

عنوان مقاله:

The Effect of Plant Growth Regulators and Explant Type on Shoot Culture of *Thymus vulgaris* L

محل انتشار:

سومین کنفرانس بین المللی یافته های نوین علوم و تکنولوژی (سال: 1395)

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خلاصه مقاله:

Thymus vulgaris L., commonly called thyme, is one of the most important aromatic species with high economic interest in fragrance, pharmaceutical, food and flavour industries. In this study, the effect of two factors, namely explant type and growth regulators on biomass production and morphogenetic responses of in vitro grown *Thymus vulgaris* plantlets were investigated. Nodal segment and shoot tip were used as explant and MS media without growth regulators served as control. The highest fresh and dry weights (529 ± 44.3 and 39.9 ± 2.2 respectively) were induced in nodal segments cultured in TDZ media. Optimum shoot proliferation (92.5-95 % shoot formation rate, with 8.6 shoots produced per explant) was obtained when semi-solid Murashige and Skoog (MS) medium was supplemented with KIN and TDZ individually. IBA media and hormone-free MS medium achieved 100% rooting frequency and induced maximum number of roots. While the maximum length of roots were obtained in BA-grown nodal segments. In this study, in term of all evaluated parameters, nodal segment explant was found to be the better explant and shoot tips grown in BA media induced the lowest amounts for all investigated parameters. The results showed that the responses of two types of explant to in vitro condition and various growth regulators tested was obviously different and interaction between the exogenous plant growth regulators applied with endogenous hormones levels specially auxin/cytokinin ratio in each type of explant resulted in different morphogenetic responses of two type of explants

کلمات کلیدی:

Thymus vulgaris L., in vitro shoot culture, fresh and dry weight, TDZ, biomass production

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