

MSU Soil Fertility Research Program

RESPONSE OF POTATO TO PHOSPHORUS AT REDUCED AND INCREASED RATES

Trial ID: PMRF01-16 Location: MRF Trial Year: 2016
 Investigator: Kurt Steinke
 Project ID: PHOSPOT

Crop Code Crop Name Crop Variety Description Rating Date Rating Type Rating Unit Crop Stage Scale							SOLTU Potato FL 2137 harvest Sep-20-2016 YIELD B'S CWT	SOLTU Potato FL 2137 harvest Sep-20-2016 YIELD OS CWT	SOLTU Potato FL 2137 harvest Sep-20-2016 YIELD A'S CWT	SOLTU Potato FL 2137 harvest Sep-20-2016 Total Yield CWT	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	50	51	52	53
1	TSP-PHOS	45 GR		0 lb ai/a				15.1 a	64.1 a	304.1 a	383 a
	MOP 0-0-62	62 GR		140 lb ai/a	226 lb/a		PPI				
	MOP 0-0-62	62 GR		100 lb ai/a	161 lb/a		APBAND				
	GYP SUM	16 GR		500 lb/a	500 lb/a		PPI				
	Urea 46-0-0	46 GR		25 lb ai/a	54.3 lb/a		APBAND				
	AS (21-0-0-)N	21 GR		66 lb ai/a	314 lb/a		EMBAND				
	Urea 46-0-0	46 GR		134 lb ai/a	290 lb/a		BHILL				
	K-Mag	22 GR		60 lb ai/a	273 lb/a		BHILL				
2	TSP-PHOS	45 GR		40 lb ai/a	89 lb/a		APBAND	19.9 a	73.3 a	297.1 a	390 a
	MOP 0-0-62	62 GR		140 lb ai/a	226 lb/a		PPI				
	MOP 0-0-62	62 GR		100 lb ai/a	161 lb/a		APBAND				
	GYP SUM	16 GR		500 lb/a	500 lb/a		PPI				
	Urea 46-0-0	46 GR		25 lb ai/a	54.3 lb/a		APBAND				
	AS (21-0-0-)N	21 GR		66 lb ai/a	314 lb/a		EMBAND				
	Urea 46-0-0	46 GR		134 lb ai/a	290 lb/a		BHILL				
	K-Mag	22 GR		60 lb ai/a	273 lb/a		BHILL				
3	TSP-PHOS	45 GR		80 lb ai/a	178 lb/a		APBAND	17.1 a	91.6 a	314.7 a	423 a
	MOP 0-0-62	62 GR		140 lb ai/a	226 lb/a		PPI				
	MOP 0-0-62	62 GR		100 lb ai/a	161 lb/a		APBAND				
	GYP SUM	16 GR		500 lb/a	500 lb/a		PPI				
	Urea 46-0-0	46 GR		25 lb ai/a	54.3 lb/a		APBAND				
	AS (21-0-0-)N	21 GR		66 lb ai/a	314 lb/a		EMBAND				
	Urea 46-0-0	46 GR		134 lb ai/a	290 lb/a		BHILL				
	K-Mag	22 GR		60 lb ai/a	273 lb/a		BHILL				
4	TSP-PHOS	45 GR		120 lb ai/a	267 lb/a		APBAND	18.2 a	82.5 a	315.2 a	416 a
	MOP 0-0-62	62 GR		140 lb ai/a	226 lb/a		PPI				
	MOP 0-0-62	62 GR		100 lb ai/a	161 lb/a		APBAND				
	GYP SUM	16 GR		500 lb/a	500 lb/a		PPI				
	Urea 46-0-0	46 GR		25 lb ai/a	54.3 lb/a		APBAND				
	AS (21-0-0-)N	21 GR		66 lb ai/a	314 lb/a		EMBAND				
	Urea 46-0-0	46 GR		134 lb ai/a	290 lb/a		BHILL				
	K-Mag	22 GR		60 lb ai/a	273 lb/a		BHILL				
5	TSP-PHOS	45 GR		160 lb ai/a	356 lb/a		APBAND	14.4 a	44.0 a	316.0 a	374 a
	MOP 0-0-62	62 GR		140 lb ai/a	226 lb/a		PPI				
	MOP 0-0-62	62 GR		100 lb ai/a	161 lb/a		APBAND				
	GYP SUM	16 GR		500 lb/a	500 lb/a		PPI				
	Urea 46-0-0	46 GR		25 lb ai/a	54.3 lb/a		APBAND				
	AS (21-0-0-)N	21 GR		66 lb ai/a	314 lb/a		EMBAND				
	Urea 46-0-0	46 GR		134 lb ai/a	290 lb/a		BHILL				
	K-Mag	22 GR		60 lb ai/a	273 lb/a		BHILL				

