International Journal of Agricultural Science and Research (IJASR)
ISSN(P): 2250 - 0057; ISSN(E): 2321-0087
Vol. 5, Issue 5, Oct 2015, 361-366

IN VITRO DIRECT REGENERATION FROM COTYLEDONARY NODE OF *SAUSSUREA LAPPA* CLARKE – A VALUABLE ENDANGERED MEDICINAL HERB

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ABSTRACT

Saussurea lappa is a pharmacologically important endangered plant enlisted in CITES Appendix I as well as in NMPB as important species of high trade and stable cultivation. An efficient protocol for *in vitro* multiplication of *Saussurea lappa* was developed from cotyledonary node explants. Multiple shoots were induced from cotyledonary nodes excised from *in vitro* raised seedlings on Murashige & Skoog's medium (MS medium) containing either BAP (6-benzylaminopurine) or Kn (Kinetin) in alone or in combination with NAA (1-Naphthaleneacetic acid). High-frequency average bud break (83.33%) and maximum number of shoots per explant (5.9 shoots) were recorded with medium supplemented with BAP + NAA at an optimum concentration of 2 mg/l + 0.1 mg/l respectively. For successful rooting, regenerated shoots were transferred to half strength and full strength MS medium containing various concentration of NAA. Best root formation (85%) was achieved with half strength MS medium supplemented with 0.5 mg/l NAA. The rooted plants were transferred in plastic cups containing vermiculite: sand (3:1) and were maintained in high humidity. Eighty per cent of the plantlets survived in natural conditions.

KEYWORDS: Micropropagation, Cotyledonary Node, *In Vitro*, *Saussurea lappa*