

Title Distribution of and association between the larger grain borer *Prostephanus truncatus* (Horn) (Coleoptera: Bostrichidae) and the maize weevil *Sitophilus zeamais* Motschulsky (Coleoptera: Curculionidae) in maize stores

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### **Abstract**

Interspecific interactions between the larger grain borer *Prostephanus truncatus* and the maize weevil *Sitophilus zeamais* were studied during two storage seasons in maize stores, in Bénin. Maize ears, randomly sampled from farmers' grain stores, were 'reared out', i.e., kept for 4 weeks under controlled conditions for F<sub>1</sub> to emerge, and periodically sampled, in order to examine colonisation patterns of *P. truncatus* and *S. zeamais*. For both storage seasons, *P. truncatus* and *S. zeamais* populations were sparsely aggregated and not associated with each other. The degree and strength of association increased with each monthly sampling occasion with the Ochiai, Jaccard and Dice indices of association. By the fourth sampling occasion, *P. truncatus* was found on most ears and on some ears in very high numbers (>300 insects). Almost all ears with *P. truncatus* contained at least a few *S. zeamais* individuals, but many ears with *S. zeamais* contained no *P. truncatus*.