

Original article

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Study of the Effect of Aqueous Solutions of Biologically Active Substances on the Rooting of Semi-Lignified Cuttings of the Rock Juniper Skyrocket (*Juniperus scopulorum* Skyrocket)

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Annotation. The results of a study of the stimulation of root formation in semi-lignified cuttings of the rock juniper Skyrocket under conditions of installation of an artificial low-pressure fog with heating of the substrate are presented. A stimulating effect on the rooting process of the potassium salt of indolyl-3-butyric acid (IMK-K) was shown. It has been established that the value of the most effective concentration of IMC-C in the solution for stimulating rooting when soaking the bases of the cuttings for 20 hours lies in the range of 50–100 mg/l. An analysis of the root system of the studied variants was carried out. It was shown that in the variants with IMC-C, the number of main roots exceeded the control by 1.4–1.5 times. The definition of the concept of «rotten base» of the cutting is given, which characterizes the inanimate basal part of the rooted cutting from the base to the first lower living root. It is assumed that the presence of a «rotten base» under optimal rooting conditions is the result of the phytotoxic effect of solutions containing an excess amount of auxin hormones on the base tissue of the cutting. Thus, a solution of 50 mg/l IMA + 50 mg/l α -NAA (α -naphthylacetic acid) had a partial phytotoxic effect, due to a decrease in rooting and the presence of a «rotten base» in cuttings 1.1 cm in size. Combined use of the amino acid glycine 1 with IBA-K g/l and glucose 5 g/l did not give a significant increase in survival. Preparations Ribav-Extra and Zircon in the studied concentrations did not affect the degree of rooting.

Key words: conifers, propagation, cuttings, root formation stimulators, auxins.

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