

## SUMMARY

Double inflorescens ambon banana plant become a new collection and still develop in SHG (Seed Horticulture Garden) Salaman area on June 2017 and farmers did not cultivate yet. Atonic is one of plant growth regulator that widely used by farmers to increase the root growth or stem growth of banana plant. The aims of this research are to know the effect of atonic as plant growth regulator and variation of medium composition on the growth of double inflorescens ambon banana plant and to know the best medium composition and the best atonic concentration on the growth of double inflorescens ambon banana plant. The experimental design that was used in this research is Completely Randomized Design (CRD) with factorial as treatment pattern. First factor was atonic concentration, there were A0 (0 ppm), A1 (2 ppm), A2 (4 ppm), and A3 (6 ppm), and the second factor was medium composition, there were M1 = compost : sand : charcoal husk (1 : 1 : 1), M2 = compost: soil (1 : 1). There were 8 treatment combinations, each treatment repeated 3 times. The variables observed in this research were the growth of ambon banana plant and the parameters were addition of plant height, addition of leaf amount and chlorophyll content. Data analyzed by using Analysis of Variance. If there is a significant effect then continued by LSD test.

This research result showed that interaction between medium composition and atonic concentration was no significant effect on all parameters. The medium composition shows the significant effect only on the addition of plant height. Atonic concentration was no significant effect. The best medium for double inflorescens ambon banana plant growth was M1 (compost: sand: charcoal husk, 1: 1: 1), and 2 ppm concentration of atonic showed the best effect on plant height addition and addition of leaf amount except chlorophyll content.

**Keywords :** plant growth regulator, atonic, double inflorescens ambon banana plant.