

## **ABSTRACT**

*Total of citizen in Indonesia is growing as much as human needs of vegetables especially mustard. Productivity of mustard in Indonesia decrease during 2008 to 2012 with a total of 103.6 tonnes, 99.8 tonnes, 98.2 tonnes and 97.4 tonnes per hectare. For this reason, it is important to conduct a research cultivation of high productivity mustard by using NFT hydroponic system. Hydroponic cultivation needs nutrition to support the growth of mustard.*

*A research aims to determine the effectiveness of vermicompost lack tofu and chicken bones meal as organic nutrition to substitute commercial nutrition on hydroponic cultivation of mustard plant by using NFT system. This research was conducted in Green House of Universitas Muhammadiyah Yogyakarta in Mei 2017 to July 2017. Randomized complete block design is used as a method of this research with single factor experimental design that consists of 4 nutrition treatments (anorganic commercial nutrition, organic commercial nutrition, nutrition of vermicompost + ZA and nutrition of vermicompost). Every treatment was replicated three times, each treatment consist of 14 samples. The result of the research showed that vermicompost lactofu and chicken bones meal as an organic nutrition for hydroponic results a better growth than organic commercial nutrition, as shown by parameters the height of the plant, the total of leaves, the width of leaves, fresh weight of plant, dry weight of plant, length of root, weight of fresh root, weight of dry root, NAR and CGR are 28,5 cm, 9,5, 590,7 cm, 30,26 gram, 1,84 gram, 34, 99 cm, 3,80 gram, 90,35 gram, 0,00039 g/cm<sup>2</sup>/10days, 0,00098 g/cm<sup>2</sup>/10days respectively.*

**Key Words:** *Mustard, vermicompost, hydroponic NFT system, lacktofu, chicken bones meal*