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EFFECIENECY OF MALIBU AND GAMBIT HERBICIDES APPLICATION IN THE COTTON PLANT FIELDS AGAINST WEEDS

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ANNOTATION

In the article Malibu against weeds in the Cotton field in the conditions of typical oxen soils of the Tashkent region, 50 W.d.g. and Gambit CK, 500 g / l.e.c. data on the effectiveness of the use of herbicides separately and in front-to-back are presented. Gambit CK, 500 g/l.e.c. It lost 86.2-87.7% of annual weeds per year when applied in the 1.5 l/ga norm. The Malibu 50 herbicide lost 85.7-88.0% of perennial weeds in the fall when applied in a 2.0 l/ha norm., Malibu 50 in the fall and Gambit CK, 500 herbicide lost 90.0-93.5% of annual weeds, 88.5-91.8% of perennial weeds, when applied precast with Cotton planting in the 1.5 l/ga norm.

Key words: herbicide, Malibu 50, Gambit CK, 500, annual weed, perennial weed, l/ha, grain/m², cotton yield.

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1 INTRODUCTION

Weeds are adapted to growing under certain environmental conditions. For example, *Chenopodium album* in Cotton fields, *Echinochloa crus-galli* L., *Amarathus retroflexus* L., *Portulaca oleraceae* L., *Solanum nigrum* L. *Convolvulus arvensis* L., *Sorghum halepense* L., *Cynodon dactylon* L. weeds such as adapted to growth.

One herbicide has different effects on different weeds. Therefore, the application of one herbicide to the diet leads to an increase in the number of weeds that are resistant to these herbicides. This negative process can be stopped using alternating application of herbicides with different spheres of influence, the use of mixtures, pre-application [2,4,5,6].

In our experiments, we conducted a scientific study on determining the effectiveness of the use of Gambit CK 500 herbicides with Malibu 50 separately and first-hand.

2. MATERIALS AND METHODS

The field experiment was carried out in 4 repetitions of 7 options in the conditions of Gray soils of the Tashkent region. The accepted methods experiments, observations, accounting and analysing. [1; 3]. Size of experimental pieces 144 m².

2.1-table
Experimental scheme

Option number	Various	Herbicide norm, l/ha
1.	Control (without herbicide)	-
2.	Gezagard, 50 % .s.c. (etalon)	1,5
3.	Gambit CK, 500 g/l.e.c.	1,0
4.	Gambit CK, 500 g/l.e.c.	1,5
5.	Gambit CK, 500 g/l. e.c.	2,0
6.	Malibu, 50 w.d.g.	2,0
7.	Malibu+ Gambit CK	2,0+1,5

The location scheme of the plant is 90x10x1. The C-6524 version of variety has been grown.

Malibu, 50 w.d.g. herbicide against perennial weeds that did not end their growing season at the end of September, the drug Gambit CK, 500 was sprayed with the help of a manual sprinkler apparatus along with the planting of cottons. The water consumption was 600 l/ha when used on herbicide Joppa, 200 l/ha when sprayed on tape method.

Definition of herbicides.

Gambit CK, 500 g/l. e.c. Produced by the Russian ao firm "August". The acting substance is promethrin. An annual one-cell and two-cell is used against weeds. Before planting, along with planting, the sprouts are sprayed into the soil in a cover or tape method until germination.

Malibu, 50 g/kg w.d.g. It is produced in Uzbekistan by the firm "sample Diyor". The acting substance is glyphosate + MCPA. It is sown in late September, early October, against perennial and annual weeds that have not finished growing. The working fluid is sprayed at 600 l/ha. Processing repeatability once.

3. The effect of pre-and post-use of herbicides on weeds

During the first accounting period, the Control Option took into account the presence of 34.6 annual weeds on 1 m² of earth. The most abundant of these weeds is *Echinochloa crus-galli* L. where it is 16.5 units in 1 m², *Chenopodium album* 6.70 units, *Amarathus retroflexus* 5.20

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units, Solanum nigrum L. 3.50 PCs., Portulaca oleraceae L. 2.70 PCs., Convolvulus arvensis L. 1.50 PCs and Sorghum halepense L. 75 were found to exist (table 3.1.1).

Herbicide variants have significantly reduced weed numbers. The herbicides Malibu 50 and Gambit CK 500 had an annual weed count of 2.25 PCs/m² in a pre – applied version. As a result of the use of Gambit CK 500 and Malibu, 50 herbicides before and after, perennial weeds have also been drastically reduced compared to the control option

3.1.1-table

Effects of herbicide application on weeds (2022 y.).

