

SUMMARY

Adenium (*Adenium obesum*) is a flowering succulent ornamental plant species with appearance of a lush canopy, varying flower colors and patterns, high life endurance, and large, sturdy caudex. One way to improve the uniqueness of adenium is to perform vegetative propagation through grafting technique, which is a technique of combining lower stem called rootstock and upper stem called scion from different plants. In adenium, this technique can produce superior plants with flowers of various shapes and colors, thus enhancing the aesthetics and the economic value of the species. The success of the grafting technique depends on callus formation between the grafting union and the active vascular tissue connecting scion and rootstock. This technique can be induced and stimulated by the use of hormones such as kinetin, which is one of the cytokinin hormone compounds that can regulate enlargement of cells and organs, cell division, organ formation, and the development of bud and shoot. The purposes of this study are to know the effect of kinetin on promoting adenium vegetative propagation through grafting technique and to determine kinetin concentration which effectively promotes the growth of adenium.

The research was conducted using experimental method arranged in a Completely Randomized Design (CRD) employing 5 concentration levels of kinetin, i.e. 0 mg.L⁻¹, 5 mg.L⁻¹, 10 mg.L⁻¹, 15 mg.L⁻¹, and 20 mg.L⁻¹, as treatments with 4 replications. The parameters observed were the percentages of graft union, time of bud breaking, number of newly formed buds, and number of newly formed leaves. The data obtained were analyzed using ANOVA, followed by LSD test when significant differences among treatments were obtained. The results showed that the effective concentration of kinetin for the growth adenium propagated with grafting technique was 10 mg. L⁻¹. Thus, it can be concluded that kinetin application can increase the growth of adenium propagated vegetatively using grafting technique by accelerating the time of bud breaking and increasing the number of buds and leaves, in which the most effective concentration is 10 mg.L⁻¹.

Keyword: *Adenium obesum*, grafting, kinetin