The Effectiveness of the Using BAP on the Growth of Peanut Shoots (Arachis hyppogaea L.) by In-Vitro

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ABSTRACTS

Low production of peanut can be caused by the lack of availability of high quality peanut seeds and the reduction of land area that can resulting in the peanuts production being met throught by import. One of the efforts to obtain high-quality peanut seeds can be done by in vitro plant propagation techniques or tissue culture. In supporting the success of shoot induction, it is necessary to have growth regulators of the cytokinin group. BAP is one of the growth regulators of the cytokinin group which has a physiological role to encourage cell division, so that the addition of BAP into the media can stimulate the formation of multiple shoots. This research aimed to determine the effectiveness of using BAP on the peanut shoots induction (Arachis Hypogaea L.) by In-Vitro. This research was conducted at the Tissue Culture Laboratory, Jember State Polytechnic. The time of the study was carried out from August to November 2021. This study was designed using a non-factorial Completely Randomized Design (CRD) with 6 treatments and 4 replications. Observational data were analyzed using ANOVA and DMRT at 5% level. The results of the study giving BAP a significant effect on the treatment of 0.2 mg/l BAP on the parameters of the early emergence of shoots with an average emergence of 7 DAP. The fastest emergence of shoots was found in the treatment with a concentration of 0.2 mg/l BAP. Treatment of 0.2 mg/l BAP was also able to induce 4.3 roots with a length of 7.6 cm. It is suspected that the administration of BAP in small concentrations can induce rooting in peanuts in vitro.

Keywords: *BAP, In-Vitro, Peanut*