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INFLUENCE OF THE APPLICATION OF HERBICIDES STEP 500 AND ANKOSAR ON ANNUAL AND PERENNIAL WEEDS IN FINE-FIBER COTTON CROPS

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ABSTRACT

In this scientific article, materials on the effectiveness of the use of a combination of herbicides with a different spectrum of action against annual and perennial weeds in fine-fiber cotton crops sown on ridges and a smooth field in meadow soils are provides. Sowing cotton seeds along the ridges and using a combination of herbicides Step 500, 50% ae. when sowing at a rate of 4.0 l/ha and Ankosar 720 g/l c. R. at a rate of 4.0 l/ha before cotton budding, or at a weed height of 10-15 cm, reduces the number of annual weeds by 92.2-95.6%, perennial weeds by 91.6-92.4%, cotton yield increases by 5.0 centners/ha.

KEYWORDS: *Herbicide, Step 500, 50% E.C., Ankosar 720 G/L A.S., Annual Weeds, Perennial Weeds, L/Ha, Pcs/M^2, Cotton Yield.*

INTRODUCTION: Actuality of the work

More than 3,000 species of weeds are prevalent in the world's arable lands, and 1,800 species of them have caused enormous economic damage, of which more than 200 species are in strong competition with major agricultural crops. There are more than 841 species of weeds in irrigated agriculture, of which 209 are dangerous. It was found that 72 species of annual and perennial weeds occur in cotton growing areas and 35 of them are the most harmful [1; 108p.].

The damage seen if the cotton stays in the weeds in the early phases of the growing season is enormous. This is because cotton lags significantly behind in growth and development, and the negative effects of weeds are also manifested in the later phases of the growing season. This leads to a sharp decrease in productivity. [4, 6, 7, 8,13, 14].

Weeds make very good use of water, light, nutrients, and other factors, and the uptake of nutrients in fertilizers reaches 30-40% [10; 78p.].

In the experiments of S.Saidov and N.Turdieva [11,12], 140 kg of nitrogen, 120 kg of phosphorus and 30 kg of potassium are absorbed from one hectare of arable land. Wild rose hips, sorghum, sorghum and other weeds absorb an average of 30-70 kg of nitrogen, 10-15 kg of phosphorus, 50-70 kg of potassium per 1 hectare, and the efficiency of mineral fertilizers is reduced by 30-40%. As a result, the quantity and quality of the crop decreases due to weeds.

The use of chemical control measures is the most effective method in weed control. This is because herbicides can be applied to large areas in the short term. Herbicides have different effects on weeds with different biological properties. Herbicides that are effective against annual weeds have a weak effect on perennial weeds. Drugs that work well on perennial weeds are less effective against annual weeds.In addition, the chronic application of one herbicide in a field leads to an increase in the number of weeds that are resistant to these herbicides. For example, when chronic use of the herbicide simazine in corn fields, the number of weeds resistant to this drug increases from year to year. [1, 13, 14].

Data from other scientists have shown that the number of weeds resistant to this drug increases from year to year as a result of applying the same herbicide in the same field for several years. This negative process can be stopped by alternating application of herbicides with different scope of application, use of mixtures, pre-application.

Based on this, we conducted experiments to determine the effectiveness of pre-application of Stomp plus and Ankasar herbicides against annual and perennial weeds in fine-fiber cotton fields. Clearing the fields of weeds by increasing the effectiveness of chemical control measures will increase the quantity and quality of the cotton crop.

The purpose and objectives of scientific research. Determining the optimal dose of herbicide Ankosar 720 g/l (72%) s.e. against weeds in fine-fiber cotton fields planted on flat ground in the conditions of irrigated meadow soils of Surkhandarya region;

Step 500, 50% e.k. and Ankosar 720 g/l (72%) s.e. and identify and evaluate the effects of pre-application of herbicides on weeds in fine-fiber cotton fields;

Step 500, 50% e.k. and Ankosar 720 g/l (72%) s.e. and to determine the effect of pre-application of herbicides on the growth, development, and yield of fine-fiber cotton;

Subject and object of research: The object of research is irrigated meadow soils of Surkhandarya region, fine-fiber cotton variety SP-1607, herbicides, Stomp plus 33% e.k., Ankosar 720 g/l (72%) s.e., Step 500, 50% e.k., single and perennial weeds were obtained.

