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Type, Ratio, Damaging Degrees Of Weeds And Effectiveness Of Herbicides Against To The Weeds, Which Meet Among Legume Crops

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Abstract: *The Weeds reduce the productivity of the agricultural crops and ic quality. When crops middle damage, the productivity decreases to 20-25%, but when they damage strongly, it is lost to get the ability of harvest from the crops.*

Keywords: soybean, mung bean, pea, common bean, weeds, Stomp, Evito Plus, herbicides.

INTRODUCTION

In the development of secondary crops in the country, the President and the Cabinet of Ministers of the Republic of Uzbekistan pay special attention to the issues of full provision of the population with food products, meeting the needs of the processing industry and increasing export potential. According to the Resolution of the Cabinet of Ministers No. 259 of March 29, 2019, currently 55,979 legume crops are planted on 55,979 hectares, including mung bean is 20638 hectares, 21,368 hectares of peas and 19,800 hectares of soybeans. There are opportunities to increase the yield of legume crops, improve product quality and process these products and export them to foreign countries.

It is necessary to apply weed control measures in the cultivation of high quality and high-yielded products in legume crops. To do this, it is important to carry out agro-technical measures in a timely and quality manner, as well as to carry out chemical weed control measures to increase productivity.

If the more legume crops are planted in Uzbekistan, the more protein will be grown, soil fertility will increase, and environmental problems will be solved. The assimilation of biological nitrogen is active only under certain conditions. There are 11 species of bacteria that live in legume crops. Specific conditions are required for the growth of rhizobium bacteria.

When plant-specific rhizobium bacteria are present in the soil, symbiosis occurs even when bacterial fertilizer nitragine or rhizotorphin is not used, and atmospheric nitrogen begins to be assimilated by the endogenous bacteria. If there are no endemic bacteria in the soil, the plant will be a waste rather than a nitrogen collector, resulting in damage to the farm.

Bacteria accumulate in the roots of legume crops and assimilate free nitrogen in the molecular state of the atmosphere, biologically 50-100 kg. Sometimes, leaves around 150 kg nitrogen in the soil. A single mung bean helps to assimilate difficult-to-dissolve phosphorus compounds in the soil, leaving 2.5-4.0 tons of root residue in the soil after it throughout the growing season.

In addition, the number of weeds is increasing due to the lack of weed control measures in the fields that have been emptied of the main crop and are not replanted. When weed control among cereals is observed, there is also a sharp decrease in the number of weeds between the main crops of the following year.

An annual herbaceous plant belongs to the family of soybeans (Fabaceae L) (Glicinahispida L). Pea - Ciceraretinum L. is an annual herbaceous plant. Mung bean is the Latin name of the mung bean (Rhaseolusaureus Piper), which belongs to the family (Leguminosae) and is native to southwest Asia. The stem of the common bean (Phaseolus vulgaris Savi) is bushy or creeping.

Soybeans contain 30-52% protein, 18-25% oil, and 20% carbohydrates. Its grain is used to make dietary foods for diabetics. The grain is used in the preparation of milk, yogurt, cottage cheese, sausages, margarine, flour, confectionery, butter, canned food. The main protein of soybeans - glycine is well digested, well soluble in water, turns into yogurt, its protein is rich in essential amino acids. Soybeans account for 40% of the world's total vegetable oil production.

Pea grain contains 25-30% protein, 4-7% oil, 47-60% nitrogen-free extractives, 2.4-12.8% cellulose, 4.0% ash, vitamin B_1 and mineral salts.

Mung bean grain contains 24-28% protein, 2-4% oil, 46-50% starch, B vitamins, lysine, arginine, legume crops are rich in protein and vitamins, high in calories. Mung bean grain is 1.5-2 times more nutritious than wheat, beans, peas, blue peas and rye grains, and 1.5 times more nutritious. The digestibility of protein in mung bean reaches 86%. In addition, mung bean grain contains macro-microelements such as Mg, Ca, S, Na, Fe, Ma, Cu, B, Co, Ni, I and is rich in phosphorus salts.

Bean seeds contain 28-30% protein and green beans have 18% protein. Its green beans contain 2% of sugar, as well as 22 mg of vitamin per 100 g.

