

Investigation on the effect of cutting time and IBA treatment on rooting of stem cuttings in kiwifruit (*Actinidia deliciosa*) cv. 'Hayward'

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Abstract In order to evaluate the effects of cutting time and different concentrations of indolebutyric acid (IBA) on rooting potential of stem cuttings of kiwifruit (*Actinidia deliciosa*) cultivar Hayward, a factorial experiment was carried out based on completely randomized design. The first factor included two cutting times (late-January and mid-March) and the second factor included 0 (as control), 2500, 5000 and 7500 mg L⁻¹ concentrations of IBA. Cuttings after treatment for 5 min with IBA, planted in perlite media and some traits related to rooting including root number, root length, root fresh weight, root dry weight, percentage of root dry matter, stem length, callus fresh weight, callus dry weight and leaf number were evaluated after 3 months. The results showed that mid-March cuttings had the highest root number, root length, root fresh weight, root dry weight, as late-January cuttings had the highest percentage of root dry matter, callus fresh weight, callus dry weight and also leaf number. IBA treatment increased traits related to rooting as the 2500mg L⁻¹ concentration was the most effective treatment. Moreover, it was found that with increasing IBA concentration to 5000 and 7500 mg L⁻¹, although traits related to rooting were increased as compared with control, but these were lower as compared with 2500mg L⁻¹. Although, 5000 mg L⁻¹ of IBA had the highest callus fresh and dry weights, but had lower rooting. Overall, cutting at mid-March and treatment with 2500mg L⁻¹ could be a recommended to rooting the cuttings of kiwifruit cultivar Hayward.

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