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PRELIMINARY RESULTS OF THE USE OF HERBICIDE IN THE FIGHT AGAINST WEEDS (GRAINY) IN THE FIELD OF SOYBEANS

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Abstract: In the article, Zallek Bek 10.8 k.e. was used against cereal weeds in soybean fields. and Zellek Super 104 g/l k.e. in the study of biological efficiency of herbicides Zallek Beck 10.8 k.e. When the herbicide is applied at the rate of 1.0 l/ha, the efficiency compared to the control is 94.3%, Zellek Super 104 g/l k.e. When herbicide is applied at the rate of 1.5 l/ha, it is reported that the efficiency is 91.7%.

Key words: Plant, soybean, weed, herbicide, option, rate, efficiency.

Introduction. At the same time that the global climate changes are happening on the surface of the earth, the population is increasing year by year. The demand for food products of the population living on the planet is increasing day by day.

To preserve and increase soil fertility in our country, to ensure its biological activity, to use new effective methods of tillage to achieve the active development of living organisms in it, to use advanced technologies based on science in the care of agricultural crops, to breed crops with high productivity, quick ripening and high grain quality selective planting, the use of advanced resource-efficient technologies, the use of herbicides against weeds, and the use of integrated control measures against diseases and pests are required.

Global demand for plant protein continues to grow. Because vegetable protein is not only nutritious and medicinal. In this place, leguminous crops are important with their biological and agronomic properties. It is important to increase the area of soybean cultivation in order to satisfy the demand of people for vegetable protein, to provide livestock with quality feed, and to improve soil fertility.

In our republic, soybean is one of the main branches of agriculture. Weed control is one of the resource-saving agrotechnologies for obtaining high and quality crops from soybeans.

Weeds reduce the quality of the products grown in soybean fields, promote the spread of pests and diseases, because in most cases, weeds are considered a source of intermediate infection, seriously harming the growth and development of plants.

Weeds can reduce plant productivity by 30-35%. In addition, they have a negative effect on the growth and development of the plant, as well as affect the quality of the product and loss of productivity during the harvest.

Relevance of the topic: Chemical treatment of annual and perennial weeds belonging to the family of cereals found in soybean fields with herbicides is important in the cleaning of seed materials, the quality of seeds, and the freedom of seeds from pests and diseases.

Effective use of chemical agents, especially herbicides, is important from an economic point of view in order to save labor resources, along with timely and high-quality implementation of mechanical, agrotechnical, chemical and other measures to fight against weeds in soybean seed fields.

Annual and Perennial Cereal Weeds: Setaria glance is an annual cereal weed that germinates after temperatures exceed 14^{o} C. Height 40-50 cm. grows up to The period of seed germination is long 10-15 years. Dog beetle mainly pollutes the soil through its seeds, on average 3-5 seeds are found per $1m^2$. It germinates when the air temperature exceeds 15^{o}C. The rhizome produces up to 5,000 seeds per vigorous bush, and the seeds are shed quickly after ripening.

Turmeric - (Echinochloa crus-galli L.) Annual grain-like weed, mostly found in irrigated, sometimes dry lands. It grows up to 100 cm tall, flowers and seeds in July-September. Turmeric reproduces only by seeds. Its seeds do not lose their ability to be fertilized for 8-10 years, on average, 6,000 seeds are produced per 1 m^2.

Wild barley - (Hordeum Murinum L.) Annual cereal weed. The height reaches 80-90 cm. During the ripening period, 1 bush of wild barley seeds pollutes the soil and grain, mostly among grain crops. Contaminates the seeds and soil of cereal crops, mainly among cereal crops.

Sorghum - (Sorghum halepense L.) A perennial cereal weed. Mainly found in irrigated and semi-arid lands, it is a rhizomatous weed that germinates in March-April and reproduces by rhizomes and rhizomes. Its perennial, thick rhizome is located 10-40 cm deep under the soil. It will be 150-200 cm tall.

It blooms from June to autumn, the fruit ripens in July. Gumai grows until the evening frost. One bush can produce up to 2000 seeds. On average, there are 4-5 pieces of gummy per 1 m^2.

Objective of the study: The aim of the research is to study the herbicides used in the fight against cereal weeds in soybean fields and to select the most effective one.

