

MSU Weed Science Research Program

Crop tolerance and weed control with Warrant in Roundup Ready sugarbeet

Trial ID: SB05-11 Study Dir.: Sprague, Powell  
 Conducted: SVREC Investigator: Christy Sprague

Date Planted: 5/4/2011 Row Spacing: 30 IN  
 Variety: Hilleshog 9042 No. of Reps: 4  
 Population: 4 1/4" spacing % OM: 2.8  
 Soil Type: Clay Loam pH: 7.9  
 Plot Size: 10 X 35 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall moldboard plow, spring field cultivated (twice).  
 Fertilizer: Urea (125 lb/A of nitrogen) was broadcast and incorporated prior to planting.

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
2.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S.WATS.
3.	POLPY	SMARTWEED, PENNSYLVANIA	POLYGONUM PENNSYLVANICUM L.
Crop	Code	Common Name	
1.	BETVU	BEEET, SUGAR	

Application Description

	A	B	C	D	E
Application Timing:	PRE	2 leaf	4 leaf	6 leaf	8 leaf
Date Treated:	5/4/2011	5/30/2011	6/7/2011	6/9/2011	6/20/2011
Time Treated:	6:25 pm	8:00 pm	3:00 pm	6:30 pm	3:30 pm
% Cloud Cover:	0	0	20	95	80
Air Temp., Unit:	63 F	82 F	91 F	58 F	80 F
% Relative Humidity:	28	68	49	71	60
Wind Speed/Unit/Dir:	2 mph SW	4 mph N	4 mph SW	4 mph NE	6 mph SE
Soil Temp., Unit:	- F	75 F	82 F	70 F	75 F
Soil/Leaf Surface M:	5 -	5 5	5 5	5 5	5 5
Soil Moist (1=w 5=d):	4	3	4	3	3

Crop Stage at Each Application

	A	B	C	D	E
Crop Name:	BETVU	BETVU	BETVU	BETVU	BETVU
Height (In.):	-	3"	1-3"	2-4"	8-10"
Stage (L):	-	2-4	4-6	6	8-10

Weed Stage at Each Application

	A	B	C	D	E
Weed 1 Name:	CHEAL	CHEAL	CHEAL	CHEAL	CHEAL
Height (In.):	-	1"	2-3"	-	-
Stage (L):	-	4-6	6-20	-	-
Weed 2 Name:	AMAPO	AMAPO	AMAPO	AMAPO	AMAPO
Height (In.):	-	1/4"	-	1-2"	-
Stage (L):	-	1	-	4-6	-
Weed 3 Name:	POLPY	POLPY	POLPY	POLPY	POLPY
Height (In.):	-	1.5-2"	2-3"	2"	-
Stage (L):	-	2-3	4-8	6	-

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	21"	20"	100"	19	Water	28
B	Cub	3.8	AirMix	11003	21"	20"	100"	19	Water	28
C	Cub	3.8	AirMix	11003	20"	20"	100"	19	Water	28
D	Cub	3.8	AirMix	11003	21"	20"	100"	19	Water	28
E	Cub	3.8	AirMix	11003	23"	20"	100"	19	Water	28

MSU Weed Science Research Program

Crop tolerance and weed control with Warrant in Roundup Ready sugarbeet

Trial ID: SB05-11 Study Dir.: Sprague, Powell  
 Conducted: SVREC Investigator: Christy Sprague

Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	# Subsamples, Dec.	BETVU injury percent 6/9/2011	BETVU count 100' row 6/9/2011	CHEAL control percent 6/9/2011	AMAPO control percent 6/9/2011	POLPY control percent 6/9/2011	BETVU injury percent 6/14/2011	CHEAL control percent 6/14/2011
							10 DA-B	10 DA-B	10 DA-B	10 DA-B	10 DA-B	7 DA-C	7 DA-C
							0	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code							
1	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	0	237	99	99	99	0	99
1	AMS		WG	17	lb/100 gal	2-leaf	B							
1	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D							
1	AMS		WG	17	lb/100 gal	6-leaf	D							
2	Warrant	3	L	3	pt/a	PRE	A	11	223	33	99	13	8	99
2	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C							
2	AMS		WG	17	lb/100 gal	4-leaf	C							
2	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E							
2	AMS		WG	17	lb/100 gal	8-leaf	E							
3	Outlook	6	L	16	fl oz/a	PRE	A	19	218	53	99	96	19	99
3	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C							
3	AMS		WG	17	lb/100 gal	4-leaf	C							
3	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E							
3	AMS		WG	17	lb/100 gal	8-leaf	E							
4	Dual Magnum	7.62	L	1.33	pt/a	PRE	A	16	221	38	99	92	10	99
4	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C							
4	AMS		WG	17	lb/100 gal	4-leaf	C							
4	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E							
4	AMS		WG	17	lb/100 gal	8-leaf	E							
5	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	5	237	99	99	98	4	99
5	Warrant	3	L	3	pt/a	2-leaf	B							
5	AMS		WG	17	lb/100 gal	2-leaf	B							
5	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D							
5	AMS		WG	17	lb/100 gal	6-leaf	D							
6	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	9	238	99	99	99	11	99
6	Outlook	6	L	16	fl oz/a	2-leaf	B							
6	AMS		WG	17	lb/100 gal	2-leaf	B							
6	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D							
6	AMS		WG	17	lb/100 gal	6-leaf	D							
7	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	13	235	99	99	99	11	99
7	Dual Magnum	7.62	L	1.33	pt/a	2-leaf	B							
7	AMS		WG	17	lb/100 gal	2-leaf	B							
7	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D							
7	AMS		WG	17	lb/100 gal	6-leaf	D							
8	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	6	245	99	99	99	5	99
8	AMS		WG	17	lb/100 gal	2-leaf	B							
8	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D							
8	Warrant	3	L	3	pt/a	6-leaf	D							
8	AMS		WG	17	lb/100 gal	6-leaf	D							
9	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	9	243	99	96	98	6	99
9	AMS		WG	17	lb/100 gal	2-leaf	B							
9	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D							
9	Outlook	6	L	16	fl oz/a	6-leaf	D							
9	AMS		WG	17	lb/100 gal	6-leaf	D							
10	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	10	223	99	99	98	5	99
10	AMS		WG	17	lb/100 gal	2-leaf	B							
10	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D							
10	Dual Magnum	7.62	L	1.33	pt/a	6-leaf	D							
10	AMS		WG	17	lb/100 gal	6-leaf	D							

MSU Weed Science Research Program

Crop tolerance and weed control with Warrant in Roundup Ready sugarbeet

Trial ID: SB05-11 Study Dir.: Sprague, Powell
Conducted: SVREC Investigator: Christy Sprague

Table with 8 columns: Weed Code, Crop Code, Rating Data Type, Rating Unit, Rating Date, Trt-Eval Interval, # Subsamples, Dec., and eight columns of control/injury data for treatments BETVU, CHEAL, AMAPO, POLPY, and CHEAL.

Table with 15 columns: Trt No., Treatment Name, Form Conc, Form Type, Rate, Rate Unit, Grow Stg, Appl Code, and eight columns of control/injury data for treatments 11 (Nortron, Betamix, UpBeet, Stinger, Activator 90) and 12 (Untreated).

Summary statistics table with 8 columns: LSD (P=.05), Standard Deviation, CV, and eight columns of control/injury data.

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

MSU Weed Science Research Program

Crop tolerance and weed control with Warrant in Roundup Ready sugarbeet

Trial ID: SB05-11 Study Dir.: Sprague, Powell  
 Conducted: SVREC Investigator: Christy Sprague

