

INFLUENCE OF GROWTH REGULATORS APPLICATION ON THE GOOSEBERRIES MOTHER PLANTS ON REGENERATIVE ABILITY OF THEIR VEGETATIVE PROGENY DEPENDING ON ROOTING CONDITION

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Abstract. *Currently, the area under industrial gooseberry plantations in Ukraine is small. The reason is lack of qualitative planting material in modern varieties, that combine high yield, taste weak, thornless shoots and disease resistant. There is a need to search ways to quickly obtain planting material of these varieties with minimal material costs.*

Conventional green cutting in greenhouses with fog-forming device is to use transparent polymer film for covering. Because of the high light transparent (80-90%) film is slightly dispels direct sunlight, which leads to a significant rise in temperature under shelter film (in sunny days to + 40-50 ° C and above). This causes the cuttings increased costs for plastic materials breath and causes burns on the leaves. The use of artificial mist lowers the temperature, especially when spraying cold water, but leads to significant wetlands substrate, and sudden changes in temperature adversely affect the plants themselves. In addition, the cost of greenhouses construction with mist device is quite high.

When milky white film used as a shelter are created diffused lighting conditions. The air temperature is reduced to 10-12 ° C compared to the conditions under transparent film. This eliminates overheating of plants, and high humidity eliminates the need for frequent watering. Leaves of cuttings do not get burns, do not lose turgor and well preserved until the season end.

According to some authors important for successful reproduction of berries crops has physiological state of the mother plant. So prepare mother plants to reproduce using physiologically active substances seems promising line of improving the gooseberry reproduction efficiency.

The aim - to evaluate the effectiveness of the physiologically active substances that use in the preparation of mother plants for reproduction in different cuttings rooting conditions.

Research was conducted in 2015-2016 in nursery of Khortitska National Education and Rehabilitation Academy, m. Zaporizhzhya.

Research was done with gooseberry varieties:

Grushenka - the new generation thornless varieties of I.V.Popova (Russian selekt-Technological Institute of Horticulture and Nursery); Sadko (511-19-2) - Seedling 329-11 x Lada, inferential at the Russian selekt-Technological Institute of Horticulture and Nursery; Kolhoznyy (34-20) - variety, obtained M.A. Pavova in education farm of Moskow Agricultural Academy "Otradnoye" in the 50's;

Zeleny Dosch (15-15). The resulting by I.V. Popova. Elite seedling. Third-generation hybrids from G. nivea.

Age of the mother plants are 3-5 years.

As growth regulators were used 2-hloretilfosfon acid ("Etel") at a concentration of 0,035%, hlormekvat - chloride ("Athlete") – 0,008%, indolebutyric acid (IBA) - 30 mg/l. Researching mother plants were sprayed with retardants solutions ("Etel", "Athlete") two weeks before cuttings, control plants was sprayed with water and control cuttings are treated with a solution of IBA according to traditional technology. Green cuttings was rooted in greenhouse with artificial fog and in the tunnels with manual watering, covered with milky-white film.

Cuttings was planted under the scheme 4x7 cm.

The substrate for rooting - lowland peat and sand 1: 1 with underlay manure 10-15 cm. Cuttings was rooted in tunnels under the milky-white film and in the greenhouse with fogging device. Watering cuttings under the milky-white film by hand - spray with the hose several times daily. Repeated experiment - three-time, 50 cuttings in form.

In the fall, in early September, was conducted registration of cuttings that formed the roots (%) and evaluated the quality of the root system (mass, g).

Under milky-white film the best rooting observed in Grushenka variety. Roots formed 92,9-100,0% planted cuttings. The quality of the newly formed root system also excellent - 8,34-9,65 g. In artificial fog conditions retardants effect was noticeable - quality of new roots improved almost 3 times in both experimental variants, and while "Etel" increased percentage of rooting 2 times. With Kolhoznyy variety observed the same trend - the cuttings under milky-white film rooted better than under artificial fog, especially in the ways of application of mother plants by " Athlete " - rooting percentage increased to 98,4%. retardants efficiency on cuttings, that was rooted in greenhouses with artificial fog as seen - cuttings formed roots almost 20% better than the control.

Differences between them - within the experience error . The difference was observed in variants of cultivation retardants: rooting percentage under milk film in both variants increased compared with control almost half. Also improved the quality of the root system, the weight of which increased by 2,2 (a variant with "Etel") and 2,5 times (variant with "Athlete"). The quality cuttings roots that formed in fog condition, was at the control level.

Effect retardants application was most notable for Sadko cuttings, which badly rooted in control variant in fog condition - by 36,2%.

Control cuttings under milky-white film rooted better at 20,7%. Substantial increase in the percentage of rooting gave the application of "Etel": in artificial fog, and in unregulated conditions it provided rooting at 86,9-87,8%, but the quality of the newly formed roots had no better.

Researchc conducted on different varieties of gooseberry have shown that the use of physiologically active substances in the preparation of mother plants to regeneration significantly increase the percentage of cuttings rooting and quality of the newly formed root system, especially in the perpetuation in unregulated conditions under milky-white film. Maximum efficiency was observed on varieties that differ genetically determined low capacity for rooting (Sadko, Zeleny Dosch).