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INFLUENCE OF COMBINE APPLICATION OF TOPIC, GRANSTAR HERBICIDES AND PHOSPHOR LEVELS ON WEEDS AND BREAD WHEAT YIELD AND ITS COMPONENTS

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ABSTRACT

A field trail was conducted at the researches Farm of Agricultural College of Duhok University, Kurdistan Region/ Iraq, which located in semi-arid zone during the season 2016-2017 in two planting dates (28 November and 28 December 2016) to study the influence of four integrate Topic and granstar (0, 1200, 1600, 2000 ml. ha^{-1} and 0, 20, 40, 60 gm ha^{-1}) and four phosphor fertilizer levels at (0, 183, 229, 275 kg ha^{-1}) respectively, on weeds and bread wheat yield and its components. The experiment unit arranged in factorial experiment, using Randomize Complete Block Design (RCRD) with three replications. The results showed that herbicide and phosphorous levels exhibited significant effect on weeds and yield and its components. The treatment (Topic 2000 ml+60 g ha^{-1} granstar) produced maximum reduction in total weeds growth and recorded maximum values for 51.1 g) respectively. High dose of herbicide (Topic:2000 ml. ha^{-1} and Granstar,60 g ha^{-1}) and high of of grains spike^{-1}, 1000-grain weight and grain yield which were (45.4, 42.5 g, and high phosphorus levels (275 kg ha^{-1}) are recommended for weed control and high yield and a good quality wheat grains.

KEYWORD: Herbicide, weeds, Phosphorus, wheat, yield

INTRODUCTION

Wheat (*Triticum aestivum* L) is one of the most important crop in the world and the widest distribution among cereal crops. It is an important cereal crop in Iraqi Kurdistan region. Its average productively is low comparing to other advance countries in the world. Several practices such as weed control, and adequate fertilizers are very important for production of bread wheat (23). The weeds compete with crop plants for essential growth factors like light, moisture, nutrients and space (8). Weed can also increase harvesting cost, reduce quality of product. Thus found that uncontrolled weed growth throughout the crop growth a 57.6% to 73.2% yield reduction, while , (22) reported the yield losses due to weed are 17 to 25% . The chemical weed control is more economical than conventional method (9). Several researchers (18) , (15), and (3) . Consider that the chemical method of weeds control proved to be more efficient method in controlling weeds. (19), showed that phosphorus revealed as the second most important factor, and essential for plant growth after nitrogen. While, Mata and Brown showed the phosphor in soil was high fixation and low levels of avarable p, the applications of p in bands generally increase productivity, (13) exhibited that phosphorus is taken up by plants as an orthophosphate ions ($H_2Po_4^{-1}$and HPO_4^{-2}) which play a vital function to maintain yield and quality. When application of phosphorus in adequate quantity and available source to plant medium has a vital role for plant growth, yield production, and improving yield quantity of wheat, also phosphorus is essential for cell division seed and fruit development (1). Several researchers (6), (5), (4) and (7), were studied different soil and found that different parameters affected the availability of soil phosphorus to plant such as PH, Ca^{+2} Concentration, moisture , texture , root density , $CaCo_3$ amount of organic matter content and type of clay mineral, also obtained, the maximum phosphorus doses contributed in achieving maximum 1000-grain weight, dry matter and highest number of grain spike^{-1}. The present study was devoted to study the yield and yield components of wheat as affected by herbicide and phosphorus fertilizer application and weed growth and population.

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MATERIAL AND METHOD

This trail was conducted at the farm of Agriculture collage, University of Duhok, Iraqi Kurdistan Region, which located in semi-arid zone during the 2016-2017 season in two planting dates under rain feed conditions to estimate the influence of four integrate Topic and granstar herbicides (1200, 1600, 2000 ml. ha^{-1} and , 20, 40, 60 gm ha^{-1}) and four phosphorus levels. (0, 183, 229, 275 kg ha^{-1}) on weeds and wheat yield and it's components. The experimental units were arranged in factorial experiment, using Complete Randomize Block Design and replicated three times. All physiochemical properties of top soil sample (0-30) and weather properties shown in (Table 1). The experimental units consists from four rows with three meter length and 20 cm distance between rows. Nitrogen was added at rate 120 kg ha^{-1} in form of urea 46%N. Half dose of nitrogen and all doses of phosphorus added before planting date, the second half of nitrogen added at tillering stage. The seeds were planted in 28 November and 28 December 2016 with seeding rate 120 k ha^{-1} using TAWAHI-13 bread wheat (*Triticum aestivum*) variety The date of spraying the integrate herbicide were 7 and 15 July 2017 when the plat 2-3 leave stage. Weed sampling recorded after 100 days from planting date. The dry weight of broad and narrow leaved weeds of $1m^2$ matured from each plot, were and dried using over drying at (75 c^0) for (48) hrs, (25).

Data collected on ten plants selected randomly from four rows, included a characters of broad and narrow leaved weeds in one m^2, plant height, leaf area cm^2 ,days to flowering , number of grains $spike^{-1}$, grains weight $spike^{-1}$, 1000- grain weight and grain yield. The data analyzed using Minitab software. Duncan Multiple Range Test (DMRT) was used to test the means of treatments.

Table (1): Physiochemical properties of top soil sample (0-30) and weather properties.

Weather properties					soil properties	
Month	Ave. Daily max.tem c^0	Ave. Daily min..tem c^0	Seasonal Relative Humidity RH %	Seasonal Rainful mm		
		2016			Sand ($g.kg^{-1}$)	89.60
October	36.2	18.3	32.3	00		
November	12.1	3.6	40.9	10.2	Silt ($g.kg^{-1}$)	486.90
December	11.6	2.04	79.4	72	Clay ($g.kg^{-1}$)	419.85
		2017			Soil texture	Silty clay
January	12.23	-0.56	73.47	29.1	PH in soil past	8. 25
February	13.76	-57.2	65.8	17.6	*Ec (dsm^{-1}) at 25 c^0 in soil past	0.55
March	18.53	6.881	67.05	52.2	CaCo3 ($g\ kg^{-1}$)	205.2
April	24.21	9.52	63.98	81.4	Organic matter k ha^{-1}	145
May	24.4	37.8	19	15.0	Available N k ha^{-1}	0.22
Total				277.5		

***** Ec: Electric conductivity

RESULTS AND DISCUSSIONS

Statistical analysis of data that showed all herbicidal treatments had significant effect on all studied traits in both seeding date with the exception to plant height and leaf area in the second date. The phosphorus levels exhibited considerable effects in all traits in first and second date with the exception of number and dry broad leaved weeds, plant height, leaf area and grain weight $spike^{-1}$. The interaction between herbicides and phosphorous levels gave significant and significant effects on all traits except of dry weight of broad leaved weeds , plant height, leaf area and grain weight $spike^{-1}$ in the first date and plant height, leaf area and number of grains $spike^{-1}$ in second date.