One of the basic laws of agriculture is that the law of returning nutrients to the soil cannot be bypassed. Therefore, it is possible to maintain and increase soil fertility by expanding the sown areas of legume crops. It should be noted that the free nitrogen in the air

depends on the mechanism of assimilation of endogenous bacteria living in the roots of legume crops, and its weight depends on the type, variety, natural climatic conditions, cultivation techniques of legume crops.

However, among the above crops, weeds are very common, contaminating crop fields and serving as a major source for the development of various diseases and pests. There are several ways to control weeds, and chemical control measures also play a key role. This is because it is necessary to harvest the secondary crops in a short period of time and prepare for the sowing of the main crop. Manual cultivation requires long and arduous work and consumes dozens of manpower. Therefore, in order to eliminate the above-mentioned problems in a timely manner, it is necessary to use herbicides against spreading weeds.

According to international organizations, 30-60% of the gross agricultural output is lost due to weeds. The main focus of this project is to protect legume crops from weeds based on new modern methods of control. Here, herbicides are applied when annual biennial and cereal weeds are 10-15 cm tall.

Weeds are dangerous competitors in the consumption of nutrients, water, light and mineral fertilizers, which are the most important for the life of agricultural crops, and are a source of protection against pests and pathogens.

The experiments were conducted on irrigated lands of Kibray district, Tashkent region. Recent data show that due to the reduction of organic matter in the soil, the amount of weeds in the fields increased, while the amount of humus decreased and did not exceed 1%. The main reason for this is the lack of timely and accurate agro-technological measures, i.e. crop rotation, the use or underutilization of organic fertilizers, weed control measures.

MATERIALS AND METHODS

The experiments were conducted on irrigated lands of Kibray district, Tashkent region, it consists of 6 variants, 4 repetitions, and each repetition covers an area of 0.25 ha. The effectiveness of the used preparations was determined in 15, 30, 60 days.

It was observed that the amount of humus and other nutrients in the top layer of the soil of the experimental area (0 - 30 cm) was relatively high, while in the lower layers it was significantly reduced. It was observed that the amount of nutrients in the mobile form in the soil also decreased as the soil layer deepened. The amount of humus in the soil (0–20 cm) decreased from 1.85% to 0.96%, the amount of mobile nitrogen in the upper layer was 9.8 mg / kg, while in the lower layer this figure decreased by almost 2 times. The amount of mobile phosphorus was 12.5 mg / kg.

Experimental scheme:

1. Control (without herbicide)
2. Stomp 2 l / ha (standard)
3. EVITO PLUS, 50% im.c., 2.5 l / ha
4. EVITO PLUS, 50% im.c., 3.0 l / ha

RESULTS AND DISCUSSION

Types and numbers of weeds were determined two times a year in experiments. Annual dicotyledonous weeds per $1m^2$ area before planting among legume crops: amaranthushybridus (Amaranthushybridus L.) - 6.3 pieces, saltbush- (Atriplexhastata L.) - 5.4, shephed's purse- (Capsella bursa-pastoris L.) - 5.4, common purslane - (Portulacaoleracea L.) - 6.6, treacle-mustrad- (Erysimumcheiranthoides L.) - 6.4, bladder weed- (Hibiscus trionum L.) - 4.5, common chickweed- (Stellaria media L.) -6,6, shepherd's purse C. (bursa-astoris (L.) MedIk) -5.6 on average, 5.9 units or 3 points, a total of 46.7 units,this figure, in turn, showed that the field was moderately contaminated with annual biennial weeds. Before planting, there were perennial dicotyledonous weeds catchweed (Galiumaparine L.) - 4.2, mugwort (Artemisia vulgaris L.) - 5.4, common sorrel (Rumexbindweedsfertus L.) -5.5 per 1 m^2, bindweeds- (Bindweedsvolvulussepium L.) - 3.9, a total of 20, i.e. a total of 57.6 pieces of single- and perennial two-stage weeds, although moderately contaminated. This in turn showed strong contamination.

