RESEARCH ARTICLE

IMPACT OF INDOLE -3- BUTERIC ACID AND INDOLE -3- ACETIC ACID ON SURVIVAL PERCENTAGE OF *TERMINALIA ARJUNA* (ROXB.) STEM CUTTINGS

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Abstract: IBA and IAA concentrations were examined to determine the Survival percentage of *Terminalia arjuna* (Roxb.) by vegetative propagation via rooting in stem cuttings. The experiment was laid out in a completely randomized design (CRD) with three replications. One-year old leafless branch cuttings were treated with 0, 500, 1000, 1500 and 2000 mg L^{-1} concentrations of IBA and IAA and planted in poly bags grown under phyto-environmentally controlled mist chamber. Results shown that minimal survival percentage was recorded in untreated cuttings (control), and significantly increased with an increase in concentration of IBA and IAA. Among two auxins, IBA emerged most effective on survival percentage, inducing rooting, sprouting and associated traits. Auxins concentration 2000 mg L^{-1} was recorded maximum 66.88% of plants survived and achieved over 70% rooting in cuttings. It also triggered more number of roots, higher root length, shoot proliferation, maximum shoot and root biomass. This paper discusses the role of growth harmones (IBA and IAA) impact on survival percentage of stem cuttings influencing rooting and has a practical implication for the development of protocol for asexual propagation and establishing clonal plantations of *Terminalia arjuna*.

Keywords: Auxins, Clonal multiplication, Multipurpose tree, Plus trees

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