

ABSTRACT

Potato (*Solanum tuberosum* L.) are a food crop and one of the tuberous vegetable commodities that is rich in nutrients and have high economic value. The problem in potato cultivation is that the seeds currently in circulation are of low quality because farmers still use seeds from the previous harvest. Plant tissue culture can be a solution because it is a propagation method that is carried out to produce many and quality seeds in a relatively short time. This research aimed to get the best concentration of IAA and BAP in the propagation of Granola potato plants *in vitro*. This research used was a two-factor completely randomized design (CRD) with 10 replicatins of the combination treatment. The first factor was IAA concentration consisted of 3 levels I0 (0,00 mg/L), I1 (0,25 mg/L), and I2 (0,50 mg/L). The second factor was BAP concentration consisted of 3 levels B0 (0,00 mg/L), B1 (0,75 mg/L), B2 (1,50 mg/L). The results showed that the treatment of IAA concentration had an effect on granola potato micro cuttings *in vitro*. This can be seen in the variable of shoot growth time, shoot growth percentage 1 weeks after planting, the number of shoots 1 and 3 weeks after planting, the number of leaves 2-8 weeks after planting, the number of roots and root length. The best treatment was obtained in the treatment of IAA concentration of 0,25 mg/L. BAP treatment affected the shoot height, number of leaves 2-8 weeks after planting, root growth time and root length. The best treatment was obtained in the treatment of BAP 0,00 mg/L (without BAP). There was an interaction between the treatment of IAA and BAP concentrations on Granola potato micro cuttings *in vitro*. This should be seen in the variables of the shoot grworth percentage 1 weeks after planting and the number of shoots at 1 week after planting. The best treatment was obtained in the treatment combination of IAA 0,25 mg/L and BAP 0,75 mg/L.

Keywords: auxin, cytokinin, concentration, hormone, propagation.