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The Potential of Red Palm Weevil Infesting and Destroying Oil Palm Industry in Malaysia

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The red palm weevils (RPW) which have two distinct morphological forms namely the red stripe palm weevil, Rhynchophorus vulneratus and the black spotted palm weevil, Rhynchophorus ferrugineus, are serious pests of palm trees worldwide. Although the taxonomic status of these two species still need to be verified, the R. vulneratus seemed to be local while R. ferrugineus has been recently introduced to Malaysia via the state of Terengganu, Malaysia. The latter has been reported to infest and cause severe damage to the coconut industry in the state and the invasion seemed to be progressing rapidly from the coconut trees along the coastal line (in 2007) to 17 km into the inland (by 2013). Interestingly, the result of our sex pheromone trap shows that its population abundance was very high in the coconut growing areas (80- 90%) and moderately high (40%) in oil palm plantations as compared to R. vulneratus. The question is what are they doing in the oil palm plantation? Do they feed on oil palm but have not yet damaged the palms? To date there has been no report or record of dead oil palm tree due to R. ferrugineus infestation. Our preliminary study on the mating behaviour of both virgin R. vulneratus and R. ferrugineus suggests that the later was significantly more aggressive than the former. R. ferrugineus males took significantly less time to start contacting female and spent less time for copulating compared to R. vulneratus. This behaviour is normally closely related to high reproductive capability and population abundance. As the population increases the competition for food (coconut tree) would be intense and some individuals would evolve to avoid it and shift to less preferred but highly abundant host plants (in this case oil palm). Since the pest seems to be able to multiply quickly there should be concern about its capability to infest and cause economic damage to the oil palm industry. Otherwise the oil palm industry will suffer a similar fate as cocoa whereby pest (cocoa pod borer) and disease are the major contributors of increasing production cost. In terms of cocoa bean production in the world, in the 1980s Malaysia was ranked third but now it is ranked fifteenth. The host shift occurrence from palm to palm is imminent as oil palm is somewhat similar to dates palm and thus it is pertinent that action be taken immediately to curb the spreading of the pest. Oil palm is one of the major contributors to the national revenue. Without interference, it is predicted that the damage to oil palm may be clearly evident in 20-30 years' time. As such, further study on various aspects of ecology, biology and managing the pests must be initiated and control measures put in place without delay. For a start, a nationwide sampling programme must be carried out using the pheromone traps to monitor and where possible reduce the R. ferrugineus population abundance of red palm weevils. This most probably will delay the host shift from occurring as competition is kept low.

Keywords: Red palm weevil, Rhynchophorus, invasive, Terengganu, coconut, oil palm.