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## AGAINST WEEDS IN RICE FIELDS EFFICIENCY OF HERBICIDES

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**Abstract.** In a scientific article, the biological efficiency of weeds in rice fields was 88.3-90.2% due to the use of Rainbow herbicide 2.5% 0.8 l / ha, herbicide Sholi Gold -113 2.5 l / ha, which is 9.7-13.2 t / ha is higher than control.

**Keywords:** rice, weeds, herbicide, Rainbow, Sholi Gold -113, biological efficiency, yield.

### INTRODUCTION

In the world of agriculture, in a number of European countries (Russia, Belarus, the Baltics) and in the United Kingdom, France, Scandinavia, China, India, Pakistan and many other countries, including Uzbekistan, weed control is now a major issue of plant protection. , without a successful solution to this problem, there will be no benefit to the effectiveness of measures to increase soil fertility and crop yields in agriculture. In this case, the main issue is not the complete elimination of weeds, but to optimize the structure of agrophytocenosis and reduce their harmful effects [4; 5; 71-101-p.].

It is noted that there are about 300 species of weeds in the rice fields of Uzbekistan. Of these, about 30 species cause significant damage [2; 233-238-p.]. According to data from the Research Institute of Plant Protection and Rice, there are 33 species of pests that regularly damage rice and cause great economic damage

to it, they belong to 2 classes, 8 categories and 15 families, and several types of weeds, perennial, annual, monocotyledonous and dicotyledonous weeds. [3; 329-332-p.].

### MATERIALS AND METHODS

Field experiments were conducted in 2018-2020 on meadow alluvial soils of Syrdarya region. The research program focused on the effect of different standards of Rainbow 2.5% em.k., Sholi Gold 113 herbicides on weeds, rice yield and grain quality, 5 options, 4 repetitions, each option 20 meters long, 5 meters wide, the area of each tray was 100 m<sup>2</sup>, of which 50 m<sup>2</sup> were taken into account, and all experimental options were placed in two tiers in a row, systematically. Phenological observations, biometric measurements and yield determinations were conducted according to field experimentation methods [1; 145-p.] on delineated model plants in the area of 1 m<sup>2</sup> in each treatment and replication of the experiment.

### RESULTS AND DISCUSSION

In the protection of rice from weeds, today in our country there are a variety of modern herbicides, different exposures depending on the amount of active ingredients, the number of manufacturers, etc. and requires the selection of herbicides that do not adversely affect product quality and their testing under these conditions.

We studied the effect of different types and norms of herbicides against annual and perennial weeds distributed in rice fields in the conditions of alluvial soils of meadows of Syrdarya region (Table 1). In the years of the study (2018-2020), 3 days before the application of herbicides in the experimental field, the number of low and perennial weeds averaged 13-19 and 5-7 pieces / m<sup>2</sup>, or total weeds 19-26 pieces / m<sup>2</sup>. when Rainbow 2.5% herbicide was applied at a rate of 0.8 l / ha, after 10 days the total weed was reduced by an average of 72.7%, after 20 days by 85.8%, after 30 days by 90.2%, while Rainbow 2.5% herbicide was applied at 1.0 l. / ha was reduced by 75.4% after the first 10 days, and by 88.1-94.6% in the next 20-30 days. (Table 2). When the Sholi Gold -113 herbicide was applied at the rates of 2.5-3.0 l / ha in the experimental field, the weeds in the rice fields were at the initial rate of 10-20-30 days after the application of the herbicide, 68.1 in accordance with the herbicide standards; 80.4; 88.3% and 74.1; 86.3; 92.8% were reported killed.

It should be noted that herbicides applied to rice weeds in the experimental field have significantly reduced the amount of weeds in these areas in recent years as a result of their negative impact on growth, development and seed formation. For example, in the first year of the study, the total number of weeds in the experimental area before herbicide spraying was averaged at 21-32 units / m<sup>2</sup>, while in the third year of the experiment, these values were 17-24 units / m<sup>2</sup>.

However, it was observed that the number of weeds in the control (without herbicide) seedlings of the experiment increased in the third year (38 pieces / m<sup>2</sup>) from the first year (23 pieces / m<sup>2</sup>).

Table 1.

Weeds spread in the experimental field, (in pieces per 1 m<sup>2</sup>)  
2018-2020 yy.

