



### Toxicity of *Cymbopogon nardus* (L.) Rendle against *Blomia tropicalis* Bronswijk, Cock and Oshima\*

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\*In: Zhang, Z.-Q., Fan, Q.-H., Heath, A.C.G. & Minor, M.A. (Eds) (2022) *Acarological Frontiers: Proceedings of the XVI International Congress of Acarology (1–5 Dec. 2022, Auckland, New Zealand)*. Magnolia Press, Auckland, 328 pp.

The toxicity of *Cymbopogon nardus* (Poaceae) against *Blomia tropicalis* (Echimyopodidae) was tested *in-vitro* (i.e. vial method) and *in-vivo* (i.e. admixture method using corn grits as media). Based on the biological response of *B. tropicalis*, the estimated minimum effective concentration (MEC) of *C. nardus* extract (CNE) that give complete mortality was 1.75 g/L, and had a potential capacity to control *B. tropicalis* population. Thirty-two chemical components were identified in CNE based on GC-MS analysis. The seven major compounds were as follows: Oleyl alcohol, methyl ether (35.34%),  $\gamma$ -Sitosterol (13.60), 6-Methylheptan-3-ol (8.04),  $\alpha$ -Terpineol (3.92%), Citral (3.59), n-Pentadecanol (3.57%), and 1-Octadecanol methyl ether (3.51%). The CNE (1.75 g/L) was generally superior in terms of toxicity and volume concentration against *B. tropicalis* as compared with conventional synthetic acaricide (Coumaphos 2.50 g/L), as a standard control of stored product mites. It indicates that the major compound of CNE and its derivatives may have interacted synergistically; amplifying its toxicity and effect that leads into mite mortality.

**Keywords:**  $\alpha$ -Terpineol, citral,  $\gamma$ -Sitosterol, stored product mites, Philippines