

MSU Soil Fertility Research Program

EVALUATION OF POTATO IN RESPONSE TO P AND K INPUTS

Trial ID: PMRF02-19 Location: MRF Trial Year: 2019

Investigator: Kurt Steinke

Project ID: MOPO19

Crop Code						SOLTU	SOLTU	SOLTU	SOLTU	
Crop Name						Potato	Potato	Potato	Potato	
Crop Variety						Lamoka	Lamoka	Lamoka	Lamoka	
Description						harvest	harvest	harvest	harvest	
Rating Date						Sep-18-2019	Sep-18-2019	Sep-18-2019	Sep-18-2019	
Rating Type						YIELD Bs	YIELD OVs	YIELD POs	YIELD As	
Rating Unit						CWT	CWT	CWT	CWT	
ARM Action Codes						TY2	TY3	ET3 TY4	TY5	
Number of Decimals						1	1	1	1	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate Unit	Growth Stage	12	13	14	15
1	CHECK						50.2 a	0.0 a	0.0 a	113.1 a
	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI				
	10-34-0		AL	20 gal/a	20 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	7-10DAH				
2	MOP 0-0-62	62	GR	300 lb ai/a	484 lb/a	PPI	43.9 a	0.0 a	0.0 a	142.3 a
	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI				
	10-34-0		AL	20 gal/a	20 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	7-10DAH				
3	MOP 0-0-62	62	GR	300 lb ai/a	484 lb/a	PPI	34.6 a	0.0 a	1.7	174.3 a
	GRANuBor 2	14.3	GR	2.5 lb ai/a	17.5 lb/a	PPI				
	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI				
	10-34-0		AL	20 gal/a	20 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	7-10DAH				
4	Aspire	58	GR	300 lb ai/a	517 lb/a	PPI	33.7 a	0.0 a	0.0 a	152.3 a
	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI				
	10-34-0		AL	20 gal/a	20 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	7-10DAH				
5	Aspire	58	GR	180 lb ai/a	310 lb/a	PPI	42.7 a	0.0 a	0.0 a	121.3 a
	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI				
	10-34-0		AL	20 gal/a	20 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				
	Aspire	58	GR	120 lb ai/a	207 lb/a	BHILL				
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a	7-10DAH				

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.

Missing data estimates are included in columns: Yates=12,16,17

Could not calculate LSD (% mean diff) for columns 13,14 because error mean square = 0.

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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	ET3 TY4	TY5	
							1	1	1	1	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Unit Stage	12	13	14	15
6	MOP 0-0-62	62	GR	180 lb ai/a	290 lb/a		PPI	42.7 a	0.0 a	0.0 a	155.3 a
	GYP SUM	16	GR	1000 lb/a	1000 lb/a		PPI				
	10-34-0		AL	20 gal/a	20 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				
	MOP 0-0-62	62	GR	120 lb ai/a	194 lb/a		BHILL				
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a		7-10DAH				
LSD P=.10							13.34	.	.	69.57	
Standard Deviation							10.71	0.00	0.00	56.12	
CV							25.93	0.0	0.0	39.22	
Replicate F							0.219	0.000	0.000	1.707	
Replicate Prob(F)							0.8814	1.0000	1.0000	0.2082	
Treatment F							1.350	0.000	0.000	0.656	
Treatment Prob(F)							0.3008	1.0000	1.0000	0.6619	

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							SOLTU Potato Lamoka harvest Sep-18-2019 spec gravit	SOLTU Potato Lamoka harvest Sep-18-2019 YIELD Tot CWT ET5 TY7
							T6 3	1
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate Rate Unit	Growth Unit Stage	16	17
1	CHECK						1.077 a	163.3 c
	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI		
	10-34-0		AL	20 gal/a	20 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	7-10DAH		
2	MOP 0-0-62	62	GR	300 lb ai/a	484 lb/a	PPI	1.071 c	186.2 bc
	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI		
	10-34-0		AL	20 gal/a	20 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	7-10DAH		
3	MOP 0-0-62	62	GR	300 lb ai/a	484 lb/a	PPI	1.069 c	210.6 ab
	GRANuBor 2	14.3	GR	2.5 lb ai/a	17.5 lb/a	PPI		
	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI		
	10-34-0		AL	20 gal/a	20 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	7-10DAH		
4	Aspire	58	GR	300 lb ai/a	517 lb/a	PPI	1.070 c	227.0 a
	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI		
	10-34-0		AL	20 gal/a	20 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	7-10DAH		
5	Aspire	58	GR	180 lb ai/a	310 lb/a	PPI	1.073 b	164.0
	GYP SUM	16	GR	1000 lb/a	1000 lb/a	PPI		
	10-34-0		AL	20 gal/a	20 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		
	Aspire	58	GR	120 lb ai/a	207 lb/a	BHILL		
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a	7-10DAH		

Means followed by same letter or symbol do not significantly differ (P=.10, LSD).

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Crop Code						SOLTU	SOLTU	
Crop Name						Potato	Potato	
Crop Variety						Lamoka	Lamoka	
Description						harvest	harvest	
Rating Date						Sep-18-2019	Sep-18-2019	
Rating Type						spec gravit	YIELD Tot	
Rating Unit							CWT	
ARM Action Codes						T6	ET5 TY7	
Number of Decimals						3	1	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Stage	
				Unit	Unit	Unit		
16							17	
6	MOP 0-0-62	62	GR	180 lb ai/a	290 lb/a		PPI	
	GYPSUM	16	GR	1000 lb/a	1000 lb/a		PPI	
	10-34-0		AL	20 gal/a	20 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	
	MOP 0-0-62	62	GR	120 lb ai/a	194 lb/a		BHILL	
	28% Nitrogen	3	AL	60 lb ai/a	20 gal/a		7-10DAH	
	LSD P=.10						0.0023	30.77
	Standard Deviation						0.0018	24.23
	CV						0.17	12.3
	Replicate F						5.437	0.536
	Replicate Prob(F)						0.0109	0.6672
	Treatment F						9.616	3.980
	Treatment Prob(F)						0.0004	0.0310

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Crop Code

SOLTU, BPOT, Solanum tuberosum, Potato = US

Rating Unit

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

ARM Action Codes

ET3 = Excluded treatment 3

ET5 = Excluded treatment 5

TY2 = 16.15916*[C2]

TY3 = 16.15916*[C3]

TY4 = 16.15916*[C5]

TY5 = 16.15916*[C7]

T6 = [C11]/([C11]-[C10])

TY7 = 16.15916*[C9]