

**APPLICATION OF NEEM SEED EXTRACT (*Azadirachta indica*)
BOTANICAL INSECTICIDE AGAINST GRAYAK CATERPILLAR
PESTS (*Spodoptera frugiperda*) ON CORN PLANTS**

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ABSTRACT

*The fall armyworm (*Spodoptera frugiperda*) is a major pest of maize capable of causing damage and risking yield losses. Excessive pesticide use negatively impacts the environment, creating a need for alternatives such as botanical insecticides derived from neem seeds (*Azadirachta indica*). This study aimed to determine the effectiveness of various concentrations of neem seed extract on *S. frugiperda* larval mortality, feeding inhibition, infestation intensity, and maize cob weight. A completely randomized design was employed with five concentration levels (0%, 10%, 15%, 20%, and 25%) and four replicates, utilizing the leaf-dip method. Probit analysis indicated that the effective concentrations (LC50 and LC95) of the neem seed extract were 23.53% and 41.68%, respectively. The application of different extract concentrations influenced feeding inhibition in *S. frugiperda* larvae; higher concentrations resulted in lower feed consumption. However, a field trial applying the effective concentration of neem seed extract to maize plants showed no significant effect on reducing the intensity of *S. frugiperda* larval infestation.*

*Keywords: neem seeds, mortality and *Spodoptera frugiperda**