

**A REVIEW ON THE CONTROLLING APPROACH PEST ON THE
DIFFERENCE EFFECTIVENESS BETWEEN BIOLOGICAL
AND CHEMICAL CONTROL OF RHINOCEROS
BEETLE IN OIL PALM PLANTATION**

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Fulfillment of the requirement for the degree of
Bachelor of Science (Hons.) Plantation Technology and Management
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DECLARATION

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ABSTRACT

A REVIEW ON CONTROLLING APPROACH PEST ON THE DIFFERENCE EFFECTIVENESS BETWEEN BIOLOGICAL AND CHEMICAL CONTROL OF RHINOCEROS BEETLE IN OIL PALM PLANTATION

The oil palm tree, *Elaeis guineensis* was originated from West Africa where it grows in the wild and later was developed into an agricultural crop. It is mainly industry that contributes to the Malaysia economy development and introduced as ornamental plant in Malaysia on 1870 (Kalidas, 2012). Palm oil is the most traded oil in the world. According to MPOB in 2011, its exports reached almost 39.04 million tonnes of which Malaysia's share was 46%. However, pest and disease infection can cause losses of oil palm yield. Rhinoceros beetle or *Oryctes rhinoceros* is one of the important pest that must be controlled because it can reduce crop yield in an average 40% to 92% crop loss during the first year of harvesting (Manjeri *et al.*, 2014). This review study was conducted to assess the effectiveness by using chemical and biological control of rhinoceros beetle and which control is mostly use by several companies in oil palm plantation. This paper also done to study the chemical and biological technique used by oil palm plantation's companies in controlling rhinoceros beetle. Based on the results, as compared to chemical and biological control, the most effective way to control the rhinoceros beetle is using biological control but chemical was applied when the population was excessive. The scope of this study by reviewing 50 global and local papers regarding to the title of this project.

Keywords: *Elaeis guineensis*, *Oryctes rhinoceros*, chemical and biological control