The number of annual and dicotyledonous weeds in the experimental fields averaged 6.2 units, or a total of 62 units. After 15 days of application of Stomp 2 l / ha (standard) to the average amaranthushybridus - (Amaranthushybridus L.) - 92.5%, saltbush- (Atriplexhastata L.) - 90.8%, shepherd's purse- (Capsella bursa- pastoris L.) - 88.9%, common purslane - (Portulacaoleracea L.) - 93.6%, common chickweed- (Stellaria media L.) - 89.2%, treacle-mustrad- (Erysimumcheiranthoides L.) - 89.3%, bladder weed- (Hibiscus trionum L.) - 89.6%, common wild oat- (Avenafatua L) -87.1%,landed glaucousbristlegrass (Setariaglauca L) -87.7%, false barley- (Hordeummurlnum L) -90.2% average 0.5 or 89.9%, average after 30 days 92.4%, after 60 days 92 , Yielded 91.5% at an overall average of 2%. The stomp preparation had little effect on shepherd's purse, glaucousbristlegrass, common wild oat, etc., and had a good effect on bladder weed and false barley.

EVITO PLUS, 50% im.c., 2.5 l/ha. After 15 days, it effected on Amaranthushybridus (Amaranthushybridus L.) - 92.5%, saltbushga (Atriplexhastata L.) - 90.8%, shepherd's purse- (Capsella bursa-pastoris L). - 90.3%, common purslane - (Portulacaoleracea L.) - 93.6%, common chickweed- (Stellaria media L.) - 91.1%, treacle-mustrad- (Erysimumcheiranthoides L.) - 89, 4%, bladder weed (Hibiscus trionum L.) - 89.6%, common wild oat (Avenafatua L) -88.9%, glaucousbristlegrass (Setariaglauca L) -87.8%, false barley- (Hordeum). murlnum L) -90.2%, and yielded an average of 0.5 or 90.5%, an average of 93.0% after 30 days, and 92.1% after 60 days with an average of 92.1%.

EVITO PLUS, 50% im.c, application of 3.0 l / ha had less effect on treacle-mustrad, glaucousbristlegrass, common wild oat, etc., gave good results on shepherd's purse, common chickweed, and others.

EVITO PLUS, when used 50% im.c, 3.0 l/ha. After 15 days, the average salinity were (Amaranthushybridus L.) - 93.7%, saltbushga- (Atriplexhastata L.) - 90.8%, shepherd's purse- (Capsella bursa-pastoris L) - 91.7%, common purslane - (Portulacaoleracea L.) - 94.8%, common chickweed- (Stellaria media L.) - 92.8%, treacle-mustrad- (Erysimumcheiranthoides L) - 90, 3%, bladder weed (Hibiscus trionum L.) - 91.7%, common wild oat (Avenafatua L) -90.8%, glaucousbristlegrass (Setariaglauca L) -89.8%, false barley (Hordeum). murlnum L) -92.2% yielded an average of 0.4 or 92.2%, an average of 94.0% after 30 days, and an average of 93.5% after 60 days, 94.2%. EVITO PLUS, 50% im.c, Application of 3.0 l / ha showed a higher effect than all weeds (Table 1).

Table1

Effects of herbicides applied simultaneously with sowing in legume crops on annual dicotyledonous and cereal weeds.

