

ABSTRACT

The grape plant (*Vitis vinifera* L.) is a climbing fruit plant originating from the Middle East. Wine production in Indonesia has not kept pace with domestic market demand. One way to propagate grape plants is by cuttings. Root growth in cuttings can be stimulated with growth regulators to produce plant roots. Using organic fertilizer is one way to improve soil fertility and reduce the use of chemical fertilizers. Goat manure has a high organic material content, goat manure contains a number of nutrients needed by plants, namely N, P, K, Ca and Mg which have the potential to be a source of nutrients for plants. was carried out at the Experimental Garden, Faculty of Agriculture, Malikussaleh University, North Aceh from August to October 2023. This research used a Randomized Block Design with two factors. The first factor is the growth regulator Atonik which consists of 0 ml/liter, 1.5 ml/liter and 3 ml/liter. The second factor for goat manure consists of 0 ml/polybag, 150 g/polybag and 250 g/polybag. Observation variables were day of shoot emergence, number of shoots, shoot length, number of leaves, leaf chlorophyll, leaf area and number of live cuttings. The results of the research showed that the single factor of regulators had a very significant effect on the shoot length at 3,4,5,6,7 and 8 WAP. Meanwhile, the goat manure treatment had a very significant effect on the shoot length variable at 5 and 6 WAP and the number of live cuttings had an influence on the shoot length variable at 6 WAP.

Key words: grapes, ZPT Atonic, goat manure