Scientific research was carried out in 2017-2019 in the conditions of irrigated meadow soils of Surkhandarya region in 14 variants, 4 repetitions (Table 1).

Accepted methods were used in conducting and conducting the experiment [5, 9].

TABLE 1 EXPERIMENTAL SCHEME (2017-2019).

№	Planting method	Name of herbicide	Herbicide rate, l/ha
1.	Sowing the seeds on flat ground	Control, no herbicides	-
2.		Stompplyus 33,0% e.k. (etalon)	4,0
3.		Step 500, 50% e.k. (etalon)	4,0
4.		Ankosar 720 g/ls.e.	3,0
5.		Ankosar 720 g/ls.e.	4,0
6.		Ankosar 720 g/ls.e.	5,0
7.		Step 500, 50% e.k. +Ankosar 720 g/ls.e.	4,0+4,0
8.	Sowing the seeds in the bush	Control, no herbicides	-
9.		Stompplyus 33,0% e.k. (etalon)	4,0
10.		Step 500, 50% e.k. (etalon)	4,0
11.		Ankosar 720 g/ls.e.	3,0
12.		Ankosar 720 g/ls.e.	4,0
13.		Ankosar 720 g/ls.e.	5,0
14.		Step 500, 50% e.k. +Ankosar 720 g/ls.e.	4,0+4,0

The soils of the experimental area are moderately sandy, meadow soils in terms of mechanical composition. Sizot waters are located at a depth of 2 m.

In the selection and preparation of land for the experiment, the typicality of the soil, the degree of supply of humus and nutrients were studied. The research was conducted at the farm "Kiyik Paykal" in Jarkurgan district of Surkhandarya region. The options were arranged in 4 tiers. track length 25 m. Each option is 8 rows. The width of the section is 8 x 90 cm = 7.2 meters, the area of the section is 7.2 x 25 meters = 180 m2. The total area of the experiment is 1,008 hectares.

Stomp plus 33% e.k. Produced by “Bio Zamin” LLC of Uzbekistan. The active ingredient is “Pendimentalin”. The herbicide has a selective effect from the inside (systemic). Annual monocotyledonous and dicotyledonous weeds are affected by root penetration. This herbicide was sprayed by tape method during the sowing of cotton.

Step 500 50% e.k. Developed by “East Asia Chemicals” LLC in Uzbekistan. The active substance is "Pendimentalin". The herbicide has a selective effect from the inside (systemic). Annual monocotyledonous and dicotyledonous weeds are affected by root penetration. The crops are sprayed into the soil by the tape method until they sprout.

Ankosar 720 g/l, s.e. Manufactured by Malaysian firm "Ancom Crop Care San.bhd.". The active substance is "Monomethyl-sodium-arsenate", an herbicide that acts internally (systematically). The herbicide is sprayed against cotton weeds at the rate of 4.0 l / ha against annual and perennial weeds, annuals and some perennial dicotyledonous weeds.

The following phenological observations were made in the experiment: - germination of cotton seedlings; - combing, flowering, fruiting and opening of pods, determination of cotton yield. The calculation of the thickness of cotton seedlings was carried out 2 times during the growing season: 1) after the first cotton was completely single (at the end of May); 2) The second time at the end of the growing season, during the cotton harvest. To determine the thickness of cotton seedlings, 4 points were selected from each delyanka (length of 1 point 11.1 m).

The following agrochemical properties of soil were studied in the experimental field.

1. Before planting cotton, samples were taken and analyzed in the laboratory to determine the amount of nitrogen, phosphorus, general and mobile forms of potassium, humus in the 0-30 cm and 30-50 cm layers of soil. Humus, humus content I.M.Tyurin; total nitrogen and phosphorus I.M.Maltseva, L.N.Gritsenko; nitrate nitrogen-ionometric instrument; mobile phosphorus was determined by B.P.Machigin and exchangeable potassium by P.V.Protasov [3].

