

## ABSTRACT

### QUALITY IMPROVING OF PALM KERNEL MEAL BY GIVING RUMEN ENZYMES AND FERMENTATION ON BEST TILAPIA (*Oreochromis niloticus*) FEED

By

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An important factor on tilapia aquaculture (*Oreochromis niloticus*) is the availability of food in sufficient quantity, unfortunately soybean meal and fish oil as feed ingredients are imported. Alternative feedstuffs needed to solve the problem of limited soybean meal. Indonesia is the largest producer of palm oil by-product called palm kernel meal (PKM). The study was conducted to determine the effect of the addition of rumen enzyme and fermentation on nutrient digestibility determine the level of PKM and PKM as a feed ingredient for tilapia growth. This research used completely randomized design with 7 treatments and 3 replications. BEST<sup>®</sup> tilapia with total weight of  $23.83 \pm 1.39$  g / fish were used. Data were analyzed using analysis of variance (ANOVA) and followed by Duncan test. The study shows that the use of BIS fermented with rumen enzymes and *Trichoderma reesei* provide the best nutrition and digestibility compared to other treatments. Nutrient content and digestibility of the resulting was total digestibility (58%), protein (83.73%), carbohydrate (65.46%) dan energy (77.77%).

**Keywords:** *BEST tilapia, digestibility, fermentation, palm kernel meal, rumen enzymes*