

Combination of Naphthalene Acetic Acid (NAA) and Kinetin in Callus subculture of Porang Plants (*Amorphophallus muelleri* Blume) In-vitro
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ABSTRACT

*Porang is a shrub that grows abundantly in forests and is one of the biological riches of tubers. To produce quality and uniform porang plants, efforts are needed through alternative techniques, namely in-vitro culture. This research aims to determine the effect of the combination of Naphthalene Acetic Acid (NAA) and Kinetin on the results of callus subculture of porang plants (*Amorphophallus muelleri* Blume) using in-vitro techniques. This research was carried out from August to December 2023 at the Jember State Polytechnic Tissue Culture Laboratory, using a 2-factor Completely Randomized Design (CRD), namely the addition of various concentrations of NAA (3 levels) and Kinetin (3 levels) which resulted in 9 treatment combinations with 3 replications. The observation parameters observed were the number of callus explants that grew roots, the number of explants that formed new callus, the percentage of live callus, the percentage of dead callus. The data obtained in the Analysis of Variant was then further tested by DMRT with a significance level of 1% or 5%. The results obtained were that the effect of the combination of NAA and Kinetin had a very significant effect on the growth of porang roots with the best combination being N3K3 (NAA 1.5 mg/l and Kinetin 2.5 mg/l) and N2K2 (NAA 1 mg/l and Kinetin 2 mg/l). It has a very significant effect on the growth of new callus and the percentage of subculture of live callus explants is 88.35% producing porang plantlets, namely N1K1 (NAA 0.5 mg/l and kinetin 1.5 mg/l), N1K3 (NAA 0.5 mg/l and kinetin 2.5 mg/l), N2K2 (NAA 1 mg/l and kinetin 2 mg/l, N2K3 (NAA 1 mg/l and kinetin 2.5 mg/l), N3K3 (NAA 1, 5 mg/l and kinetin 2.5 mg/l).*

Key Words: NAA, Kinetin, *In-Vitro*, Porang.