

The intensity of tomato growth and development when using growth regulators

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Annotation. In the context of the growing importance of ecology, it is necessary to study and improve the use of growth regulators in the cultivation of vegetable crops. One of the main factors in the efficiency of vegetable cultivation is the scientifically based use of plant growth regulators. Every year, new biologically active preparations for growing agricultural plants enter the market. For the effective use of biological products, it is necessary to select the optimal doses and consumption rates of the working fluid. The use of plant growth regulators is primarily aimed at increasing the yield and quality of the products obtained. In our research, we studied the high-yielding tomato variety Alpha, which is one of the most promising varieties for open ground. For the study, we chose promising growth regulators recommended for use on vegetable crops: Potassium Humate, Energen, Heteroauxin, Fitosporin, Zircon. Seeds and adult plants were treated with these preparations. All experiments were carried out in accordance with generally accepted methods. The experiments were laid according to the following scheme: Control (the seeds were soaked in distilled water); in the experimental variants, the seeds were treated, and during the growing season, foliar top dressing was carried out with working solutions of the applied growth regulators. The duration of soaking the seeds is 2 hours; when feeding plants during the growing season, the consumption of the working fluid is 500 l/ha. The agricultural technique used in the research is generally accepted in the economy. Soaking seeds in solutions of stimulants showed efficiency in comparison with the control ones, but the maximum increase was achieved when the seed treatment was combined with feeding with stimulants during the growing season.

Key words: tomato, plant growth regulators, Potassium humate, Energen, heteroauxin, Phytosporin, Zircon, plant growth phases, biomass of aboveground organs, dry mass of plants

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