								AMAPO	POLPY	BETVU	CHEAL	AMAPO	POLPY
								control	control	injury	control	control	control
								percent	percent	percent	percent	percent	percent
								6/14/2011	6/14/2011	6/25/2011	6/25/2011	6/25/2011	6/25/2011
								7 DA-C	7 DA-C	5 DA-E	5 DA-E	5 DA-E	5 DA-E
								0	0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	99	99	0	99	99	99
1	AMS		WG	17	lb/100 gal	2-leaf	B						
1	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
1	AMS		WG	17	lb/100 gal	6-leaf	D						
2	Warrant	3	L	3	pt/a	PRE	A	99	77	3	99	99	98
2	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C						
2	AMS		WG	17	lb/100 gal	4-leaf	C						
2	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E						
2	AMS		WG	17	lb/100 gal	8-leaf	E						
3	Outlook	6	L	16	fl oz/a	PRE	A	99	99	8	99	99	99
3	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C						
3	AMS		WG	17	lb/100 gal	4-leaf	C						
3	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E						
3	AMS		WG	17	lb/100 gal	8-leaf	E						
4	Dual Magnum	7.62	L	1.33	pt/a	PRE	A	99	99	3	99	99	99
4	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C						
4	AMS		WG	17	lb/100 gal	4-leaf	C						
4	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E						
4	AMS		WG	17	lb/100 gal	8-leaf	E						
5	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	99	98	0	99	99	99
5	Warrant	3	L	3	pt/a	2-leaf	B						
5	AMS		WG	17	lb/100 gal	2-leaf	B						
5	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
5	AMS		WG	17	lb/100 gal	6-leaf	D						
6	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	99	99	1	99	99	99
6	Outlook	6	L	16	fl oz/a	2-leaf	B						
6	AMS		WG	17	lb/100 gal	2-leaf	B						
6	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
6	AMS		WG	17	lb/100 gal	6-leaf	D						
7	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	99	99	0	99	99	99
7	Dual Magnum	7.62	L	1.33	pt/a	2-leaf	B						
7	AMS		WG	17	lb/100 gal	2-leaf	B						
7	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
7	AMS		WG	17	lb/100 gal	6-leaf	D						
8	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	99	99	0	99	99	99
8	AMS		WG	17	lb/100 gal	2-leaf	B						
8	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
8	Warrant	3	L	3	pt/a	6-leaf	D						
8	AMS		WG	17	lb/100 gal	6-leaf	D						
9	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	99	99	0	99	99	99
9	AMS		WG	17	lb/100 gal	2-leaf	B						
9	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
9	Outlook	6	L	16	fl oz/a	6-leaf	D						
9	AMS		WG	17	lb/100 gal	6-leaf	D						
10	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	99	99	0	99	99	99
10	AMS		WG	17	lb/100 gal	2-leaf	B						
10	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
10	Dual Magnum	7.62	L	1.33	pt/a	6-leaf	D						
10	AMS		WG	17	lb/100 gal	6-leaf	D						

MSU Weed Science Research Program

Crop tolerance and weed control with Warrant in Roundup Ready sugarbeet

Trial ID: SB05-11 Study Dir.: Sprague, Powell  
Conducted: SVREC Investigator: Christy Sprague

								AMAPO	POLPY		CHEAL	AMAPO	POLPY	
								control	control	BETVU	control	control	control	
								percent	percent	injury	percent	percent	percent	
								6/14/2011	6/14/2011	6/25/2011	6/25/2011	6/25/2011	6/25/2011	
								7 DA-C	7 DA-C	5 DA-E	5 DA-E	5 DA-E	5 DA-E	
								0	0	0	0	0	0	
# Subsamples, Dec.														
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code							
11	Nortron	4	L	3	pt/a	PRE	A	99	99	9	99	99	98	
11	Betamix	1.3	L	2	pt/a	2-leaf	B							
11	UpBeet	50	WG	0.5	oz/a	2-leaf	B							
11	Stinger	3	L	4	fl oz/a	2-leaf	B							
11	Activator 90		L	0.25	% v/v	2-leaf	B							
11	Betamix	1.3	L	3	pt/a	4-leaf	C							
11	UpBeet	50	WG	0.5	oz/a	4-leaf	C							
11	Stinger	3	L	4	fl oz/a	4-leaf	C							
11	Activator 90		L	0.25	% v/v	4-leaf	C							
12	Untreated							0	0	0	0	0	0	
LSD (P=.05)								0.0	2.8	3.4	0.0	0.0	0.9	
Standard Deviation								0.0	1.9	2.4	0.0	0.0	0.6	
CV								0.0	2.18	122.87	0.0	0.0	0.69	

Means followed by same letter do not significantly differ (P=.05, LSD)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