Similar impact of herbicides and phosphorus levels on 1000-grain, number of grains $spike^{-1}$ and grain yield were observed (12) and (10).

Table (2): Mean square analysis of integrate herbicide and phosphorus levels on broad and narrow leaf weeds. components in first and second planting date.

		MS										
						First date						
S.O.V	D f	No. of broad leaved weeds m^2	Dry weight of broad leaved weeds (g) m^2	No. of narrow leaved weeds m^2	dry weight of narrow leaved weeds (g) m^2	plant height (cm)	flag Leaf area cm^2	Days to flowering	No. grain .spike^{-1}	Grain weight Spike^{-1} (g)	1000 grain weight (g)	Grain yield g m^{-1}
Block	2	0.188	00.52	34.56	1.84	103.02*	16.3	0.396	8.42**	0.084*	11.7*	143
H	3	130.85**	5.69**	3972.9**	3231.5**	191.22**	3.497	56.1**	303.3**	0.0175	225.5**	31635 **
P	3	3.910	1.060	92.24**	62.36**	13.34	3.795	2.47**	500.8**	0.0128	175.7**	16633**
HxP	9	6.502 *	1.482	55.37**	56.19**	9.41	8.362	1.42**	20.1**	0.0435	38.9**	3785**
Error	30	2.788	1.027	15.43	3.64	21.45	6.676	0.285	1.56	0.0209	3.275	492
Total	47											
						Second date						
Block	2	0.521	0.600	2.771	5.75	2063.8**	40.87	0.646	20.0*	0.0699*	0.957	5414
H	3	68.47**	49.10**	161.47**	1015.85**	68.48	3.21	36.18**	79.3**	0.0592*	19.71**	3328
P	3	6.354**	1.842**	75.861**	399.58**	300.99**	53.06*	16.69**	82.1**	0.336**	108.3**	10989**
HxP	9	5.650**	2.366**	20.213**	115.45**	24.42	8.30	3.76**	10.176	0.0527*	17.64**	1036
Error	30	0.654	0.285	2.349	3.74	36.61	16.45	0.424	5.436	0.02001	2.567	2145
Total	47											

*, **, indicating significant difference at 0. 05 and 0.01 probability levels respectively. H – Herbicide, P- phosphorus.

The interaction between herbicides and phosphorus (H*P) caused remarkably differences in most of studied traits, i.e., for number and dry weight of broad and narrow leaved weeds. The check treatment gave the maximum values (8.8,2.6 g, 44.5, 37.9 g and 6.7, 5.3 g, 10.1 cm and 22.1 g in first and second dates while, H_3 level exhibited the minimum values 1.8, 1.0 g, 6.6, 3.7, 1.4, 0.8 and 1.9 g in both dates(Table 3). Regarding the phosphorus effect, results in (table 4) showed that the phosphorous levels gave worthily effect on the whole traits with except of number and dry weight of broad leaved weeds, plant height, leaf area and grain weight spike^{-1} in first date, and leaf area in second date. The date also showed the effect of four levels of phosphorous in number and dry weight of narrow leaved weeds, the Po level gave the maximum values 21.2 and 16.2 g. For yield and yield components the P_3 level produced the highest value (40.0, 32.2 g and 330.5 g) for number of grain spike^{-1}, 1000-grain weight and grain yield, respectively in first date. In second date the Po level was superior in number and dry weight of broad and narrow leaved weeds with values 4.2, 2.9 g, 9.2 and 19.0 g, respectively. For plant height and leaf area the P_2 and P_3 level produced the highest value, 103.4 cm and 28.9 cm^2. For the earliest days to flowering, P_1 level recorded the lowest value 121.9 days. The P_3 level was superior in most yield components and gave 1.1 g, 2.9 g and 298.3 g for grain weight spike^{-1}, 1000-grain weight and grain yield. These results indicate that phosphorus has an important effect on the grains in spike because the phosphorus is important in cell division and development of new tissue, phosphorus is also associated with complex energy transformation in the plant and the H_3 level was more effective to kill the most broad and narrow leaved weeds compared to the weedy check and caused noticable increasing in grain yield. Similar results regarding herbicide and phosphorous levels were reported by (2) and (24).

Table (3): Influence of integrate Topic and Granstar herbicides and phosphorous levels on weeds and yield and yield components of bread wheat.

Treat.	No of broad leaved weeds m^2	Dry weight of broad leaved weeds (g) m^2	No of narrow leaved weeds m^2	dry weight of narrow leaved weeds (g) m^2	plant height (cm)	flag Leaf area cm^2	Days to flowering	No. grain.spike^{-11}	Grain weigSpike^{-1} (g)	1000 grain weight (g)	Grain yield g m^2
First date											
H_0	8.8 a	2.6 a	44.5 a	37.9a	101.3a	22.3 a	141.d	26.8 c	0.9 a	25.3 c	265.5 b
H_1	3.0 b	2.1ab	6.9 c	4.8 c	96.4ab	21.5 a	143.c	35.1 b	0.9 a	26.8 c	260.7 b
H_2	2.1 b	1.9ab	11.7 b	7.1 b	93.1 b	22.4 a	144.b	36.7 a	1.0 a	31.9 b	283.0 b
H_3	1.8 b	1.0 b	6.6 c	3.7 c	92.5 b	21.4 a	146.a	37.9 a	1.0 a	34.6 a	370.6 a
P_0	3.7 a	1.7 a	21.2 a	16.2 a	95.7a	21.1 a	143.b	25.0 d	0.9 a	24.3 c	247.7 c
P_1	3.3 a	1.9 a	16.1 b	14.2 a	94.9a	22.5 a	143.b	34.6 c	0.9 a	29.3 b	283.6 b
P_2	4.6 a	2.3 a	17.8ab	11.4 b	97.4a	21.9 a	143.b	36.9 b	0.9 a	32.7 a	318.0 a
P_3	4.2 a	1.7 a	14.7 b	11.6 b	95.4a	22.0 a	144.a	40.0 a	1.0 a	32.2 a	330.5 a
Second date											
H_0	6.7 a	5.3 a	10.1 a	22.1 a	97.3a	27.3a	123.4 a	27.7 b	0.9 a	28.2a	235.3 a
H_1	2.5 b	1.8 b	7.3 b	13.5 b	103.a	28.3a	123.2b	32.1 a	0.9 a	25.7 b	272.9 a
H_2	2.0 bc	1.5 b	2.2 c	4.4 c	100.a	27.3a	122.7 b	32.6 a	0.8 a	25.7 b	248.4 a
H_3	1.4 c	0.8 c	3.2 c	1.9 d	100.a	28.1a	119.7 c	33.5 a	1.0 a	25.4 b	263.9 a
P_0	4.2 a	2.9 a	9.2 a	19.0 a	92.9 b	24.6b	120.8 d	27.6 b	0.7 c	22.8 d	230.7 b
P_1	2.6 b	1.9 b	5.5 b	6.9 b	102.a	28.8a	121.9 c	32.6 a	0.9bc	25.0 c	238.2 b
P2	3.2 b	2.4ab	5.0 b	8.6 b	103.4a	28.6a	122.8 b	32.6 a	1.0ab	27.6 b	253.3ab
P3	2.7 b	2.2 b	3.2 c	7.3 b	103.1a	28.9a	123.5 a	33.2 a	1.1 a	29.7 a	298.3 a

