ABSTRACT

FERI KURNIAWATI. Digestibility Enhancement of Cassava Peel *Manihot utilissima* after Immersion in NaOH, Mold Fermentation, and Bacteria Fermentation as Feed Raw Material for Nile Tilapia *Oreochromis niloticus*. Supervised by MIA SETIAWATI and MULYASARI.

This research aimed to determine digestibility enhancement of cassava peel *Manihot utilissima* after immersion in 3% NaOH for 3 days, 10% combined mold fermentation *Trichoderma viride* and *Phanerochaete chrysosporium* for 7 days, and 15% fermentation of *Bacillus megaterium* for 5 days as feed raw material for Nile tilapia. Test diet of digestibility Nile tilapia was carried out by mixing 30% cassava peel with 70% reference diet. Nile tilapia was used as an object in this research with an average weight of 16.62±0.03 gram. The object was conditioned for 28 days with a density of 10 fish/aquarium. Feeding done twice a day with satiation and feces collection was began day of sixth. The result of this research showed that 3% NaOH immersion, combination of mold fermentation and bacteria fermentation gives a significantly different effect of control (P<0.05) and was improved about 5%, 15%, and 10% of protein digestibility, 20%, 18%, and 16% of energy digestibility, and 174%, 151%, and 164% of material digestibility. The treatment for cassava peel are 10% combined fermentation of mold showed the best of digestibility so potentially as feed raw material for Nile tilapia.

Keywords: Nile tilapia, cassava peel, NaOH, mold, bacteria, digestibility