2. The volumetric weight of the soil was determined at depths of 0-100 cm in layers every 0-10, 10-20, 20-30 and 30-50 cm.

Research results. In the experimental fields, the occurrence of annual weeds, mainly black currant, olabuta, ituzum, wild rose, fat grass, sheep, perennial weeds such as gumay, ajrik, koypechak was observed and taken into account.The number of weeds was taken into account after the first (after 30 days), second (after 50 days) and third (after 70 days) watering.

TABLE 2 EFFECTS OF HERBICIDE APPLICATION ON WEEDS (2017-2019)

№	Options	The rate of application of herbicides, kg, l/ha	Annual weeds						Perennial weeds					
			Account 1		Account 2		Account 3		Account 1		Account 2		Account 3	
			piece/ m^2	decrease,%	piece/ m^2	decrease,%	piece/ m^2	decrease, %	piece/ m^2	piece/ m^2	piece/ m^2	decrease,%	piece/ m^2	decrease,%
Planting on flat ground														
1.	Control, no herbicides	-	43,1	-	29,70	-	25,60	-	6,80	-	5,10	-	4,45	-
2.	Stompplyus 33,0 % e.k. (etalon)	4,0	8,47	80,3	6,24	79,0	5,57	78,2	6,10	10,3	4,59	10,0	3,99	10,3
3.	Step 500, 50 % e.k. (etalon)	4,0	8,12	81,1	5,83	80,4	5,21	79,6	5,94	12,6	4,38	14,1	3,93	11,7
4.	Ankosar 720	3,0	10,09	76,	7,34	75,	6,4	74	1,	79,1	1,2	75	1,14	74,

	g/ls.e.			6		3	3	,9	42		4	,7		4
5.	Ankosar 720 g/ls.e.	4,0	8,78	79,6	6,56	77,9	5,85	77,1	1,11	83,7	0,98	80,8	0,91	79,6
6.	Ankosar 720 g/ls.e.	5,0	8,26	80,8	6,28	78,9	5,47	78,6	1,01	85,1	0,94	81,5	0,86	80,7
7.	Step 500, 50 % e.k. + Ankosar 720 g/ls.e.	4,0+4,0	4,91	88,6	4,13	86,1	3,51	86,3	0,76	88,8	0,69	86,5	0,68	84,7
Planting in the bush														
8.	Control, no herbicides	-	35,05	18,6	25,40	14,5	22,09	13,7	6,12	10,0	4,67	08,4	4,12	07,4
9.	Stompplyus 33,0 % e.k. (etalon)	4,0	5,12	88,1	4,20	85,6	3,87	84,9	5,56	18,2	4,27	16,3	3,77	15,3
10.	Step 500, 50 % e.k. (etalon)	4,0	4,70	89,1	3,66	87,7	3,46	86,5	5,36	21,1	4,03	20,1	3,57	19,8
11.	Ankosar 720 g/ls.e.	3,0	7,27	83,1	5,44	81,7	4,81	81,2	0,94	86,2	0,77	84,9	0,74	83,4
12.	Ankosar 720 g/ls.e.	4,0	5,07	88,2	4,20	85,9	3,81	85,1	0,68	90,0	0,60	88,2	0,64	85,6
13.	Ankosar 720 g/ls.e.	5,0	4,80	88,9	4,06	86,3	3,67	85,7	0,65	90,4	0,56	89,0	0,60	86,5
14	Step 500, 50 % e.k. + Ankosar 720 g/ls.e.	4,0+4,0	1,81	95,8	2,09	92,9	2,05	92,0	0,39	94,3	0,38	92,5	0,38	91,5

In the control variant in a thin-fiber cotton field planted on flat land, the annual weeds were 43.1 pieces/m^2 in the first count (30 days after spraying). Stomp plus 33% e.k. (standard) when the herbicide was applied at a rate of 4.0 l/ha compared to the control option, 80.3%, Step 500, 50% e.k. Reduced weeds by 81.1% when applied at a dose of 4.0 l/ha. At this time Ankosar 720 g/l herbicide 3.0; Application at the rates of 4.0 and 5.0 l/ha is 76.6 per year for annual weeds, respectively; 79.6; and provided a reduction of 80.8% (Table 2).

