

***IN VITRO* MANAGEMENT OF *GANODERMA* BASAL STEM ROT DISEASE  
ON OIL PALM WITH WILD BASIDIOMYCETES FRUITING IN GRASS  
AFTER RAINFALL**

**NURNADIA NATASHA BINTI ZAINAL**

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## DECLARATION

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## ABSTRACT

Oil palm tree (*Elaeis guineensis*) are widely grown in tropical countries especially in Malaysia. The widespread of Basal Stem Rot disease that caused by the *Ganoderma boninense* had been the major problem as it hard to be eliminated and takes years to identify the symptoms. Therefore, the main objective of this studies were to identify wild mushroom species that can inhibit the *Ganoderma* sp. mycelial growth by isolation of fungi that grow in grass, spore and hyphae identification and determining the pathogenicity activity of isolated fungi against *Ganoderma boninense* by using the dual culture method. The fruiting body of *Ganoderma* sp. and different type of wild mushroom were collected and cultured in Potato Dextrose Agar (PDA). The mycelial, hyphae and spore structure of the wild mushroom culture were identified by observing the fungal staining under the microscope. All three wild mushrooms were named by Wild mushroom 1, 2 and 3 as the species name cannot be identified. A five mm diameter of agar disc was taken from each six day-old PDA culture of *Ganoderma* sp. and the wild mushroom 1, 2 and 3. The agar disc culture of *Ganoderma* sp. were placed 4 cm opposite site to each agar disc culture of wild mushroom in fresh potato dextrose agar (PDA) plate. All of the fungus was observed growing for six days to determine the growth inhibition of each wild mushrooms fungus against *Ganoderma* sp. fungus. The result showed that the wild mushroom 3 have the strong pathogenicity with higher percentage of mycelial growth inhibition against *Ganoderma* sp.