

Annotation

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Efficiency of reproduction of UUPROZ-6 rootstock with green cuttings during processing by β -indolebutyric acid

UUPROZ-6, an intergeneric hybrid of a quince and an apple tree, is a new clonal universal rootstock. Preliminary studies have shown the compatibility of this form with a number of species of the apple subfamily as well as with pear varieties which are considered to be incompatible with a quince. The focus of this paper is on the examining the impact of β -indolebutyric acid (IBA) of various concentrations on the rooting green cuttings of the rootstock. The graftage was made during an active growth of the rootstock shoots in the mother planting. The bottom of cuttings with three internodes was treated with IBA water solution during 16-hour exposure. The treated cuttings were planted into the greenhouses equipped with the fog cannon. The mixture of lowland peat and hard-grained bank sand in the ratio of 1:1 with a subacidic reaction (pH of the water extract is 6.0–6.2) was a rooting support medium. A positive effect of β -indolebutyric acid on the rooting of green cuttings of UUPROZ-6 new universal rootstock of the apple subfamily is proved. The optimum concentration of IBA used for treating cuttings before their planting into the greenhouse ranges from 30 to 50 mg/l during 16-hour exposure. Under such conditions about 88 % planted cuttings take roots. They have up to 15 main roots with the total length of 260 cm. The decrease in IBA concentration to 10–20 mg/l and its increase to 60 mg/l during 16-hour exposure did not stimulate better rooting and increasing the yield of green cuttings. The analysis of the economic efficiency has proved the unfavourableness of rooting green cuttings of the universal clonal rootstock UUPROZ-6 without applying the rooting stimulant. In respect to the economic efficiency, the most optimal IBA concentration used for green graftage of UUPROZ-6 rootstock is 40–60 mg/l with 16-hour exposure that will provide inefficiency of 224–251%.

Key words: UUPROZ-6, green handles, acid β -yndolylmaslyanaya.