

## ABSTRACT

*NENTI ROFIAH HASANAH, 2024. THE EFFECT OF GROWTH REGULATORY AGENTS Benzyl Amino Purine (BAP) and Naphthalene Acetic Acid (NAA) ON THE GROWTH OF TALAS BENENG'S CALLUS (Xanthosoma undipes K. Koch) THROUGH IN VITRO CULTURE. Department of Biology Education, Faculty of Teacher Training and Education, Siliwangi University, Tasikmalaya.*

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Talas Beneng (*Xanthosoma undipes* K. Koch) is a potential plant for industrial needs to export. One of the ways to cultivate Talas Beneng is in Mandala Buleud, Sariwangi District, Tasikmalaya Regency. Talas Beneng leaves (*Xanthosoma undipes* K. Koch) are the main part that is widely used. This research aims to determine the effect of the growth regulators Benzyl Amino Purine (BAP) and Naphthalene Acetic Acid (NAA) on the growth of Talas Beneng callus (*Xanthosoma undipes* K. Koch) through in vitro culture. This research used a factorial Completely Randomized Design (CRD) method with 9 treatment combinations and 4 repetitions. Observation of callus growth was carried out every 2 days in 1 week with the main parameters being the growth of the explant forming a callus, the time the callus appeared, the callus growth phase, and the percentage of live explants. Supporting parameters are callus morphology including texture and color observed at the end of the study. Observation data was analyzed using the Kruskal-Wallis Test with the help of SPSS software. The results showed that the concentration of BAP and NAA growth regulators affected the explant growth phase at 2 weeks after planting (WAP) with a significance value of  $0.048 < 0.05$ , at 3 WAP with a significance value of  $0.046 < 0.05$ , at 6 WAP with the significance value is  $0.038 < 0.05$ , at 7 WAP with a significance value of  $0.035 < 0.05$  and 8 WAP with a significance value of  $0.045 < 0.05$ . The optimum concentration is B2N2 (BAP; 1 ml, NAA; 1 ml) with the fastest growth response in terms of explant growth parameters forming callus, time to callus appearance, callus phase, and forming brownish white crumb callus.

Keywords: Talas Beneng, BAP, NAA, Callus