

Aplikasi Beberapa Konsentrasi Benzyl Amino Purine (BAP) dan Naftalena Asam Asetat (NAA) terhadap Pertumbuhan Bibit Pisang Cavendish (*Musa Acuminata* L.) Secara *In Vitro*. (*Application of Several Concentrations of Benzyl Amino Purine (BAP) and Naphthalene Acetic Acid (NAA) on the Growth of Cavendish Banana (*Musa acuminata* (L)) Seedlings In Vitro*)
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ABSTRACT

Bananas are one of the types of fruit with a high level of consumer demand and a significant contribution to export value. One type of banana in question is the Cavendish banana. The high market demand for this fruit makes large-scale plant development using high-quality planting material a factor for successful production. The current problem is the insufficient availability of seedlings, as banana plants can conventionally only produce 5-10 suckers per year and are prone to Panama disease caused by soil-borne pathogens. Thus, obtaining seedlings through tissue culture becomes the best solution. This study aims to determine the effect of the application of growth regulators BAP and NAA on the growth of Cavendish banana seedlings. The research was conducted at the Tissue Culture Laboratory of the Jember State Polytechnic in Summersari District, Jember Regency, from August to November 2024, using 2 factors, namely BAP and NAA, each consisting of 3 levels, BAP (1, 3, and 5 ppm) and NAA (0.5, 1, and 1.5 ppm), which were then combined and repeated 3 times. The observed data were analyzed using the DMRT 5% test method if the results showed a significant difference. The results of this study indicate that the application of BAP and NAA growth regulators significantly affects the growth of Cavendish banana seedlings. The best results for the parameters of the number of shoots, explant height, and explant survival percentage were obtained from the interaction treatment of 1 ppm BAP and 1.5 ppm NAA, while the best time for shoot emergence was in the interaction treatment of 3 ppm BAP and 1 ppm NAA. The best parameter for the number of new leaves formed was in the interaction treatment of 5 ppm BAP and 1 ppm NAA.

Keywords: *Cavendish Banana, BAP, NAA*