№	Annual weeds				Perennial weeds			
	1-account		2-account		1-account		2-account	
	piece/m ²	decrease, %	piece/m ²	decrease, %	piece/m ²	decrease, %	piece/m ²	decrease, %
1.	34,6	-	30,5	-	3,25	-	3,50	
2	4,30	87,6	4,50	85,2	3,00	13,2	3,10	11,4
3.	6,00	82,7	5,75	81,1	3,25	6,25	3,30	5,71
4.	4,25	87,7	4,20	86,2	2,80	13,8	3,05	12,9
5.	3,45	90,0	3,50	88,5	2,75	15,3	3,00	14,3
6.	28,6	17,3	26,2	14,1	0,40	87,7	0,50	85,7
7.	2,25	93,5	3,00	90,2	0,30	90,8	0,40	88,5

Gambit CK, 500 herbicide lost 86.2-87.7% of annual weeds, 12.9-13.8% of perennial weeds when applied in the 1.5 L/ha norm. This provided an 88.5-90.0% loss of annual weeds, and a 14.3-15.3% loss of perennial weeds when herbicide was applied in the 2.0 l/ha norm. Malibu, 50 p.d.g and Gambit CK, 500 g/l e.k.. herbicides provided an 88.5-90.8% loss of annual weeds by 90.2-93.5% of perennial weeds when applied in advance.

Gambit CK, 500 g/l e.k. the dry mass of annual weeds decreased by 86.0-88.0% when herbicide was used in the 1.5 l/ha norm, and 88.3-90.4% when used in the 2.0 l/ga norm. When Malibu 50 herbicide was used in a 2.0 l/Ha norm, the dry mass of annual weeds decreased by 13.5-16.3%. The low level of this indicator can be explained by the fact that annual weeds are abundant in this version. In this version, the dry mass of perennial weeds has decreased by 86.2-88.2 %.

3.1.2-table

Effects of herbicides on weed dry mass (2022 y.).

№	Annual weeds				Perennial weeds			
	1- account		2- account		1- account		2- account	
	g/m ²	decrease, %	g/m ²	decrease, %	g/m ²	decrease, %	g/m ²	decrease, %
1.	32.5	-	28,2		4,25	-	5,80	
2	4,40	86,5	4,50	84,0	3,65	14,1	5,10	12,1
3.	5,90	81,8	5,60	80,1	3,93	7,76	5,40	6,90
4.	3,90	88,0	3,95	86,0	3,65	14,1	5,00	13,8
5.	3,12	90,4	3,30	88,3	3,55	16,5	4,91	15,2
6.	27,2	16,3	24,4	13,5	0,50	88,2	0,80	86,2
7.	2,50	92,3	2,82	90,0	0,35	91,8	0,60	89,7

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The Malibu 50 herbicide is rated at 3.0 l/ha and the Gambit CK 500 e.k. When used for 1.5 l/ha, the dry mass of annual weeds decreased by 90.0-92.3% when used first-to-last, and the dry mass of perennial weeds decreased by 89.7-91.8%.

Similar data were obtained in 2023. Gezagard, 50%. when herbicide was applied in the 1.5 l/ha norm, it provided an annual weed loss of 87.1-88.4%,. Gambit provided an 88.4-89.8% loss of annual weeds when CK 500 herbicide was applied in a 1.5 L/ha norm. Gambit CK, 500 e.k. G/L herbicide lost 89.8-91.0% of annual weeds when applied in a 2.0 l / ha norm.

3.1.3-table

Effects of herbicide application on weeds (2023 y.).

№	<i>Annual weeds</i>				<i>Perennial weeds</i>			
	1- account		2- account		1- account		2- account	
	piece/m ²	decrease, %	piece/m ²	decrease, %	piece/m ²	decrease, %	piece/m ²	decrease, %
1.	36.2	-	32,5	-	3,50	-	3,75	
2	4,20	88,4	4,20	87,1	3,10	11,4	3,35	10,7
3.	6,25	82,7	5,50	83,1	3,25	7,14	3,50	6,67
4.	4,00	89,4	3,75	88,4	3,00	14,3	3,25	13,3
5.	3,25	91,0	3,30	89,8	2,90	17,1	3,20	14,7
6.	30,2	16,5	28,0	13,8	0,35	88,6	0,45	88,0
7.	2,00	94,5	2,75	91,5	0,30	91,4	0,35	90,7

Malibu Lost 88.0-88.6% of perennial weeds when 50 herbicides were applied in the 2.0 l/ga norm. Malibu 50 herbicide in the 2.0 l/ha norm in the fall, Gambit CK, 500 herbicides in the 1.5 l/ha norm along with Cotton planting, both annual weeds and perennial weeds were effectively lost when applied. In this version, annual weeds are lost 91.5-94.5%, perennial weeds 90.7-91.4%.

