



Research project of counterparts funded at UNTAD and Universitas Brawijaya (UB)

Name	Counterpart	Title
Nur Edy	B07	Rot disease caused by Ganoderma in land use change of Sumatra

Background and Method

Ganoderma sp., is a fungal pathogen of plants that causes stem and root rots. It is the most devastating pathogen, capable of infecting and killing most economically important trees and perennial crops including forest, oil palm and rubber trees. OBJECTIVES of the study were to (i) investigate the distribution and disease incidence of stem-rot disease in Jambi, (ii) to collect fungal samples from the infected trees and from control samples, and (iii) to identify the fungal isolates and determine the extent of *Ganoderma* sp. among them.

This research was conducted in the core plots of EFForTS in Jambi. Observations of disease incidence were based on symptom diagnostics. We collected the basidiocarps of *Ganoderma* and identified the morphological and molecular phylogeny of the species.

Results

The basal stem rot disease was highest in the forest sites at both the Harapan and Bukit Duabelas landscape (33-34%), followed by rubber plantations (16-19%) and oil palm plantation (2.7%). A total of 828 fruiting bodies of the fungi (basidiocarps) were obtained from infected forest, oil palm, and rubber trees. Of that number, we found 47 different basidiocarp morphotypes (figure 1). All the basidiocarps collected had basidiomes with different morphological characteristics. They were sessile and bracket shaped, had lactate pilei, and were of a wide range of colors (light brown through black). The basidiome margins were also of different shape, color, and thickness (figure 2).

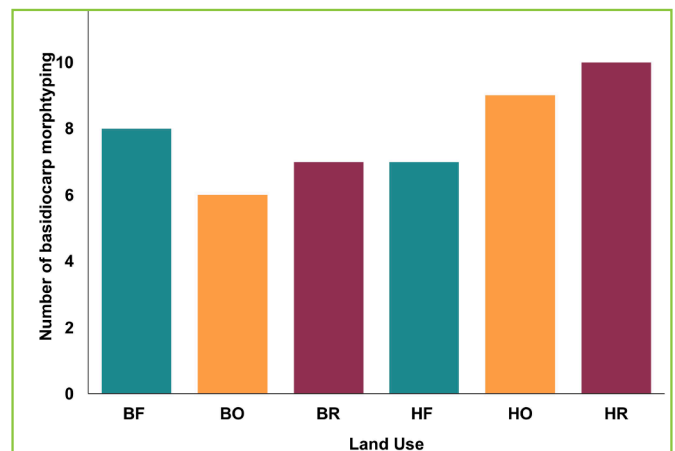


Figure 1. Number of basidiocarp morphotypes in Bukit Dua Belas and Harapan rainforest transformation systems.



Figure 2. Basidiocarp morphotypes collected from the transformation systems of Bukit Duabelas and Harapan rainforest.