Means having the same letters in the same column are not significantly difference at P-value > 0.05

The data in table 4. recognized the interaction effect between integrate herbicide and phosphorus levels on weeds and wheat yield. The results revealed that the lowest number and dry weight of broad leaved weeds 1.3 and 0.7 g obtained from H_3P_2 level whilst, the lowest values 3.0 and 1.7 g recorded for number and weight of narrow leaved weeds produced by H_3P_1 level in the first date. Moreover, in second date, a minimum number and dry weight of broad and narrow leaved weeds were obtained by H_3P_1 and H_3P_2 level and values were 1.3, 0.3 g, 1.3 and 1.1 g respectively. The plant height and leaf area exhibited non significant effect by interaction between herbicide and phosphorous levels in both dates and grains weight spike^{-1} in first date. The earliest days to the flowering was recorded in check treatment and values were 140 and 120 days in first and second date respectively. These traits significantly affected by weed and check treatment and exhibited highly competition between wheat crop and both of broad and narrow leaved weeds. Regarding to yield and yield components the results table 5 showed that the highest number of grains spike^{-1}, 1000-grain weight and grain yield were realized by H_3P_3 and H_1 P_1 level for number of grain spike^{-1} in first date and recorded 45.4, 42.5 g, 451.1 g, 35.3,34.0 and 312.8 g respectively. The results of herbicide and phosphorus levels were agreed with (14) and (16), However, these results appear that interaction between (H x P) was superior in number of grain-spike^{-1}, 1000-grain weight and grain yield in both dates.

Table (4): Effect of interaction of integrate herbicides and phosphorous levels on broad and narrow leaved weeds and yield and its components of bread wheat.

H	P	No. of broad leaved weeds m^2	Dry weight of broad leaved weeds (g) m^{2-1}	No. of narrow leaved weeds m^2	dry weight of narrow leaved weeds (g) m^2	plant height (cm)	flag Leaf area (cm^2)	Days to flowering	No. grain.spike^{-1}	Grain weight Spike^{-1} (g)	1000 grain weight (g)	Grain yield g m^{-2}
First date												
H_0	P_0	8.7abc	2.3ab	52.0 a	45.0 a	100.2a	20.7 a	140.7 e	21.0 h	0.9 a	20.7 e	231.1 d
	P_1	5.3bcd	1.7ab	41.3ab	43.7 a	101.2a	21.9 a	140.7 e	24.5 gh	0.8 a	22.8de	269.9 cd
	P_2	11.7 a	4.3 a	44.7ab	28.4 c	102.0a	25.2 a	141.3de	27.7 g	0.9 a	32.3bc	314.7 bc
	P_3	9.7ab	2.3ab	40.0 b	34.5 b	101.5a	21.3 a	142.0de	34.1 f	1.1 a	25.3de	246.2 d
H_1	P_0	2.3 d	1.7ab	3.0 d	3.8d-f	98.3 a	20.1 a	144.3 c	28.0 g	0.9 a	26.0de	241.8 d
	P_1	3.3 d	2.3ab	6.3 cd	3.8def	94.1 a	21.8 a	142.3 d	35.7 ef	1.0 a	26.7 d	254.4 cd
	P_2	2.7 d	2.1ab	12.7cd	8.1 d	97.6 a	21.3 a	142.0de	37.8def	0.8 a	27.5cd	265.3 cd
	P_3	3.7 cd	2.2ab	5.7 cd	3.5def	95.8 a	22.7 a	144.3 c	38.9 be	0.9 a	27.1cd	281.4bcd
H_2	P_0	1.7 d	1.6ab	14.7cd	7.8 de	94.5 a	24.5 a	144.3 c	25.7 g	0.9 a	24.7de	237.7 d
	P_1	2.3 d	2.7ab	13.7cd	7.8 de	93.0 a	22.7 a	144.7bc	39.7bd	0.8 a	32.5bc	270.6 cd
	P_2	2.7 d	2.2ab	8.7 cd	6.5def	93.1 a	20.6 a	144.3 c	39.9bd	1.1 a	36.3 b	280.5bcd
	P_3	3 1.7d	1.1b	10.0cd	6.5def	91.9 a	21.8 a	144.3 c	41.7ac	1.1 a	33.9 b	343.1 b
H_3	P_0	2.3 d	1.3ab	15.0 c	8.2 d	89.8 a	21.9 a	146.0ab	25.5 g	1.0 a	26.0de	280.1bcd
	P_1	2.0 d	1.0 b	3.0 d	1.7 f	91.4 a	21.7 a	146.0ab	38.5cde	1.1 a	35.4 b	339.6 b
	P_2	1.3 d	0.7 b	5.0 cd	2.6def	96.7 a	22.4 a	146.3 a	42.3ab	1.0 a	34.5 b	411.6 a
	P_3	1.7 d	1.0 b	3.3 cd	2.1 ef	92.3 a	19.5 a	147.0 a	45.4 a	0.9 a	42.5 a	451.1 a
Second date												
H_0	P_0	10.0 a	6.5 a	13.3 a	43.4 a	88.9	25.5 a	120.0 f	24.4 d	0.8 bc	24.2dg	214.2 a
	P_1	4.3 b	4.2 b	13.3 a	13.2cd	99.2 a	29.9 a	119.3 f	27.3 cd	0.8 bc	25.8bf	232.7 a
	P_2	7.7 a	6.7 a	10.3 ab	17.4 bc	99.5 a	27.9 a	119.3 f	27.8bcd	0.8 bc	27.1bf	243.7 a
	P_3	4.7 b	3.9 bc	3.3 c-e	14.3 cd	101.a	26.0 a	120.0 ef	31.4a-d	1.1a-c	25.7 cf	250.5 a
H_1	P_0	3.0 bc	1.7 de	13.3 a	22.5 b	100.6a	24.4 a	121.3 de	25.1 d	0.6 c	23.4e-g	232.2 a
	P_1	2.3 bc	1.3 de	4.0 c-e	10.9 de	106.1a	29.1 a	123.3 bc	35.3 a	0.9a_c	23.8-g	238.0 a
	P_2	1.7 c	1.6 de	6.3 b-d	10.4 de	102.5a	30.9 a	123.0 cd	34.5 ab	1.0ac	26.9 bf	272.6 a
	P_3	3.0 bc	2.5 cd	5.7 c-e	10.0 de	103.8a	28.7 a	125.0 ab	33.7ac	1.3 a	28.7bcd	348.7 a
H_2	P_0	2.3 bc	1.9 de	3.3 c-e	6.8 ef	92.0 a	24.4 a	121.3 de	29.6a-d	0.7 bc	23.1 e-g	232.8 a
	P_1	2.3 bc	1.9 de	1.7 e	1.4 f	102.2a	28.0 a	122.3 cd	33.2abc	0.8a-c	22.7 fg	237.1 a
	P_2	1.7 c	0.7 e	2.0 de	5.5 ef	105.2a	27.4 a	123.3 bc	34.4 ab	0.8 bc	25.7 c-f	242.5 a
	P_3	1.7 c	1.7 de	1.7 e	4.0 f	103.2a	29.2 a	123.7a-c	33.3abc	0.9a-c	30.1abc	281.1 a
H_3	P_0	1.3 c	1.4 de	6.7 bc	3.5 f	89.9 a	24.0 a	120.3 e f	31.3a- d	0.6 c	20.3 g	243.6 a
	P_1	1.3 c	0.3 e	3.0 c-e	2.0 f	100.3 a	28.3 a	122.7 cd	34.5 ab	0.9abc	27.7 b-e	244.8 a
	P_2	1.7 c	0.6 e	1.3 e	1.1 f	106.2 a	28.1 a	125.3 a	33.8abc	1.3 a	30.6ab	254.5 a
	P_3	1.3 c	0.8 e	2.0 de	0.9 f	103.8 a	31.9 a	125.3 a	34.3abc	1.2 ab	34.0 a	312.8 a

