

عنوان مقاله:

A New Approach for Olive (Arbequina cv.) Micropropagation: Effect of Dikegulac, Light and Carbon Source

محل انتشار:

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خلاصه مقاله:

Micro-propagation of olive provides the possibility of producing clones of native plants with appropriate attributes and mass reproduction in short period of time, compared to conventional methods. Apical dominance in olive explants limits the growth of lateral branches in vitro. The effect of Woody Plant Medium (WPM), Olive Medium (OM) and Murashig and Skoog (MS) with carbohydrate source (mannitol and sucrose), was investigated for in vitro shoot proliferation of olive. Different concentrations of sodium dikegulac (0.0, 2.5, 5.0, 7.5 and 10 mg L⁻¹) along with 3 mg L⁻¹ zeatin and 0.5 mg L⁻¹ BAP and two light qualities (red and white) were used to overcome apical dominance. Effects of different IBA concentrations on the in vitro root induction were also investigated. More than 74% of explants rooted when IBA was used at 2 mg L⁻¹. OM was the most effective medium, resulting in better and morphologically superior microshoots. Mannitol showed a positive effect on shoot proliferation. Using sodium dikegulac at 5 mg L⁻¹ under white light significantly stimulated axillary bud growth. In the corresponding concentrations of sodium dikegulac, red light had a significant effect on longitudinal growth compared to the white light.

کلمات کلیدی:

Sodium dikegulac, apical dominance, light qualities, Arbequina

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