

## **The possible of utilizing environmental friendly and biodegradable chitosan in suppressing Ganoderma infection of oil palm**

### **Abstract**

This paper discusses the possibility to use the environmental friendly and biodegradable chitosan in controlling Ganoderma infection. Research was conducted to determine the suitable concentration of chitosan in suppressing Basal Stem Rot (BSR) in oil palm seedlings caused by Ganoderma. Three different concentrations of chitosan tested were 0.5, 1.0 or 1.5% (w/v). The effectiveness of chitosan was measured through concentration of ergosterol (the fungal sterol) found in oil palm roots, mean percentage of disease severity, percentage of bole tissue infection and possible isolation of Ganoderma on Ganoderma Selective Medium (GSM). Results showed that the minimum concentration of chitosan; 0.5% (w/v) suppress the fungal sterol to the lowest and scored the lowest mean disease severity percentage in comparison to other concentrations. However, there was no significant difference shown between the concentrations for bole tissue infection as no infection was noted. Ganoderma was successfully isolated from seedlings roots of all treatments except healthy control using GSM.