Means having the same letters in the same column are not significantly difference at P-value > 0.

Table 5. showed significant effect of integrate herbicide (H) in the whole of studied traits with except of plant height and leaf area, but the phosphorus levels (P) showed highly, remarkable effect in all of traits except dry weight of broad leaved weeds, plant height and leaf area, also the date (T) produced substantially significant effect in all traits except of plant height and grains weight spike^{-1}.The interaction between H x P exhibited highly significant effect for all studied traits with the exception of the grains weight spike^{-1}. the result in the same table indicated that

an interaction between H x T gave highly significant effect for all traits except of plant height and leaf area whereas, the interaction between P x T produced highly significant effect for all traits. However, no significant effect were observed in dry weight of broad leaved weeds, number of narrow leaved weeds, leaf area and grain yield whereas, the interaction between H x P x T recorded highly significant effect for all studied traits and
non significant for number and dry weight of broad leaved weeds, leaf area and grain yield.

Table (5): Mean square analysis of integrate herbicide and phosphor levels on broad and narrow leaved weeds and yield and its components.

S.O.V	df	MS										
		No. of broad leaved weeds m^2	Dry weight of broad leaved weeds (g) m^2	No. of narrow leaved weeds m^2	dry weight of narrow leaved weeds (g) m^2	plant height (cm)	flag Leaf area cm^2	Days to flowering	No. grain .spike^{-1}	Grain weight Spike^{-1} (g)	1000 grain weight (g)	Grain yield g m^{-1}
block	2	0.510	1.1316	21.95	6.41	1544.19**	33.047 **	0.95	27.18 **	0.1494 **	7.449	3126
H	3	194.083 **	41.554* *	2659.7 **	3641.94* *	71.63	6.995	84.2 **	346.06 **	0.0456	168.61 **	20371 **
P	3	5.528 *	1.2553	163.2 **	351.66 **	169.29 *	7.59	12.37 **	487.74 **	0.2372**	268.33 **	25160 **
T	1	15.042 **	4.878 **	3301.76 **	202.25 **	479.72	0 **	11158.6**	168.94 **	0.0333	275.98 **	38079 **
HxP	9	8.852 **	3.1405 **	31.36 **	101.21 **	25.05 **	16.723 *	2.57 **	13.47 **	0.0335	39.282 **	2694
HxT	3	5.236 *	13.2343 **	1474.68 **	605.42 **	188.07	0	8.12 **	36.49 **	0.03107	76.624 **	14592 **
PxT	3	4.736 *	1.6475	4.9	110.28 **	145.04 *	0	6.79 **	95.13 **	0.11175* *	15.743 **	2462
HxPxT	9	3.301	0.7077	44.22 **	70.43 **	8.78 *	0	2.61 **	16.8 **	0.06278* *	17.234 **	2128
Error	62	1.672	0.6351	9.1	3.61	48.18	6.46	0.35	3.42	0.0199	2.995	1355
Total	95											

*, **, indicating significant difference at 0. 05 and 0.01 probability level respectively. H – Herbicide, P- Phosphors levels. T- Planting date.

The effect of herbicides levels on weed (broad and narrow leaved weeds) was significant different. The data in table 6. showed that the highest weed control efficacy (0.89%) was recorded by H3 level, increasing herbicide rates led to significantly increasing weeds control efficiency, while, the H_1 level recorded the minimum percent (0.68%) of efficiency compared with control. For a number and dry weight of broad and narrow leaved weeds the P_0 level produced the maximum values 4.0, 2.3 g, 15.2 and 17.6 g, respectively. For plant height and leaf area, these traits were not significantly effects by different levels of herbicides. Also the same traits appeared different effects by phosphorus levels, the maximum plant height was recorded by P_2 level with value 100.4 cm but leaf area appeared non significant effect. The earliest days to flowering the H_0 and P_0 level gave the minimum days to the flowering and values were 130.4 and 132.3 days because the competition between the weeds and wheat plant was higher in this treatment. Significant differences were also found in yield and yield contributing characters (table 6). The H_3 and P_3 level produced the highest values (35.7, 1.0g, 31.4 g and 317.3 g , 36.6, 1.0 g, 30.9 g and 314.4 g), for number of grains spike^{-1}, grain weight, 1000-grain weight, grain yield and the lowest grain yield and yield components were also found in control treatment. The data in the same table confirmed that the first date was superior in the number and dry weight of broad and narrow leaved weeds and also superiority in number of grains spike-^{1}, 1000- grain weight and grain yield and recorded the maximum values (34.1, 29.6 g and 295.0 g) respectively. Similar trends were found by (4) and (24). The results showed that the herbicide reduced the compete between eeds and crops for nutrients, light, causing increase in wheat vigour, tillering, head size and kernel weight.

