Impact of glyphosate-resistant horseweed treatments on sugarbeet yield

Trial ID: SB01-14 Study Dir.: Sprague and Powell Conducted: SVREC Investigator: Christy Sprague

 Date Planted:
 May/06/2014
 Row Spacing:
 30
 IN

 Variety:
 HM-173RR
 No. of Reps:
 4

 Population:
 49,000 seeds/A
 % OM:
 2.9

 Soil Type:
 Clay loam
 ph:
 7.9

Plot Size: 10 X 30 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall moldboard plow, spring field cultivate and soil finish.

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
2.	AMARE	PIGWEED, REDROOT	AMARANTHUS RETROFLEXUS L.
3.	POLCO	BUCKWHEAT, WILD	POLYGONUM CONVOLVULUS L.
Crop	Code	Common Name	
1.	BETVU	BEET, SUGAR	

Application Description

	A	В	С
Application Timing:	2-Leaf	6-Leaf	canopy
Date Treated:	May/27/2014	Jun/10/2014	Jul/11/2014
Time Treated:	1:15 PM	11:00 AM	12:45 PM
% Cloud Cover:	100	100	20
Air Temp., Unit:	80 F	72 F	78 F
% Relative Humidity:	65	46	53
Wind Speed/Unit/Dir:	4 mph SW	3 mph E	3 mph S
Soil Temp., Unit:	70 F	68 F	62 F
Soil/Leaf Surface M:	4 4	5 5	5 5
Soil Moist (1=w 5=d):	3	5	5

Crop Stage at Each Application

	A	В	C
Crop Name:	BETVU	BETVU	BETVU
Height (In.):	1-1.5"	5 "	19"
Stage (L):	2	6	10-12

Weed Stage at Each Application

	A	В	C
Weed 1 Name:	CHEAL	CHEAL	CHEAL
Height (In.):	0.5-1"	2-2.5"	2.5"
Stage (L):	4-6	8-Many	8
Weed 2 Name:	AMARE	AMARE	AMARE
Height (In.):	1"	1"	1.5"
Stage (L):	2	2-6	4
Weed 3 Name:	POLCO	POLCO	POLCO
Height (In.):	_	1-3"	-
Stage (L):	-	2-7	_

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	30
В	Cub	3.8	AirMix	11003	22"	20"	100"	19	Water	30
C	Cub	3.8	AirMix	11003	29"	20"	100"	19	Water	30

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Crop Rati Rati Rati Trt-l	ed Code o Code ng Data Type ng Unit ng Date Eval Interval ubsamples, Dec.							BETVU injury percent Jun/04/2014 8 DA-A 0	BETVU injury percent Jun/10/2014 14 DA-A 0	CHEAL control percent Jun/10/2014 14 DA-A 0	AMARE control percent Jun/10/2014 14 DA-A 0
Trt No.	Treatment Name		Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1 1 1	Roundup PowerMax AMS Roundup PowerMax AMS		SL WG SL WG	22 17 22 17	fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	0	0	88	99
2 2 2 2 2	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 2 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A A B	3	0	95	99
3 3 3 3	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 3 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A A B	3	4	95	99
4 4 4 4 4	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 4 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf	A A A B B	4	6	97	99
5 5 5 5 5	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 6 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A A B	6	2	90	99
6 6 6 6 6	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L	22 2 17 22 2 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf 6-leaf	A A A B B	3	1	91	99
7 7 7 7 7	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 3 17 22 3 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A A B B	2	3	93	99
8 8 8 8 8	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 2 17 22 4 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A A B B	2	4	94	99
9 9 9 9	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 4 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	0	0	85	99

