

Title Evaluation of a multi-attractant lure on the capture of several stored-product beetle species.

Authors Athanassiou, C. G., Kavallieratos, N. G., Eliopoulos, P. A., Palyvos, N. E., Casagrande, E. and Buchelos, C. T.

Citation Advances in stored product protection. Proceedings of the 8th International Working Conference on Stored Product Protection, York, UK, 22-26 July 2002 (2003); 252-257

Abstract

The introduction of a multi-attractant lure (a mixture of natural plant extracts) inside perforated traps (pitfall lure) was assessed for its efficiency in trapping Coleoptera adults infesting stored cereals. The experiments were carried out in two horizontal-type store rooms located in Central Greece. The first store room contained bulked wheat; control traps and traps containing the attractant at levels of 100, 200 and 500 mg were placed just below the grain surface, in five replicates. The second store room contained bulked maize, and the attractant levels examined were 500, 1000 and 2000 mg. The traps were inspected for captured insects at weekly intervals for nine weeks. On each trap-check date, grain samples were taken adjacent to the trapping location; these samples were also examined for insects. In the first store room the most abundant beetle species were *Tribolium castaneum*, *Tribolium confusum*, *Oryzaephilus surinamensis* and *Rhyzopertha dominica*. Significantly more adults were found in the traps than in the samples for *T. castaneum*, *T. confusum* and *O. surinamensis*. Generally, more adults were found in the traps containing 500 mg of the attractant, except on a few occasions, but no significant differences were recorded between levels. Additionally, after the third week, captures were not significantly different from the control traps. On the other hand, for *R. dominica* the samples contained similar adult numbers to the traps, despite the use of the attractant. In the second store room, the most abundant species were *Sitophilus oryzae*, *O. surinamensis* and *R. dominica*. As above, significant differences in species abundance were recorded among treatments, with the exception of *R. dominica*. Traps holding 1000 mg and 2000 mg of attractant contained significantly more *S. oryzae* and *O. surinamensis* adults, compared to the control traps and traps with 500 mg.