Table (6): Influence of integrate herbicides and phosphorous levels on broad and narrow leaved weeds and yield and its components of bread wheat.

Herbicide	No. of broad leaf weeds m^2	dry weight of broad leaf weeds(g) m^2	No. of narrow leaf weeds m^2	dry weight of narrow leaf weeds(g) m^2	plant height (cm)	Flag Leaf area cm^2	Days to flowering	No. grain.spike^{-11}	Grain weigSpike^{-1} (g)	1000 grain weight (g)	Grain yield g m^2
					Herbicides						
H_0	7.7 a	4.0 a	27.3 a	30.0 a	99.3 a	22.3 a	130.4 c	27.3 c	0.9 a	25.5 c	250.4 b
H_1	2.8 b	1.9 b	7.1 b	9.1 b	99.8 a	21.5 a	133.2 b	33.6 b	0.9 a	26.3 c	266.8 b
H_2	2.0b c	1.7 b	7.0 b	5.8 c	96.9 a	22.4 a	133.5 b	34.7ab	0.9 a	28.6 b	265.7 b
H_3	1.6 c	0.9 c	4.9 b	2.8 d	96.3 a	21.4 a	134.9 a	35.7 a	1.0 a	31.4 a	317.3 a
P_0	4.0 a	2.3 a	15.2 a	17.6 a	94.3 b	21.1 a	132.3 c	26.3 c	0.8 c	23.6 c	239.2 c
P_1	2.9 b	1.9 a	10.8 bc	10.6 b	98.5ab	22.5 a	132.7 c	33.6 b	0.9 bc	27.2 b	260.9bc
P_2	3.9 ab	2.3 a	11.4 b	10.0 b	100.4 a	21.9 a	133.1 b	34.8 b	1.0ab	30.1 a	285.7 b
P_3	3.4 ab	1.9 a	9.0 c	9.5 b	99.2 ab	22.0 a	134.0 a	36.6 a	1.0 a	30.9 a	314.4 a
D_1	D_1	3.9a	1.9 b	17.4 a	13.4 a	100.3 a	21.9 a	143.8 a	34.1 a	0.9 a	29.6 a
D_2	D_2	3.1b	2.3 a	5.7 b	10.5 b	95.8 b	21.9 a	122.2 b	31.5 b	0.9 a	26.2 b

Numbers fallowed by the same letters in the same column are not significant difference at 0.05 probability level

Table 7. indicated that an interaction between integrate of herbicide and phosphor levels for both dates of planting on wheat and weed yield,. and gave the heights number and dry weight of broad and narrow leaved weeds values 9.3, 32.7 and 44.2 g recorded by H^0 wherever, the lowest values (1.5, 2.7 and 1.5 g) were recorded by H_3 at P_3 respectively. Clear decreases found in the above traits as a results of H and P application together. According to interaction between HxP on leaf area and days to flowering, the maximum values of leaf area and days to flowering recorded by H_0 P_3 which was 25.2 cm^2 and 130 days to flowering, while the lowest values of leaf area was 19.5 cm^2, and maximum value for days to flowering was 136.2 days.The data in table 8. showed the highest number of grains spike^{-1}, grain weight spike^{-1}, 1000- grain weight and grain yield obtained with H_3 P_3 level which were 39.9, 1.0 gm, 38.3 gm and 381.9 g respectively. While the lowest values were found in H_0 P_0 level with the exception grain weight spike^{-1} which was found in H_3 P_0. These results showed that adding herbicide and phosphorous levels to crops will provide their requirement for a variable phosphorous in balance proportion with nitrogen. The results revealed that all herbicide and phosphorus significantly decreased weed population and direct effected on the wheat yield rate. These results were in agreement with those state out by (20),(19)and (24) .

Table (7): Influence of interaction of integrate herbicides and phosphorus levels .on broad and narrow leaved weeds and yield and its components of bread wheat

H	P	No. of broad leaved weeds m^2	Dry weight of broad leaved weeds (g) m^2	No. of narrow leaved weeds m^2	dry weight of narrow leaved weeds (g) m^2	plant height (cm)	flag Leaf area cm^2	Days to flowering	No. grain.spike^{-1}	Grain weight Spike^{-1} (g)	1000 grain weight (g)	Grain yield g m^{-1}
H_0	P_0	9.3 a	4.4 a b	32.7 a	44.2 a	94.6 a	20.7 a b	130.3 g	22.7 e	0.8 bc	22.5 h	222.7 e
	P_1	4.8 bc	2.9 bcd	27.3 a b	28.4 b	100.2 a	21.9 a b	130.0 g	25.9 d e	0.8 b c	24.3fgh	251.3 cde
	P_2	2.0 d	5.5 a	27.5 a b	22.9 c	100.8 a	21.3 a b	130.3 g	27.7 d	0.9abc	29.7bcd	279.2 b- e
	P_3	7.2 ab	3.1 b c	21.7 b	24.4 c	101.7 a	25.2 a	131.0 g	32.7 c	1.1 a b	25.5 e-h	248.4 cde

H_1	P_0	2.7 cd	1.7 cf	8.2 cde	13.1 d	99.4 a	20.1 a b	132.8 ef	26.5 d	0.8 c	24.7 eh	237.0 d e
	P_1	2.8 cd	1.8 c-f	5.2 cde	7.4 e f	100.1 a	21.8 a b	132.8 ef	35.5 bc	0.9 abc	25.2 e-h	246.2 cde
	P_2	2.2 d	1.8 c-f	9.5 c	9.3 d e	100.1 a	21.3 a b	132.5 f	36.1abc	0.9 abc	27.2 dg	268.9 b-e
	P_3	3.3 cd	2.3 cde	5.7 cde	6.7 ef	99.6 a	22.7 a b	134.7 b c	36.3abc	1.1 abc	27.9cde	315.0 abc
H_2	P_0	9.7 a	1.7 c- f	9.0 c d	7.3 e f	93.2 a	21.8 a b	132.8 e f	27.6 d	0.8 b c	23.9 g h	235.2 e
	P_1	2.3 cd	2.3 c- f	7.7 cde	4.6 f g	97.6 a	24.5 a b	133.5 c-f	36.4abc	0.8 abc	27.6 c-f	253.9 cde
	P_2	2.2 d	1.4 def	5.3 cde	6.0 e f	99.2 a	22.7 a b	133.8 cde	37.1 a b	0.9 abc	31.0b c	261.5 b-e
	P_3	1.7 d	1.4 def	5.8 cde	5.3 f g	97.6 a	20.6 a b	134.0 cde	37.5 a b	1.0 abc	32.0 b	312.1 a-d
H_3	P_0	1.8 d	1.3 de f	10.8 c	5.8 e f	89.8 a	21.9 a b	133.2 def	28.4 d	0.8 c	23.1 h	261.9 b-e
	P_1	1.7 d	0.6 f	3.0 d e	1.8 g	95.9 a	21.7 a b	134.3 c d	36.5abc	1.0 abc	31.5 b	292.2 b-e
	P_2	1.5 d	0.6 f	3.2 d e	1.9 g	101.5 a	22.4 a b	135.8 a b	38.0 a b	1.1 a	32.6 b	333.1 a b