Impact of glyphosate-resistant horseweed treatments on sugarbeet yield

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Crop Rati Rati Rati Trt-l	ed Code o Code ng Data Type ng Unit ng Date Eval Interval ubsamples, Dec.							BETVU injury percent Jun/04/2014 8 DA-A 0	BETVU injury percent Jun/10/2014 14 DA-A 0	CHEAL control percent Jun/10/2014 14 DA-A 0	AMARE control percent Jun/10/2014 14 DA-A 0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
10 10 10 10 10	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 6 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	0	0	90	99
11 11 11 11 11	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 8 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	0	0	91	99
12 12 12 12 12 12 12 12 12	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3 4.5 3	SL L WG SL L WG SL L	22 2 17 22 4 17 22 4 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf 6-leaf canopy canopy	С	6	0	97	99
13 13 13 13 13	Sequence AMS Abundit Extra Upbeet Destiny HC AMS	5.25 3 50	L WG SL WG L WG	2.5 17 32 1 1	pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	6-leaf 6-leaf 6-leaf	A A B B B	9	9	81	99
14 14 14 14 14 14 14	Abundit Extra Upbeet Destiny HC AMS Abundit Extra Upbeet Destiny HC AMS	3 50 3 50	SL WG L WG SL WG L	32 0.5 1 17 32 0.5 1	fl oz/a oz/a pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	2-leaf 2-leaf 2-leaf 2-leaf 6-leaf 6-leaf 6-leaf	A A A B B B B	1	8	97	99
15 15 15 15 15 15 15	Abundit Extra Upbeet Destiny HC AMS Abundit Extra Upbeet Destiny HC AMS	3 50 3 50	SL WG L WG SL WG L	32 1 1 17 32 1 1	fl oz/a oz/a pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	2-leaf 2-leaf 2-leaf 2-leaf 6-leaf 6-leaf 6-leaf	A A A B B B	2	7	91	99
16	Untreated							0	0	0	0
CV	(P=.05)							2.8 75.6	3.8 100.83	8.0 6.56	0.0 0.0

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	ed Code o Code							POLCO	BETVU	CHEAL	AMARE
Rati Rati Rati Trt-l	ng Data Type ng Unit ng Date Eval Interval ubsamples, Dec.							control percent Jun/10/2014 14 DA-A 0	injury percent Jun/20/2014 24 DA-A 0	control percent Jun/20/2014 24 DA-A 0	control percent Jun/20/2014 24 DA-A 0
Trt No.	Treatment Name		Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1 1 1	Roundup PowerMax AMS Roundup PowerMax AMS		SL WG SL WG	22 17 22 17	fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	98	0	98	99
2 2 2 2 2	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 2 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	99	0	99	99
3 3 3 3	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 3 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	98	0	97	99
4 4 4 4	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 4 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A A B B	98	0	99	99
5 5 5 5 5	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 6 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A A B B	98	0	93	99
6 6 6 6 6	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 2 17 22 2 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A A B B	94	0	93	99
7 7 7 7 7	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 3 17 22 3 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B B	94	0	97	99
8 8 8 8 8	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 2 17 22 4 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	98	0	98	99
9 9 9 9	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 4 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	95	0	91	99

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Crop Rati Rati Rati Trt-E	ed Code o Code ng Data Type ng Unit ng Date Eval Interval ubsamples, Dec.							POLCO control percent Jun/10/2014 14 DA-A 0	BETVU injury percent Jun/20/2014 24 DA-A 0	CHEAL control percent Jun/20/2014 24 DA-A 0	AMARE control percent Jun/20/2014 24 DA-A 0
Trt	Treatment Name		Form Type	Rate	Rate Unit	Grow Stg	Appl Code	•	<u> </u>	•	
10 10 10 10 10	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 6 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	2-leaf 2-leaf 6-leaf 6-leaf 6-leaf	A A B B	91	1	95	99
11 11 11 11	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 8 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	92	0	95	99
12 12 12 12 12 12 12 12 12	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3 4.5 3	SL L WG SL L WG SL L	22 2 17 22 4 17 22 4 17	fl oz/a fl oz/a llb/100 gal fl oz/a fl oz/a llb/100 gal fl oz/a fl oz/a llb/100 gal	canopy canopy	С	97	0	97	99
13 13 13 13 13 13	Sequence AMS Abundit Extra Upbeet Destiny HC AMS	5.25 3 50	L WG SL WG L	2.5 17 32 1 1	pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	2-leaf 2-leaf 6-leaf 6-leaf 6-leaf	A A B B B	95	7	80	99
14 14 14 14 14 14 14	Abundit Extra Upbeet Destiny HC AMS Abundit Extra Upbeet Destiny HC AMS	3 50 3 50	SL WG L WG SL WG L	32 0.5 1 17 32 0.5 1	fl oz/a oz/a pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	2-leaf 2-leaf 2-leaf 2-leaf 6-leaf 6-leaf 6-leaf	A A A B B B B	95	4	92	99
15 15 15 15 15 15 15	Abundit Extra Upbeet Destiny HC AMS Abundit Extra Upbeet Destiny HC AMS	3 50 3 50	SL WG L WG SL WG L	32 1 1 17 32 1 1	fl oz/a oz/a pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	6-leaf 6-leaf 6-leaf	A A A B B B B	96	5	94	99
16 LSD	Untreated (P=.05)							4.9	1.5	5.4	0.0
CV	()							3.79	100.48	4.26	0.0

