

***Ganoderma lucidum*-treated oil palm empty fruit bunch (OPEFB): a potential feedstuff for Goats**

ABSTRACT

The digestibility and rumen fermentation characteristics in goats fed with biologically pretreated oil palm empty fruit bunch (OPEFB) with *Ganoderma lucidum* as total mixed ration (TMR) were evaluated in this study. OPEFB biologically pretreated with *G. lucidum* for 12 weeks of solid-state fermentation (SSF) period were formulated as TMR in an animal feeding trial giving treatments to T1: Basal diet (Control); T2: Basal diet with 25% replacement of grass with untreated OPEFB; and T3: Basal diet with 25% replacement of grass with treated OPEFB. This delignification on the treated OPEFB indicated break down of lignin content and becomes more digestible for ruminant consumption. The feeding of T1, T2 and T3 shown significant difference ($p < 0.05$) in acid detergent lignin digestibility (ADLD) and total bacterial count. T2 had higher lignin content, lower ADLD and lower bacterial population compared to T1 and T3. It is postulated that the high lignin content and lower ADLD in T2 negatively affected bacterial growth, while T1 and T3 were comparable. Consequently, OPEFB treated with *G. lucidum* can be used as a replacement for grass as roughage source in TMR, without causing negative effects on the animal's digestion.