Numbers fallowed by the same letters in the same column are not significant difference at 0.05 probability level.

According to data in table 8, the results showed the interaction of integrate herbicide, phosphorus levels and planting dates on studied traits. The results explained significant effects in all studied traits , the check treatment (H_0 D_1) was superiority in number and dry weight of broad and narrow leaved weeds, and obtained highest values (8.8, 5.3g , 44.5 and 37.9 g) whilst, the H_3 D_2 recorded the lowest values (1.4, 0.8 and 1.9 g), respectively. For an interaction between phosphorus and planting date, the P_2 D_1 gave the maximum value for number of broad leaved weeds whereas, maximum value for dry weight of broad leaved weed obtained by P_0 D_2. For number of narrow leaved weed the P_0 D_1 gave the high value 21.2 whereas , the maximum value of dry weight (19.0 g) for this trait obtained by P_0 D_2, this mean the continuous growth of grass throughout different stage of wheat growth of wheat crop. For plant height the H_1 D_2 treatment gave high average of plant height with value of 103.2 cm. the earliest for days to flowering, the H_0 D_2 recorded the minimum days(119.7) to flowering. While the first planting date recorded the maximum value (141.2 days) with check treatment of herbicide. The interaction between phosphorus and planting date in the same table showed the maximum plant height was recorded by P_3 D_2 and minimum days to flowering 122.7 dayes was found in P_2 D_2. Regarding to data represented in table 9. for yield and yield components the first planting date gave high average number of grains spike^{-1} (37.9), 1000-grain weight (34.6 g) and grain yield 370.6 g with H_3 level of herbicide, and same date recorded the high value for the same trait (40.0, 32.2 g and 330.5 g) .For number of grains spike^{-1}, 1000- grain weight and grain yield at P_3 level. The reasons of superior this traits may be due to the long of first date compared to the second planting date and fast grain filling can reach optimum grain weight and grain filling is the most critical stage, any stress during this stage will negatively affect on 1000-grain weight and final seed yield (21). Similar results were also reported by (1) and (17).

Table (8): Influence of interaction of integrate topic and granstar herbicides and phosphorus levels on broad and narrow leaved weeds and yield and its components of bread wheat.

H	D	No. of broad leaved weeds m^2	Dry weight of broad leaved weeds (g) m^2	No. of narrow leaved weeds m^2	dry weight of narrow leaved weeds (g) m^2	plant height (cm)	flag Leaf area cm^2	Days to flowering	No. grain.spike^{-1}	Grain weight Spike^{-1} (g)	1000 grain weight (g)	Grain yield g/ m^{-2}
H_0	D_1	8.8 a	5.3 a	44.5 a	37.9 a	101.3ab	22.3 a	141.2 d	26.8 e	0.9 a	25.3 d	265.5 bc
	D_2	6.7 b	2.6 b	10.1bc	22.1 b	97.3 ab	22.3 a	119.7 f	27.7 e	0.9 a	25.7 d	235.3 c
H_1	D_1	3.0 c	2.1 bc	6.9 c d	4.8 d e	96.4 ab	21.5 a	143.2 c	35.1 b c	0.9 a	26.8 cd	260.7 b c
	D_2	2.5 c	1.8 b-e	7.3 c	13.5 c	103.2 a	21.5 a	123.2 e	32.1 d	0.9 a	25.7 d	272.9 b c
H_2	D_1	2.1 c	1.9bcd	11.8 b	7.1 d	93.1 b	22.4 a	144.4 b	36.7 a b	1.0 a	31.9 b	283.0 b

	D_2	2.0 c	1.5cde	2.2 e	4.4 e	100.7ab	22.4 a	122.7 e	32.6 d	0.8 a	25.4 d	248.4 b c
H_3	D_1	1.8 c	1.0 de	6.6 cd	3.7 e f	92.6 b	21.4 a	146.3 a	37.9 a	1.0 a	34.6 a	370.6 a
	D_2	1.4 c	0.8 e	3.2 de	1.9 f	100.1ab	21.4 a	123.4 e	33.5 c d	1.0 a	28.2 c	263.9 b c
P_0	D_1	3.8a b	1.7 b	21.2 a	16.2 b	95.7 ab	21.1 a	143.8 ab	25.0 e	0.9 b	24.3 c	247.7 c d
	D_2	4.2a *b*	2.9 a	9.2 c	19.0 a	92.8 b	21.1 a	120.7 e	27.6 d	0.7 c	22.8 c	230.7 d
P_1	D_1	3.3a b	1.9 a b	16.1 b	14.2 b	94.9 ab	22.5 a	143.4 b	34.6 b c	0.9 a b	29.3 b	283.6abc
	D_2	2.6 b	1.9 a b	5.5 c d	6.9 d	102.0 a	22.5 a	121.9 d	32.6 c	0.9 bc	25.0 c	238.2 c d
P_2	D1	4.6 a	2.3 a b	17.8ab	11.4 c	97.3 ab	21.9 a	143.5 b	36.9 b	0.9 a b	32.7 a	318.0 a
	D2	3.2a b	2.4a b	5.0 d	8.6 d	103.4 a	21.9 a	122.7 c	32.6 c	1.0 a b	27.6 b	253.3bcd
P_3	D1	4.2a b	1.7 b	14.8 b	11.6 c	95.4 ab	22.0 a	144.4 a	40.0 a	1.0 a b	32.2 a	330.5 a
	D2	2.7 b	2.2a b	3.2 d	7.3 d	103.1 a	22.0 a	123.5 c	33.2 c	1.1 a	29.7 b	298.3 a b

Numbers fallowed by the same letters in the same column are not significant difference at 0.05 probability leve

