ABSTRACT

Grammatophyllum speciosum is the largest orchid ever. This plant grow as an epiphyte plant on the trees in the forest. The natural breeding Grammatophyllum speciosum are very slow and become rare. Therefore, the techniques that can reproduce the orchid buds in a short time, with significant amounts and no disease is needed to be done. The purpose of this research was to determine the effect and the best concentration of rice extract and BAP for the multiplication of Grammatophyllum speciosum buds. The research was conducted in the In Vitro Laboratory, Faculty of Agriculture, Universitas Muhammadiyah Yogyakarta from November 2015 to April 2016.

The research used a single factor which arranged in Completely Randomized Design (CRD). The treatments consist of aquadest + 0,5 mg/l BAP, 25% rice extract + 0,5 mg/l BAP, 50% rice extract + 0,5 mg/l BAP, 75% rice extract + 0,5 mg/l BAP, 100% rice extract + 0,5 mg/l BAP, aquadest + 1 mg/l BAP, 25% rice extract + 1 mg/l BAP, 50% rice extract + 1 mg/l BAP, 75% rice extract + 1 mg/l BAP dan 100% rice extract + 1 mg/l BAP. Each treatment has 10 replication. The data were analyzed by using The Analysis of Variance and followed by The Duncan Multiple Range Test (DMRT) at α=5%.

The results of this research showed that the various concentrations of the rice extract and BAP were able to multiply the orchid bud and affect the growth of orchid root length. The use of 75% rice extract + 1 mg / l BAP on ½ MS medium was the best concentration for orchid multiplication.

Keyword : White Rice, BAP, Grammatophyllum speciosum.