ABSTRACT

EFFECT OF FERTILIZER AND CONCENTRATION BENZYLADENINE (BA) ON THE GROWTH AND FLOWERING OF ORCHID HYBRID *DENDROBIUM*

By:

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Dendrobium as ornamental plants that are used as cut flowers, potted plants, wreaths, garden ornament has a high economic value (due to the type, beauty, shape, texture, flower size, and rarity), has a broad market opportunities, sources of germplasm as mains to cross in order to get new varieties, and to cultivate them do not require large tracts of land. to get orchid production which is reached with good cultivation, one of them is by using fertilizers and growth regulators (PGR) to obtain growth and good flowering of orchids.

This study was conducted to answer the following questions: (1) Which type of foliar fertilizer that can generate the best response to the growth and flowering of orchid *Dendrobium*, (2) how the effect of benzyladenine (BA) on the growth and flowering of orchid *Dendrobium*, (3) whether there is an interaction between foliar fertilizers and provision of benzyladenine (BA) to influence the growth and flowering of orchid *Dendrobium*.

The research conducted in the greenhouse, Faculty of Agriculture, University of Lampung from January to June 2014. The experiments were carried out with a complete randomized block design with three replications. The treatments arranged in factorial (2x5). The first factor of 2 types of fertilizers, was (NPK 20-15-15) and (NPK 10-40-15). The second factor is the various concentrations of benzyladenine (BA) are: 0, 100, 200, 300, and 400 mg/l. based on data and discussion of experimental results that have been raised, it can be concluded as follows:

Gandasil fertilizer (NPK 20-15-15) and Hyponex (NPK 10-40-15), had no effect on the growth and flowering of plants Dendrobium hybrids indicated by a variable percentage of plants to germinate, the number of new shoots, the height of new shoots, the increase of leaf pseudo stem diameter, and the percentage of flowering plants. Application of benzyladenine (BA) on the concentration of 100-400 mg / l, can stimulate flowering orchid hybrid *Dendrobium*, which is indicated by an increase in the percentage of flowering from 60.50 to 64.83%. Application of benzyladenine (BA) on the concentration of 100-400 mg / l had no effect on the percentage of ornamental plants whis have new sprout, and the number and the height of new shoots.

There is no interaction between the two types of NPK (20-15-15 and 10-40-15), with concentrations of benzyladenine (BA) in influencing all observed variables.

Keywords: *Dendrobium*, Two kinds of completed fertelizers, Benzyladenine, flowering