Step 500, 50% e.k. Sprinkle with sowing at a rate of 4.0 l/ha, Ankosar 720 g/l s.e. spraying herbicide at a rate of 4.0 l/ha during the period of cotton weeding or when the height of weeds is 10-15 cm, their number decreased by 88.6%.

In a field planted with cotton on flat ground Ankosar 720 g/l s.e. Annual weed loss at the rate of 4.0 l/ha lost 77.1–79.6%. At the time of the first registration, the number of perennial weeds was 6.80 pieces/m^2. Stomp plus 33% k.e. perennial weeds in the variant where the herbicide (4.0 l / ha) was applied were 10.3%, Step 500, 50% e.k. Ankosar 720 g/l herbicide was 3.0, while it was reduced by 12.6% to the norm of 4.0 l/ha; 4.0; and 79.1, respectively, used in the 5.0 l/ha norms; 83.7; and decreased by 85.1%.In the experiment (2017-2019), in the control (without herbicide) option in the 1st account of weeds after the 1st irrigation in the land plowed in the fall, the average number of annual weeds was 35.1/m^2, while in the variants using herbicides, their number significantly reduced. For example, Stomp plus 33% e.k. When applied at a rate of 4.0 l/ha, the annual weed is 88.1% higher than the control option, Step 500, 50% e.k. a 89.1%

reduction was achieved when the herbicide was applied at a rate of 4.0 l/ha.These herbicides only affected the germination of weed seeds. Ankosar 720 g/l s.e. preparations 3.0; Annual weeds when applied at 4.0 and 5.0 l/ha were 83.1%, respectively, compared to the control option; Decreased by 88.2% and 88.9%, respectively. Step 500, 50% e.k. 4.0 l/ha with normal sowing and Ankosar 720 g/l s.e. At the rate of 4.0 l/ha, the number of weeds decreased by 92.0-95.8% in the pre-applied variant during the cotton weeding period.

The number of perennial weeds in the control variant planted with cotton buds and without the use of herbicides was 6.12 pcs/m^2. Stomp plus 33% e.k. In the variant applied at the rate of 4.0 l/ha, the number of perennial weeds increased by 18.2%, Step 500, 50% e.k. the herbicide was found to decrease by 10.0% when applied at a dose of 4.0 l/ha. It has been observed that these herbicides only affect perennial weeds that germinate from seeds. Ankosar 720 l/ha herbicide separately 3.0; 4.0; and 86.2% of perennial weeds, respectively, when applied at the rate of 5.0 l/ha; Decreased by 90.0% and 90.4%, respectively.

TABLE 3 PLANTING IN THE BUSH ANDEFFECT OF HERBICIDE APPLICATION ON DRY MASS OF WEEDS (2017-2019)

№	Options	The rate of application of herbicides, kg, l/ha	Annual weeds						Perennial weeds					
			Account 1		Account 2		Account 1		Account 2		Account 1		Account 2	
			piece/ m^2	decrease ,%	piece/ m^2	decrease ,%	piece/ m^2	decrease ,%	piece/ m^2	piece/ m^2	piece/ m^2	decrease ,%	piece/ m^2	decrease ,%
Planting on flat ground														
1.	Control, no herbicides	-	36,3	-	25,75	-	20,65	-	5,55	-	5,25	-	4,75	-
2.	Stompplyus 33,0 % e.k. (etalon)	4,0	4,25	88,3	3,25	87,4	3,00	85,5	4,75	14,4	4,55	13,3	4,15	12,6
3.	Step 500, 50 % e.k. (etalon)	4,0	4,05	88,8	3,00	88,3	2,75	86,7	4,50	18,9	4,35	17,1	4,00	15,8
4.	Ankosar 720 g/ls.e.	3,0	7,25	80,0	6,00	76,7	5,00	75,8	1,15	79,3	1,10	79,0	1,00	78,9
5.	Ankosar 720 g/ls.e.	4,0	6,25	81,4	5,25	79,6	4,65	77,5	0,95	82,9	0,90	82,9	0,85	82,1
6.	Ankosar 720 g/ls.e.	5,0	6,00	82,8	5,00	80,6	4,45	78,5	0,85	84,7	0,80	84,8	0,80	83,2
7.	Step 500, 50% e.k. + Ankosar 720 g/ls.e.	4,0-4,0	3,25	91,0	2,50	90,3	2,25	89,1	0,65	88,3	0,65	87,6	0,60	87,4
Planting in the bush														
8.	Control, no	-	28,	21,4	20,	20,4	16,	18,9	4,85	12,6	4,6	11,4	4,25	10,5

