ABSTRACT

Patchouli (*Pogostemon cablin* Benth.) is an essential oil-producing plant that is widely used in various industrial sectors. Aceh Patchouli has a problem in its propagation because Aceh patchouli plants are difficult to flower so do not have seeds as a generative breeding organ. Plant tissue culture can be a solution because it is a propagation method that is carried out to obtain many and quality seeds in a relatively short time. This research aimed to obtain the best concentration of shallot bulb juice and BAP in the propagation of aceh patchouli plants *in vitro*. This research used was two-factor Randomized Block Design (RBD) with 10 replicates of the combination treatment. The first factor is the concentration of shallot bulb juice consisted of 3 levels A0 (0 g/L), A1 (20 g/L), and A2 (40 g/L). The second factor was the concentration of BAP consisted of 3 levels B0 (0 ppm), B1 (1 ppm), B2 (2 ppm). Results showed that the treatment of shallot bulb juice had an effect on the percentage of age 1-8 WAP, the percentage of shoot growth of 1 WAP, the number of shoots 8 WAP, shoot height and the number of leaves 2-4, 7-8 WAP, root growth time and number of roots. Highest value is obtained in the treatment of shallot bulb juice 0 g/L (A0). BAP treatment affected the percentage of variable age 1 WAP, shoot growth time, number of shoots 2-8 WAP, shoot height, number of leaves 1, 3-8 WAP, root growth time, number of roots and root length. Highest value is obtained in the treatment of BAP 1 ppm (B1). There is an interaction between the concentration of shallot bulb juice and BAP on the percentage of age variables 1-8 WAP, number of shoots 2-3 WAP, number of leaves 2-8 WAP and the number of roots. Highest value is obtained in the treatment of shallot bulb juice concentration of 20 g/L + BAP 1 ppm.

Keywords: concentration, hormone, organic, propagation, synthetic