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## **EFFECT OF HERBICIDES ON PRODUCTIVITY OF CAMELINA SATIVA**

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**Formulation of the problem.** Camelina sativa is a plant family of cabbage, in the seed the oil content is 25–46%. It is unpretentious to soil fertility and grows well in the continental climate. The sowing of Camelina sativa is rarely damaged by pests and diseases, therefore, it is attractive for agricultural growing. Potential features of Camelina sativa are not yet fully disclosed, because this crop is occupied by small crop areas, and there are no intensive growing technologies.

The main disadvantage of cultivating of Camelina sativa is the absence of registered herbicides. This is a problem for intensive and massive cultivation because weeds significantly reduce crop capacity and fertilizer utilization efficiency, etc.

**Presenting the main material.** The research was conducted on the experimental field of the Faculty of Agrotechnologies and Ecology of Lviv National Agrarian University. The test is laid out in a triple repetition with a systematic placement of variants. The width of the row spacing is 15 cm, the depth of seeding is 2 cm, the seeding rate is 5 kg / ha, the registration area of the plot is 25 m<sup>2</sup>. The soil of the experimental area is dark gray podzolic. We studied the effective and selective action of metazachlor, propiochloride, and clopyralid. In order to reduce the washing of soil herbicides, Butyzan 400 and Proponit 720, on certain variants, were used Nyu-Film-17.

As a result of the research, it was founded that in all variants with herbicides (except for the use of Lontrel Grand), the growth of the Camelina sativa seed was 0,6–2,7 c/ha or 5,3–23,9 % compared to the control variant. In particular, adding Nyu-Film-17 to Butyzan 400 contributes to a 15,9 % increase in the crop capacity. The increase of the Butyzan 400 rate to 2,2 l/ha does not increase the additional increase in seeds compared to the norm of 1,8 l/ha, but on the contrary, there is a tendency to decrease productivity.

The best option is with the post-insertion of Butyzan 400 in the phase 2–4 of true leaves in the culture. The crop capacity is 14,0 c/ha, which is 23,4 % more than the control. Lontrel Grand influences negatively on the productivity of Camelina sativa.

During vegetation in the sowing dominated Polygonum scabrum Moench, Chenopodium album, Raphanus raphanistrum, Elymus repens L.. Somewhat common are Cirsium arvense L., Sonchus arvensis, Galium aparine,

*Thlaspi arvense*, *Fallopia convolvulus*, *Vicia cracca*, *Capsella bursa-pastoris* L., *Stellaria media*.

In the early stages of the growth of the *Camelina sativa* in variants with before-growth with using metazachlor and propiochloride, the lagging growth of cuttings and weight reduction were observed in comparison with control plants. The phytotoxicity is 5–30%. Thus, the weight of one plant in the raw state in these variants in the BBCH phase 12–14, decreases by 27–59 %, and the density of plants decreases by 32–86 pcs/m<sup>2</sup>.

The use of Butyzan 400 (2.2 l/ha) after first growth of the *Camelina sativa* does not cause visual signs of phytotoxicity of herbicides per culture. This is confirmed by the results of the accounting of the structural indices of the harvest.

The effect of herbicides on the *Camelina sativa* is clearly manifested in structural indices of a crop capacity. It was found that the reduction of plant density in the pre-season dosing of drugs is offset by an increase in the number of branches, the number of boxes and a mass of thousands of seeds.

All structural indices of a crop capacity deteriorate after the use of herbicide Lontrel Grand. In particular, the number of seeds in the box decreases by half – 4,6 pcs.

The best results are noted in the version where Butyzan 400 (2,2 l/ha) was used in the phase 2–4 true leaves.

**Conclusions.** In the conditions of the sufficient moisture for the effective control of the number of weeds in the crop *Camelina sativa*, it is expedient to use herbicide Butyzan 400 (metazachlor) in the phase 2–4 of true leaves.

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