

Title Combinations to enhance the efficacy of diatomaceous earth against the larger grain borer, *Prostephanus truncatus* (Horn).

Author Stathers, T. E.

Citation Advances in stored product protection. Proceedings of the 8th International Working Conference on Stored Product Protection, York, UK, 22-26 July 2002 (2003); 925-929

#### **Abstract**

Combinations of Protect-It (diatomaceous earth; DE) with low levels of pyrethroids, plant extracts or soil bacteria metabolites were evaluated against *P. truncatus* on maize. Deltamethrin and permethrin exhibited a high knockdown effect and prevented progeny emergence of *P. truncatus* at 0.025 and 2.00 mg/kg, respectively. No further effects from the addition of Protect-It (500, 1000 or 2500 ppm) were observed. The combinations of DE and plant extracts or soil bacteria metabolites, formulated as "All Natural" and "Spindeba", also prevented progeny emergence of *P. truncatus* at 50-100 ppm. The results are discussed in the context of improving the efficacy of DE against *P. truncatus* for use by small-scale producers in developing countries.