

**Title** Assessment of the effect of pesticides on weevils for conservation of kola nuts in Cameroon  
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#### **Abstract**

The efficiency of traditional methods in reducing post-harvest kola nut weevil infestation was assessed in the ICRAF-AHT nursery. The study was aimed at identifying and estimating post-harvest losses, investigating the effect of healthy/unhealthy fruits on nut infestation, and assessing the efficiency of products used by farmers against kola nut weevil infestation (Actellic 50 EC solution, 500 gm/l of pyrimiphos methyl, Malagrain DP5 powder, 5% Malathion and neem (*Azadirachta indica* seed extracts). Kola nuts were stored in baskets following a split-split plot experimental design in randomized complete blocs with four replicates. Each basket was considered as an experimental unit, and contained either 500 infested or 400 healthy kola nuts. Nuts were manually sorted out every month and Actellic solution, Malagrain powder and neem seed extracts applied after one, three and four months respectively to kola nuts depending on remanence duration. Over a four month storage period, 70.98% of losses were caused by weevil infestation (most commonly *Balanogastriis kolae*) while 5.65% of losses were due to drying and rot. The kola nuts were not influenced ( $P = 0.992$ ) by the initial health of the kola pods, but were highly affected ( $P < 0.001$ ) by the products applied. Actellic 50 EC was found to be the most efficient (0.28% losses). The results are discussed with a view to assessing the use of a range of organic products for kola nut preservation by farmers in Cameroon.