

INFLUENCE OF GROWTH REGULATORS OF STEROID NATURE ON PRODUCTIVITY AND QUALITY OF WINTER BARLEY GRAIN

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Studies on the study of the action of steroid glycosides on plants of winter barley varieties Buran and Osnova, carried out in a field crop rotation saturated with leguminous crops - peas (early harvesting) and soybeans (late harvesting). Winter barley plants were sprayed once in the ripening phase - the beginning of the emergence into the tube with solutions of steroid glycoside preparations Moldstim (MS) and Ecostim (EC) in a dose of 25 mg/l, in the control versions - with water. Plot area – 2 m². Repeat the experiment 4 times. Solution consumption - 100 ml per 1 m² of leaf surface. In the process of research, the elements of productivity and potential productivity were determined; grain quality, protein, starch, fat, fiber and ash content - by infrared spectroscopy on Scanner model 4250 at IF „Porumbeni”. It has been established that the treatment of plants with Moldstim and Ecostim preparations leads to an increase in stem growth parameters, leaf surface area and time of its functioning during ontogenesis, accumulation of raw and abs dry biomass by 1.1-2.1 times compared to the control, regardless of variety features. In an average of three years, under the action of growth regulators in the studied varieties Buran and Osnova, when grown on peas, the mass of the ear increases by 1.1-1.3 times, the mass of the grain in the ear - by 1.1-1.4 times. To a lesser degree, these indicators increase when growing soybean varieties. The increase in grain size under the action of steroid glycosides occurs in a different degree. The number of grains in the spike especially increases in the Buran variety when the MS preparation is in effect.

Calculations of winter barley varieties Buran and Osnova, in real soil and climatic conditions, allowed to establish its dependence on the type of predecessor. It has been established that when growing pea varieties, compared to soybeans, the yield increases 1.4-1.5 times in the control variants.

Spraying of vegetating plants with MS and ES preparations leads to the increase in yield of varieties. Thus, in the Buran pea variety in the MS and EC variants, compared to the control, the grain productivity increases by 10.1-17.5q/ha. It should be noted that when growing on soybeans, compared to peas, the reaction of the Buran variety to the treatment with steroid glycoside preparations is more pronounced. Productivity increases by 1.5 times. In the Osnova variety, regardless of the type of predecessor, spraying vegetative plants with steroid glycoside preparations leads to a 1.3-fold increase in yield. Under the action of MC and ES preparations, an increase in the grain content of protein by 1.34-1.74%, fat by 0.24-0.59% and starch by 1.35-1.93% is observed in Buran pea plants.

Keywords: *barley varieties, Ecostim, Moldstim, peas, soybeans.*