

MSU Weed Science Research Program

Time of weed removal in Roundup Ready sugarbeet

Trial ID: SB03-10 Study Dir.: Sprague, Powell
Conducted: SVREC Investigator: Christy Sprague

Date Planted: 3/31/2010 Row Spacing: 30 IN
Variety: Hilleshog 9042 No. of Reps: 4
Population: 4 1/4" spacing % OM: 3.0
Soil Type: Clay pH: 6.8
Plot Size: 10 X 30 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall moldboard plow and spring field cultivator (twice)
Fertilizer: 125 lb/A of nitrogen applied as urea prior to planting

Crop and Weed Description

Table with 4 columns: Weed, Code, Common Name, Scientific Name. Lists CHEAL, POLPY, AMASS and BETVU.

Application Description

Table with 7 columns (A-F) and rows for Application Timing, Date Treated, Time Treated, % Cloud Cover, Air Temp., % Relative Humidity, Wind Speed/Unit/Dir, Soil Temp., Soil/Leaf Surface M, Soil Moist.

Crop Stage at Each Application

Table with 6 columns (A-F) and rows for Crop Name, Height (In.), Stage (L).

Weed Stage at Each Application

Table with 6 columns (A-F) and rows for Weed 1 Name, Height (In.), Stage (L), Weed 2 Name, Height (In.), Stage (L), Weed 3 Name, Height (In.), Stage (L).

Weed Density (plants/sq. ft.)

Table with 7 columns (1-6) and rows for Date, Weed Name, Density.

Application Equipment

Table with 11 columns (Appl, Sprayer, Speed, Nozzle, Nozzle, Nozzle, Nozzle, Boom, GPA, Carrier, PSI) and rows A-F.

Comments: Sugarbeet seed treatment was Tach 45 and Beta Pancho 4M. Sugarbeet stunting (injury) was due to weed competition.

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Weed Code								CHEAL	POLPY	AMASS			CHEAL
Crop Code								BETVU			BETVU		
Rating Data Type								stunting	control	control	control	stunting	control
Rating Unit								percent	percent	percent	percent	percent	percent
Rating Date								6/8/2010	6/8/2010	6/8/2010	6/8/2010	6/14/2010	6/14/2010
Trt-Eval Interval								23 DA-A	23 DA-A	23 DA-A	23 DA-A	29 DA-A	29 DA-A
# Subsamples, Dec.								0	0	0	0	0	0
Trt	Treatment	Form	Form	Rate	Rate	Grow	Appl						
No.	Name	Conc	Type	Unit	Unit	Stg	Code						
1	Roundup PowerMax	4.5	L	22	fl oz/a	2" weeds	A	0	95	95	97	0	99
1	AMS		WG	17	lb/100 gal	2" weeds	A						
1	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
1	AMS		WG	17	lb/100 gal	+4" weed	F						
2	Roundup PowerMax	4.5	L	22	fl oz/a	A +4 d	B	0	94	92	97	0	99
2	AMS		WG	17	lb/100 gal	A +4 d	B						
2	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
2	AMS		WG	17	lb/100 gal	+4" weed	F						
3	Roundup PowerMax	4.5	L	22	fl oz/a	A +8 d	C	2	99	87	99	3	99
3	AMS		WG	17	lb/100 gal	A +8 d	C						
3	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
3	AMS		WG	17	lb/100 gal	+4" weed	F						
4	Roundup PowerMax	4.5	L	22	fl oz/a	A +12 d	D	11	69	68	99	5	93
4	AMS		WG	17	lb/100 gal	A +12 d	D						
4	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
4	AMS		WG	17	lb/100 gal	+4" weed	F						
5	Roundup PowerMax	4.5	L	22	fl oz/a	A +16 d	E	20	76	55	96	11	99
5	AMS		WG	17	lb/100 gal	A +16 d	E						
5	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
5	AMS		WG	17	lb/100 gal	+4" weed	F						
6	Roundup PowerMax	4.5	L	32	fl oz/a	2" weeds	A	0	96	95	93	0	99
6	AMS		WG	17	lb/100 gal	2" weeds	A						
6	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
6	AMS		WG	17	lb/100 gal	+4" weed	F						
7	Roundup PowerMax	4.5	L	32	fl oz/a	A +4 d	B	0	95	96	95	0	99
7	AMS		WG	17	lb/100 gal	A +4 d	B						
7	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
7	AMS		WG	17	lb/100 gal	+4" weed	F						
8	Roundup PowerMax	4.5	L	32	fl oz/a	A +8 d	C	3	99	99	99	0	99
8	AMS		WG	17	lb/100 gal	A +8 d	C						
8	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
8	AMS		WG	17	lb/100 gal	+4" weed	F						
9	Roundup PowerMax	4.5	L	32	fl oz/a	A +12 d	D	16	78	68	99	7	97
9	AMS		WG	17	lb/100 gal	A +12 d	D						
9	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
9	AMS		WG	17	lb/100 gal	+4" weed	F						
10	Roundup PowerMax	4.5	L	32	fl oz/a	A +16 d	E	21	76	60	98	11	99
10	AMS		WG	17	lb/100 gal	A +16 d	E						
10	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
10	AMS		WG	17	lb/100 gal	+4" weed	F						
11	Roundup PowerMax	4.5	L	22	fl oz/a	2" weeds	A	0	95	92	90	0	99
11	AMS		WG	17	lb/100 gal	2" weeds	A						
11	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
11	Dual Magnum	7.62	L	1.33	pt/a	+4" weed	F						
11	AMS		WG	17	lb/100 gal	+4" weed	F						
12	Untreated							0	0	0	0	0	0
LSD (P=.05)								4.1	6.0	6.7	5.4	3.0	1.1
Standard Deviation								2.9	4.2	4.6	3.8	2.1	0.7
CV								47.57	5.14	6.12	4.25	68.92	0.83