Gezagard, when 50% herbicide was applied in the 1.5 l/ha norm, the dry mass of annual weeds decreased by 85.8-87.6%.

Gambit CK, 500 g/l. The dry mass of annual weeds decreased by 81.3-83.3% when applied in the 1.0 l/ha norm. When this herbicide was used at a norm of 1.5 l/ha, the dry mass of annual weeds decreased by 87.2-89.0 %. Malibu, 50 p.d.g. when herbicide was used in the 2.0 l/ha norm, the dry mass of perennial weeds decreased by 86.3-87.4%. Malibu, 50 p.d.g. herbicide in the fall at a norm of 2.0 l/ha and Gambit CK, 500 g/l e.k. In the 1.5 l / ha norm, the dry mass of annual weeds decreased by 91.2-92.9 %, while the dry mass of perennial weeds decreased by 89.8-91.6% when used before and after along with the planting of cottons.

3.1.4-table

Effects of herbicides on weed dry mass (2023 y.).

№	<i>Annual weeds</i>				<i>Perennial weeds</i>			
	1- account		2- account		1- account		2- account	
	g/m ²	decrease,%	g/m ²	decrease,%	g/m ²	decrease,%	g/m ²	decrease,%
1.	35.4	-	31,6		4,75	-	6,20	
2	4,40	87,6	4,50	85,8	4,10	13,8	5,50	11,3
3.	5,90	83,3	5,91	81,3	4,38	7,79	5,78	6,77
4.	3,90	89,0	4,05	87,2	4,08	14,1	5,41	12,7
5.	3,12	91,2	3,32	89,5	3,97	16,4	5,28	14,8
6.	29,4	16,9	27,0	14,6	0,60	87,4	0,85	86,3
7.	2,50	92,9	2,78	91,2	0,40	91,6	0,63	89,8

So, it turns out that it is possible to effectively reduce the number and dry mass of annual and perennial herbs by applying the drug Gambit CK 500 at 1.5 l/ha in combination with sowing acorns in the fall or Malibu at a norm of 2.0 l/ha in the fall and Gambit at a norm of 1.5 l/ha.

4. Growth and development of manure when applying herbicides first and then.

4.1. Germination of acorns. It is known that herbicides can also affect the plant being protected for being physiologically active substances. The scientific literature provides data that chemical preparations do not adversely affect Cottons and other crops in optimal norms [2,4,5,6].

Data on the dynamics of germination of acorns are presented in Table 4.1.1. The data obtained indicate that the use of herbicides separately and from time to time does not adversely affect the germination of seeds. In the first days of accounting, no difference was observed in the number of sprouts germinated in control and experimental options. We see that in the last days of observation, the number of Sprouts is slightly higher in experimental options compared to the control option.

4.1.1 - table
Germination of cotton, (2022 y.)

№	Days of observation					
	15.IV.	17.IV.	19. IV.	21. IV.	23. IV.	25. IV.
1.	16,3	35,5	63,6	78,5	85,0	85,5
2.	16,0	34,0	56,5	78,0	87,0	88,0
3.	17,5	33,8	56,0	75,0	85,0	87,0
4.	16,3	34,0	58,5	78,0	86,5	87,5
5.	16,8	32,5	56,5	79,0	85,5	85,0
6.	18,8	35,0	61,0	75,5	87,0	88,0
7.	16,3	36,3	63,5	78,0	86,0	89,0

On April 25 in the control option, one in m, 85.5% of germination was taken into account. The best option was taken into account the presence of 89.0% germination. In the second year of research (2023.) close information has been obtained.

4.1.2 - table
Germination of cotton, (2023 y.)

