ABSTRACT

An experiment was conducted to determine the effectiveness of Red pepper (*Capsicum annum)* and Neem *(Azaradirachta indica*) in controlling cowpea weevil *(Callosobruchus maculatus)* during storage. The trial involved use of grinded pepper and neem leaf as bio pesticide for storing cowpea and the check(control) comprised of cowpea with weevils but not treated with either pepper or neem. There were 6 treatments in total arranged in a completely randomized design which was replicated 3 times for both treatments. Five (5) insects were introduced into each treatment and 5grams ,10grams and 15grams of pepper and neem were also introduced into the plastic containers and stored for 10days in the laboratory. Data collected included number of perforated and unperforated seeds, numbers of dead bruchids, numbers of live bruchids and percentage weight loss. Data were subjected to analysis of variance (ANOVA) and Fisher’s least significant difference to ascertain the significance between the different treatment mean at 5% level of probability. The result shows that pepper has a higher effect on the mortality rate with (33.100±7.91%). There was a strong relationship between treatment concentration and weevil mortality rate at (P=0.002). Neem treatments observed the highest weight loss at the control (0.067±0.125). There was no relationship between weight loss and the various concentrations of neem powder used to preserve cowpea (P>0.05). Pepper extracts observed higher perforations in the controls. There was a strong relationship between the concentration of pepper powder used to preserve the cowpea and the perforation rate of weevils at (P=0.000). The findings in this study suggest that neem is not a proper preservative against weevils in storage hence higher powdered concentration of pepper should be used to preserve cowpea in storage against weevils.