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Weed Code						POLPY	AMASS			CHEAL	POLPY	AMASS	
Crop Code								BETVU					
Rating Data Type						control	control	stunting	control	control	control		
Rating Unit						percent	percent	percent	percent	percent	percent	percent	
Rating Date						6/14/2010	6/14/2010	6/23/2010	6/23/2010	6/23/2010	6/23/2010	6/23/2010	
Trt-Eval Interval						29 DA-A	29 DA-A	38 DA-A	38 DA-A	38 DA-A	38 DA-A	38 DA-A	
# Subsamples, Dec.						0	0	0	0	0	0	0	
Trt	Treatment	Form	Form	Rate	Rate	Grow	Appl						
No.	Name	Conc	Type	Unit	Unit	Stg	Code						
1	Roundup PowerMax	4.5	L	22	fl oz/a	2" weeds	A	98	99	1	99	99	
1	AMS		WG	17	lb/100 gal	2" weeds	A						
1	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
1	AMS		WG	17	lb/100 gal	+4" weed	F						
2	Roundup PowerMax	4.5	L	22	fl oz/a	A +4 d	B	98	99	0	99	98	
2	AMS		WG	17	lb/100 gal	A +4 d	B						
2	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
2	AMS		WG	17	lb/100 gal	+4" weed	F						
3	Roundup PowerMax	4.5	L	22	fl oz/a	A +8 d	C	97	99	0	99	99	
3	AMS		WG	17	lb/100 gal	A +8 d	C						
3	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
3	AMS		WG	17	lb/100 gal	+4" weed	F						
4	Roundup PowerMax	4.5	L	22	fl oz/a	A +12 d	D	96	99	5	95	99	
4	AMS		WG	17	lb/100 gal	A +12 d	D						
4	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
4	AMS		WG	17	lb/100 gal	+4" weed	F						
5	Roundup PowerMax	4.5	L	22	fl oz/a	A +16 d	E	94	99	15	99	99	
5	AMS		WG	17	lb/100 gal	A +16 d	E						
5	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
5	AMS		WG	17	lb/100 gal	+4" weed	F						
6	Roundup PowerMax	4.5	L	32	fl oz/a	2" weeds	A	99	99	0	99	99	
6	AMS		WG	17	lb/100 gal	2" weeds	A						
6	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
6	AMS		WG	17	lb/100 gal	+4" weed	F						
7	Roundup PowerMax	4.5	L	32	fl oz/a	A +4 d	B	99	99	0	99	99	
7	AMS		WG	17	lb/100 gal	A +4 d	B						
7	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
7	AMS		WG	17	lb/100 gal	+4" weed	F						
8	Roundup PowerMax	4.5	L	32	fl oz/a	A +8 d	C	99	99	0	99	99	
8	AMS		WG	17	lb/100 gal	A +8 d	C						
8	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
8	AMS		WG	17	lb/100 gal	+4" weed	F						
9	Roundup PowerMax	4.5	L	32	fl oz/a	A +12 d	D	97	99	9	99	99	
9	AMS		WG	17	lb/100 gal	A +12 d	D						
9	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
9	AMS		WG	17	lb/100 gal	+4" weed	F						
10	Roundup PowerMax	4.5	L	32	fl oz/a	A +16 d	E	98	99	9	99	99	
10	AMS		WG	17	lb/100 gal	A +16 d	E						
10	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
10	AMS		WG	17	lb/100 gal	+4" weed	F						
11	Roundup PowerMax	4.5	L	22	fl oz/a	2" weeds	A	98	99	0	99	98	
11	AMS		WG	17	lb/100 gal	2" weeds	A						
11	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
11	Dual Magnum	7.62	L	1.33	pt/a	+4" weed	F						
11	AMS		WG	17	lb/100 gal	+4" weed	F						
12	Untreated							0	0	0	0	0	
LSD (P=.05)								1.9	0.0	4.4	1.6	1.4	0.0
Standard Deviation								1.3	0.0	3.1	1.1	1.0	0.0
CV								1.5	0.0	95.38	1.23	1.1	0.0

