Effect of vitamins on improving morphogenic competence in *Cuminum cyminum* L. cultures

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*Cuminum cyminum* L. is an important seed spice belonging to family Apiaceae. Production of cumin is limited due to limited genetic diversity and several biotic stresses. Hence, the present study aims at improving the regeneration of cumin in *in vitro* cultures. A regeneration medium was standardized comprising of MS supplemented with kinetin (0.5 mg/l). Effect of thiamine was studied on the morphogenic competence of the *in vitro* cultures. The levels of thiamine in the induction as well as proliferation medium highly influenced the shoot regeneration. Highest number of shoot buds per explant was obtained when the concentration of thiamine was twofold the normal MS level at both induction as well as proliferation stages. Shoots upto 2 cm or more in length were excised and inoculated on rooting medium i.e., MS medium supplemented with 0.5 mg/l indole-3-butyric acid (IBA). Rooted plantlets were transferred to field conditions.

**Figure 1:** Effect of thiamine HCl on regeneration from cotyledonary node of *C. cyminum* cultured on MS medium supplemented with Kn (0.5 mg/l)

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Biography

Smita Purohit, Associate Professor & Former Head, Department of Botany, The IIS University, Jaipur has her expertise in plant tissue culture, stress physiology, molecular biology, mineral manipulation and phytochemical studies. She has worked on various plant systems like Cuminum cyminum, Dianthus caryophyllus, Cissus quadrangularis, Salvia hispanica to name a few. She has also authored books in the field of Genetics and Plant Breeding and has supervised few doctoral and many MPhil candidates and has published many research papers in national and international journals of repute.