

**In vitro and In vivo Biocontrol Performance of *Trichoderma harzianum* Rifai on *Ganoderma boninense* Pat. Related to Pathogenicity on Oil Palm (*Elaeis guineensis* Jacq.)**

**ABSTRACT**

*Ganoderma boninense*, causes basal stem rot disease in oil palm, which leads to severe losses to the palm oil industry. The antagonistic effect of *Trichoderma harzianum* on *G. boninense* (a causal pathogen for oil palm) was tested by in vitro and in vivo studies. *T. harzianum* inhibited the mycelia growth of *G. boninense* on in vitro plate assay experiment and in vivo on the glass house grown oil palm plants. During the in vivo experiment, at first time point after one month, *G. boninense* development was found in oil palm root tissues in control plants whereas in *T. harzianum* treated plants no disease symptoms were observed until at the end of the experiment. It is a broad-spectrum approach to use *T. harzianum* to control *G. boninense* infection of oil palm.