

MSU Soil Fertility Research Program
 RESPONSE OF POTATO TO POTASIUUM APPLICATIONS

Trial ID: PMRF01-19 Location: MRF Trial Year: 2019

Investigator: Kurt Steinke

Project ID: POTPOT

						SOLTU Potato Lamoka harvest Sep-18-2019 YIELD Bs CWT	SOLTU Potato Lamoka harvest Sep-18-2019 YIELD OVs CWT	SOLTU Potato Lamoka harvest Sep-18-2019 YIELD POs CWT	SOLTU Potato Lamoka harvest Sep-18-2019 YIELD As CWT	
						TY2 1	TY3 1	TY4 1	TY7 1	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate Rate Unit	Growth Stage	15	16	17	18
1	GYPSUM 10-34-0 28% Nitrogen 28% Nitrogen 28% Nitrogen CHECK	16 GR AL 3 AL 3 AL	GR AL AL AL	1000 lb/a 20 gal/a 81 lb ai/a 60 lb ai/a 60 lb ai/a	1000 lb/a 20 gal/a 27 gal/a 20 gal/a 20 gal/a	PPI INFUR EMBAND BHILL 6-10DAH	55.4 a	0.0 a	3.1 a	100.0 a
2	GYPSUM MOP 0-0-62 10-34-0 K20 Liquid 28% Nitrogen 28% Nitrogen 28% Nitrogen	16 GR 62 GR AL 3.25 AL 3 AL 3 AL 3 AL	GR GR AL AL AL AL AL	1000 lb/a 225 lb ai/a 20 gal/a 75 lb ai/a 81 lb ai/a 60 lb ai/a 60 lb ai/a	1000 lb/a 363 lb/a 20 gal/a 23 gal/a 27 gal/a 20 gal/a 20 gal/a	PPI PPI INFUR INFUR EMBAND BHILL 6-10DAH	41.3 b	0.0 a	1.1 a	118.0 a
3	GYPSUM MOP 0-0-62 10-34-0 K20 Liquid 28% Nitrogen 28% Nitrogen 28% Nitrogen	16 GR 62 GR AL 3.25 AL 3 AL 3 AL 3 AL	GR GR AL AL AL AL AL	1000 lb/a 150 lb ai/a 20 gal/a 150 lb ai/a 81 lb ai/a 60 lb ai/a 60 lb ai/a	1000 lb/a 242 lb/a 20 gal/a 46 gal/a 27 gal/a 20 gal/a 20 gal/a	PPI PPI INFUR INFUR EMBAND BHILL 6-10DAH	31.4 c	0.0 a	2.5 a	109.4 a
4	GYPSUM MOP 0-0-62 10-34-0 28% Nitrogen 28% Nitrogen 28% Nitrogen	16 GR 62 GR AL 3 AL 3 AL 3 AL	GR GR AL AL AL AL	1000 lb/a 300 lb ai/a 20 gal/a 81 lb ai/a 60 lb ai/a 60 lb ai/a	1000 lb/a 484 lb/a 20 gal/a 27 gal/a 20 gal/a 20 gal/a	PPI PPI INFUR EMBAND BHILL 6-10DAH	44.6 b	0.0 a	0.0 a	133.8 a
5	GYPSUM MOP 0-0-62 10-34-0 K20 Liquid 28% Nitrogen 28% Nitrogen K20 Liquid 28% Nitrogen	16 GR 62 GR AL 3.25 AL 3 AL 3 AL 3.25 AL 3 AL	GR GR AL AL AL AL AL AL	1000 lb/a 105 lb ai/a 20 gal/a 75 lb ai/a 81 lb ai/a 60 lb ai/a 120 lb ai/a 60 lb ai/a	1000 lb/a 170 lb/a 20 gal/a 23 gal/a 27 gal/a 20 gal/a 37 gal/a 20 gal/a	PPI PPI INFUR INFUR EMBAND BHILL BHILL 6-10DAH	30.8 c	0.0 a	1.1 a	130.9 a

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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						SOLTU	SOLTU	SOLTU	SOLTU	
						Potato	Potato	Potato	Potato	
						Lamoka	Lamoka	Lamoka	Lamoka	
						harvest	harvest	harvest	harvest	
						Sep-18-2019	Sep-18-2019	Sep-18-2019	Sep-18-2019	
						YIELD Bs	YIELD OVs	YIELD POs	YIELD As	
						CWT	CWT	CWT	CWT	
						TY2	TY3	TY4	TY7	
						1	1	1	1	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate Unit	Growth Stage	15	16	17	18
6	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI	44.2 b	0.0 a	0.0 a	139.6 a
	MOP 0-0-62	62	GR	165 lb ai/a	266 lb/a	PPI				
	10-34-0		AL	20 gal/a	20 gal/a	INFUR				
	K20 Liquid	3.25	AL	75 lb ai/a	23 gal/a	INFUR				
	28% Nitrogen	3	AL	81 lb ai/a	27 gal/a	EMBAND				
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a	BHILL				
	K20 Liquid	3.25	AL	60 lb ai/a	18.5 gal/a	BHILL				
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a	6-10DAH				
7	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI	39.9 bc	0.0 a	1.7 a	140.5 a
	MOP 0-0-62	62	GR	187 lb ai/a	302 lb/a	PPI				
	10-34-0		AL	20 gal/a	20 gal/a	INFUR				
	K20 Liquid	3.25	AL	113 lb ai/a	34.8 gal/a	INFUR				
	28% Nitrogen	3	AL	81 lb ai/a	27 gal/a	EMBAND				
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a	BHILL				
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a	6-10DAH				
LSD P=.10						9.23	.	2.83	28.55	
Standard Deviation						7.53	0.00	2.31	23.28	
CV						18.32	0.0	170.9	18.68	
Replicate F						0.486	0.000	2.134	0.878	
Replicate Prob(F)						0.6961	1.0000	0.1315	0.4708	
Treatment F						5.010	0.000	1.047	1.822	
Treatment Prob(F)						0.0035	1.0000	0.4288	0.1512	