	herbicides		5		50		75				5			
9.	Stompplyus 33,0% e.k. (etalon)	4,0	3,25	91,0	2,35	90,9	2,00	90,3	4,25	23,4	4,20	20,0	3,85	18,9
10.	Step 500, 50% e.k. (etalon)	4,0	3,00	91,7	2,15	91,7	1,75	91,5	4,00	27,9	3,85	26,7	3,65	23,2
11.	Ankosar 720 g/ls.e.	3,0	6,15	83,0	5,00	80,6	4,35	78,9	0,95	82,9	0,85	83,8	0,90	81,1
12.	Ankosar 720 g/ls.e.	4,0	5,25	85,5	4,55	82,3	4,25	79,4	0,75	86,5	0,65	87,6	0,75	84,2
13.	Ankosar 720 g/ls.e.	5,0	5,00	86,2	4,35	83,1	4,10	80,1	0,65	88,3	0,55	89,5	0,60	87,4
14.	Step 500, 50% e.k. + Ankosar 720 g/ls.e.	4,0-4,0	2,55	93,0	2,00	92,2	1,85	91,0	0,45	91,9	0,40	92,4	0,40	91,6

Step 500, 50% e.k. 4.0 l/ha with normal sowing and Ankosar 720 g/l s.e. Perennial weeds lost 91.5–94.3% in the pre-applied variant during the cotton weeding period at a rate of 4.0 l/ha.

Data on determining the effect of application of herbicides on dry mass of weeds in different doses and methods in fine-fiber cotton fields planted in pink and flat soil are given in Table 3. In the control (herbicide-free) option, the dry mass of annual weeds in the 1st accounting period was 36.3 g/m^2, while Stomp plus was 33.0% e.k. In the variant used at the rate of 4.0 l/ha, it was 4.25 g/m^2, and the dry mass of weeds was reduced by 88.3%. Step 500, 50% e.k. when the herbicide was applied at a rate of 4.0 l/ha, the dry mass of annual weeds was 4.05 g/m^2, i.e., reduced by 88.8%.Ankosar 720 g/l s.e. (4.0 l/ha) herbicide 3.0; In the variants used separately at the norms of 4.0 and 5.0 l / ha, respectively, compared to the control variant (7.25, 6.25 and 6.00 g/m^2) 80.0; Decreased by 81.4 and 82.8%, respectively. Step 500, 33% e.k. (4.0 l/ha) with herbicide Ankosar 720 g l s.e. (4.0 l/ha) in the pre-applied variant of the herbicide, the dry mass of weeds (3.25 g/m^2) was reduced by 91.0%.

The dry mass of perennial weeds was 5.55 g/m^2 in the control variant at the time of calculation 1, Stomp plus 33% e.k. At a dose of 4.0 l/ha, it was 4.75 g/m^2, a decrease of 14.4% compared to the control option. Step 500, 50% e.k. when the herbicide was applied at a rate of 4.0 l/ha, the dry mass of perennial weeds decreased by 18.9% to 4.50 g/m^2. Ankosar 720 g/l s.e. (4.0 l/ha) herbicide 3.0; When applied at 4.0 and 5.0 l/ha, the dry mass of perennial weeds decreased by 79.3, 82.9, and 84.7%, respectively, compared to the control option. This figure is Step 500, 33% e.k. (4.0 l/ha) with Ankosar 720 g/l s.e. (4.0 l/ha) was 87.4–88.3% higher than the control option in the pre-applied herbicide.

