

2008

October

Termite Attack on Oil Palm Grown on Peat Soil: Identification of Pest Species and Factors Contributing to the Problem

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*Oil palm grown on peat soil has been reported to be severely attacked by subterranean termites, and this has been thought to be due to the harbouring of the termites in abundant timber residues left behind after the clearing of logged-over peat swamp forests for oil palm cultivation. In this study, oil palm trees and plant residues in plantations established on peat and mineral soils were examined for the presence of termites. The primary termite species capable of killing oil palm trees was *Coptotermes curvignathus* (Rhinotermitidae). Immature palms were killed as a result of feeding damage to the apical meristem at the base of the spear, while mature palms were killed as a result of damage to the trunk, in which the termite sometimes nested. *C. curvignathus* was rarely encountered in timber residues or frond heaps on the plantation floor, suggesting that removal of timber residues would not significantly reduce termite attack on oil palm on peat soils. Two other species of *Coptotermes* found in oil palm trees grown on peat soils were able to form small nests in the trunks of mature palms but did not cause death. Together with *Schedorhinotermes* spp., they primarily infested plant and wood residues. The results also showed that there was a change in the composition of termite species across different soil types. Termitids were dominant in mineral soil sites, while Rhinotermitids dominated deep peat sites. A high population of *C. curvignathus* in the original peat swamp habitat is, therefore, likely to be a major factor contributing to the high incidence of termite attack on oil palm grown on peat soils.*

Keywords: *Coptotermes curvignathus, Isoptera, Rhinotermitidae, termites, peat soil, mineral soil, wood residues, Malaysia.*