

## **ABSTRACT**

*The research was conducted to understand the effect of various forage on the composting process of water hyacinth and to determine the best mixture of forage and water hyacinth compost to improve the growth and production of lettuce. The study was carried out from Desember 2015 through April 2016 at the Greenhouse and Soil Laboratory of Faculty of Agriculture, Universitas Muhammadiyah Yogyakarta.*

*This research was designed using Completely Randomized Design (CRD) in two phases. Phase 1 is composting the water hyacinth with 4 variant of forage and phase 2 is applicating the mixture of forage and water hyacinth compost to the lettuce.*

*The result showed that the addition of various forage and cow manure on water hyacinth had no significant in accelerate the composting process. Moreover, the best mixture application in improving the growth and production of lettuce is gamal and water hyacinth compost mixture.*

**Keywords:** *Water Hyacinth, Composting, Forage and Lettuce*