

ABSTRAK

Arista, Molik Widaning. 2013. **Effect of Lime and Manure On Land Latosol on growth of Jatropha Plants Seeds (*jatropha curcas* L).** Thesis. Department of Biology, Faculty of Science and Technology of the State Islamic University of Maulana Malik Ibrahim Malang.

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Government is promoting jatropha cultivation is considered as an alternative energy source that important to biodiesel feedstock. One area that is widely used is latosols land, because the land is a land latosols very wide spread in Indonesia. Latosols land use constraints are high soil acidity and have a low nutrient content. Attempt to overcome soil acidity and liming is to improve the soil fertility by fertilizing. The purpose of this study was to investigate the effect of lime dose and goat manure, and to determine dose combination of lime and manure to provide the best growth of jatropha on land latosols.

In this study, the research uses a Completely Randomized Design (CRD) with two treatment factors, the first factor is composed of lime dose $K_0 = 0$ tonnes / ha, $K_1 = 2$ tons / ha, $K_2 = 4$ tons / ha, and $K_3 = 6$ tons / ha, while the second factor is the dose of goat manure consists of $P_0 = 0$ tonnes / ha, $P_1 = 10$ tonnes / ha, $P_2 = 20$ tonnes / ha, and $P_3 = 30$ tonnes / ha. Each treatment combination was repeated three times. Growth variables measured include plant height, leaf number, and dry weight. Data were analyzed by ANOVA, when there is a significant difference test further treatment DMRT 5% significance level.

From the results of research that can be concluded that both treatment doses of lime and manure doses showed significant effect on growth, visible from variable plant height, leaf number, and dry weight of *Jatropha*. Of lime with a dose of 2 tons / ha in combination with goat manure 30 tonnes / ha gave the highest growth of *Jatropha* seeds.

Keywords: Lime, Goat Manure, Soil Latosol, *Jatropha* Seeds