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# THE USING OF IVIN FOR SCOTS PINE SEEDLINGS GROWING

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The using of modern chemicals (fertilizers, herbicides, fungicides, biologically active substances, etc.) is the element of progressive technologies of planting stock growing at the forest nurseries.

Recent years the special attention was direct to new drugs domestic production - synthetic analogues of natural phytohormones. There using given to provide forestry by not expensive and effective stimulants.

Objective of the research – to study the Ivin influence on sowing quality of *Pinus sylvestris* L. (Scotch Pine) seeds and on quality of annual seedlings, growing in greenhouse.

Research conducted in stationary greenhouse of *State Enterprise «Kiev Forest Scientific-Research Station"*. Pre-sowing seed treatment contained 4 variants: *different* 18-hour soaking in aqueous of Ivin solution with concentration 1.0; 2.0 and 4.0 ml / l and control (soak in water). To assess the effect of the drug was conducted accounting soil germination (21 days after sowing), preservation of crops in the fall. At the end of growing season measurement of biometric parameters of seedlings, including: height, diameter at root collar, length of root systems were conducted, the number of lateral shoots were calculated. Obtained data was processed statistically. Biometric performance complemented weight items: the mass of the aerial parts of seedlings, needles mass, the mass of root systems.

According to obtained data, a positive impact of the drug on germination and safety of crops were not found: soil germination after pre-treatment of seeds in different variants was on 11.4 - 9% lower than the control. Maximum concentration of Ivin - 4.0 ml / l provided most negative effect on soil germination.

best safety were obtained at Ivin concentration 2.0 ml / l ( 92.1% compared to control).

The treatment of pine seeds by Ivin (concentration 1.0 and 2.0 ml / l) led to a significant increase of height of seedlings by 10%. Other biometric indicators of annual seedlings (length of root diameter at root collar) changed slightly. Treatment of pine seeds by Ivin in minimum of studied concentration (1.0 ml / l) provide double increase air-dry weight of seedlings (both above ground and underground parts), while maintaining their quality.

It is planned to continue further research with test substance in smaller concentrations: from 0.5 to 2.0 ml / l.