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INFLUENCE OF DIFFERENT HERBICIDES AGAINST WEEDS MEETING ON CEREAL FIELDS UNDER IRRIGATION

A. Amanov,
D.Sc. of agricultural sciences at Kashkadarya Branch of the
Research Institute of Grain and Leguminous Crops (Kashkadarya Branch of RIGLC)

T. X. Meyliyev
Basic doctoral student Kashkadarya Branch of the
Research Institute of Grain and Leguminous Crops (Kashkadarya Branch of RIGLC)

Abstract:

Grain production has been and remains the basic branch of agricultural production of each state. In stabilizing grain production, plant protection from pests, diseases, and weeds is of great importance.

The article discusses the effect of various weeds found in grain fields on grain yield and their impact on herbicide treatment. The study revealed the type and number of weeds before and after spraying with herbicides.

Key words: *wheat, herbicide, species, number, weeds, element, water, harm, control.*

Introduction

All economic and agrotechnical measures to increase agricultural production are actively carried out in the republic. In the successful solution of these problems, it is of particular importance to protect plants from diseases, insects and weeds, which significantly reduce the quality and quantity of grain crops.

Annual exposure to weeds results in a 20 million ton reduction in grain. According to statistical data, the damage caused by weeds in the world is estimated at 10.4 billion rubles. If measures against weed control are not taken in a timely manner in the grain fields of Uzbekistan, annual crop losses will amount 27,0-36,6%[2].

In our country, among cereals, there are more than 200 types of weeds that absorb more nutrients, water and light than cereals. As a result, this interferes with the full development of cultivated plants[1].

One of the main ways weeds spread on irrigated land is wastewater used as an irrigation tool. Weed control is now increasingly carried out in the field in the field. However, the seeds of the weeds that grow around the irrigation network, ripen and enter the water, spread to the fields. The spread of weeds through irrigation water has been well documented in many scientific studies[3].

The aim of the research is to study and determine the effects of various herbicides against weeds observed on the territory of grain fields under irrigated conditions. Field experiments

were carried out at the experimental site of the Kashkadarya branch of NIIZZBK in light gray soils in 2018-2019.

In the course of the research, work to determine the type and number of weeds was carried out twice. During the research on an area of 1 m2 of annual dicotyledonous weeds, 5.8 pcs of Amaranthus hybridus L., 4.8 pcs of Capsella bursa-pastoris L., 5.7 pcs of Erysimum cheiranthoides L were found. ., 5.8 pieces of Hibiscus trionum L., according to general calculations, the average indicator of which is 4.6 pieces, that is, it is estimated at 3 points, as a result it is 22 pieces, this indicator indicates that the sown area is moderately contaminated with annual dicotyledonous weeds.

During the tillering phase of wheat, on an area of 1 m2 of perennial dicotyledonous weeds, 6.3 units of Galium aparine L., 5.2 units of Artemisia vulgaris L., 5.2 units of Convolvulus sepium L. is 45 pieces, this indicator indicates that the sown area is moderately contaminated with annual and perennial dicotyledonous weeds.

After treatment with herbicides to determine the contamination with weeds, 4.2 pcs of Echinochloa crus-galli L., 8.8 pcs of Avena fatua L, 4.2 pcs of Setaria glauca L., 5.4 pcs of Hordeum murlnum L., 4.5 pcs Alpecurus myosuroides Hids, according to general calculations, the indicator is 23, an average of 4.3 pcs. Even if the degree of contamination of the field was assessed as medium, heavy contamination with wild oats was observed.

Also, on an area of 1m2, 4.3 units of Galium aparine L., 3.1 units of Stellaria media L., 4.1 units of conolon daction, 6, 1 unit of Sorghum halepense L were found on average 4.6 units of perennial dicotyledonous weeds, according to general calculations, the average of all types of weeds on an area of 1 m2 is 54, which means that the contamination of the field is estimated as average. (table 1).