№	Names of weeds	Control herbicide-free, piece / m^2	Stomp 2 l / ha (standard)		EVITO PLUS, 50% im.c. 2.5 l / ha		EVITO PLUS, 50% im.c. 2.5 / ha	
			piece / m^2	%	piece / m^2	%	piece / m^2	%
		15 days after spraying herbicide / m^2						
1	Amaranthushybridus	8,0	0,6	92,5	0,6	92,5	0,5	93,7
2	Saltbush	5,4	0,5	90,8	0,5	90,8	0,5	90,8
3	Shepherd's purse	7,3	0,8	88,9	0,7	90,3	0,6	91,7
4	Common purslane	7,9	0,5	93,6	0,5	93,6	0,4	94,9
5	Common chickweed	5,7	0,6	89,3	0,5	91,1	0,4	92,9
6	Treacle-mustrad	7,0	0,8	89,4	0,8	89,4	0,5	90,3
7	Bladder weed	4,9	0,5	89,6	0,5	89,6	0,4	91,7
8	Common wild oat	5,5	0,7	87,1	0,6	88,9	0,5	90,8
9	Glaucousbristlegrass	5,0	0,6	87,8	0,6	87,8	0,5	89,8
10	False barley	5,2	0,5	90,2	0,5	90,2	0,4	92,2
	Average	6,2	0,5	89,9	0,5	90,5	0,4	92,2
		30 days after spraying herbicide / m^2						
1	Amaranthushybridus	7,9	0,7	91,1	0,6	92,4	0,4	94,9
2	Saltbush	6,5	0,4	93,8	0,5	92,2	0,4	93,8
3	Shepherd's purse	7,6	0,6	92,1	0,4	94,7	0,4	94,7
4	Common purslane	8,8	0,4	95,4	0,4	95,5	0,3	96,6
5	Common chickweed	9,6	0,5	94,8	0,5	94,8	0,4	95,9
6	Treacle-mustrad	7,8	0,5	93.6	0,4	94,9	0,4	94,9
7	Bladder weed	5,9	0,5	91,4	0,4	93,2	0,4	93,2
8	Common wild oat	5,5	0,6	88.9	0,5	90,8	0,4	92,6
9	Glaucousbristlegrass	6,8	0,5	92,8	0,6	91,4	0,5	92,8
10	False barley	5,2	0,5	90,2	0,5	90,2	0,4	92,2
	Average	7,2	0,5	92,4	0,4	93,0	0,4	94,1
		60 days after spraying herbicide / m^2						
1	Amaranthushybridus	7,6	0,5	93,4	0,4	94,7	0,4	94,7
2	Saltbush	5,5	0,4	92,6	0,5	90,8	0,4	92,6
3	Shepherd's purse	-	0		0		0	
4	Common purslane	7,6	0,5	93,4	0,5	93,4	0,4	94,8
5	Common chickweed	6,5	0,5	92,2	0,4	93,5	0,4	93,5
6	Treacle-mustrad	8,0	0,5	93,7	0,5	93,7	0,3	96,3
7	Bladder weed	5,9	0,5	91,4	0,4	93,2	0,3	94,9
8	Common wild oat	6,0	0,5	91,6	0,5	91,6	0,3	95,0
9	Glaucousbristlegrass	6,0	0,5	91,6	0,5	91,6	0,4	93,3

10	False barley	5,4	0,5	90,6	0,4	92,5	0,3	94,4
	Average	6,5	0,4	92.2	0,4	92,7	0,3	94,3
	Average calculation	6,6	0,4	91,5	0,4	92,1	0,3	93,5
	NSR_{05}=	-	-	2,12		1,25		1,56

CONCLUSION AND ACKNOWLEDGEMENT

In conclusion, it can be said that Stomp was administered at a rate of 2 l / ha and EVITO PLUS, 50% im.c, at a rate of 2.5 l / ha. As above-mentioned low-impact weeds can be used in the absence of overgrowth. In the remaining case, i.e. when the number of weeds is large, EVITO PLUS, 50% im.c, at a dose of 3.0 l / ha gives good results. This in turn affected productivity. EVITO PLUS, 50% im.c. When applied at 3.0 l / ha a, the yield was 25 c / ha, i.e. 16 c / ha more than the control.

The results of the above experiments show that in recent years, the amount of various diseases, insects, pests, as well as various weeds in irrigated lands is increasing. The main reasons for this are the edges of the fields where crops are grown, roadsides, bourn waysides, large and small ditches, around pipes wich used to irrigated, uncultivated lands, irrigation canals, poor quality nutritional juices, the local manure, which is given without rot, is in exchange for the weed seeds being scattered on the ground, not being cultivated between crops. In this case, in the field, after 2-3 years of agro-technical measures, as well as immediate chemical control measures, the condition of the fields may become unfit for sowing.

As a result, along with a sharp decline in productivity, the quality of grain decreases, i.e. suitability for consumption decreases, the quality of the products obtained deteriorates, leading to the spread of various diseases, insects and pests. This, in turn, necessitates the development of measures to control weeds found in arable land.

At the end of the experiment, the effect of the tested herbicides on certain types of weeds, their weight, the development of crops, the quality of the harvest is studied. Prospective herbicides identified in small field experiments are tested under extensive production conditions and their effectiveness is studied.

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