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Comparative Growth Rates of Treculia africana Decne: Embryo in Varied Strengths of Murashige and Skoog Basal Medium

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Abstract : This study provides a regeneration protocol for Treculia africana Decne (an endangered plant) through embryo culture. Mature zygotic embryos of T. africana were excised from the seeds aseptically and cultured on varied strengths (full, half and quarter) of Murashige and Skoog (MS) basal medium supplemented. All treatments experienced 100±0.00 percent sprouting except for half and quarter strengths. Plantlets in MS full strength had the highest fresh weight, leaf area, and longest shoot length when compared to other treatments. All explants in full, half, quarter strengths and control had the same number of leaves and sprout rate. Between the treatments, there was a significant difference (P>0.05) in their effect on the length of shoot and root, number of adventitious root, leaf area, and fresh weight. Full strength had the highest mean value in all the above-mentioned parameters and differed significantly (P>0.05) from others except in shoot length, number of adventitious roots, and root length where it did not differ (P<0.05) from half strength. The result of this study indicates that full strength MS basal medium offers a better option for the optimum growth for Treculia africana regeneration in vitro.

Keywords : medium strengths, Murashige and Skoog, Treculia africana, zygotic embryos
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