



**INSECTICIDAL ACTIVITY OF STEM BARK AND POD OF LOCUST BEAN  
(*Parkia biglobossa*) AGAINST COWPEA WEEVIL (*Callosobruchus maculatus* F.)  
CAUSING DAMAGE IN STORED COWPEA**

**Zaharadden, S., Tijjani, A., Aliyu, M. and Abubakar, S.**

Department of Crop Production, Faculty of Agriculture and Agricultural Technology,  
Abubakar Tafawa Balewa University, Bauchi PMB 0248, Bauchi Nigeria.

**Corresponding Authors' E-mail:** shuaibuzaharaddeen@gmail.com **Tel.:** +2347030785575

**ABSTRACT**

Laboratory experiment was carried out to evaluate the efficacy of Stembark and pod powders of locust bean (*Pakia biglobossa*) and their appropriate concentration for the management of cowpea weevils (*Callosobruchus maculatus* F.). Spintor (0.125%) and dust (0.125 g) was used a positive control and untreated cowpea seeds serving as negative control. The experiment was laid in Completely Randomized Design (CRD) comprising of Stem bark powder (1 g, 3 g and 5 g), Pod powder (1 g 3 g and 5 g), spintor 0.125% Dust (0.125 g) and control. These were applied to 100 g healthy cowpea seeds and repeated three times. Contact activity of the plant products were evaluated and data collected were subjected to analysis of variance (ANOVA) using SPSS software (version 23) and means were separated using NDMRT at 1% and 5% probability level. The results showed that higher concentration (5 g/100g) of plant products significantly ( $P \leq 0.05$ ) caused mortality of *C. Maculatus* after 24 (2.33), 48 (2.66), 72 (2.66) and 96 hours (3.00) by contact toxicity compared to other treatments. Similarly, higher concentration (5 g/100g seed) of the pod powder significantly ( $P \leq 0.05$ ) decreased oviposition (3.67), adult emergence (3.66), percentage seed damage (1.73%), number of exit holes (6.33) and weight loss (1.03%) compared to untreated cowpea seed that record 58.00, 54,67, 19.67%, 56.33 and 13.87%, respectively. It was concluded that germination of the treated seeds was not affected negatively. The Pod powder of *P. biglobossa* could be recommended as suitable alternatives to chemical pesticides to be used as contact protectant against *C. maculatus* on stored cowpea seeds.

**Keyword:** *Callobruchus maculatus*, Control, *Parkia biglobossa*, Pod, Spintor Dust, Stem bark.