



Turkish Journal of Agriculture and Forestry

Turkish Journal

of

Agriculture and Forestry

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Effect of Indole-3-Butyric Acid and Different Strains of *Agrobacterium rubi* on Adventive Root Formation from Softwood and Semi-Hardwood Wild Sour Cherry Cuttings

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Abstract: This study was conducted to evaluate the effects of a range of Indole-3-butyric acid (IBA) concentrations (250, 500 and 750 mg l⁻¹) alone and in combination with three strains of *Agrobacterium rubi* (A1, A16 and A18) on the rooting capacity of wild sour cherry (*Prunus cerasus* L.) softwood and semi-hardwood cuttings. The bacterial strains used in the present study were isolated from the foliage of pome fruits (from apple and pear orchards) growing in the eastern Anatolia region of Turkey. No rooting was observed on the cuttings of wild sour cherry with control treatment (no IBA or bacterial treatment) in both types of cuttings, whereas different rooting percentages were observed on the cuttings treated with IBA and bacteria. The highest rooting percentages were 65% for softwood and 70% for semi-hardwood cuttings when they were treated with 250 mg l⁻¹ IBA + A16 treatments. In softwood cutting treatments, the bacteria strains A16 (43.8%) and A1 (42.5%) were found to be more effective than the strain A18 (18.8%) and the control (13.1%). Among the hormone doses, the best rooting percentage was found at the treatment of 250 mg l⁻¹ IBA (39.4%). In semi-hardwood cuttings the highest rooting percentage among the bacterial strains and hormone doses was obtained with the treatments of A16 (49.4%) and 750 mg l⁻¹ IBA (46.9%). The results indicate that the combination of IBA + bacteria is highly effective in increasing rooting capacity when compared to the control, or bacteria and IBA treatments alone.

Key Words: Sour cherry, softwood and semi-hardwood cutting, *Agrobacterium rubi*, IBA, adventive rooting

Turk. J. Agric. For., 27, (2003), 37-42.

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