

# 2014 Phosphorous Trial: Kansas State University



**17**  
Bushel/Acre  
Increase

TRT	P Source	Rate	Phos-Hold	14 DAT	21 DAT	28 DAT
		lb/a		----- ppm -----		
1	P	40	Yes	13.5	15.1	13.5
2	P	30	Yes	12.1	12.1	12.5
3	P	40	No	15.7	14.5	13.6
4	P	30	No	15.2	13.6	14.3
			LSD <sub>0.05</sub>	3.4	3.7	2.3
<u>ANOVA (P&gt;F)</u>						
Treatment				0.131	0.331	0.381

TRT	P Source	Rate	Phos-Hold	30 DAT	45 DAT	60 DAT	30DAT	45DAT	60DAT
		lb/a		----- % -----			----- % -----		
1	P	40	Yes	3.17	3.75	2.75	0.298	0.333	0.242
2	P	30	Yes	3.10	3.74	2.72	0.284	0.328	0.236
3	P	40	No	3.04	3.81	2.72	0.293	0.340	0.238
4	P	30	No	3.06	3.76	2.81	0.292	0.341	0.243
			LSD <sub>0.05</sub>	0.39	0.21	0.16	0.037	0.027	0.019
<u>ANOVA (P&gt;F)</u>									
Treatment				0.871	0.867	0.605	0.870	0.663	0.809

TRT	P Source	Rate	Phos-Hold	YIELD	Moisture	Test Wt.
		lb/a		bu/a	%	lb/bu
1	P	40	Yes	249	17.2	54.8
2	P	30	Yes	259	17.0	54.8
3	P	40	No	250	17.4	54.6
4	P	30	No	242	16.8	55.0
			LSD <sub>0.05</sub>	20	0.9	0.5
<u>ANOVA (P&gt;F)</u>						
Treatment				0.380	0.489	0.495

\*Results conducted and submitted by:  
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## 2014 MATERIALS AND METHODS

Experiment: N & P Corn  
Location: SWREC Irrigated Field near Tribune, KS  
Soil type: Ulysses silt loam  
Crop: Corn  
Plot size: 10' X 30' (4 rows/plot, 30" row width).  
Experimental design: RCBD; 4 treatments N with 4 replications  
RCBD; 4 treatments P with 4 replications

Treatments 5/06/14 All treatments broadcast  
Planting date: 5/06/14  
rate: 30,000 seeds/a  
variety: Pioneer 1151

Fertilizer date: 5/06/14 5/06/14  
type: per treatment N study: blanket 10 gal/a 10.34.0  
rate: see map P study: blanket 160 #N/a urea

Herbicides date: 5/07/14  
type: Lumax EZ + Glyphosate + Atrazine 4L + AMS  
rate: 3¼ qt/a + 22 oz/a + 1 pt/a + 1.7 lb/a  
date: 6/02/14 date: 6/27/14 (2520 w/ drops)  
type: Glyphosate + AMS type: Glyphosate + AMS  
rate: 22 oz/a + 1.7 lb/a rate: 22 oz/a + 1.7 lb/a

Tillage: treatment: All treatment: All  
date: 3/20, 3/21, 3/26 & 4/10 date: N/A  
type: Disced type: Field Cultivated

Previous Crop: Sorghum  
Harvest date: 10/20/14  
method: Machine harvest, 2 rows x 27'

In-season rainfall 5/06/14 – 10/20/14 = 12.47"  
Irrigation 5/06/14 – 10/20/14 = 17.85"  
\*\*1.58" irrigation on 4/18/14  
would count as fallow rainfall \*\*