

عنوان مقاله:

Putrescine and IBA enhanced the adventitious root formation in Damask rose (*Rosa × damascena* Mill.) under in vivo and in vitro conditions

محل انتشار:

مجله باغبانی و تحقیقات پس از برداشت، دوره 6، شماره 23 (سال: 1402)

تعداد صفحات اصل مقاله: 14

نویسندگان:

Mohammad Musavi Ahmadabadi - *Department of Horticultural Sciences, Faculty of Agriculture, Tarbiat Modares University, Tehran, Iran*

Nima Ahmadi - *Department of Horticultural Sciences, Faculty of Agriculture, Tarbiat Modares University, Tehran, Iran*

Maryam Dehestani-Ardakani - *Department of Horticultural Sciences, Faculty of Agriculture & Natural Resources, Ardakan University, Ardakan, Iran*

خلاصه مقاله:

Purpose: To investigate the effects of Putrescine and Indole-3-Butyric Acid (IBA) on the adventitious rooting of micro-cuttings and semi-hardwood cutting of *Rosa damascena*, this study was conducted under both in vitro and in vivo conditions. **Research Method:** The rooting of micro-cuttings was induced on the basal MS medium supplemented with five concentrations (0, 0.25, 0.5, 1 and 2 mg/L) of IBA and putrescine. In vivo experiment, putrescine and IBA at five concentrations (0, 0.25, 0.5, 1 and 2 g/L) were applied on semi-hardwood damask cuttings, while a downward wounding was created by a sharp blade on the bases of cutting as another treatment. **Findings:** Data showed significant variations in the root number and root length for in vitro and in vivo cuttings treated with different concentrations of putrescine and IBA. The obtained results revealed that presence of putrescine and IBA in both conditions enhanced root formation, as significantly improved the number of roots and root length in each explant. Under in vitro conditions, the maximum root length and root number were observed on the MS medium supplemented with 1 mg/l IBA+1 mg/l putrescine. **Research limitations:** No limitations were found. **Originality/Value:** The present study highlighted the role of putrescine and IBA in the adventitious rooting of *R. damascena*, under both in vitro and in vivo situations.

کلمات کلیدی:

Micro-cutting, Plant growth regulations, Propagation, Tissue culture, Wounding

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1863406>

