

# **The Effect Of Several Concentrations of ZPT BAP and GA3 On The Regeneration Of Rice Shoots (*Oryza sativa* L.) Of The Paketih Variety**

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## **ABSTRACT**

Rice The Paketih variety is an indica species that is difficult to regenerate compared to the japonica species. To achieve a high success rate in shoot regeneration, it is necessary to optimize the concentration of growth regulators. This study aims to determine the effect of several concentrations of BAP and GA3 growth regulators on rice shoot regeneration. The study was conducted at the Jember State Polytechnic Jember from September to December 2025. The experimental design used a factorial RAL with two factors: BAP (6-Benzyl Amino Purine) and GA3 (Gibberellic Acid), each factor consisting of three levels, resulting in nine treatment combinations. The first factor was the concentration of BAP at concentrations of 1 mg/l; 1.5 mg/l; 2 mg/l. The second factor was the concentration of GA3 at concentrations of 0 mg/l; 0.5 mg/l; 1 mg/l. The observed variables were callus quality, callus diameter (mm), callus weight (g), time of shoot emergence, number of shoots, and shoot height (cm). The results showed that BAP alone had an optimal effect on callus diameter and weight, with the best concentration being 2 mg/l, which produced a diameter of 8.11 and a weight of 0.107. GA3 alone had no significant effect on callus diameter and weight. The interaction between BAP and GA3 had no significant effect on callus diameter and weight.

**Keywords:** *Indica, ZPT, Regeneration*