EFFECT OF COMBINED USE OF HERBICIDES ON WINTER WHEAT YIELD

Sulliyeva Suluv Xurramovna[1]

Qahhorov Ismoiljon Barotali o‘g‘li[2]

Candidate of Biological Sciences, Associate Professor of the Faculty of Natural Sciences of Termez State University[2]

Teacher of the Faculty of Natural Sciences of Termez State University[2]

Annatation: This article presents the results obtained when several herbicides were used together to control weeds in winter wheat fields and their effect on winter wheat yield.

Key words: herbicides, complex application, productivity, weeds, winter wheat.

Introduction: One of the factors that hinders the production of abundant and high-quality plant products is weeds, which cause huge problems. For this reason, it is an urgent issue to create the scientific and practical basis of combating weeds in the field of grain crops grown on irrigated lands in each soil and climatic conditions, as well as by crop and variety.

Purpose of work: Studying the effects of combined application of several herbicides on weeds and yield in winter wheat field.

Research object: Winter wheat fields in the irrigated lands of Surkhandarya region were selected as the object of research and experiments were conducted.

Research methods: Applying, observing, comparing and evaluating the results of adding various herbicides to the winter wheat field, which is considered the object of research.

It is known from the scientific sources of 1980-1990 that herbicides were mixed with each other, with mineral fertilizers and other chemical agents, and it was observed that the efficiency was high when they were used once. Especially when herbicides are mixed together and used together, repeatedly using tractor-mounted herbicide sprayers to control weeds in a winter wheat field increases both

exposure and cost.

The selective effect of herbicides when used to control weeds in winter wheat fields requires the use of several herbicides together to control weeds of different species.

According to the results of our experiments (Table 4.2.7.22), Puma super (1 l/ha) herbicide with spikes, Granstar (15 g/ha) herbicide against dicotyledonous weeds separately and together it was found that when herbicides were applied, grain yield was significantly increased compared to the control option without application.

Table - 4.2.7.22

Dependence of the productivity of winter wheat variety Kroshka on the level of weed control by herbicides

№	Experience is an option lari	Productivity, s/ha				Difference from control (st), +,-	
		2005 year	2006 year	2007 year	average	s/ha	%
When the herbicide was applied on March 20							
1	I option (st)	31,3	34,4	32,8	32,8	-	100,0
2	II option	45,3	50,1	48,5	47,9	+15,1	146,0
3	III option	46,9	49,5	47,3	47,9	+15,1	146,0
4	IV option	56,7	57,3	56,1	56,7	+23,9	172,8
	Sx, %	0,36	0,17	0,26			
	EKF05=s/ha	3,11	1,10	1,75			
When the herbicide was applied on April 10							
1	I option (st)	30,1	31,5	29,8	30,4	-	100,0
2	II option	47,3	48,1	47,1	47,4	+17,0	155,9
3	III option	47,8	49,7	48,1	48,5	+18,1	159,5
4	IV option	59,5	61,2	60,5	60,4	+30,0	198,7
	Sx, %	0,28	0,24	0,16			
	EKF05 =s/ha	1,86	1,52	1,04			

However, it was observed that grain yield changes depending on the period, type and method of herbicide application.

First of all, when the grain yield of the control option without herbicides was analyzed according to the duration of herbicide application, the following cases were observed. It was observed that the grain yield of the control variant was different in the years of the experiment, in the places where herbicides were applied and where herbicides were not applied, due to the fact that the experimental fields were in different places according to the terms of application of herbicides. However, the fact that the difference in grain yield in the control options does not exceed 2.0-2.5 s/ha can be considered as a result of the error between the experimental options. Because the smallest between-experimental difference (ECF) is 1.10-3.11, this indicator is a natural difference that occurs between experimental options and replications, and such differences that occur in field experiments it is recognized that the experiments were carried out correctly.