Results in table 9. exhibited the interaction effect of herbicide, phosphorous levels and planting date. The interaction $H_{0\,x}\ P_{0\,x}\ D_2$ gave the highest number and dry weight of broad and narrow leaved weeds which, were (10.0, 6.5 g, 43.4 g), respectively but, the highest value for number of narrow leaved weeds was 52.0 at $H_0\ P_0\ D_{1.}$ The lowest value were 1.3 and 0.8 for number and dry weight of broad leaved weeds The maximum value for number and dry weight of narrow leaved weed obtained by $H_3\ P_2\ D_2$ and $H_3\ P_3\ D_2$ which were 1.3 and 0.9 g. For days to flowering the earliest days produced by $H_0\ P_1\ D_1$ was 119.3 days while, the latest days to flowering recorded by $H_3\ P_3\ D_1$ which was 147.0 days because the duratione was 30 days between the first and second date. Data regarding yield and yield components is shown in table 9. Statistical analysis of data that the interaction $H_{3\,x}\ P_{3\,x}\ D_1$ showed significant affected on yield and yield component of wheat. Mean values showed that the maximum number of grains spike^{-1} (45.4), 1000-grain weight (42.5 g) and grain yield (451.1 g) was found in H_3 x P_3 x D_1. while, the minimum values for this traits were 21.0, 20.7 g and 214.2 g was found by $H_0\ P_0\ D_1$ and $H_0\ P_0\ D_{2,}$ respectively .From the results above, all herbicide treatment and phosphor application increased wheat yield and yield components, wheat yield were negatively correlated with weed growth. These results were those of (2) and (11). Who reported that herbicide offer sizeable increase in crop productivity corresponding to their weed control and application of P under semi arid climate improve the crop growth, yield and its components and seeds quality.

Table (9): Influence of interaction of integrate topic and granstar herbicides and phosphorous levels on broad and narrow leaved weeds and yield and its components of bread wheat.

H	N	D	NNo, of broad leaved weeds m^2	Dry weight of broad leaved weeds (g) m^2	No of narrow leaved weeds m^2	dry weight of narrow leaved weeds (g) m^2	plant height (cm)	flag leaf area cm^2	Days to flowering	No. grain. spike^{-1}	Grain weight Spike^{-1} (g)	1000 grain weight (g)	Grain yield g m^{-1}
H_0	P 0	D_1	8.7 a b	2.3 b-e	52.0 a	45.0 a	100.2 a	20.7 a	140.7 d	21.0 n	0.9 a-e	20.7 j k	231.1 c d
		D_2	10.0 a	6.5 a	13.3cde	43.4 a	88.9 a	20.7 a	120.0 i j	24.4mn	0.8cde	24.2h-k	214.2 d
	P 1	D_1	5.3b c d	1.7 b-e	41.3 b	43.7 a	101.2 a	21.9 a	140.7 d	24.5mn	0.8 a-e	22.8i jk	269.9 c d
		D_2	4.3 c d	4.2 abc	13.3cde	13.2 efg	99.2 a	21.9 a	119.3 j	27.3klm	0.8 b-e	25.8 f-k	232.7 c d
	P 2	D_1	11.7 a	4.3 a b	44.7 a b	28.4 b c	102.0 a	21.3 a	141.3 d	27.7 j-m	0.9 a-e	32.3 b-e	314.7 bcd
		D_2	7.7 abc	6.7 a	10.3 c-g	17.4 d e	99.5 a	21.3 a	119.3 j	27.8 i-m	0.8 a-e	27.1 e-i	243.7 c d
	P 3	D_1	9.7 a	2.3 b-e	40.0 b	34.5 b	101.5 a	25.2 a	142.0 d	34.1 d-h	1.1 abc	25.3 f-k	246.2 c d
		D_2	4.7 bcd	3.9 bcd	3.3 f g	14.3 e f	101.8 a	25.2 a	120.0 i j	31.4 g-l	1.1 a-e	25.7 f-k	250.5 c d
H_1	P 0	D_1	2.3 d	1.7 b-e	3.0 f g	22.5 c d	98.3 a	20.1 a	144.3 c	28.0 i-m	0.9 a-e	26.0 f-j	241.8 c d
		D_2	3.0 d	1.7 cde	13.3cde	3.8 j-m	100.6 a	20.1 a	121.3 h i	25.1m n	0.6 d e	23.4 h-k	232.2 c d
	P	D_1	3.3 d	2.3 b-e	6.3 c-g	10.9fgh	94.1 a	21.8 a	142.3 d	35.7 c-g	1.0 a-e	26.7 f-i	254.4 c d

