Ainun Masfufah. 2012. Effect of Biofertilizer on Various Doses and Growing Media Against Different Plant Growth and Productivity of Tomato (*Lycopersicon esculentum*). This was under the direction of Drs. Agus Supriyanto, M. Kes. and Dr. Ir. Tini Surtiningsih, DEA, Biology Course, Department of Biology, Faculty of Science and Technology, Airlangga University, Surabaya

ABSTRACT

This study aims to determine the effect of dose biofertilizer, the influence of growing media, and the influence of the combinations of biofertilizer dose and growing media on growth and productivity of tomato plants. The study used a completely randomized design factorial 2x5 pattern was repeated 3 times. The first factor is the fertilizer dose (D) which consisted of D_0 = no fertilizer, Da = NPK fertilizer dose 10 g/plant, D_5 = biofertilizer dose 5 ml/plant, D_{10} = biofertilizer dose 10 ml/plant, and D_{15} = biofertilizer dose 15 ml/plant. The second factor is the growing medium (M) which consists of M_1 (soil) and M_2 (soil:compost = 1:1). The variable of observation consists of plant height (cm), leaf number (strand), tomato fruit number per plant (fruit), and tomato fruit weight (g). Analysis of the data used by Two- way ANOVA and Independent Sample T-Test. The results of statistical analysis show that the biofertilizer dose affect on plant height, but had no effect on leaf number, tomato fruit number per plant, and tomato fruit weight. Whereas. The growing media is also effect on leaf number and tomato fruit weight, but had no effect on plant height and tomato fruit number per plant. However, the combination of biofertilizer dose and growing media had no effect on any response to the growth and productivity of tomato plants. Biofertilizer dose 10 ml/plant showed the best result compared with other treatments on plant height, and the soil growing medium showed better result on leaf number and tomato fruit weight.

Keywords: Biofertilizer, doses, growing media, tomato plants (*Lycopersicon esculentum*).