

ABSTRACT

Wood apple (*Limonia acidissima*) is a plant that has many benefits. The cultivation of wood apple plants is quite difficult to do conventionally because wood apple seeds take a long time to germinate and the germination rate is low. Tissue culture is one of the modern propagation techniques that can produce plants that are uniform, fast and free from disease. This study aimed to determine the effect of the use of kinetin and IBA growth regulators in the propagation of wood apple plants *in vitro*. This research was conducted at the Plant Tissue Culture Laboratory, Faculty of Agriculture, Universitas Malikussaleh, North Aceh from December to February 2024. The research used a Completely Randomized Design (CRD) consisted of 2 factors. The first factor was the concentration of kinetin, consisted of 3 levels of K0 (0 ppm kinetin), K1 (1,5 ppm kinetin) and K2 (3 ppm kinetin). The second factor was the concentration of IBA which consisted of 3 levels of I0 (IBA 0 ppm), I1 (IBA 1 ppm), I2 (IBA 2 ppm). The results showed that the single kinetin treatment had an effect on the variables of 3-8 WAP survival percentage, 3-8 WAP shoot growth percentage, 8 WAP shoot count and 1 WAP leaf count. The best kinetin treatment is found at a kinetin concentration of 1,5 ppm. IBA treatment has an effect on the survival percentage of 3, 5, 6, 7 dan 8 WAP. The best IBA treatment is found at a IBA concentration of 1 ppm. There is an interaction between kinetin and IBA on the percentage of life variable. Kinetin concentration of 1.5 ppm + IBA 1 ppm indicates the highest percentage of explant survival

Key words: Auxin, Concentration, Cytokinin, Propagation, Tissue Culture