

Induction of adventitious rooting in vitro in apple rootstocks

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Abstract

Rooting of shoot tips in vitro was investigated using two apple rootstocks. To root induction, shoot tips from proliferating rootstocks M.9 and M.26 were cultured on half-strength modified MS medium supplemented with 20 g.l⁻¹ sorbitol, 162 mg.l⁻¹ PG (phloroglucinol) and various concentrations of auxins (IAA, IBA and NAA, alone or in combination) for 4 and 7 days in darkness, respectively. Shoots were later transferred to a growth regulator-free medium and incubated under light for elongation of the roots. Assessment after 30 days showed that rooting was best with 0.5 mg.l⁻¹ IAA + 0.5 mg.l⁻¹ IBA in the medium for M.9. For stock M.26, the highest of rooting percentage (%100) and number of roots/shoot (5.0) were achieved with 3 mg.l⁻¹ IAA and 0.1 mg.l⁻¹ NAA, respectively. Plants were planted in a peat medium and maintained under high humidity for the hardening-off phase.

Key words: apple, in vitro rooting, IAA, IBA, NAA

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