

Induction of Somatic Embryos from Cotyledon Explant in *Jatropha curcas* (LINN)

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ABSTRACT

During present investigations induction of embryogenic callus from cotyledon explants was achieved from important biodiesel and medicinal plant *Jatropha curcas*. Explants inoculated on MS (Murashige and Skoog, 1962) medium supplemented with various concentration of growth hormone like, BAP 6-Benzylaminopurine), IAA (Indole 3- acetic acid), GA3(Gibberellic acid) with addition proline and PEG (Polyethylene Glycol). MS media containing (2, 4- D-Dichlorophenoxy acetic acid) in combination of BAP were able to initiation of callus. MS medium containing BAP at various concentrations viz 0.2, 0.4, 0.6, 0.8 mg/l with combination different concentrations of GA3 like 0.2, 0.4, 0.6, 0.8 and 1.0 mg/l, IAA 0.1, 0.2, 0.3 mg/l and proline observations were also recorded. Induced callus from cotyledon explants were using MS medium with supplemented 0.5 mg/l BAP, 0.6 mg/l GA3, and proline was able to produce direct somatic embryogenic callus. This method of regeneration of plant was more effective as compare to other methods because regeneration percentage was 70% -80% respectively. The percentage of embryo maturation was observed after three weeks and the matured somatic embryos were subculture on hormone free MS medium for plant regeneration.

Keywords: - *Jatropha curcas*, somatic embryo, cotyledon explants.