

/

Calciorthid
Triticum aestivum

Aridisols

3-

0.5

4

2007/12/3

(240-160-80 -0)

5 15

(205%20)

¹⁻ . P₂O₅

(2)

(1) :

(3)

10

14

.%46

¹⁻ . 120

:

.2008/5/15

18

14

23

(2)

1.67

. - . 80

(%95)

¹⁻ . P

Effect of phosphate fertilizer and splitting on dry weight, phosphorous uptake in some growth stages for wheat *Triticum aestivum* with rain fed conditions

Salih alrashidi & Shukri alrekani

Collage of agriculture and forestry/ Mosul University

Abstract

An experiment was conducted in the field of the college of Agriculture and Forestry in Mosul University, the soil classification order was Aridisols and great group calciorthid, to evaluate the effect of splitting and levels of phosphorus fertilization on growth and yield of wheat *Triticum aestivum* variety of Abugareeb-3... A pure seeds has been sown at Nov.3rd.2007 in a rows (lines) with space 15cm between the lines and 5cm in depth. Levels of P₂O₅ were (0, 80,160,240) kg.ha⁻¹ applied as single super phosphate (20%) splitting of P was as follow: D1: All the appointed phosphate levels in one dose applied with seeds; D2: A half of the appointed phosphate levels applied with seeds and the second half after ten weeks of seeding; D3: A half of appointed phosphate levels applied after ten weeks of seeding and the second half of fertilizer after 14weeks of seeding. The P fertilizer was applied between seeding lines in 10cm depth.. Because of rain fall shortage normal water used to irrigate the crop. All applications of crop service has been respectively done till harvest stage at May15th 2008.

The samples has been taken in four stages of growth from each the plant and soil in purpose to find the dry matter; P uptake in plant The time of sampling was 10 weeks, 14weeks, 18 weeks post seeding and after harvest (23weeks).

The results showed that there was increasing of grain yield,. The results showed at the all stages of sampling increasing of dry matter and P uptake as a result of increasing of P levels, while there was numerical response (especially D2 treatments) of most of these studied properties above to the split application of the fertilizer and the effect was more clear at the low P level (80kg.ha⁻¹). The critical value of P in the plant was 1.67 kg.ton⁻¹ to give 95% of the relative yield.

Triticum spp

%50

. (1)

500

1975 (2)

:

.(3)

:

:

)

(

(4)

Calciorthid

Aridisols

2

.(5)

(1)

(1)

() KCl. 2M 1:5	0.018 gm.kg ⁻¹	N
1N	0.37 gm.kg ⁻¹	K
NaHCO ₃ 0.5M	0.012 gm.kg ⁻¹	P
1N	7.5 gm.kg ⁻¹	
1N	22 Cmolc.kg ⁻¹	CEC
NaOH + HCl	235 gm.kg ⁻¹	CaCO₃
pH-meter	7.62	pH

Conductivity bridge	0.45 ds.m ⁻¹	ECe
()	254 gm.kg ⁻¹	
core	1.32 Mg. m	
	Clay loam	
	250 gm.kg ⁻¹	
	300 gm.kg ⁻¹	
	450 gm.kg ⁻¹	

3- *Triticum aestivum*

0.5 4

2007/12/3

-160-80 -0)

5 15

(P₂O₅ % 20)

1- . P₂O₅ (240

(2) 1- . 120

(2)

	P ₂ O ₅ 1-	*
	80	1 1
10		2 1
10 14		3 1

	160	1 2
10		2 2
10 14		3 2
	240	1 3
10		2 3
10 14		3 3

5

10

:

(10)

•

(18)

(14)

2008/5/15

(23

(2)

163

L.S.D.

.(SAS

240

2 3

(3)

:

¹⁻ .P₂O₅

.(7 6)



1-

:3

*

					**
2.000	4.470	2.390	1.097	0.055	
2.720	5.890	3.130	1.760	0.088	1 1
2.620	6.000	3.150	1.300	0.065	2 1
2.490	5.710	3.070	1.110	0.055	3 1
3.940	8.350	4.800	2.480	0.124	1 2
3.730	8.400	4.150	2.260	0.113	2 2
3.730	8.310	4.740	1.790	0.060	3 2
4.150	8.830	5.200	2.430	0.123	1 3
4.320	8.960	5.440	2.730	0.137	2 3
3.920	8.760	5.160	1.720	0.056	3 3
0.0349	0.0698				L.S.D
	7.37	4.12	1.87	0.088	
	0.0221				L.S.D

.%5

*

()

**

-) (3 -2 -1) 1- .P₂O₅ (240-160-80)

-

(

(8)

(3)

(9)

(10)

. % 108

%221.25

% 202

(11) (7) (6)

1- . P₂O₅ 240 2 3 (4) :

%391.9 1 3 . %462.6

%98.5 3 1 (2) .