	1	D_2	2.3 d	1.3 d e	4.0 efg	3.8 j-m	106.1 a	21.8 a	123.3 f g	35.3 d-h	0.9 a-e	23.8h-k	238.0 c d
	P	D_1	2.7 d	2.1 b-e	12.7 c-f	10.4fgh	97.6 a	21.3 a	142.0 d	37.8 b-f	0.8 b-e	27.5 e-i	265.3 c d
	2	D_2	1.7 d	1.6 d e	6.3 c-g	8.1 f-k	102.5 a	21.3 a	123.0 g h	34.5 d-h	1.0 a-e	26.9 e-i	272.6 c d
	P	D_1	3.7 c d	2.2 b-e	5.7 c-g	10.0 f-i	95.8 a	22.7 a	144.3 c	38.9 b-f	1.3 a	27.1 e-i	348.7 abc
	3	D_2	3.0 d	2.5 b-e	5.7 c-g	3.5 j-m	103.4 a	22.7 a	125.0 e f	33.7 e-i	0.9 a-e	28.7 d-h	281.4 c d
H_2	P	D_1	1.7 d	1.6 d e	14.7 c d	7.8 g-l	94.5 a	21.8 a	144.3 c	25.7lmn	0.9 a-e	24.7 g-k	237.7 c d
	0	D_2	2.3 d	1.9 b-e	3.3 f g	6.8 h-m	92.0 a	21.8 a	121.3 h i	29.6 h-m	0.8 cde	23.1 h-k	232.8 c d
	P	D_1	2.3 d	2.7 b-e	13.7cde	7.8 g-l	93.0 a	24.5 a	144.7 b c	39.7 a-e	0.8 a-e	32.5 b-e	270.6 c d
	1	D_2	2.3 d	1.9 b-e	1.7 g	1.4 m	102.2 a	24.5 a	122.3 gh	33.2 f-k	0.9 a-e	22.7 ijk	237.1 c d
	P	D_1	2.7 d	2.2 b-e	8.7 c-g	6.5 h -m	93.1 a	22.7 a	144.3 c	39.9 ad	1.1 a-e	36.3 b	280.5 c d
	2	D_2	1.7 d	0.7 e	2.0 g	5.5 h-m	105.2 a	22.7 a	123.3 f g	34.4 d-h	0.8 a-e	25.7 f-k	242.5 c d
	P	D_1	1.7 d	1.1 e	10.0 c-g	6.5 h-m	91.9 a	20.6 a	144.3 c	41.7abc	1.1 a-e	33.9bcd	343.2 abc
	3	D_2	1.7 d	1.7 cde	1.7 g	4.0 i -m	103.2 a	20.6 a	123.7efg	33.3 f- j	0.9 a-e	30.1 c g	281.1 c d
H_3	P	D_1	2.3 d	1.3 e	15.0 c	8.2 f-j	89.8 a	21.9 a	146.0abc	25.5lmn	1.0 a-e	26.0 f -j	280.1 c d
	0	D_2	1.3 d	1.4 d e	6.7 c-g	3.5 j-m	89.9 a	21.9 a	120.3 i j	31.3 g-l	0.6 e	20.3 k	243.6 c d
	P	D_1	2.0 d	1.0 e	3.0 f g	2.0 klm	91.4 a	21.7 a	146.0abc	38.5 b-f	1.1 a-d	35.4 b c	339.6 abc
	1	D_2	1.3 d	0.3 e	3.0 f g	1.7 l m	100.3 a	21.7 a	122.7 g h	34.5 d-h	0.9 a-e	27.7 e- i	244.8 c d
	P	D_1	1.3 d	0.7 e	5.0 d-g	2.6 j-m	96.7 a	22.4 a	146.3 ab	42.3 a b	1.0 a-e	34.5 bc	411.6 a b
	2	D_2	1.7 d	0.6 e	1.3 g	1.1 m	106.2 a	22.4 a	125.3 e	33.8 e-i	1.3 a b	30.6 c- f	254.5 c d
	P	D_1	1.7 d	1.0 e	3.3 f g	2.1 j-m	92.3 a	19.5 a	147.0 a	45.4 a	0.9 a-e	42.5 a	451.1 a
	3	D_2	1.3 d	0.8 e	2.0 g	0.9 m	103.8 a	19.5 a	125.3 e	34.3 dh	1.2 abc	34.0bcd	312.8 bcd

Numbers fallowed by the same letters in the same column are not significant difference at 0.05 probability level.

CONCLUSION

We conclude that the most effective herbicide treatment (H3) and (P3) level which provided the maximum reduction in total weed. and because of the environmental concerns, application of the high herbicide dose with high phosphorus level are recommended for improving weed control and high wheat yield and good wheat seed quality.

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پوختە

ئەڤ ڤەکولینە ل زە ڤیێن کولیژا چاندنێ / زانکویا دهوک هاتە ئەنجامدان ل وەرزێ زستانێ ٢٠١٦-٢٠١٧ ل دوو ژڤانێن چاندنێ (٢٨ / ١١ و ٢٨ / ١٢ / ٢٠١٦) . چار دوسێجییێت قرکە رێَ گیایی (توپیک , ٢٠٠٠, ١٢٠٠, ١٦٠٠, ٢٠٠٠ مل / هکتار) و (گرانستار ٠ , ٦٠ , ٤٠ غم/ هکتار) وچار ئاستێن زبلێ فوسفاتی (٠ , ١٨٣ , ٢٢٩ , ٢٧٥ کغم / هکتار). فاکتەرێن ڤەکولینێ هاتنە دابەشکرن ل دویف نەخشێ (RCBD) ب سێ دوبارە کرنا ژ بو تاقیکرنا کارتێکرنا دوسێجێن جیاواز ییێن قرکەرێن گیایی و زبلێ فسفوری لسەر ئادەی و بەرهەم و پێکهاتییێن وی ییێن گەنمی.

ئەنجامان کارتێکر نێن بەرچاف ییێن ئاستییێن قرقەری و زبلی لسەر هەر ئێک ژ ئادەی و بەرهەم و پێکها تییێن وی دیارکرن . فاکتەرا (H3 R3 D1)ب بەرچارڤی ریژا ئادەی کێم کر بهەردوو جوران ڤە(بەلک زراڤ و پەحن) لگەل ئەنجامێن بلند ییێن هژمارا دندکا د کولیلکا دا و کێشا ١٠٠٠ دندکا و بەرهەمی توڤێ کو (45.4 و 42.5 غم و 45101 غم) , لەوما ئەم پێشنیارا دکە ین بکارئینانا ٢٧٥ کغم/ هکتار و ٢٠٠٠ مل / هکتار توپک و ٦٠ غم/ هکتار گرانستار دکە ین ژبو کونترولکرنا ئادەی و بدەستڤە ئینانا بەرهەمەکێ بلند و جورەکێ باش ژ توڤێ گەنمی .

حنطة الخبز وتأثيراتها باظافة مستويات من مخلوط مبيدي الادغال (توبك + كرانستار) والسماد الفوسفاتي على الادغال والحاصل ومكوناته

الخلاصة

نفذت تجربة حقلية في حقل كلية الزراعة جامعة دهوك خلال موسم الشتوي **2016- 2017** وبموعدين الاول في **28** تشرين الثاني**,** والثاني في **28** كانون الاول(**December 2016**.استعملت اربعة تراكيز من مبيد (توبك**: , 2000 ,1600,1200, 2000** مل هكتار**-1** و كرانستار**0, 40, 02. 60** غم هكتار**-1**) و اربعة مستويات من السماد الفوسفاتي **(0 ,183, 229, 275**كغم هكتار**-1**) وزعت معاملات التجربة العاملية في تصميم القطعات العشوائية الكاملة بثلاث مكررات لدارسة تأثير تراكيز مختلفة من المبيد و الفسفور على الأدغال و حاصل الحنطة ومكوناته**.** أظهرت ألنتائج تأثيرا معنويا لمستويات المبيد و الفسفور على الأدغال و الحاصل و مكوناته و أظهرت المعاملة (**H_3 R_3 D_1**) نقص واضح في عدد ألأدغال العريضة و الرفيعة مع أظهار قيم عالية لعدد البذور في السنبلة و وزن **1000-**بذرة وحاصل البذور و ألتي كانت **(45.4, 42.5 g, and 451.1 g).** وعليه نوصي باستعمال **(Topic:2000 ml. ha^{-1} and Granstar,60 gm ha^{-1})275 kg ha^{-1}** للسيطرة على نمو ألأدغال و حاصل عالي و نوعية جيدة من بذورالحنطة**.**