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Weed Code				CHEAL	POLPY	AMASS	BETVU	BETVU	BETVU				
Crop Code				control	control	control	count	% sugar	yield				
Rating Data Type				percent	percent	percent	100' row	percent	ton/acre				
Rating Unit				9/14/2010	9/14/2010	9/14/2010	9/14/2010	9/14/2010	9/14/2010				
Rating Date				121 DA-A	121 DA-A	121 DA-A	121 DA-A	121 DA-A	121 DA-A				
Trt-Eval Interval				0	0	0	0	1	1				
# Subsamples, Dec.				0	0	0	0	1	1				
Trt	Treatment	Form	Form	Rate	Grow	Appl							
No.	Name	Conc	Type	Unit	Stg	Code							
1	Roundup PowerMax	4.5	L	22	fl oz/a	2" weeds	A	99	99	99	192	18.6	24.5
1	AMS		WG	17	lb/100 gal	2" weeds	A						
1	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
1	AMS		WG	17	lb/100 gal	+4" weed	F						
2	Roundup PowerMax	4.5	L	22	fl oz/a	A +4 d	B	98	99	98	185	18.3	25.7
2	AMS		WG	17	lb/100 gal	A +4 d	B						
2	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
2	AMS		WG	17	lb/100 gal	+4" weed	F						
3	Roundup PowerMax	4.5	L	22	fl oz/a	A +8 d	C	99	99	99	195	18.2	24.6
3	AMS		WG	17	lb/100 gal	A +8 d	C						
3	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
3	AMS		WG	17	lb/100 gal	+4" weed	F						
4	Roundup PowerMax	4.5	L	22	fl oz/a	A +12 d	D	99	99	99	203	18.0	23.1
4	AMS		WG	17	lb/100 gal	A +12 d	D						
4	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
4	AMS		WG	17	lb/100 gal	+4" weed	F						
5	Roundup PowerMax	4.5	L	22	fl oz/a	A +16 d	E	99	99	98	200	18.6	22.4
5	AMS		WG	17	lb/100 gal	A +16 d	E						
5	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
5	AMS		WG	17	lb/100 gal	+4" weed	F						
6	Roundup PowerMax	4.5	L	32	fl oz/a	2" weeds	A	99	99	98	188	18.6	24.7
6	AMS		WG	17	lb/100 gal	2" weeds	A						
6	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
6	AMS		WG	17	lb/100 gal	+4" weed	F						
7	Roundup PowerMax	4.5	L	32	fl oz/a	A +4 d	B	99	99	98	202	18.4	24.9
7	AMS		WG	17	lb/100 gal	A +4 d	B						
7	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
7	AMS		WG	17	lb/100 gal	+4" weed	F						
8	Roundup PowerMax	4.5	L	32	fl oz/a	A +8 d	C	99	99	99	219	17.3	26.1
8	AMS		WG	17	lb/100 gal	A +8 d	C						
8	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
8	AMS		WG	17	lb/100 gal	+4" weed	F						
9	Roundup PowerMax	4.5	L	32	fl oz/a	A +12 d	D	99	98	99	206	18.1	23.0
9	AMS		WG	17	lb/100 gal	A +12 d	D						
9	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
9	AMS		WG	17	lb/100 gal	+4" weed	F						
10	Roundup PowerMax	4.5	L	32	fl oz/a	A +16 d	E	99	99	96	200	18.2	23.4
10	AMS		WG	17	lb/100 gal	A +16 d	E						
10	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
10	AMS		WG	17	lb/100 gal	+4" weed	F						
11	Roundup PowerMax	4.5	L	22	fl oz/a	2" weeds	A	99	99	98	185	18.5	24.1
11	AMS		WG	17	lb/100 gal	2" weeds	A						
11	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F						
11	Dual Magnum	7.62	L	1.33	pt/a	+4" weed	F						
11	AMS		WG	17	lb/100 gal	+4" weed	F						
12	Untreated							0	0	0	145	17.1	6.3
LSD (P=.05)								1.0	0.7	2.5	25.9	0.65	3.82
Standard Deviation								0.7	0.5	1.8	17.9	0.45	2.65
CV								0.79	0.52	1.96	9.27	2.47	11.65

