Growth Response of Dendrobium sp. Orchid Seeds Regarding the Various Frequency of Compound Leaf Fertilizer Application in the Acclimatization Stage. *Supervisor:* Netty Ermawati, S.P., Ph.D.

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ABSTRACT

The floriculture business in Indonesia, Dendrobium orchids, is growing rapidly. Orchid seedlings from in-vitro propagation require an adjustment stage to the new environmental stress (acclimatization stage) before they will eventually be planted as potted seedlings. One of the factors for the success of in-vitro culture is the use of fertilizer with the right frequency of application. The study aimed to determine the growth response of Dendrobium sp. orchid seedlings to various spraying frequencies as well as the most effective of each spraying frequency that provides the best growth for Dendrobium sp. seedlings at the acclimatization stage. The research was conducted from January 2022 to April 2022. The design used was non-factorial RAL, with treatments F1 (once every 5 days), F2 (once every 10 days) and F3 (once every 15 days). Data were analyzed using the F test (ANOVA). Based on the results of the study, it can be concluded that the frequency of application of NPK foliar fertilizer gives no significant effect on the parameters in the study, including the increase in plant height, increase in number of leaves, increase in leaf length, and increase in leaf width at all times of the study. The F1 treatment (once every 5 days) gave the highest increase in plant height, increase in number of leaves, increase in leaf length, and increase in leaf width. So it can be concluded that the F1 treatment (once every 5 days) is the best frequency of spraying compound foliar fertilizer for orchid plants Dendrobium sp.

Keywords: *Dendrobium sp. orchid, in vitro, application frequency*