

**THE INFLUENCE OF GROWTH REGULATORS AND TYPE OF
PREDECESSOR ON THE PRODUCTIVITY AND QUALITY OF WINTER
BARLEY**

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The investigations were carried out on the varieties of winter barley Buran (intensive type) and the Osnova (plastic type), growing in pea and soybean, under conditions of field small-scale experiment. In the phase of mowing - the beginning of the exit into the tube, the plants were sprayed once with solutions of steroid glycoside preparations Moldstim (MS) and Ekostim (ES) at a dose of 25 mg/l, in control variants - with water. During the vegetative period, the parameters of growth and photosynthetic activity of plants were determined, at the end of vegetation - indicators of productivity elements, potential yield and chemical composition of the grain.

It has been established that the treatment of vegetative plants with MS and ES preparations leads to an increase in the parameters of stalk growth, the leaf surface and the time of its functioning during ontogenesis; the accumulation of raw and absolutely dry biomass by plants irrespective of the varietal characteristics and the type of the precursor.

It is shown that at the end of vegetation, under the influence of growth regulators, the parameters of the elements of productivity increase-the mass of the ear, the mass of grain in the ear and the number of grains in them, especially when growing in peas, in comparison with soybean. Increase in productivity elements leads to an increase in the yield of varieties. Thus, in the Buran variety for peas in MC and ES variants, the cereal productivity, in comparison with the control, is increased by 10.1-17.5 centners per hectare, while growing in soybeans by 1.5 times. In the Osnova, regardless of the type of precursor, under the action of preparations of steroid glycosides, the yield increases 1.3 times.

Analysis of the qualitative composition of grain, carried out by infrared spectroscopy on the Scanner model 4250 (Porumbeni), showed that under the influence of preparations of MS and ES a change in the chemical composition of the grain is observed. In the Buran variety, the pea in grain increases the protein content by 1.34-1.74%, fat by 0.24-0.59%, and starch by 1.35-1.93%; on soybeans - on 0.47-1.58; 0.77-1.00; 0.27-0.40%, respectively. The content of fiber and ash in the grain, regardless of the preceding culture, is reduced. In the variety of the Osnova for peas under the influence of growth regulators, in the grain the protein content increases by 0.45-1.06%, but at the same time, the amount of starch decreases. When grown on soybeans in this grade, the chemical composition of the grain is reduced. Consequently, under the influence of preparations of steroid glycosides, an increase in the productivity of plants is observed and the qualitative composition of the grain changes. It increases the content of the main groups of nutrients (protein, starch, fat) and reduces the amount of fiber and ash. The nature of the effect of growth regulators depends on the varietal characteristics and the conditions for their growth.