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						SOLTU Potato Lamoka harvest Sep-18-2019 spec gravit	SOLTU Potato Lamoka harvest Sep-18-2019 YIELD Total CWT
Crop Code							
Crop Name							
Crop Variety							
Description							
Rating Date							
Rating Type							
Rating Unit							
Crop Stage Scale							
ARM Action Codes						T5	TY6
Number of Decimals						3	1
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate Rate Unit	Growth Stage	
							19 20
1	GYPSUM 10-34-0 28% Nitrogen 28% Nitrogen CHECK	16 AL 3 3	GR AL AL AL	1000 lb/a 20 gal/a 81 lb ai/a 60 lb ai/a	1000 lb/a 20 gal/a 27 gal/a 20 gal/a	PPI INFUR EMBAND BHILL 6-10DAH	1.079 a 158.4 a
2	GYPSUM MOP 0-0-62 10-34-0 K20 Liquid 28% Nitrogen 28% Nitrogen 28% Nitrogen	16 62 AL 3.25 3 3 3	GR GR AL AL AL AL AL	1000 lb/a 225 lb ai/a 20 gal/a 75 lb ai/a 81 lb ai/a 60 lb ai/a 60 lb ai/a	1000 lb/a 363 lb/a 20 gal/a 23 gal/a 27 gal/a 20 gal/a 20 gal/a	PPI PPI INFUR INFUR EMBAND BHILL 6-10DAH	1.070 c 160.4 a
3	GYPSUM MOP 0-0-62 10-34-0 K20 Liquid 28% Nitrogen 28% Nitrogen 28% Nitrogen	16 62 AL 3.25 3 3 3	GR GR AL AL AL AL AL	1000 lb/a 150 lb ai/a 20 gal/a 150 lb ai/a 81 lb ai/a 60 lb ai/a 60 lb ai/a	1000 lb/a 242 lb/a 20 gal/a 46 gal/a 27 gal/a 20 gal/a 20 gal/a	PPI PPI INFUR INFUR EMBAND BHILL 6-10DAH	1.070 c 143.4 a
4	GYPSUM MOP 0-0-62 10-34-0 28% Nitrogen 28% Nitrogen 28% Nitrogen	16 62 AL 3 3 3	GR GR AL AL AL AL	1000 lb/a 300 lb ai/a 20 gal/a 81 lb ai/a 60 lb ai/a 60 lb ai/a	1000 lb/a 484 lb/a 20 gal/a 27 gal/a 20 gal/a 20 gal/a	PPI PPI INFUR EMBAND BHILL 6-10DAH	1.070 bc 178.4 a
5	GYPSUM MOP 0-0-62 10-34-0 K20 Liquid 28% Nitrogen 28% Nitrogen K20 Liquid 28% Nitrogen	16 62 AL 3.25 3 3 3.25 3	GR GR AL AL AL AL AL AL	1000 lb/a 105 lb ai/a 20 gal/a 75 lb ai/a 81 lb ai/a 60 lb ai/a 120 lb ai/a 60 lb ai/a	1000 lb/a 170 lb/a 20 gal/a 23 gal/a 27 gal/a 20 gal/a 37 gal/a 20 gal/a	PPI PPI INFUR INFUR EMBAND BHILL BHILL 6-10DAH	1.073 b 162.8 a

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						SOLTU	SOLTU
						Potato	Potato
						Lamoka	Lamoka
						harvest	harvest
						Sep-18-2019	Sep-18-2019
						spec gravit	YIELD Total
							CWT
						T5	TY6
						3	1
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate Rate Unit	Growth Stage	
6	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI	19
	MOP 0-0-62	62	GR	165 lb ai/a	266 lb/a	PPI	20
	10-34-0		AL	20 gal/a	20 gal/a	INFUR	
	K20 Liquid	3.25	AL	75 lb ai/a	23 gal/a	INFUR	
	28% Nitrogen	3	AL	81 lb ai/a	27 gal/a	EMBAND	
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a	BHILL	
	K20 Liquid	3.25	AL	60 lb ai/a	18.5 gal/a	BHILL	
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a	6-10DAH	
7	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI	1.069 c
	MOP 0-0-62	62	GR	187 lb ai/a	302 lb/a	PPI	183.7 a
	10-34-0		AL	20 gal/a	20 gal/a	INFUR	
	K20 Liquid	3.25	AL	113 lb ai/a	34.8 gal/a	INFUR	
	28% Nitrogen	3	AL	81 lb ai/a	27 gal/a	EMBAND	
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a	BHILL	
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a	6-10DAH	
	LSD P=.10						0.0026
	Standard Deviation						0.0022
	CV						0.2
	Replicate F						3.720
	Replicate Prob(F)						0.0305
	Treatment F						10.097
	Treatment Prob(F)						0.0001

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Crop Code

SOLTU, BPOT, Solanum tuberosum, Potato = US

Rating Unit

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

ARM Action Codes

TY2 = 16.15916*[5]

TY3 = 16.15916*[6]

TY4 = 16.15916*[8]

TY7 = 16.15916*[10]

T5 = [C14]/([C14]-[C13])

TY6 = 16.15916*[12]