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Weed Code

Crop Code

Rating Data Type

Rating Unit

Rating Date

Trt-Eval Interval

Subsamples, Dec.

BETVU	BETVU
RWST	RWSA
# / ton	# / acre
9/14/2010	9/14/2010
121 DA-A	121 DA-A
1	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
1	Roundup PowerMax	4.5	L	22	fl oz/a	2" weeds	A	272.3	6684
1	AMS		WG	17	lb/100 gal	2" weeds	A		
1	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
1	AMS		WG	17	lb/100 gal	+4" weed	F		
2	Roundup PowerMax	4.5	L	22	fl oz/a	A +4 d	B	271.0	6981
2	AMS		WG	17	lb/100 gal	A +4 d	B		
2	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
2	AMS		WG	17	lb/100 gal	+4" weed	F		
3	Roundup PowerMax	4.5	L	22	fl oz/a	A +8 d	C	266.4	6555
3	AMS		WG	17	lb/100 gal	A +8 d	C		
3	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
3	AMS		WG	17	lb/100 gal	+4" weed	F		
4	Roundup PowerMax	4.5	L	22	fl oz/a	A +12 d	D	262.2	6067
4	AMS		WG	17	lb/100 gal	A +12 d	D		
4	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
4	AMS		WG	17	lb/100 gal	+4" weed	F		
5	Roundup PowerMax	4.5	L	22	fl oz/a	A +16 d	E	274.5	6144
5	AMS		WG	17	lb/100 gal	A +16 d	E		
5	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
5	AMS		WG	17	lb/100 gal	+4" weed	F		
6	Roundup PowerMax	4.5	L	32	fl oz/a	2" weeds	A	274.1	6776
6	AMS		WG	17	lb/100 gal	2" weeds	A		
6	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
6	AMS		WG	17	lb/100 gal	+4" weed	F		
7	Roundup PowerMax	4.5	L	32	fl oz/a	A +4 d	B	266.9	6643
7	AMS		WG	17	lb/100 gal	A +4 d	B		
7	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
7	AMS		WG	17	lb/100 gal	+4" weed	F		
8	Roundup PowerMax	4.5	L	32	fl oz/a	A +8 d	C	255.3	6655
8	AMS		WG	17	lb/100 gal	A +8 d	C		
8	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
8	AMS		WG	17	lb/100 gal	+4" weed	F		
9	Roundup PowerMax	4.5	L	32	fl oz/a	A +12 d	D	268.7	6216
9	AMS		WG	17	lb/100 gal	A +12 d	D		
9	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
9	AMS		WG	17	lb/100 gal	+4" weed	F		
10	Roundup PowerMax	4.5	L	32	fl oz/a	A +16 d	E	266.9	6234
10	AMS		WG	17	lb/100 gal	A +16 d	E		
10	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
10	AMS		WG	17	lb/100 gal	+4" weed	F		
11	Roundup PowerMax	4.5	L	22	fl oz/a	2" weeds	A	270.6	6515
11	AMS		WG	17	lb/100 gal	2" weeds	A		
11	Roundup PowerMax	4.5	L	22	fl oz/a	+4" weed	F		
11	Dual Magnum	7.62	L	1.33	pt/a	+4" weed	F		
11	AMS		WG	17	lb/100 gal	+4" weed	F		
12	Untreated							249.8	1578
LSD (P=.05)								11.44	1073.8
Standard Deviation								7.92	743.7
CV								2.97	12.22