

MSU Soil Fertility Research Program
RESPONSE OF SUGARBEET TO FOLIAR APPLICATIONS OF NITROGEN
 Trial ID: BV02-17 Location: SVREC Trial Year: 2017
 Investigator: Kurt Steinke

Project ID: FOLIAR

Crop Code						BEAVA	BEAVA
Crop Name						Sugarbeet	Sugarbeet
Crop Variety						Beta 1399	Beta 1399
Description						lbs/175sqft	RWSA
Rating Date						Oct-27-2017	Oct-27-2017
Rating Type						YIELD	LBS RWSA
Rating Unit						T-US	POUNDS
Crop Stage Scale						HARVEST	HARVEST
ARM Action Codes						ER1 TY3	ER1 T4
Number of Decimals						0	0
Trt No.	Treatment Name	Form Type	Rate	Other Rate	Other Rate	Growth Stage	
			lb ai/a	lb/a	lb/a		
1	P205-PHOS	GR	20 lb ai/a	44.4 lb/a	81 lb/a	2X2PL	12
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a	81 lb/a	2X2PL	22
	Manganese	GR	2 lb ai/a	7.4 lb/a	7.4 lb/a	2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a	13.3 gal/a	2X2PL	
	28% N Rain	AL	120 lb ai/a	40 gal/a	40 gal/a	2-4LF	
2	P205-PHOS	GR	20 lb ai/a	44.4 lb/a	81 lb/a	2X2PL	34 ab
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a	81 lb/a	2X2PL	9291 ab
	Manganese	GR	2 lb ai/a	7.4 lb/a	7.4 lb/a	2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a	13.3 gal/a	2X2PL	
	28% N Rain	AL	120 lb ai/a	40 gal/a	40 gal/a	2-4LF	
3	P205-PHOS	GR	20 lb ai/a	44.4 lb/a	81 lb/a	2X2PL	31 a-d
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a	81 lb/a	2X2PL	8816 abc
	Manganese	GR	2 lb ai/a	7.4 lb/a	7.4 lb/a	2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a	13.3 gal/a	2X2PL	
	28% N Rain	AL	80 lb ai/a	26.7 gal/a	26.7 gal/a	2-4LF	
4	P205-PHOS	GR	20 lb ai/a	44.4 lb/a	81 lb/a	2X2PL	28 d
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a	81 lb/a	2X2PL	7864 c
	Manganese	GR	2 lb ai/a	7.4 lb/a	7.4 lb/a	2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a	13.3 gal/a	2X2PL	
	28% N Rain	AL	120 lb ai/a	40 gal/a	40 gal/a	2-4LF	
	WATER 50%	AL				2-4LF	
5	P205-PHOS	GR	20 lb ai/a	44.4 lb/a	81 lb/a	2X2PL	28 cd
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a	81 lb/a	2X2PL	7832 c
	Manganese	GR	2 lb ai/a	7.4 lb/a	7.4 lb/a	2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a	13.3 gal/a	2X2PL	
	28% N Rain	AL	80 lb ai/a	26.7 gal/a	26.7 gal/a	2-4LF	
	WATER 50%	AL				2-4LF	
6	P205-PHOS	GR	20 lb ai/a	44.4 lb/a	81 lb/a	2X2PL	30 bcd
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a	81 lb/a	2X2PL	8330 bc
	Manganese	GR	2 lb ai/a	7.4 lb/a	7.4 lb/a	2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a	13.3 gal/a	2X2PL	
	28% N Rain	AL	120 lb ai/a	40 gal/a	40 gal/a	8-10LF	
6	P205-PHOS	GR	20 lb ai/a	44.4 lb/a	81 lb/a	2X2PL	32 a-d
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a	81 lb/a	2X2PL	8984 abc
	Manganese	GR	2 lb ai/a	7.4 lb/a	7.4 lb/a	2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a	13.3 gal/a	2X2PL	
	28% N Rain	AL	80 lb ai/a	26.7 gal/a	26.7 gal/a	8-10LF	

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=22
 Excluded replicate 1 in column 12; 1 in 22

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Crop Variety						Beta 1399	Beta 1399
Description						lbs/175sqft	RWSA
Rating Date						Oct-27-2017	Oct-27-2017
Rating Type						YIELD	LBS RWSA
Rating Unit						T-US	POUNDS
Crop Stage Scale						HARVEST	HARVEST
ARM Action Codes						ER1 TY3	ER1 T4
Number of Decimals						0	0
Trt No.	Treatment Name	Form Type	Rate	Other Rate	Other Rate	Growth Unit	Stage
						12	22
7	P205-PHOS	GR	20 lb ai/a	44.4 lb/a		2X2PL	33 ab
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a		2X2PL	8989 abc
	Manganese	GR	2 lb ai/a	7.4 lb/a		2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a		2X2PL	
	28% N Rain	AL	120 lb ai/a	40 gal/a		8-10LF	
	WATER 50%	AL				8-10LF	
8	P205-PHOS	GR	20 lb ai/a	44.4 lb/a		2X2PL	32 abc
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a		2X2PL	8752 abc
	Manganese	GR	2 lb ai/a	7.4 lb/a		2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a		2X2PL	
	28% N Rain	AL	80 lb ai/a	26.7 gal/a		8-10LF	
	WATER 50%	AL				8-10LF	
9	P205-PHOS	GR	20 lb ai/a	44.4 lb/a		2X2PL	35 a
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a		2X2PL	9676 a
	Manganese	GR	2 lb ai/a	7.4 lb/a		2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a		2X2PL	
	28% N Flat Fan	AL	120 lb ai/a	40 gal/a		2-4LF	
10	P205-PHOS	GR	20 lb ai/a	44.4 lb/a		2X2PL	33 ab
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a		2X2PL	8731 abc
	Manganese	GR	2 lb ai/a	7.4 lb/a		2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a		2X2PL	
	28% N Flat Fan	AL	120 lb ai/a	40 gal/a		8-10LF	
11	P205-PHOS	GR	20 lb ai/a	44.4 lb/a		2X2PL	35 a
	K2O 0-0-62	GR	50 lb ai/a	81 lb/a		2X2PL	9553 a
	Manganese	GR	2 lb ai/a	7.4 lb/a		2X2PL	
	28% Nitrogen	AL	40 lb ai/a	13.3 gal/a		2X2PL	
	Urea 46-0-0	GR	120 lb ai/a	260 lb/a		2-4LF	
12	CHECK						21 e
							5567 d
	LSD P=.10					4.2	1198.2
	Standard Deviation					3.0	852.8
	CV					9.63	10.0
	Replicate F					2.641	4.471
	Replicate Prob(F)					0.0938	0.0241
	Treatment F					4.948	4.979
	Treatment Prob(F)					0.0007	0.0008

Crop Code

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BEAVA, BSUG, Beta vulgaris vulg. altissima, Sugarbeet = US

Rating Type

YIELD = yield

Rating Unit

T-US = ton (short=2000 lb)

ARM Action Codes

ER1 = Excluded replicate 1

TY3 = 0.1244571*[11]

T4 = [c12]*[c21]

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