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RESPONSE OF KAPOK SEEDLINGS TO HUMIC ACID, SEAWEED EXTRACT AND SELENIUM TREATMENTS

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ABSTRACT

The present investigation was conducted at the Experimental Farm, Fac. of Agric., Al-Azhar Univ., Assiut, during the two successive seasons of 2016 and 2017 aiming to determine the influence of humic acid levels at 0, 0.1, 0.2 and 0.3 g / plant, seaweed extract at 0, 1, 2 and 3 ml / l and selenium at 0, 25, 50 and 75 ppm on seedling height, stem diameter, leaf number / plant, leaves and stems dry weights / plant as well as the elements of N, P and K % in leaves of Kapok (*Ceiba pentandra*, L.) seedlings. The obtained results revealed that in general all parameters studied were increased due to the application of humic acid at all levels. The use of the high level of humic acid (0.3 g / plant) proved to be more effective in augmenting these traits than those obtained by other levels, mostly. As for seaweed extract treatments, all vegetative growth and N, P and K % traits were significantly augmented by using all concentrations of seaweed extract. On the other hand, foliar spray with of selenium at the concentration of 50 ppm significantly increased the growth characteristics. Selenium at 25 ppm significantly increased N % and selenium at 50 and 75 ppm resulted augmented P %, while selenium at all concentrations led to a significant increase in K %. The highest values of these traits were obtained by using seaweed extract at the high concentration (3 ml / l). The combined effect between the two studied factors had significant effect on these examined parameters and the most effective treatments were detected when the addition of humic acid at 0.3 g / plant in combination with seaweed extract at 3 ml / l. From the obtained results, it could be recommended to supply Kapok seedlings with humic acid at 0.3 g / plant plus foliar spray with seaweed extract at 3 ml / l to increasing the growth characteristics and enhancing the percentages of N, P and K under this research conditions.

Key words: Kapok seedling, humic acid, seaweed extract, selenium