Table 1. The type and number of weeds found in grain fields (average)

№	Latin name for weeds	Found in the square 1 m^2
1	Amaranthus retroflexuss	5,8
2	Avena fatua L	8,8
3	Alopecurus myosuroides Hids	4,5
4	Hibiscus trianum	5,8
5	Erubimum cheiratnoidis	5,7
6	Lapputa myositis sualnch	6,3
7	Artemisia vulgaris	5,2
8	Capsella bursa	4,8
9	*Setaria glauca L*	4,2
10	Eninochloa cruss galli	4,2
11	Galium aparine L.	4,3
12	Sorghum halepense	6,1
13	Conolon daction	4,1
14	Hordeum murlnum L	5,4
15	Stellaria media L	3,1
16	Convolunlus arvensis	5,2
Total		83,5

In the course of investigations against the harmful weeds found in grain fields, the herbicides "Ento-super", "Ento-rana" and "Granistar plus" were used. The calculation of the number of weeds per 1 m^2 was carried out before and after treatment with herbicides.

Based on the results of the work carried out to determine the effect of herbicides on weeds, it was determined that in the control variant without the use of the herbicide, the number of weeds was high and, in turn, negatively affected the general development of the main crop. To study and determine the range of effectiveness of herbicides, calculations and recording of the number of weeds per 1 m^2 area of each variant were carried out.

Analysis of studies to determine the effect of herbicides on the number of weeds showed that the number of weeds in the untreated control variant was significantly higher than in the variants with the use of herbicides. The number of weeds per 1 m2 of each variant was recorded to study and analyze the effects of herbicides.

Table 2. The effect of various herbicides on weeds (average)

Variant	Drug name	Application rate	Before applying the herbicide 1 m^2 / pc	After application of the herbicide 1 m^2 / pc	Range of action, %.
1	The control (without processing)	-	54	59	-
2	Katsumi 24 EC	200 ml / ha	57	2	96,4
3	Entosuper	0,6 ml / ha	55	4	92,7
4	Granistar plus	0,75 ml / ha	54	7	87,1
5	Ento-rune	0,02 ml / ha	56	5	91,1

In the course of the studies, analyzing the results, it was determined that in the variant with the use of the herbicide "Katsumi 24 EC" the number of weeds before the herbicide treatment was 57 pcs, and after the application of 2 pcs, the effectiveness of which is 96.4%, in the variant with the herbicide " Granistar plus ", the number of weeds before treatment with herbicide was 54, and after application of 7, the effectiveness of which was 87.1%, in the variant with the use of the herbicide Entosuper Ento-Rane, the number of weeds before the herbicide treatment was 55, and after the application of 4, the effectiveness of which is 92.7%, in the variant with the herbicide "Ento-ranne" the number of weeds before treatment with herbicide was 56 pieces, and after application of 5 pieces, the effectiveness of which is 91.1% (2-zhadval).

Conclusion

According to the results of the conducted studies, it should be noted that in our study weed plants were treated with various herbicides. As a result, the most effective option was with the herbicide Katsumi 24 EC, which showed a herbicidal effect on weeds of 96.4%.

References:

1. Lazovatina M. A. Ximicheskaya borba s sornyakami na posevax xlopchatnika i kukuruzы v usloviyax serozemnыx pochv[Chemical control of weeds in cotton and corn crops in gray soil conditions]. Avtoref. kand. diss. – Tashkent1964 g. 25 s.
2. Sattiboev I. Sornыe zlaki oroshaemыx zemel vostochnoy Fergany[Weed grasses of irrigated lands in eastern Fergana]. Avtoref. Kand. Diss. – Tashkent. 1969 g.
3. Xamidov A., Sornyaki v Uzbekistane[Weeds in Uzbekistan], T, 1973;
4. Kobulov Yu.S., Sulaymonov E., Sornyaki i borba s nimi[Weeds and their control], T., 1976
5. Opredelitel rasteniy Sredney Azii[Keys to plants of Central Asia]. Tashkent “Nauka” 1980-1987 g T I-IX.