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Methods Of Application Of Glyphosate Herbicides To Control Weeds Around The Field

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ABSTRACT

The article presents the degree of effect of glyphosate on each type of weeds around the field, defining the amount of preparation according to the types of weeds and their developing conditions, using period and damage, and the ways of controlling are recommended.

KEYWORDS

Abiotic, weeds, plant, controlling, vegetable, herbicide, annual, perennial;

INTRODUCTION

It has been found that weeds spread to agricultural crops from areas where they grow more around the field. Therefore, it was found that it is expedient to eliminate weeds of these places in the first place, and it is confirmed that the use of herbicides to

control weeds should be carried out more in these places. This is because, as mentioned above, the influence of the herbicide, which has the effect of glyphosate, is a chemical that has a strong toxic effect on all plant species. It is known that all types of plants are fully

eliminated when it is used during the growing and developing period of the vegetation.

MAIN PART

Taking into account this, types of weeds, developing bioecology of weeds, which appeared around the fields of cotton and vegetable crops of the monitored regions, was taken into consideration. The results show that there can be seen annual and perennial types of weeds around the fields of cotton and vegetable crops of farms, especially, around the bourns and paths.

Around such fields, near the places where cultural crops are grown, there are places where weeds have been growing for many years, and there are found the main types of prostrate spurge, camel-thorn and quackgrass, from annual plants: some types of lambs-quarter, nettle, weed wheat and around the bourns nutsedge.

As a continuation of many years of scientific research (such experiments were conducted by A.Khojaniyazov (2016)), from annual weeds lambs-quarter in its beginning of the development, when the height of prostrate spurge and quackgrass was 20-30 cm, which are growing and developing in the fields of vegetable crops in this year, on the third day of April, which is considered to be a typical year for this year, the species of weeds in these places were identified, and Hurricane forte and Intoglifos were dissolved and applied to the field with the help of OBX-28 aggregation which was hanged to tractor.

For this purpose, the number, species, phases of weeds spread in the area of 1 thousand square meters were completely determined, and then treated with preparations with the help of special sprayers.

To determine the biological usefulness of, on the 10th day after spraying, special observations were made to take into account the cases of yellowing and complete destruction of weeds in the field, and these actions continued till 30 days after using herbicides.

The results of the experiments are given in the table, in this, in order to determine the biological usefulness of herbicides, fields, where the types and numbers of weeds are the same, were indicated and at the same time observation was carried out in the fields which was not chosen as controlling, and the number of weeds was counted. From perennial weeds bindweed, quackgrass, crabgrass, prostrate spurge, camel-thorn, from annual weeds nutsedge, lambs-quarter, weed wheat, nettle were identified and the degree of impact on each of them was calculated depending on their morphological changes.

As can be seen from the data in the table, the effect of the selected amount of herbicide on the weed species was 10 days after using, and the annual weeds stopped growing and began to turn completely yellow, and this means that annual weeds are not very resistant. This is due to the fact that these types of weeds stopped growing in the days after the application of the herbicide, and the youngest were completely killed in 15-20 days.

Eliminating weeds in this degree not only seen in annual weeds but also in perennial weeds, and on the 20th day after application of the preparation, some species, especially bindweed, completely turn yellow.

Biological efficacy of using herbicides with glyphosate to weeds around the field

Shymbay, 2020.

Preparations	Amount, l/ha	Weeds	Number before spraying, piece, 1 m ²	Biological efficacy in days, %					
				10		20		30	
				C	H	C	H	C	H
Intoglifos	4,0	Annual	6,7	51,1	-	72,6	11,5	100	91,5
		Perennial	7,9	16,2	-	61,8	32,9	100	84,6
Intoglifos	5,0	Annual	6,8	61,4	-	78,9	31,3	100	92,0
		Perennial	5,4	22,1	-	69,6	37,6	100	94,9
Intoglifos	6,0	Annual	7,6	72,8	-	84,4	46,3	100	93,7
		Perennial	8,9	38,6	-	79,5	51,2	100	96,8
Hurricane forte	3,0	Annual	6,9	54,3	-	75,1	44,5	100	94,6
		Perennial	5,7	59,3	-	81,5	56,6	100	94,1
Hurricane forte	4,0	Annual	4,9	62,1	-	80,9	51,6	100	95,3
		Perennial	6,1	62,3	-	83,5	57,4	100	96,1
Hurricane forte	5,0	Annual	5,3	64,1	-	76,3	58,3	100	98,5
		Perennial	6,4	68,4	-	89,4	61,6	100	97,2
Control (not used)	-	Annual	6,8	-	-	-	-	-	-
		Perennial	11,3	-	-	-	-	-	-

