Effect of Benzyl Amino Purine on the Lateral Shoot formation of Cordyline (Cordyline fruticosa) Shoots

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Cordyline (Cordyline fruticosa) is an important ornamental foliage plant species belong to Asparagaceae family grown in the tropical and sub-tropical regions of the world. Availability of quality planting material is a major problem in cordyline cultivation. This study focussed on the induction of lateral shoots formation with Benzyl Amino Purine (BAP) on the decapitaed Cordyline plants. Cordyline shoots of about 25cm long were potted in polyethylene bags (6cm x 15cm) filled with the medium of compost and sand mixed at 1:1 ratio. Shoots were kept for three weeks in the shade before decapitation. Application of different concentrations of BAP (25, 50, 75 and 100 ppm) was done twice (3 weeks after plant establishment and 2 weeks after the first hormonal application) as a foliar spray while the control was sprayed with distilled water. The number and length of lateral shoots and the number of leaves of cordyline plants were recorded after the hormone treatment at two week interval. It was found that the application of 75 ppm BAP was the most effective in producing lateral shoots and leaves on cordyline plants. Treatment with 75 ppm BAP has given the highest number of lateral shoots (5.8 and 7.2) and leaves (14.2 and 19.3) compared to the rest of the treatments in both hormonal applications. The length of shoots was also increased markedly due to the application of hormone. The highest length (24.4 and 38.6 cm) was observed in plants treated with 75 ppm BAP. The findings of this study indicate that the application of 75 ppm BAP can be beneficial for lateral shoot induction and growth enhancement of Cordyline trees during two hormonal applications.

Keywords: BAP hormone, Cordyline plants, Lateral shoots