MSU Weed Science Research Program

Crop tolerance and weed control with Warrant in Roundup Ready sugarbeet

Trial ID: SB05-11  
Conducted: SVREC

Study Dir.: Sprague, Powell  
Investigator: Christy Sprague

Weed Code								CHEAL	AMAPO	POLPY	BETVU	BETVU	
Crop Code								control	control	control	injury	count	
Rating Data Type								percent	percent	percent	percent	100' row	
Rating Unit								9/12/2011	9/12/2011	9/12/2011	9/12/2011	9/15/2011	
Rating Date								84 DA-E	84 DA-E	84 DA-E	84 DA-E	87 DA-E	
Trt-Eval Interval								0	0	0	0	0	
# Subsamples, Dec.								0	0	0	0	1	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	0	99	98	99	219	19.2
1	AMS		WG	17	lb/100 gal	2-leaf	B						
1	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
1	AMS		WG	17	lb/100 gal	6-leaf	D						
2	Warrant	3	L	3	pt/a	PRE	A	0	99	99	99	222	19.2
2	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C						
2	AMS		WG	17	lb/100 gal	4-leaf	C						
2	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E						
2	AMS		WG	17	lb/100 gal	8-leaf	E						
3	Outlook	6	L	16	fl oz/a	PRE	A	0	99	99	99	214	19.1
3	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C						
3	AMS		WG	17	lb/100 gal	4-leaf	C						
3	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E						
3	AMS		WG	17	lb/100 gal	8-leaf	E						
4	Dual Magnum	7.62	L	1.33	pt/a	PRE	A	0	99	99	99	233	19.0
4	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C						
4	AMS		WG	17	lb/100 gal	4-leaf	C						
4	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E						
4	AMS		WG	17	lb/100 gal	8-leaf	E						
5	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	0	99	99	99	224	18.7
5	Warrant	3	L	3	pt/a	2-leaf	B						
5	AMS		WG	17	lb/100 gal	2-leaf	B						
5	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
5	AMS		WG	17	lb/100 gal	6-leaf	D						
6	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	0	99	99	99	226	19.2
6	Outlook	6	L	16	fl oz/a	2-leaf	B						
6	AMS		WG	17	lb/100 gal	2-leaf	B						
6	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
6	AMS		WG	17	lb/100 gal	6-leaf	D						
7	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	0	97	99	99	227	18.8
7	Dual Magnum	7.62	L	1.33	pt/a	2-leaf	B						
7	AMS		WG	17	lb/100 gal	2-leaf	B						
7	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
7	AMS		WG	17	lb/100 gal	6-leaf	D						
8	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	0	99	99	99	230	19.0
8	AMS		WG	17	lb/100 gal	2-leaf	B						
8	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
8	Warrant	3	L	3	pt/a	6-leaf	D						
8	AMS		WG	17	lb/100 gal	6-leaf	D						
9	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	0	99	99	99	229	19.4
9	AMS		WG	17	lb/100 gal	2-leaf	B						
9	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
9	Outlook	6	L	16	fl oz/a	6-leaf	D						
9	AMS		WG	17	lb/100 gal	6-leaf	D						
10	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	0	99	99	99	223	19.5
10	AMS		WG	17	lb/100 gal	2-leaf	B						
10	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D						
10	Dual Magnum	7.62	L	1.33	pt/a	6-leaf	D						
10	AMS		WG	17	lb/100 gal	6-leaf	D						

MSU Weed Science Research Program

Crop tolerance and weed control with Warrant in Roundup Ready sugarbeet

Trial ID: SB05-11  
Conducted: SVREC

Study Dir.: Sprague, Powell  
Investigator: Christy Sprague

Weed Code		CHEAL		AMAPO		POLPY		BETVU		BETVU			
Crop Code	Rating Data Type	injury percent	control percent	control percent	control percent	count 100' row	% sugar	9/12/2011	9/12/2011	9/12/2011	9/15/2011		
Rating Unit	Rating Date	84 DA-E	84 DA-E	84 DA-E	84 DA-E	87 DA-E	87 DA-E	0	0	0	1		
Trt	Treatment	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					# Subsamples, Dec.	
11	Nortron	4	L	3	pt/a	PRE	A	0	96	99	99	223	18.3
11	Betamix	1.3	L	2	pt/a	2-leaf	B						
11	UpBeet	50	WG	0.5	oz/a	2-leaf	B						
11	Stinger	3	L	4	fl oz/a	2-leaf	B						
11	Activator 90		L	0.25	% v/v	2-leaf	B						
11	Betamix	1.3	L	3	pt/a	4-leaf	C						
11	UpBeet	50	WG	0.5	oz/a	4-leaf	C						
11	Stinger	3	L	4	fl oz/a	4-leaf	C						
11	Activator 90		L	0.25	% v/v	4-leaf	C						
12	Untreated							0	0	0	0	214	19.5
LSD (P=.05)								0.0	2.6	0.8	0.0	23.3	0.80
Standard Deviation								0.0	1.8	0.6	0.0	16.1	0.56
CV								0.0	1.96	0.64	0.0	7.21	2.91

Means followed by same letter do not significantly differ (P=.05, LSD)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