Means followed by same letter or symbol do not significantly differ (P=.10, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Trial ID: PMRF01-16 Location: MRF Trial Year: 2016

Investigator: Kurt Steinke

Project ID: PHOSPOT

Crop Code							SOLTU	SOLTU	SOLTU	SOLTU	
Crop Name							Potato	Potato	Potato	Potato	
Crop Variety							FL 2137	FL 2137	FL 2137	FL 2137	
Description							harvest	harvest	harvest	harvest	
Rating Date							Sep-20-2016	Sep-20-2016	Sep-20-2016	Sep-20-2016	
Rating Type							YIELD B'S	YIELD OS	YIELD A'S	Total Yield	
Rating Unit							CWT	CWT	CWT	CWT	
Crop Stage Scale											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	50	51	52	53
6	TSP-PHOS	45	GR	200 lb ai/a	444 lb/a		APBAND	13.3 a	89.8 a	299.7 a	403 a
	MOP 0-0-62	62	GR	140 lb ai/a	226 lb/a		PPI				
	MOP 0-0-62	62	GR	100 lb ai/a	161 lb/a		APBAND				
	GYP SUM	16	GR	500 lb/a	500 lb/a		PPI				
	Urea 46-0-0	46	GR	25 lb ai/a	54.3 lb/a		APBAND				
	AS (21-0-0)-N	21	GR	66 lb ai/a	314 lb/a		EMBAND				
	Urea 46-0-0	46	GR	134 lb ai/a	290 lb/a		BHILL				
	K-Mag	22	GR	60 lb ai/a	273 lb/a		BHILL				
7	TSP-PHOS	45	GR	80 lb ai/a	178 lb/a		APBAND	15.7 a	78.8 a	328.1 a	423 a
	MOP 0-0-62	62	GR	140 lb ai/a	226 lb/a		PPI				
	MOP 0-0-62	62	GR	100 lb ai/a	161 lb/a		APBAND				
	GYP SUM	16	GR	500 lb/a	500 lb/a		PPI				
	Urea 46-0-0	46	GR	25 lb ai/a	54.3 lb/a		APBAND				
	AS (21-0-0)-N	21	GR	66 lb ai/a	314 lb/a		EMBAND				
	Urea 46-0-0	46	GR	122 lb ai/a	265 lb/a		BHILL				
	K-Mag	22	GR	60 lb ai/a	273 lb/a		BHILL				
	10-34-0		AL	10 gal/a	10 gal/a		BHILL				
8	TSP-PHOS	45	GR	120 lb ai/a	267 lb/a		APBAND	18.1 a	66.0 a	342.8 a	427 a
	MOP 0-0-62	62	GR	140 lb ai/a	226 lb/a		PPI				
	MOP 0-0-62	62	GR	100 lb ai/a	161 lb/a		APBAND				
	GYP SUM	16	GR	500 lb/a	500 lb/a		PPI				
	Urea 46-0-0	46	GR	25 lb ai/a	54.3 lb/a		APBAND				
	AS (21-0-0)-N	21	GR	66 lb ai/a	314 lb/a		EMBAND				
	Urea 46-0-0	46	GR	122 lb ai/a	265 lb/a		BHILL				
	K-Mag	22	GR	60 lb ai/a	273 lb/a		BHILL				
	10-34-0		AL	10 gal/a	10 gal/a		BHILL				
LSD P=.10							5.72	37.11	39.44	37.4	
Standard Deviation							4.70	30.50	32.41	30.7	
CV							28.5	41.35	10.3	7.58	
Replicate F							0.601	0.354	0.822	0.595	
Replicate Prob(F)							0.6214	0.7869	0.4961	0.6255	
Treatment F							0.895	1.055	0.880	1.741	
Treatment Prob(F)							0.5283	0.4249	0.5385	0.1535	

Crop Code

SOLTU, BPOT, Solanum tuberosum, = US

Rating Unit

CWT = hundredweight (u.s.=100 lb)

ARM Action Codes

TY1 = 7.329632*[C40]

TY2 = 7.329632*[C43]

TY4 = 7.329632*[C46]

T3 = [C50]+[C51]+[C52]