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SHOOTLES PROLIFERATION OF JOJOBA (*SIMMONDSIA CHINENSIS* (LINK) Schn.) EXPLANTS PRODUCED BY IN VITRO CULTURE

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ABSTRACT

According to the present investigation shoot multiplication and callus cultures of jojoba (*Simmondsia chinensis* Link (Schneider)) was studied during growth period (2013-2016). To study the best growth of explants on basal medium, three concentrations of MS salts were used (full, three quarter and half strength). Also, two growth regulators (kin and BAP) at 0.5, 1.0 and 1.5 mg/L were used to proliferate shootlets of established explants on suitable growth medium combined with 5, 10 and 15 mg/l malt extraction. The induction of callus culture by *in vitro* leaves of jojoba clone. at $1cm^2$ size, approximately were used and cultured on MS medium supplemented with 2,4D, NAA and 2ip at 0.5, 1.0 1.5mg/l individually and combination.The Results indicated that the best growth medium concentration was MS at full strength in all experiments. Furthermore, multiplication of *in vitro* jojoba shoots number, shootlets length and leaves number could be highly achieved (7.67 shootlets/explants, 4.67 cm and 9.4 leaves) by 1.5 mg/L BAP combined with 15 mg/L malt extract. 2,4D with 2ip at 1.5 plus 0.5 mg/L induced callogenesis (98.67 %) with fresh weight 4.4 g while NAA plus 2ip at 1.0 and 1.5 mg/L enhanced callogensis production.

Key words : 2,4-D callus, Jojoba *Simmondsia chinensis*, *In vitro*, shoot proliferation.