EFFECT OF SOME GROWTH HORMONES ON GERMINATION AND SEEDLING GROWTH OF *Treculia africana* (Decaisne)

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ABSTRACT

This experimental study was aimed at determining the effects of some growth hormones; Gibberellic acid (GA_3), Indole Acetic Acid (IAA), Indole Butyric Acid (IBA) on seed germination and seedling growth of *Treculia africana*. Each of the hormones was mixed with 120ml of distilled water at different concentration level of 10%, 25%, and 50% respectively. Each of the treatments was replicated five (5) times. Watering was applied everyday for twelve (12) weeks and measurements of the seedling growth height, collar diameter, leaf length, leaf width, leaf area and leaf number were taken fortnightly and germination rate was also carried out. The result showed that Gibberellic acid (GA_3) at concentration level of 50% enhanced seed germination (96%), plant height (17.0cm), leaf number (6.0), relative growth rate (0.4226) and other tested parameters in *Treculia africana* seedlings. Indole Acetic Acid (IAA) at all level of concentration also enhanced seeds germination (68 %, 65% &72%), leaf area (15.6cm^2), collar diameter (0.57cm), Absolute growth rate (0.888) and Net assimilation rate (0.0274) at 25% level of concentration. IBA enhanced leaf area (15.62cm^2), fresh weight (0.90g), leaf width (3.36cm) and leaf length (7.66cm). The result showed that all the growth hormones used in this study enhanced seedling growth morphologically and physiologically. Hence, hormonal treatment at low concentration is very effective in seed germination and seedling growth so that production of healthy and quality stocks of *Treculia africana* will be produced and management of the forest on sustainable basis could be realized for forest regeneration and afforestation programme.