

Jaenal Abidin. The Study *Laundry* Waste Utilization for the Cultivation of Azolla and Their Impact to Increasing the Quality of Waste. Under The Guidance Dr. Ir. Yanisworo WR., MSi and Ir. Lanjar Sudarto, MP.

ABSTRACT

This research aims to know the impact of waste levels of *Laundry* on the growth of Azolla plants, impact of levels Phosphate absorption of *Laundry* on Azolla plants and impact of Azolla plants to increase the quality of *Laundry* waste. This research was done in a garden experiment the Faculty of Agriculture UPN Veteran, Yogyakarta. This research was done on August 2014 untill October 2014. Research represent used Completely Randomized Block Design consists of two factors. First, dilution waste of *Laundry* which is that 0% (D0), 30% (D1), 60% (D2) and 100% (D3), and last the addition of fertilizer sp-36, with dose 0 gram (P1). 2,4 gram (P2), 4,8 gram (P3). The research covering the parameters of the content chemical waste *Laundry* and planting media content which includes waste phosphate (mg/L), BOD (mg/L), Detergen (mg/L), and pH growing media. And growth of the parameters which includes a heavy wetness Azolla (gram), dry weight of Azolla (gram), and Phosphate of absorption (%). The research result show that there is interaction between dilution *Laundry* waste and the addition of fertilizer sp-36 in phosphate absorption parameters, a combination of treatment d2p3 (dilution waste 60% and addition of fertilizer sp-36 4,8 grams) shows the result of the most better than the combination treatment another. *Laundry* waste levels affect the growth of Azolla, growth levels of Azolla on waste 30% does not appear to have markedly dissimilar to growth of Azolla on level waste 0% (zero waste) however, about 60% the rate for the negative effect on growth Azolla, even in levels waste 100% Azolla happened death on second week. This research can apparently increase the quality of waste, proved to the decrease in the water pH, BOD, phosphate and detergent on waste levels 0%, 30%, and 60% after was planted the Azolla, but Azolla dying at the rate of 100% waste.

Keywords : Waste *Laundry*, Azolla, SP-36