

**Effectivity of BAP (*Benzil Amino Purine*) Concentration and Photoperiode on
In Vitro Growth of Potato Shoot-Bud (*Solanum tuberosum* L.)
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ABSTRACT

Potatoes (*Solanum tuberosum* L.) is one of food sources from tubers. But, availability of potato seeds is lower because it is susceptible to pests and diseases, so an alternative is needed to produce disease free seeds. The aim of this research to know concentration of BAP and photoperiode in order to produce potato buds with many number of shoots, short internodes, large stem diameter, and can adapt when acclimatized. This research was conducted at Tissue Culture Laboratory, State Polytechnic of Jember from September to Desember 2018. This study uses a Randomize Complete Design (RCD) with 2 factors, 12 treatment combinations and 3 replications. First factor was BAP consists of four levels (1; 1,5; 2; and 2,5 ppm). Second factor was photoperiode with time setting (12; 16; and 20 hours). Data were analyzed by using Analysis of Variance, and further tested using DMRT 5% and 1%. The result showed that 2,5 ppm concentration of BAP give the best concentration for shoot lenght and number of shoots. Using 20 hours photoperiode stem diameter become larger and shorter internode.

Keywords : *BAP, Photoperiode, Growth, Potato Buds*