Research results: The field experiment was conducted in the seed breeding nursery of soybeans planted in the main area in 2022 in the conditions of the meadow gray soil of the Central Experimental Site of the Scientific Research Institute of Cereals and Legumes.

It is economically beneficial to apply effective herbicides against weed seeds after they have germinated in the field. Special attention should be paid to the timing of application of herbicides against weeds. The air must be dry when applying the herbicide. In addition, nighttime application of herbicides used against weeds gives good results. Also, it is most effective to apply herbicides against weeds in the morning of the day when the air temperature does not rise.

Against grainy weeds in the soybean crop, herbicides Zallek Beck 10.8 g/l and Zellek super 104 g/l g.e. Field experiment was conducted on the basis of methodology in 3 options, 4 returns on the application of .

In order to study the effects of the herbicides used in the field experiment on weeds, phenological observations were made in the experimental field according to the established procedure.

No herbicides were used in option 1 of the experimental system. Zellek super 104 g/l k.e. in the 2nd option model. herbicide 1.0 l/ha, in option 3 Zallek Beck 10.8 k.e. herbicide was applied in the amount of 1.0 l/ha in the period when 3 leaves were formed.

For use in the experimental field, the working solution is prepared at the rate of 300 liters per hectare against annual and perennial spiked weeds, when their average height is 5-7 cm, the air temperature is 25-30 degrees, and the wind speed does not exceed 2-3 m/s. prepared a working solution of herbicides against weeds and sprayed them on the shade area.

Experience system

№	Experience options	spending norm l/ha
1	No herbicide was applied	0
2	Zellek Super 104 g/l k.e. (template)	1,0
3	Zallek Bek 10.8 k.e.	1,0

According to Table 1, which presents the results of the scientific research, the effect of herbicides used against annual and perennial weeds in soybean seed breeding nursery was found that the leaves of weeds stopped growing after 8-10 days of spraying herbicides.

Table 1

Biological efficacy of herbicides applied against weeds in soybean field

№	Weeds name	The number of weeds per 1 m^2 before treatment, pcs			45 days after processing The number of weeds per 1 m^2, pcs			Biological efficiency,%	
		No herbicide treatment	Zellek super k.e 1.0 l/ha (model))	Zallek Beck 10.8 k.e. 1.0 l/ha	No herbicide treatment	Zellek super k.e 1.0 l/ha (model))	Zallek Beck 10.8 k.e. 1.0 l/ha	Zellek super k.e 1.0 l/ha (model))	Zallek Beck 10.8 k.e. 1.0 l/ha
1	Setaria glance	19	21	22	26	1,16	1,1	94,5	95,2
2	Turmeric - (Echinochloa crus-galli L.)	11	15	14	17	0,75	0,8	95	94
3	Wild barley - (Hordeum Murinum L.)	7	6	8	10	0,75	0,4	87,5	95
4	Gumai - (Sorghum halepense L.)	3	3	5	8	0,3	0,34	90	93,3
Average		**10,0**	**11,2**	**12,2**	**15,2**	**0,74**	**0,66**	**91,7**	**94,4**

The effect of the herbicide rates used in the experiment on weeds was compared to the 1st variant of the experiment without herbicide treatment in the 2nd variant Zellek Super 104 g/l k.e. herbicide was applied at the rate of 1.0 l/ha (model) in the 91.7% of weeds, in the 3rd option Zallek Beck 10.8 k.e. it was determined that weeds were reduced by 94.4% in the option where the herbicide was used at the rate of 1.0 l/ha.

The herbicides used in the experimental field did not have a negative effect on the soybean plant, on the contrary, it was observed that the leaves of the soybean plant were shiny, wider and enlarged compared to the variant without herbicide application. At the time of soybean podding and grain maturity, the height of the main stem of the soybean plant is on average 12-14.5 cm higher than the herbicide-untreated variant. was found to be high.

The mineral fertilizer given to the soybean plants that were free from herbicide-killed grain-like weeds caused plant growth due to the use of water without "partners" to increase the height of the plants.

Conclusion. In conclusion, it can be said that Zallek Bek is 10.8 k.e. application of herbicide at a rate of 1.0 l/ha was found to reduce annual and perennial spike weeds in soybean field up to 94.4%. Application of herbicide against weeds increases the yield of soybean crop by 10-15%.

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