VEGETATIVE PROPAGATION OF *JATROPHA CURCAS* - EFFECT OF IBA CONCENTRATION, ROOTING MEDIA AND INCUBATION CONDITIONS

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ABSTRACT: Tree borne seed oil as a biofuel resource is getting attention globally in developing countries, especially in India. *Jatropha curcas* is identified as a potential crop to produce biodiesel. Present study was taken up to standardize the vegetative propagation technique for production of clonal planting stock of high oil/seed yielding mature plants. To initiate an efficient rooting three experiments viz; i) IBA concentrations ii) rooting media (sand, soil, soilrite and vermiculite) and iii) incubation conditions (mist chamber, green house, polytunnel, shade house and open area) were conducted and green stem cuttings of 15-20 cm in length of J. curcas from 15 years old plants were used. Use of IBA 2,500 ppm for 30 min showed highest (92.33 %) rooting. Among the different incubation conditions tested, IBA 2,500 ppm treated cuttings planted in polytunnel favored maximum (97.82 %) rooting with better growth of shoot and root. Out of the various rooting media used, sand proved the best in terms of rooting percentage (91.77) and subsequent shoot and root growth. Hardening of rooted plants was found essential for 4 weeks under 50 % shade (in agroshade net house) before keeping in open nursery. Success rate during hardening was > 97 %. Survival rate of six month old vegetatively propagated plant was 95 % in field conditions after one year.

Keywords: *Jatropha curcas, vegetative propagation, green stem cuttings, IBA, rooting media, incubation conditions*

Abbreviations: J. curcas- Jatropha curcas; IBA- Indole 3-butric acid; CD-critical difference

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