mortalities for *S. zeamais* of 80%, *S. oryzae* more than 60%, *C. maculatus* 100% and *T. castaneum* 50%. The two other oils tested were not as persistent as *L. rugosa*. This important persistence of the essential oil of *L. rugosa* could be explained by its high content of oxygenated compounds compared to that of the other oils. This most interesting essential oil is therefore a suitable one for popularisation in strategies of pest management in storage.

Key words: essential oils, aromatic plants, stored products, insect pests, persistence.

Powered by


Search

jn WWW jn AJAR

[Email Alerts](#) | [Terms of Use](#) | [Privacy Policy](#) | [Advertise on AJAR](#) | [Help](#)

Copyright © 2007 by Academic Journals