EFFECTS OF GROWTH HORMONES ON THE AUXILIARY BUD INITIATION AND SHOOT DEVELOPMENT OF CORDYLINE PLANTS (*Cordyline fruticosa*)

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ABSTRACT

Cordyline is a major foliage plant species in the tropical and sub-tropical countries and economically important genera in the family *Asparagaceae*. Thus, availability of quality planting material becomes a major problem in cordyline cultivation. Therefore, this study was carried out to induce lateral shoot formation of topped cordyline with Cytokinin (BAP) and Cytokinin + Auxin (BAP+NAA) combination. A length of 25cm shoots were potted in 20cm height and 20 cm width Polyethylene bags containing compost and sand at a ratio of 1:1. Plants were kept for three weeks in the shade before decapitation. Application of different concentrations of BAP (25ppm, 50ppm and 75ppm) was done first time and after that application of different concentrations of NAA (25ppm, 50ppm and 75ppm) was done in combination with a constant level of BAP (75ppm) at one week interval. Number of lateral shoots, length of lateral shoots and number of leaves were recorded after the hormone treatments at one week interval.

Application of 75ppm cytokinin (BAP) was considered as the most effective treatment to induce lateral shoot formation as well as to improve growth performance in cordyline plants. Among the different treatments tested, 75ppm of BAP was given recorded the highest number of lateral shoots and leaves compared to the other treatments. Length of shoots per plant did not increase remarkably due to the application of hormones. The findings of this study clearly revealed that 75ppm BAP performed better than the other concentrations of BAP.

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