Abstract

Insect bioassays were conducted to evaluate the efficacy of maize seed kernels expressing protein of aδ-endotoxin gene of Bacillus thuringiensis tenebrionis Cry3A against economically important coleopteran pests in stored maize. Results from infestation of transgenic seed kernel assays conducted in the laboratory indicate that the kernels had no influence on the survival of the adult larger grain borer Prostephanus truncatus (Horn.) and maize weevil Sitophilus zeamais respectively. There was no adult mortality recorded. There was high population reduction in the T0 transgenic kernels (61%-88%) for both the beetles when compared to the non-transgenic control , in the T1 generation the population reduction was 37%-76% for P. truncatus and 61%-80% for S. zeamais except for inbred A04 which had no effect on population reduction. The lowest kernel damage and weight loss was observed in maize inbredCML 395 for P. truncatus in both T0 and T1 maize generations and in inbred I04 for S.zeamais.