MSU Weed Science Research Program

Crop tolerance and weed control with Warrant in Roundup Ready sugarbeet

Trial ID: SB05-11  
Conducted: SVREC

Study Dir.: Sprague, Powell  
Investigator: Christy Sprague

Weed Code

Crop Code

Rating Data Type

Rating Unit

Rating Date

Trt-Eval Interval

# Subsamples, Dec.

BETVU	BETVU	BWTVU
yield	RWST	RWSA
ton/acre	# / ton	# / acre
9/15/2011	9/15/2011	9/15/2011
87 DA-E	87 DA-E	87 DA-E
1	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	21.6	280	6049
1	AMS		WG	17	lb/100 gal	2-leaf	B			
1	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D			
1	AMS		WG	17	lb/100 gal	6-leaf	D			
2	Warrant	3	L	3	pt/a	PRE	A	22.1	275	6108
2	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C			
2	AMS		WG	17	lb/100 gal	4-leaf	C			
2	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E			
2	AMS		WG	17	lb/100 gal	8-leaf	E			
3	Outlook	6	L	16	fl oz/a	PRE	A	19.6	272	5346
3	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C			
3	AMS		WG	17	lb/100 gal	4-leaf	C			
3	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E			
3	AMS		WG	17	lb/100 gal	8-leaf	E			
4	Dual Magnum	7.62	L	1.33	pt/a	PRE	A	20.7	274	5716
4	Roundup PowerMax	4.5	SL	22	fl oz/a	4-leaf	C			
4	AMS		WG	17	lb/100 gal	4-leaf	C			
4	Roundup PowerMax	4.5	SL	22	fl oz/a	8-leaf	E			
4	AMS		WG	17	lb/100 gal	8-leaf	E			
5	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	21.4	271	5780
5	Warrant	3	L	3	pt/a	2-leaf	B			
5	AMS		WG	17	lb/100 gal	2-leaf	B			
5	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D			
5	AMS		WG	17	lb/100 gal	6-leaf	D			
6	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	22.6	274	6209
6	Outlook	6	L	16	fl oz/a	2-leaf	B			
6	AMS		WG	17	lb/100 gal	2-leaf	B			
6	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D			
6	AMS		WG	17	lb/100 gal	6-leaf	D			
7	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	20.6	269	5530
7	Dual Magnum	7.62	L	1.33	pt/a	2-leaf	B			
7	AMS		WG	17	lb/100 gal	2-leaf	B			
7	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D			
7	AMS		WG	17	lb/100 gal	6-leaf	D			
8	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	21.7	274	5961
8	AMS		WG	17	lb/100 gal	2-leaf	B			
8	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D			
8	Warrant	3	L	3	pt/a	6-leaf	D			
8	AMS		WG	17	lb/100 gal	6-leaf	D			
9	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	22.2	281	6250
9	AMS		WG	17	lb/100 gal	2-leaf	B			
9	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D			
9	Outlook	6	L	16	fl oz/a	6-leaf	D			
9	AMS		WG	17	lb/100 gal	6-leaf	D			
10	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	B	20.9	282	5898
10	AMS		WG	17	lb/100 gal	2-leaf	B			
10	Roundup PowerMax	4.5	SL	22	fl oz/a	6-leaf	D			
10	Dual Magnum	7.62	L	1.33	pt/a	6-leaf	D			
10	AMS		WG	17	lb/100 gal	6-leaf	D			

MSU Weed Science Research Program

Crop tolerance and weed control with Warrant in Roundup Ready sugarbeet

Trial ID: SB05-11 Study Dir.: Sprague, Powell  
Conducted: SVREC Investigator: Christy Sprague

Weed Code

Crop Code	BETVU	BETVU	BWTVU
Rating Data Type	yield	RWST	RWSA
Rating Unit	ton/acre	# / ton	# / acre
Rating Date	9/15/2011	9/15/2011	9/15/2011
Trt-Eval Interval	87 DA-E	87 DA-E	87 DA-E
# Subsamples, Dec.	1	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code			
11	Nortron	4	L	3	pt/a	PRE	A	18.6	259	4864
11	Betamix	1.3	L	2	pt/a	2-leaf	B			
11	UpBeet	50	WG	0.5	oz/a	2-leaf	B			
11	Stinger	3	L	4	fl oz/a	2-leaf	B			
11	Activator 90		L	0.25	% v/v	2-leaf	B			
11	Betamix	1.3	L	3	pt/a	4-leaf	C			
11	UpBeet	50	WG	0.5	oz/a	4-leaf	C			
11	Stinger	3	L	4	fl oz/a	4-leaf	C			
11	Activator 90		L	0.25	% v/v	4-leaf	C			
12	Untreated							16.2	284	4592
LSD (P=.05)								3.04	12.9	911.5
Standard Deviation								2.10	8.9	631.3
CV								10.17	3.24	11.09

Means followed by same letter do not significantly differ (P=.05, LSD)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.