№	Days of observation					
	20.IV.	22.IV.	24. IV.	26. V.	28. V.	30. IV.
1.	13,8	32,5	59,0	82,5	87,0	88,5
2.	12,5	28,8	56,5	83,0	88,0	89,0
3.	13,5	31,0	57,5	82,5	87,0	88,5
4.	12,5	29,0	58,5	84,0	89,0	90,0
5.	12,0	27,5	56,5	77,0	85,0	87,5
6.	13,0	34,0	60,0	85,0	90,0	90,5
7.	12,5	29,0	59,5	83,0	90,5	91,0

Based on the data presented, it can be concluded that herbicides do not adversely affect the germination of acorns.

4.2. Growth and development of cotton.

The fact that the fields are clean from the beginning of the growing season can be achieved with the help of herbicides. Table 4.2.1 shows that the versions in which herbicides were applied had significantly higher Cotton height and leaf count compared to the control version.

The height of the goose 1.VI at Control Option 17.5 cm, Gezagard, 50% sus. k. the herbicide version used 20.2 CM, Gambit CK, 500 and Malibu 50. herbicides were used separately in variants at 19.6; 20.8; 20.6 and 24.6 cm, respectively. Malibu, 50 p.d.g. and in the version where Gambit CK, 500 herbicides were applied before and after, this difference was even greater(5.3 cm). In this variant 1.In VII, The Dove was 65.3 cm tall. During this period, the height of the ACORN was equal to 58.0 CM in the control variant.

4.2.1-table.

Height and number of true leaves, (2022 y.)

Tretmeant	Real leaves, pieces. 1.VI.	Plant height, cm			
		1.VI.	1.VII.	1.VIII	1.IX.
1	6,70	17,5	58,0	86,6	90,2
2	7,00	20,2	62,4	92,4	94,4
3	6,90	19,6	59,6	90,5	92,0
4	7,20	20,8	63,5	93,0	95,6
5	7,23	20,6	63,7	95,2	95,0
6	7,10	20,4	61,6	94,2	95,8
7	7,30	21,5	65,3	95,5	96,4

The height of the goose is In VIII, the control variant used 86.6 cm, Gezagard, 50% herbicide-the version used 92.4 cm, the Gambit CK 500 and Malibu, 50 herbicides in the separately used variants were 90.5; 93.0; 95.2 and cm, respectively. Malibu, a version used in the 50-2.0 l/ha norm, had a height of 94.2 cm. The herbicides Malibu, 50 and Gambit CK, 500 were 95.5 in the variant used after the advance.

Even in the second year of research, this law was preserved. The height of the Acorn is 1, 2023.VIII had 88.7 cm in the control version, 94.2 sm in the version using the Gezagard herbicide, and 92.3; 95.6 and 94.8 cm respectively in the Gambit CK, 500 and Malibu, 50 herbicides used separately. The herbicides Malibu, 50 and Gambit CK, 500 were 95.8 in the variant used after the advance. The number of simpodial branches is also in the Control option 1. IX had 13.5 units.(Table 4.2.2). In the best experimental options, this figure was equal to an average of 15.0-15.5 units in one plant.

4.2.2.-table.

Number of crop branches and elements of acorns in the field where herbicides were applied, PCs/ in one plant (2022 y).

Tretmeant	Simpodial branch, pieces			1.VIII		1.IX	
	1.VII	1.VIII	1.IX	bud/square	boll	boll	open boll
1	6,80	12,6	13,5	1,50	3,50	7,10	1,20
2	7,70	13,8	14,7	2,25	4,20	9,20	2,20
3	7,50	13,6	14,6	2,00	4,15	9,30	2,10
4	7,80	13,9	15,0	2,40	4,25	9,80	2,25
5	7,70	13,8	14,7	2,30	4,20	9,60	2,15
6	8,10	13,9	14,9	2,50	4,25	9,70	2,20
7	8,30	14,5	15,5	2,70	4,40	10,1	3,10

1.VIII in the control option, the number of cocoons was 3.5 units, in the version, where Gezagard, 50 herbicides were applied, 4.20 units, in the Gambit CK, 500 herbicides were used separately, 4.15; 4.25 and 4.20 units, respectively. The Malibu, a version with a norm of 50 2.0 l/ha, took into account that the number of cocoons was 4.25 units. Malibu, 50. and the Gambit CK, a version in which 500 herbicides were applied before, averaged 4.40 units per Bush Acorn.