Note: Y – weeds turn yellow:

D – weeds eliminated:

In the control, the weeds were eliminated by hand.

As can be seen from the data, in the fields where applied herbicides, the plants start to

turn yellow from the first days and stop growing, on the 10th day, herbicides influenced on 51.1-64.1% of the annual, 16.2-68.4% of the perennial weeds and turned yellow but not

fully eliminated. The full elimination of weeds was observed on the 20th day after use. The maximum level of biological efficiency of the preparation is clearly seen on the 30th day after application, when 91.5-98.5% of annual weeds and 84.6-97.2% of perennial weeds are fully eliminated.

In these days, the physiological processes of weeds, which are not fully eliminated under the influence of preparations, are disrupted, not fully grown and undeveloped, which on the 40th days were fully eliminated, and it is assessed as all of the weeds were eliminated according to the resistance degree of weeds in the field.

Depending on the degree of comparing biological usefulness of herbicides, when the amount applied per hectare increases, the biological efficiency increases, and it can be seen from the obtained data that the activeness of the herbicide Hurricane forte is very high.

As can be seen from the results obtained, the higher the dose of the preparation, the higher the effectiveness of the preparation, and it can be seen that weeds were eliminated mainly on 20th day after using the preparation. It was observed that, as usual, the susceptibility of annual weeds nutsedge and weed wheat to the preparation was high, and the types of lambs-quarter that grew later were fully eliminated on the 10th day after application of the herbicide. The fact that the perennials have grown a little, it is resistant to herbicides, and by the 30th day it is clear that there is a full elimination, which means that the effect of the treatment is high.

According to actions, the results proved that the effect of the two types of herbicides on the perennials of weeds is also high. This is due to the fact that the most common pests in fields

are bindweed and quackgrass, prostrate spurge, which stop growing and developing under the influence of herbicides, and on the 10th day after application of the herbicide, the growth of the plant is stopped, and the on the 20th day some were fully eliminated and this shows that herbicides influence actively on these types. From this, bindweed according to the developing condition, is susceptible to the effect of herbicides when it is very young.

However, the fact that the annual weeds growing in the fields exceed 30 cm in height, lasts their elimination later, in this year appearance of perennial weeds requires research on studying roots of plants in the field after application of the preparation.

Therefore, due to the fact that this year's research did not provide full clarity on the issue, the need to continue the experimental work was left as an actual theme in the coming years.

CONCLUSION

Thus, in order to determine the degree of influence of the herbicide to each type of weed, it is required to determine the amount of the preparation for each type of plant according to the conditions of development, the time of application of the herbicide, it became clear that clarifications were required to be identified by means of observations. Therefore, the use of glyphosate herbicides to control perennial and annual weeds around the fields of agricultural crops, in order to eliminate them, in the second decade of April, when the average air temperature exceeded 15-17 °C, it is required to treat in the phase not exceeding 20-30 cm in height of quackgrass, bindweed, crabgrass, prostrate spurge, camel-thorn, nutsedge lambs-quarter, weed wheat, nettle. For this purpose it is necessary to use the maximum amount of herbicides, conditionally

mixed with water and carried out with the help of OBX aggregations, ensuring that the solution is completely in contact with the plant body. In order to prevent the regrowth of plants in the days after the application of the herbicide, the irrigation should be stopped, and on the 30th day after the application of the herbicide, in order to ensure soil moisture, the irrigation should be started.

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