

VEGETATIVE PROPAGATION OF *JATOPHA CURCAS* L. : EFFECT OF TYPE, SIZE OF CUTTINGS AND AUXINS

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ABSTRACT : *Jatropha curcas* L., (family, Euphorbiaceae) has been globally accepted for its oil as an alternative to fossil fuel. In the first experiment, three types of cuttings (apical, green stem and woody stem) of various sizes; (10, 15 and 20cm length) were treated with IBA 2500ppm, to find out their effect on sprouting and rooting behavior. In the second experiment, different auxins; (IAA, IBA, NAA and NOA) were tested. Out of the various types of cuttings used, apical green cuttings (20cm) exhibited the highest 97.33 percent of rooting, followed by green stem cuttings (20cm) with average 95 percent rooting within 45 day period in sand bed medium in mist chamber. Among the various auxins used, maximum rooting percentage (92.61%) was observed from the green stem cuttings treated with IBA 2500ppm for 30m in. Hardening of rooted cuttings for 4 weeks was found essential in 50% shade in agro shade net house. Survival rate of potted plants was about 98%. Six month old cloned plants exhibited 95% survival in field after one year of planting.

Key Words: *Jatropha curcas*, vegetative propagation, type of cutting, auxins, rooting, hardening.