

Title Evaluation on the efficacy of spinosad dust against major storage insect pests.  
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Citation Advances in stored product protection. Proceedings of the 8th International Working Conference on Stored Product Protection, York, UK, 22-26 July 2002 (2003); 888-891

#### Abstract

Laboratory bioassays were conducted to compare the efficacy of spinosad dust (0.125%) admixed with shelled wheat grains with that of a cocktail of pirimiphos-methyl (1.6%) and permethrin (0.3%) as actellic super dust against *Sitophilus zeamais*, *Tribolium castaneum*, *Rhyzopertha dominica* and *Prostephanus truncatus*. Spinosad dust was applied at 0.35, 0.7 and 1.44 ppm, and actellic dust at 10.5 ppm. All treatments were significantly ( $P=0.05$ ) better than the control except when applied against *T. castaneum*. Spinosad at 0.7 and 1.44 ppm controlled *S. zeamais* over the 24-week period. All treatments gave good control of *P. truncatus* and *R. dominica*, with no apparent significant differences ( $P=0.05$ ) between treatments on the latter. On *P. truncatus*, spinosad showed better performance than actellic super dust ( $P=0.05$ ). All levels of spinosad dust appeared to perform better on *P. truncatus* compared to actellic super; however, spinosad dust, unlike actellic super, was unable to control *T. castaneum*. The results suggest that spinosad dust may have potential in controlling major storage insect pests, with special applicability against the destructive larger grain borer, *P. truncatus*.