INFLUENCE OF SOME PLANT GROWTH REGULATORS AND EXPLANTS ON CALLUS INTIATOIN OF (Sage) Salvia officinalis IN VITRO .

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ABSTRACT

A study on the effect of three kinds of Auxins and Benzyladenin (BA) on callus initation from leaves ;shoot tip and internodes of (Sage) Salvia officinalis was carried out. The study was conducted at the tissue culture lab./Hort.Dept./College of Agric./Univ. of Baghdad, from April/2008 to October /2009 .Explants were cultured on a modified Murashige and Skoog (MS) medium.Five levels of either 2,4-dichloro phenoxyacetic acid (2,4-D) , Naphthaleneacetic acid (NAA) or Indoleacetic acid (IAA) were added to the medium. Concentrations of each auxin were 0 ,0.5 ,1.0 , 2.0 or 4.0 mg.l-1 ; four levels of BA 0 , 0.2 , 0.4 or 0.8 mg.l-1 were supplemented to the medium. The study inculuded effect of each Auxin alone or in combination with BA on callus intiation. Results could be summarized as follows: Callus intiation from leaves culture was superior in increasing callus fresh and dry weight companing with shoot tip and internode culture, when MS medium supplemented with the auxin alone or in combination with Cytokinin. Highest values of callus fresh and dry weight were registered when leaves were explanted on MS medium supplement with 1.0 mg/l of 2,4-D in combination with 0.2 mg.l-1 of BA , the values were 0.3225 g and 0.0308 g. respectively .