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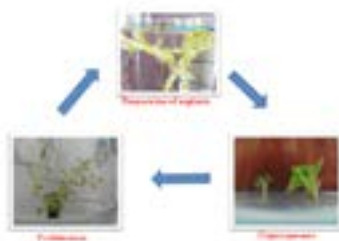
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The first report on factors affecting tissue culture of *Thymus Transcaspicus* Klokov from Iran

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Khorasani thyme (*Thymus transcaspicus* Klokov) is an important thyme species of Lamiaceae family. This species is an evergreen and aromatic herb with culinary and medicinal use. *Thymus transcaspicus* is distributed in Iran and Turkmenistan. There is no report on in vitro propagation of Khorasani thyme. This study was conducted in *Thymus transcaspicus* for studying the factors affecting tissue culture on this species for the first time. For this purpose, different concentrations of BAP (0, 0.25, 0.5, 1.5, 2 and 3 mg l⁻¹) and IBA (0, 0.5, 1, 1.5 and 2 mg l⁻¹) were added into MS and MS/2 media. The best result for disinfection obtained with the using 70% alcohol for 5 sec. and 20% Clorox for 10 min. The results indicated that MS/2 medium was more effective in terms of explant growth compared with MS medium. The results demonstrated that, application of 1.5 mg l⁻¹ IBA plus 0.5 mg l⁻¹ BAP increased plant height, leaf width, and internode length as well as internode number. Furthermore, application of 1 mg l⁻¹ IBA plus 3 mg l⁻¹ BAP increased leaf length, fresh and dry weight and plant number. According to the results, application of 1.5 mg l⁻¹ IBA improved root number and root length, while application of 1 and 2 mg l⁻¹ increased root diameter in thyme plants.



Recent Publications

1. Ahmadi-Dizaji J, Barnosi A, Jafari M, Rezae-danesh V (2012) The effect of TDZ and BAP on direct regeneration of stem node explants of *Teucrium chamaedrys* L. Special issue of 12th Iranian Genetic Congress; Tehran, Iran.
2. Karami A, Mozafari A, Ebrahimi M and Maarofi H (2011) The effect of different concentrations of benzyladenine on *Satureja avromanica* Maroofi regeneration. The 7th National Biotechnology Congress.
3. Bicca Dode L, Bobrowski VL, Bolacelbraga EJ, Seixas FK, Schuch MW (2003) *In vitro* propagation of *Ocimum basilicum* L. (Lamiaceae). Acta Scientiarum Biological Sciences 25: 435-437.
4. Rout GR (2000) *In vitro* manipulation and prorogation of medicinal plants. Biotechnology Advances 18: 91-120.
5. Saez F, Sanches P, Piqueras A (1994) Micropropagation of *Thymus piperella*. Plant Cell Tiss. Org. Cult. 39: 269-272.

Biography

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