عنوان مقاله:

Comparative study of Cytokinins, Auxins and Gibberellic acid effects on regeneration of different Quercus brantii var persica explant on in-vitro culture

محل انتشار:

ششمین کنفرانس بین المللی علوم کشاورزی،محیط زیست،توسعه شهری و روستایی (سال: 1399)

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خلاصه مقاله:

New biotechnology techniques, such as tissue culture and micro propagation, are the best way to save valuable plant species which is in danger of extinction. Non-sexual reproduction and specifically tissue culture techniques is the only way to save Zagros Range oak forests. In order to micro propagation of Persian oak, seeds for the purpose of Isolation of the embryo and spring branches for separating meristems, transfer to laboratory. After disinfection, Meristems and embryos of Persian oak in order to regeneration, moved to WPM medium that treated with different concentration of BAP (0,1,0.5,2,5 mg/l), IAA (0,0.5 mg/l), NAA (0, 0.1 mg/l), TDZ (1, 2 mg/l) and GA3 (0, 0.5, 1 mg/l) Which were used alone or in combination. The cultured explant was transferred to the growth room for 30 days. According to the results, GA3 had no effect on regeneration of Persian oak in any concentration. Auxins grows regulators include NAA had no significant effect on regeneration compared to control samples. The combination of IAA (0.5 mg/l) and BAP (1 mg/l) Caused the death of meristems, in the same condition, embryos hadno regeneration. The highest amount of phenolization was observed at combination of BAP 2 mg/l, IAA 0.5 mg/l and also BAP 2mg/l, GA3 2mg/l. At 5 mg concentration of BAP may or may not be combined with other growth regulators and regardless of their concentration, most of explant was strongly vitrified. Best result for regeneration had earned at two different treatments: BAP 2 mg/l and TDZ 2 mg/l. In other treatments such as BAP 1mg/l and TDZ 1mg/l less regeneration was observed. It should be note that all explant was place at growth room with 23 ° C and in 16 hours the light period and 8 hours' darkness and Light intensity 2500 and 4500 lux. The intensity of the light was adjusted with the luxury meter.

کلمات کلیدی:

Persian oak, micro propagation, phenolic discharge, Cytokinins, Auxins, Gibberellic