

**Utilization of Golden Conch Shells as Biopesticides in Controlling *Spodoptera frugiperda* Pests on Corn Plants (*Zea mays*)**  
Supervised by Iqbal Erdiansyah, S.P., M.P.

**Novy Dian Loeswindarsih**  
Food Crop Production Technology Study Program  
Agricultural Production Department

**ABSTRACT**

*Spodoptera frugiperda* is one of the main pests of maize. To overcome these pests and reduce the use of synthetic pesticides, it is possible to use biopesticides of golden snail shells containing chitosan resulting from the deacetylation of chitin. This study aims to determine the effect of chitosan biopesticide on *Spodoptera frugiperda* pests. The research was conducted from April to August 2022 in Patemon village, Pakusari sub-district, Jember. The research design in the laboratory used was a non-factorial completely randomized design (CRD) with 5 treatments and 3 replications, 15 experiments were obtained, namely control; 1.5% ; 3% ; 4.5% ; and 6%. The research design in the field used non-parametric by comparing two plots and each of them took 50 samples with a zigzag pattern. The results of the observation that the highest pest mortality occurred at a concentration of 6% which is the highest concentration with a pest mortality value reaching 73%, so that in the field using a concentration of 6% with a dose of 500 liters/ha. The concentration of *Emamectin benzoate* insecticide used in the field was 0.14 gram/liter and the dose was 500 liters/ha. The results showed that the population and intensity of *Spodoptera frugiperda* attack on chitosan treatment with emamectin benzoate had no significant effect. The results of the pest population and the intensity of the attack are directly proportional. The yield data, namely the weight of the cobs from both treatments, showed that it had a significant effect on the yield of the higher chitosan treatment.

**Keywords :** *Spodoptera frugiperda*, Corn, Chitosan, *Emamectin benzoate*