№	Experiment options	Before applying the herbicide			Weed species
		Annual weeds	Perennial weeds	All	
1	Control (without herbicides)	15	5	20	Leersia oryzoides, Echinochloa Phyllopogon kossenko, Echinochloa grysgalli, Echinochloa coarctata,
2	Reynbou 2.5% - 0.8 l / ha	13	6	19	Phragmites communis Trin, Bolboschemus compactis,
3	Reynbou 2.5% - 1.0 l / ha	16	5	21	Bmaritimus L palla, Juncelles serotimus (Rotb)
4	Sholi Gold 113- 2.5 l / ha	19	7	26	Clarke), Najas minor ALL, Najas graminca Deliff
5	Sholi Gold 113- 3.0 l / ha	18	5	23	

In the experimental field, the biological efficacy of herbicides applied to weeds in rice fields averaged 3 years (2018-2020) when Rainbow 2.5% herbicide applied 90.8-9.0 l / ha, while Sholi Gold 113 m.d. When applied at 2.5-3.0 l / ha, it was 88.3-92.8%, while Rainbow 2.5% herbicide was observed to be 1.8-6.3% less effective than the options applied at 0.8-1.0 l / ha.

Due to the fact that the main part of weeds in the rice field was lost by Rainbow 2.5%, Sholi Gold 113 herbicides, it was observed that they had an effective effect on rice grain yield. At the same time, the lowest rates of rice grain yield were observed in herbicide-free control variants, 5.75 t / ha, and the highest rice yields were observed in variants using Rainbow 2.5% herbicide 0.8-1.0 l / ha, 7.07-7.36 t/ha or 1.32-1.61 t compared to controls. / was higher. Sholi Gold 113 m.d. In the variants applied to 2.5-3.0 l / ha, these values were 6.72-7.04 t / ha, which is 0.97-1.29 t / ha higher than the control.

Table 2.

Impact of Herbicide Standards on Weeds in Rice Fields, 2018-2020 yy.					
Experiment options	Before applying the herbicide number of weeds, pieces / m <sup>2</sup>	The total number of weeds after spraying with herbicide, pieces / m <sup>2</sup>			Rice yield, t / ha
		After 10 days	After 20 days	After 30 days	
1. Control (without herbicides)	20	20	22	26	5.75
2. Reynbou 2.5%-0.81 / ha	19	3* (72.7) **	4 (85.8)	4 (90.2)	7.47
3. Reynbou 2.5%-1.01 / ha	21	4 (75.4)	4 (88.1)	4 (94.6)	7.76
4. Sholi Gold 113-2.51 / ha	26	4 (68.1)	4 (80.4)	4 (88.3)	7.02
5. Sholi Gold 113-3.01 / ha	23	4 (74.1)	4 (86.3)	4 (92.8)	7.34
Comment: * - Reducing the number of weeds ** - Reduction of weeds percentage					

## CONCLUSIONS

In summary, along with the increase in the standards of herbicides used against weeds in the cultivation of rice in the grassland alluvial soils of the Syrdarya region, their impact was also high. However, when Rainbow 2.5% was applied to 0.8-1.0 l / ha and Sholi Gold 113 to 2.5-3.0 l / ha, the difference between the indicated norms on the effect on weeds per 1 m<sup>2</sup> in total was very small, reaching 4.4-4.5% formed only. Therefore, in order to reduce the cost of herbicides and the cost of crops grown and prevent them from harming the environment, it is possible to grow high-quality rice by applying Rainbow 2.5% to 0.8 l / ha, Rice Gold 113 to 2.5 l / ha. was found to be present.

## REFERENCES

1. Дала тажрибаларини ўтказиш услублари (Методическое руководство на узбекском языке). – Тошкент : ЎзПТИ, 2007. – 145 б.
2. Отамирзаев Н.Г., Жўраев А., Холдаров М.Х. Биологический эффективность гербицида Turanstar 200 г/л к.э. (дв. цигалафоп-бутил) на риса. “Ўзбекистон Республикасида бошоқли дон, ноанъанавий ва мойли ҳамда озуқа экинларини инновацион технологиялар асосида етиштириш истиқболлари” мавзусидаги Республика илм.амал. конф. Андижон. 2020 й. 233-238 б.
3. Рахимов М.М., Мухсимов Н.П. Шоли майдонларидаги бегона ўтларга қарши замонавий гербицидлар таъсири. “Ўзбекистон Республикасида бошоқли дон, ноанъанавий ва мойли ҳамда озуқа экинларини инновацион технологиялар асосида етиштириш истиқболлари” мавзусидаги Республика илм.амал. конф. мақолалар тўплами. 2020 й. 91, -329-332 б.
4. Шолини бегона ўтдан тозалаш ҳосилдорликни оширади. Тавсия. Шоличилик илмий-тадқиқот институти. <http://iim.uz/en/news>.
5. Bullock D.S., Bullock D.G. From agronomic research to farm«- management guidelines: a primer on the economics! of information «and precision technology // *Precis. Agric.* 2011. V. 2. P. 71-101.