In the herbicide-free control option planted to cotton on the ridge, the dry mass of annual weeds averaged 28.5 g/m^2, while Stomp plus 33.0% e.k. 4.0 l/ha was 3.25 g/m^2 in the normally used variant, or a decrease of 91.0% compared to the control variant. Step 500, 50% e.k. when the herbicide was applied at a rate of 4.0 l/ha, the dry mass of annual weeds was reduced by 91.7%. Ankosar 720 g/l s.e. herbicide 3.0; In the variant used at 4.0 and 5.0 l/ha, 83.0, respectively, compared to the control variant; Decreased by 85.5 and 86.2%, respectively.Step 500, 33% e.k.

(4.0 l/ha) with herbicide Ankosar 720 g/l s.e. (4.0 l/ha) in the pre-applied variant of the herbicide it was found that the dry mass of annual weeds decreased by 91.0-93.0% compared to the control variant (Table 3).

In the herbicide-free control option planted to cotton, the dry mass of perennial weeds was 4.85 g/m^2 in the 1st accounting period, while Stomp plus was 33% e.k. 4.0 l/ha was applied at a dose of 4.25 g/m^2, a decrease of 23.4% compared to the control option. Step 500, 50% e.k. when the herbicide was applied at a rate of 4.0 l/ha, the dry mass of perennial weeds was 4.0 g/m^2 or a decrease of 27.9%.Ankosar 720 g/l s.e. herbicide 3.0; 82.9 in proportion to the control option when used at 4.0 and 5.0 l/ha; Decreased by 86.5 and 88.3%, respectively. Step 500, 33% e.k. (4.0 l/ha) with herbicide Ankosar 720 g/l s.e. (4.0 l/ha) in the pre-applied variant of the herbicide, it was found that the dry mass of perennial weeds decreased by 91.6-91.9%.

This means that the application of herbicides against weeds in the fields of fine-fiber cotton planted in the plow, which is plowed in the fall, effectively reduces the dry mass of annual weeds when applied in optimal norms and methods.

The application of herbicides in the field in different doses and methods, planting cotton in the fields and on flat ground, ensures that the fields are free of weeds in a timely manner, creates favorable conditions for cotton growth and development, and ensures a high cotton yield compared to the herbicide-free option..

In the control variant planted on flat land, the average cotton yield was 29.8 ts/ha. Stomp plus 33% e.k. In the variant used at the rate of 4.0 l/ha, 31.8 ts / ha, Step 500, 50% e.k. herbicide at a rate of 4.0 l/ha 32.8 ts/ha, Ankosar 720 g/l herbicide 3.0; 32.9 when used at 4.0 and 5.0 l/ha, respectively; 33.9 and 33.9 ts/ha were harvested. Step 500, 50% e.k. when the herbicide was applied at a rate of 4.0 l/ha and Ankosar 720 g/l at a rate of 4.0 l/ha before and after the cotton mowing period, a yield of 34.5 ts/ha was achieved (Table 4).

In the herbicide-free variant planted on cotton buds, the yield of fine-fiber cotton averaged 31.1 ts/ha, while Stomp plus 33% e.k. In the variant used at the rate of 4.0 l / ha, 32.8 ts/ha, Step 500, 50% e.k. herbicide at a dose of 4.0 l/ha 33.5 ts/ha, Ankosar 720 g/l herbicide 3.0; 33.4 when used at 4.0 and 5.0 l/ha, respectively; 34.9 and 34.8 ts/ha were harvested. Step 500, 50% e.k. when the herbicide was applied at the rate of 4.0 l/ha and Ankosar 720 g/l at the rate of 4.0 l/ha before the cotton mowing period, the yield was 35.4 ts/ha (Table 4).

