Effect of ZPT NAA (*Naphthalene acetic acid*) and BAP (*6-Benzyl amino purine)* on the Growth of Porang (*Amorphophallus muelleri* Blume.) In Vitro
Supervisor Rudi Wardana, S.Pd., M.Si.

Siti Afivatul Arifah
Food Crop Production Technology Study Program
Department of Agricultural Production

ABSTRACT

The tissue culture technique is one of the propagation techniques by growing plant parts such as leaves, cells, buds, and protoplasts, then growing on an aseptic artificial medium enriched with nutrients and growth regulators. This study aims to determine the effect of ZPT NAA and BAP administration on the induction of porang buds. This research was carried out from August to December 2022 at the Network Culture Laboratory of the Jember State Polytechnic, using the Parametric Statistics method consisting of 2 treatments and 10 tests so that there were 20 units of culture bottles. Treatment included 0.5 mg/l NAA + 1.5 mg/l BAP and 0.5 mg/l NAA + 2.5 mg/l BAP. The observed observation parameters are the time of appearance of the callus, the texture of the callus, the diameter of the callus, the number of roots, and the time of emergence of buds. The data obtained were analyzed using SPSS software, then tested with Parametric Test using Independent Sample T-Test with a significance level of 5%, for callus quality parameters tested with qualitative tests using Chi-Square Test 2 Unpaired Samples with a significance level of 5%. The results obtained the effect of giving ZPT NAA and BAP on the treatment of 0.5 mg / l NAA + 1.5 mg / l BAP and 0.5 mg / l NAA + 2.5 mg / l BAP gave unreal effects on callus diameter and root count at week 8. Furthermore, at the time of emergence of callus (46 HST) at the treatment of 0.5 mg / l NAA + 2.5 mg / l BAP and the number of roots at week 16 (18 pieces) at the treatment of 0.5 mg / l NAA + 1.5 mg / l BAP gave significantly different results based on the Parametric Independent Sample T-Test with a significance level of 5%. For callus quality, texture indicators give influential results while callus color has no effect based on the qualitative chi-squared test of 2 unpaired samples with a significance level of 5%.

Keywords: *BAP, Callus, NAA, Tissue Culture.*