1.In IX, the control version had 7.5 cocoons, the Gezagard 50 herbicide applied version had 9.20, the Gambit CK, 500 herbicides used separately had 9.30; 9.80 and 9.60, respectively. The Malibu 2.0 L / ha norm option took into account that the number of collars was 9.70 units. In the version where the Malibu and Gambit CK 500 herbicides were applied before, the average number of cocoons per Bush ACORN was 10.1 units.

4.2.3-table

Number of crop branches and elements of acorns in the field where herbicides were applied, PCs/ in one plant (2023 y).

Tretmeant	Simpodial branch, pieces			1.VIII		1.IX	
	1.VII	1.VIII	1.IX	bud/square	boll	boll	open boll
1	6,90	12,9	13,9	1,75	3,70	8,10	1,50
2	7,80	13,9	14,8	2,50	4,40	9,80	2,50
3	7,50	13,7	14,7	2,25	4,25	9,50	2,30
4	7,90	13,9	14,9	2,60	4,50	10,2	2,75
5	7,80	13,9	14,8	2,50	4,35	10,1	2,50
6	8,20	13,9	15,3	2,50	4,25	9,90	2,40
7	8,30	14,5	15,5	2,70	4,40	10,5	2,80

The number of cocoons opened was also 1.5-1.9 units more than the control in the version used before and after the Malibu and Gambit herbicides.

Timely weed loss ensures an increase in the yield of cotton, creating favorable conditions for the growth and development of acorns.

4.3. Cotton yield

Timely loss of weeds ensured an increase in the yield of cotton, creating favorable conditions for the growth and development of acorns. The control option received a cotton crop of 27.7 ts/ha. The Gezagard 50 herbicide 1.5 l/ha was derived in a regulatory variant with a yield of 3.3 ts / ha over the control version. Gambit CK, 500

When herbicide was applied in the norm of 1.0 l/ha, a yield of 3.1 ts / Ha was obtained compared to the control option. When it was used at a norm of 1.5 l/ha, a yield of 4.3 ts/Ha was obtained. As Gambit CK, 500 herbicide applied to 2.0 l/provided conditions for obtaining a cotton yield of more than 4.1 ts/per Control.

4.3.1-table

Cotton crop, ts/ha(2022-2023yy).

№	Tretmeant	2022 y.	2023 y.	Average	Difference from control
1.	Control (without herbicide)	25,6	29,8	27,7	-
2.	Gezagard, 50 %. sus. k., 1,5 l/ha	28,8	33,2	31,0	+ 3,3
3.	Gambit CK, 500 g/l.e.k.,1,0 l/ha	28,6	33,0	30,8	+ 3,1

4.	Gambit CK, 500 g/l.e.k.,1,5 l/ha	29,8	34,2	32,0	+ 4,3
5.	Gambit CK 500 g/l. e.k.,2,0 l/ha	29,6	34,0	31,8	+ 4,1
6.	Malibu, 50 s.d.g. 2,0 l/ha	28,6	33,4	31,0	+ 3,3
7	Malibu 2,0 l/ha + Gambit CK 1,5 l/ha	30,6	35,2	32,9	+5,2

Malibu, with a Gambit CK (1.5 l/ha) of 50 (2.0 L/ha) received a 32.9 ts / ha multiple cotton yield in the pre-applied version. In this version, it was achieved to obtain a crop of 5.2 ts/ha of cotton compared to the control option.

Therefore, the use of herbicides in optimal norms does not adversely affect the growth, development of Cottons, but rather the timely loss of weeds ensures an increase in yield, creating favorable conditions for these physiological processes.

CONCLUSION

1. Gambit CK provides an 86.2-89.4 %, loss of annual weeds when 500 herbicides are applied in the 1.5 l/ga norm. The Malibu 50 herbicide provided an 85.7-88.6% loss of perennial weeds when applied in a 2.0 l/ha norm in the fall.

2. Malibu 50 herbicide at 2.0 l/ha in the fall, Gambit CK 500 herbicide at 1.5 l/ha provides a 90.2-94.5% loss of annual weeds, 88.5-91.4% loss of perennial weeds, when applied first-after-first with seed planting.

3. When Gambit CK herbicide was used in the 1.5 l/ha norm compared to the control option 4.3 ts/ha, Malibu 50 drug was taken in the 2.0 l/ha norm with a yield of 3.3 ts/ha more cotton. Malibu, 50 preparation 2.0 l/ha BME'yorda in the fall, Gambit CK herbicide provides for obtaining a crop of 5.2 ts/ha more cotton when applied in advance, along with the planting of acorns.

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