Results: According to the first experiment conducted on March 20 to eliminate spike and dicotyledonous weeds in the winter wheat field by applying herbicides, the grain yield of the control variant without herbicide application was 31.3-34 .4 s/ha, the grain yield when spiky weeds were eliminated by means of Puma super (1 l/ha) herbicide was 45.3-50.1 s/ha in the years of the experiment , the three-year average additional grain was 15.1 s/ha compared to the control option without herbicides. When Granstar (15 g/ha) herbicide was used against dicotyledonous weeds, the grain yield differed dramatically from year to year (46.5-49.5 s/ha) and averaged 47.9 s. /ha, compared to the control variant, it showed the formation of additional grain yield by 15.1 s/ha. However, when both herbicides were used together at the specified rates, the additional grain yield increased up to 72.8%. That is, according to the three-year experiments, the average grain yield when herbicides are used together is 56.7 s/ha, and the additional grain yield is 23.9 s/ha compared to the control option without herbicides. did These conditions are the reason why the grain yield is 8.8 s/ha less when the herbicide Puma super (1 l/ha) is applied alone, compared to when the

herbicide Granstar (15 g/ha) is applied together, due to the negative effects of dicotyledonous weeds. can be expressed as 'secret. It is natural that the decrease in grain yield when Granstar (15 g/ha) herbicide is used alone, compared to when both herbicides are used together, is caused by the negative effects of spiky weeds. Because spike and dicotyledonous weeds develop in winter wheat fields at the same time and have a negative impact on productivity. Puma super (1 l/ha) and Granstar (15 g/ha) herbicides, when used together, control both spike and dicot weeds at the same time, allowing free growth and development of winter wheat. due to the creation of perfect conditions, the grain yield will increase dramatically.

According to the second experiment, the additional grain yield when Puma super (1 l/ha) herbicide was applied against spikes and Granstar (15 g/ha) herbicide against dicotyledonous weeds on April 10 compared to when herbicides were applied on March 20 was 6 It was observed to increase up to 1 s/ha. This situation can be explained by the fact that herbicides were applied on March 20, and despite the elimination of weeds, new ones appeared and negatively affected the growth and development of winter wheat, reducing the yield. Because on April 10, all types of weeds that have been treated with herbicides will fully germinate and be eliminated by herbicides (early and dicotyledonous). Therefore, it was found that the additional grain yield when Puma super (1 l/ha) was applied on March 20 was 15.1 s/ha, and this indicator increased by 2.0 s/ha when applied on April 10. . Also, when Granstar (15 g/ha) herbicide was applied on April 10 compared to March 20, an increase of 3.0 s/ha was observed. When herbicides are applied together on April 10, when the weeds have fully germinated, the additional grain yield is on average up to 30 s/ha, and the total average grain yield increases to 60.4 s/ha. provides.

Conclusion: So, when spike and dicotyledonous weeds are common in winter wheat fields, Puma super (1 l/ha) and Granstar (15 g/ha) herbicides are used against them by mixing them together and applying them once. due to the cleaning of wheat fields from such weeds, it is possible to ensure an increase in grain yield up to two percent.

We selected the fields where winter wheat was grown a year before the experiment and where winter wheat is planned to be grown next year, and we marked the fields with a lot of spike and dicotyledonous weeds. Even before conducting the experiments, we calculated such weeds and then applied herbicides according to the experimental scheme. Therefore, it was observed that there was a significant difference in productivity between the experimental variants without herbicides and those with herbicides. Usually, herbicides are applied to crops with a lot of weeds.

REFERENCES:

1. Decision of the President of the Republic of Uzbekistan "On additional measures to introduce the market principle in the production and sale of grain", PQ-262, 28.05.2022.
2. Закиров Т.С. Культура земледелия в орошаемых условиях Узбекистана. - Т.: «Ўзбекистон», 1979.
3. Ermatov A. Irrigated farming. T.: "Teacher", 1983.
4. Rashidov M. I. and others. Recommendations for the use of Granstar herbicide in grain fields. Tashkent, 1998.
5. Oripov R., Khalilov N. Plant science. T., 2006.
6. Ibragimov Z.A. Field weeds and their control in short-rotation grain rotation (Nauchn.tr. KIEI, vip.1), 1996
7. Kholmatov M.Kh., Akramov B. Effectiveness of chemicals in the fight against weeds, diseases and pests in irrigated grain fields. "Cotton and grain farming" //J: No. 2, 2000
8. Elefferohorinos T. G. Weeds competition from Callium Aparine 1 and Veronica Persica Poir in Winter Wheat and their control by chlorsulfuron. //Aspects. №9,1985
9. Dependence of stem lodging resistance of winter wheat on weed control. Sullieva Suluv Khurramovna, JOURNAL OF AGRICULTURE & HORTICULTURE Volume 4, Issue 6, 55-58.

10. Dependence of winter wheat growth and development on the level of weed control. Sullieva Suluv Khurramovna, JOURNAL OF AGRICULTURE & HORTICULTURE Volume 4, Issue 6, 52-54.