In the variants using herbicides against weeds, the yield was higher (1.3–5.6 ts/ha) relative to the control variant. The highest yields were obtained when Ankosar 720 g/l herbicide was applied at a rate of 4.0 l/ha (3.6; 5.1 ts/ha, respectively) and Step 500, 50% e.k. herbicide at 4.0 l/ha and Ancosar 720 g/l at 4.0 l/ha (4.7; 5.6 ts/ha, respectively).

TABLE 4 PLANTING IN THE BUSH ANDIMPACT OF HERBICIDE APPLICATION ON COTTON YIELD, TS / HA (2017-2019)

№	Options	Application rate of herbicide, kg, l / ha	Yield by years, ts / ha			Average yield, ts / ha	Difference from control, ts / ha
			2017	2018	2019		
Planting on flat ground							
1.	Control, no	-	29,1	30,3	30,0	29,8	±0

	herbicides						
2.	Stompplyus 33,0% e.k. (etalon)	4,0	32,0	31,9	31,5	31,8	2,0
3.	Step 500, 50% e.k. (etalon)	4,0	33,1	32,8	32,5	32,8	3,0
4.	Ankosar 720 g/ls.e.	3,0	33,4	32,9	32,5	32,9	3,1
5.	Ankosar 720 g/ls.e.	4,0	34,1	33,9	33,8	33,9	4,1
6.	Ankosar 720 g/ls.e.	5,0	34,2	34,0	33,5	33,9	4,1
7.	Step 500, 50% e.k. + Ankosar 720 g/ls.e.	4,0+4,0	35,0	34,5	34,0	34,5	4,7
Planting in the bush							
8.	Control, no herbicides	-	30,7	31,0	31,6	31,1	1,3
9.	Stompplyus 33,0% e.k. (etalon)	4,0	32,9	32,0	33,5	32,8	3,0
10.	Step 500, 50% e.k. (etalon)	4,0	33,9	33,6	33,0	33,5	3,7
11.	Ankosar 720 g/ls.e.	3,0	34,2	33,2	32,8	33,4	3,6
12.	Ankosar 720 g/ls.e.	4,0	35,5	34,7	34,5	34,9	5,1
13.	Ankosar 720 g/ls.e.	5,0	35,2	35,0	34,2	34,8	5,0
14.	Step 500, 50% e.k. + Ankosar 720 g/ls.e.	4,0+4,0	35,9	35,3	35,0	35,4	5,6
ЭКМТ$_{05}$=			1,1ts/ha	1,2ts/ha	1,2ts/ha		
EKMT$_{05}$=			2,64%	2,82%	2,83%		

It should be noted that when the land was plowed in the fall and herbicides were applied to the land where the cotton was harvested, the cotton yield was significantly higher than the cotton planting options on the flat land.

CONCLUSIONS

1. Pre-application of herbicides with different exposure properties for effective weed control in fine-fiber cotton fields planted on flat ground and bush give high efficiency.

Step 500 in a field planted with cotton buds, 50% e.k. (standard) at the rate of 4.0 l/ha reduces annual weeds by 86.5-89.1%, perennial weeds by 19.8-21.1%. Ankosar reduces annual weeds by 85.1-88.2% and perennial weeds by 85.6-90.0% in the variant used at the rate of 720 l/ha to 4.0 l/ha.

Step 500, 50% e.k. 4.0 l/ha with normal sowing and Ankosar 720 g/l s.e. At the rate of 4.0 l/ha, the pre-applied variant loses 92.0-95.8% of annual weeds and 91.5-94.3% of perennial weeds during the pre-weeding period.

2. Pre-application of herbicides with a different area of application against weeds in the field of fine-fiber cotton planted on the bush and flat ground creates favorable conditions for the growth and development of cotton by timely removal of weeds.

3. Step 500, 50% e.k. 4.0 l/ha with normal sowing and Ankosar 720 g/l s.e. At the rate of 4.0 l/ha during the ginning period of cotton, 5.1 and 5.6%, respectively, in the variant applied before and after the control variant, a large cotton yield was obtained.

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