

EFFECT OF HERBICIDES APPLICATION ON WINTER WHEAT GROWTH

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Abstract:

Weeds are extremely diverse in cultivated land, and their characteristics, habitats, growth, development and distribution are also different. This causes a number of problems for farmers in controlling weeds while growing high grain yields. Especially in the lands where the underground seepage waters are located, when the control measures are not implemented in time, when the rhizomatous weeds, sedges, reeds, sedges, etc. are not implemented, they develop quickly and completely occupy the cultivated area, leading to the complete loss of the possibility of growing agricultural crops in the field.

Keywords: Weeds, winter wheat, agricultural, crops, herbicides, results.

Introduction

Taking into account that weeds absorb 2-3 times more light, heat, water and nutrients compared to cultivated crops, reduce soil fertility, prevent their growth and development, and reduce crop yield by 10-20%, in severely damaged areas by 40-50%, it is important to develop effective weed control measures [4; 2].

In a number of scientific studies, in order to reduce the amount of expenditure and increase the effectiveness of herbicides for the separate application of herbicides against weeds in cultivated fields, it was mentioned that their simultaneous application gives a positive result [3; 1].

Sh.Kh. Rizaev [1] Application of Granstar-75% DF-15 g/ha+Puma Super-7,5%-0,8 l/ha from herbicides against annual and perennial weeds in winter wheat fields in the lower part of the Zarafshan oasis a high grain yield of 63,4-67,2 tons/ha was obtained.

Therefore, it is important to study the weeds that damage agricultural crops and properly organize their control.

Our field experiments are conducted in the experimental fields of the Karakalpakstan Agricultural Research Institute in conditions of moderately saline meadow-alluvial soils. Control in the experiment (without herbicide), Serto Plus, 75% - 100 g/ha, Serto Plus, 75% - 150 g/ha, Clodimex, 8% - 0,3 l/ha, Clodimex, 8% - 0,4 l/ha ha, Serto Plus, 75% - 100 g/ha + Clodimex, 8% - 0,3 l/ha, Serto Plus, 75% - 150 g/ha + Clodimex, 8% - 0,4 l/ha were used. In our experiments, herbicides were applied according to the experimental system.

In order to determine the effectiveness of herbicides in winter wheat fields in our field experiments, the types and amounts of weeds in the experimental field were counted before the application of herbicides and 10, 20, 30 days after the application of herbicides.

According to the obtained data, when herbicides were used and their biological efficiency was studied, Serto Plus, 75% herbicide, used at 100-150 g/day, killed annual, dicotyledonous weeds

by 83,3-90,1% in 2-3 options, it was noted that it had no effect on ajryk from monocots and perennials. It was also found that the effectiveness of perennial bipeds was 76,4-83,3%, corresponding to herbicide mayors. In our experiments, Clodimex, 8% herbicide was applied at 0,3-0,4 l/in 4-5 options, and in terms of herbicide efficiency, it had a good effect on monocotyledonous weeds, in accordance with herbicide standards, 83,5-89,1% , it was observed in our experiments that it reduced 31,4-35,2% of the perennials that cause great damage in the cultivated area, and did not affect dicotyledonous and perennials.

In the 6th variant of the experiment, Serto Plus, 75% - 100 g/ha + Clodimex, 8% - 0,3 l/ha were used together, one-year monocotyledons in the experimental field 86,3-88,6%, dicotyledons 85,4-92,1% killed, perennials reduced by 80,3-82,4%, providing high biological efficiency. However, the species and rates of used herbicides were less effective for perennial, rhizomatous sorghum (ajryk) and amounted to 36,3%. Herbicides were used together Serto Plus, 75% - 150 g/ha + Clodimex, 8% - 0,4 l/ha in higher rates in option 7, the death of weeds, herbicides were applied at a low rate Serto Plus, 75% - 100 g/ha + Clodimex, 8% - 0,3 l/ha

Compared to option 6, there were almost no differences in biological efficiency (up to 0,5-3%). According to the data obtained in our experiments, the average height of the plant in the control variant without herbicide application was 81,4 cm, the number of total and productive stems was 412,4 and 241,4 m²/unit, respectively. No significant difference was observed between the rates of applied herbicides on wheat height, total and number of productive stems, but significant differences were observed between herbicide types.

According to the obtained results, the height, total and number of productive stalks of winter wheat in variants where the herbicides Serto Plus, 75% (100-150 g/ha) and Clodimex, 8% (0,3-0,4 l/ha) were applied separately, control it was taken into account that it was higher by 7,3 and 9,7 cm, 21,1 and 55,9 m²/unit, and 43,7 and 62,0 m²/unit, respectively, compared to the variant. It was noted that the highest indicators were high in the variant where herbicides Serto Plus, 75% - 100 g/ha + Clodimex, 8% 0,3 l/ha were used together.

According to the results of our experiments conducted in winter wheat fields infested with annual and perennial weeds, it was observed that the types and rates of herbicides used during winter wheat growth had different effects on winter wheat yield elements.

In the fight against annual monocotyledonous and dicotyledonous weeds spread in the experimental field, herbicides Serto Plus, 75% - 100 g/ha + Clodimex, 8% - 0,3 l/ha and Serto Plus, 75% - 150 g/ha ha + Clodimeks, 8% - 0,4 l/ha, when mixed together, has a positive effect on the formation of elements of the autumn wheat crop, plant height is 1,4-1,2 cm, grains in the ear are 3,7-3,5 in accordance with the herbicide type and standards it was taken into account that pieces, the weight of grain in one spike is 0,17-0,18 g and the weight of 1000 grains is 1,2-1,6 g.

Also, the herbicides used against weeds have different effects on grain yield. In the experimental field, against weeds Serto Plus, 75% - 100 g/ha + Clodimex, 8% - 0,3 l/ha and Serto Plus, 75% - 150 g/ha ha + Klodimeks, 8% - 0,4 l/ha, it was found that the highest grain yield was obtained among the experimental options. It was noted that when these herbicides were used as a mixture, the grain yield was 14-15 t/ha higher than the control (without herbicide) option.

In conclusion, in the areas infested with one-year monocotyledonous and dicotyledonous weeds, which are common in winter wheat fields in the conditions of moderately saline meadow-alluvial soils of Karakalpakstan, Serto Plus, 75% - 100 g/ha + Clodimex, 8% - Application in the form of a mixture at the rate of 0,3 l/ha, along with the destruction of the main part of weeds, the cultivated area is cleared of weeds, favorable conditions for the growth and development of wheat are created, and it creates the possibility of growing a high grain yield.

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