

ABSTRACT

Dahlan, Dwi Nur Aini. 2011. Evaluation of Potential Waste Fiber of *Borassus flabellifer* L. fermented EM-4 as the Cattle Feeding Broiler By In-Vitro. Thesis Department of Biology, Faculty of Science and Technology, State Islamic University (UIN) Malang Maulana Malik Ibrahim. Mentors I: Dra. Retno Susilowati, M.Sc. Supervising II: A. Nasichuddin, M.A.

Key words: Ruminants, Siwalan, proximate analysis, digestibility of dry matter (DM) of organic material (BO), the value of TDN.

Production of beef cattle that have an impact on the domestic meat demand is largely determined by meeting the needs of feed, but are often constrained by continuity and the cost of feed. Fiber of *Borassus flabellifer* L. has a fairly good nutrition can be used as an alternative feed. coco palm is fermented in advance by using the EM-4 so that the better nutritional content. The potential fiber of *Borassus flabellifer* L as cattle feed can be determined by measuring the nutritional content, digestibility and TDN values in vitro. This study aims to determine the effect of fermented fiber of *Borassus flabellifer* L EM-4 on the nutritional content (BK, BO, PK, SK and LK), digestibility (BK and BO), and the total value of digestibility (TDN) in cattle in vitro.

This is experimental quantitative research using Completely Randomized Design (CRD) with 5 treatments and 3 replications. Treatment levels are distinguished by the use of EM-4 as a fermenter fiber of *Borassus flabellifer* L. as much as 0% (P0), 0.1% (P1), 0.5% (P2), 1% (P3), and 5% (P4). Parameters observed include nutrition, among others, dry matter (DM), organic matter (BO), crude protein (PK), crude fiber (SK) and crude fat (LK) with instructions AOAC (1980), digestibility (BK and BO) TDN value Fiber of *Borassus flabellifer* L. in accordance with the methods used by Tilley and Terry (1963). To determine the influence, proximate analysis data calculation results, digestibility and TDN values were analyzed using One Way Anova statistics, if there are any real influence continued with the Smallest Real Difference test (LSD) 5%.

The results showed that the use fiber of *Borassus flabellifer* L. waste significant effect ($P < 0.05$) on the nutrient content (BK, BO, PK, SK, and LK), digestibility (BK and BO) and the value of TDN. Average use of EM-4 in a 1% fiber of *Borassus flabellifer* L. is to improve the nutrient content (BK, BO, PK, SK and LK), can increase the digestibility (BK and BO) and can also increase the value of TDN fiber of *Borassus flabellifer* L..