. (%338.5)

()

240 1- .P₂O₅ (160 80) 1- .P₂O₅

.(3 3 1 3) (2 3)

. %100.5

% 550.0 %200.0

1 3

2 3 .%5.63

1 3 .%825.7



3 1

%597.1

%11.4

1-

(4)

*

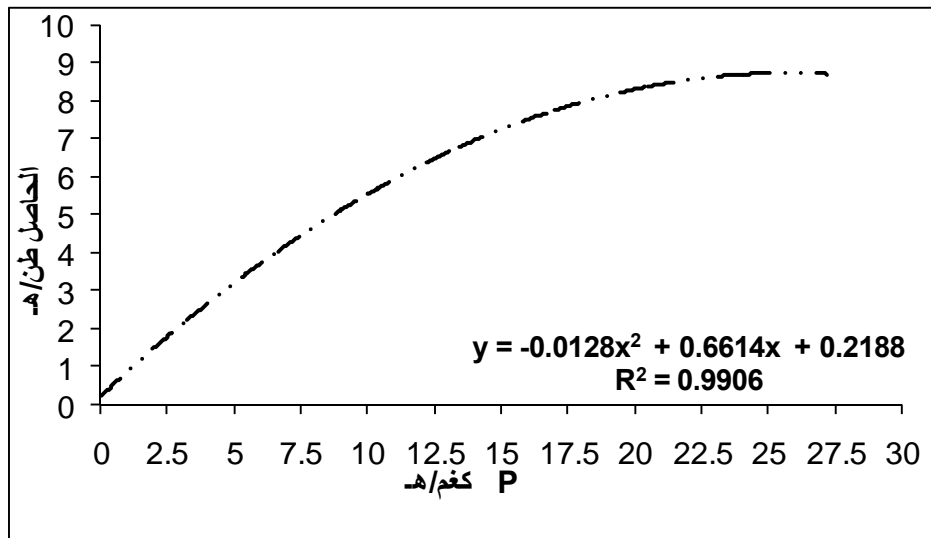
					**
2.730	6.390	3.100	1.400	0.024	
6.010	11.520	7.620	4.800	0.078	1 1
6.590	11.800	10.010	4.500	0.057	2 1
5.420	11.320	8.790	1.560	0.027	3 1
10.940	21.620	13.290	8.700	0.147	1 2
11.470	21.780	14.790	9.200	0.126	2 2
9.880	21.520	14.490	3.200	0.030	3 2
13.430	27.190	16.610	9.760	0.159	1 3
15.360	27.600	20.750	12.960	0.150	2 3
11.970	26.860	16.610	4.400	0.024	3 3
0.0699	0.1398				L.S.D
	18.76	12.61	6.05	0.11	
	0.0442				L.S.D

.%5

*

()

**



P

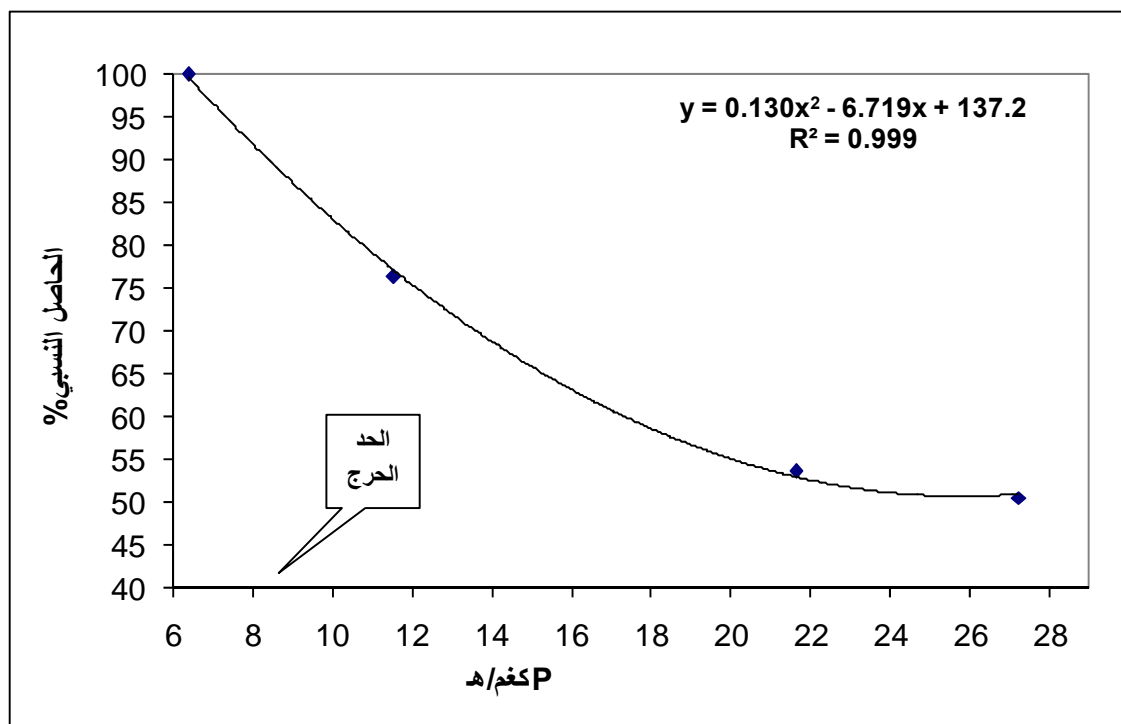
1

(1)

1- . 8.762 P
1- . P 25.84
1- . P 2.95

(2)

1- . P 1.67 1- . P 7.3 %95
(12) . 1- . 4.36
(13) / 2.58
/ 2.5 %90



-2 -

1- P 1.67

2 3

%95

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