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	ed Code			J	, ,	J		POLCO		CHEAL	AMARE
Rat Rat Rat Trt-	p Code ing Data Type ing Unit ing Date Eval Interval ubsamples, Dec.							control percent Jun/20/2014 24 DA-A 0	BETVU injury percent Jun/26/2014 30 DA-A 0	control percent Jun/26/2014 30 DA-A 0	control percent Jun/26/2014 30 DA-A 0
Trt	Treatment Name		Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1 1 1	Roundup PowerMax AMS Roundup PowerMax AMS		SL WG SL WG	22 17 22 17	fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	99	0	98	99
2 2 2 2 2	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 2 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	98	0	98	99
3 3 3 3	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 3 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf	A A A B B	98	0	98	99
4 4 4 4 4	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 4 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf	A A A B B	99	0	98	99
5 5 5 5 5	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 6 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf	A A A B B	99	0	94	99
6 6 6 6 6	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 2 17 22 2	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf 6-leaf	A A A B B	96	0	95	99
7 7 7 7 7	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 3 17 22 3 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf 6-leaf	A A A B B	99	0	99	99
8 8 8 8 8	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L	22 2 17 22 4 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf 6-leaf	A A A B B	99	0	99	99
9 9 9 9	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 4 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	99	0	89	99

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Weed Code Crop Code							POLCO	BETVU	CHEAL	AMARE
Rating Data Typ Rating Unit Rating Date Trt-Eval Interval # Subsamples, I							control percent Jun/20/2014 24 DA-A 0	injury percent Jun/26/2014 30 DA-A 0	control percent Jun/26/2014 30 DA-A 0	control percent Jun/26/2014 30 DA-A 0
Trt Treatment No. Name		orm For		Rate Unit	Grow Stg	Appl Code				
10 AMS	PowerMax 4.9 PowerMax 4.9 3	.5 SL	3 17 22 6	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	2-leaf 2-leaf 6-leaf 6-leaf 6-leaf	A A B B	98	0	95	99
11 AMS	PowerMax 4.9 PowerMax 4.9 3	W(.5 SL	G 17 22 8	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	97	1	95	99
12 Stinger 12 AMS 12 Roundup F 12 Stinger 12 AMS	PowerMax 4.9 3 PowerMax 4.9 3 PowerMax 4.9 3 3	L W(.5 SL L W(.5 SL	2 3 17 22 4 3 17 22 4	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf 6-leaf canopy canopy	С	99	0	99	99
13 Sequence13 AMS13 Abundit Ex13 Upbeet13 Destiny HO13 AMS	tra 3 50		32 3 1 1	pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	2-leaf 2-leaf 6-leaf 6-leaf 6-leaf	A A B B B	97	0	84	99
14 Abundit Ex 14 Upbeet 14 Destiny HC 14 AMS 14 Abundit Ex 14 Upbeet 14 Destiny HC 14 AMS	50 ; tra 3	0 WC L WC SL	G 0.5 1 G 17 32 G 0.5 1	fl oz/a oz/a pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	2-leaf 2-leaf 2-leaf 2-leaf 6-leaf 6-leaf 6-leaf	A A A A B B B B	98	0	93	99
15 Abundit Ex 15 Upbeet 15 Destiny HC 15 AMS 15 Abundit Ex 15 Upbeet 15 Destiny HC 15 AMS	50 tra 3	0 WC L WC SL	3 1 1 32 3 1 3 1	fl oz/a oz/a pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	2-leaf 2-leaf 2-leaf 2-leaf 6-leaf 6-leaf 6-leaf	A A A B B B B	98	0	90	99
16 Untreated							0	0	0	0
LSD (P=.05) CV							2.8 2.16	0.5 800.0	6.1 4.83	0.2 0.13

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	ed Code			J	, ,	J		POLCO		CHEAL	AMARE	POLCO
Rati Rati Rati Trt-l	o Code ng Data Type ng Unit ng Date Eval Interval ubsamples, Dec.							control percent Jun/26/2014 30 DA-A 0	BETVU injury percent Jul/24/2014 13 DA-C 0	control percent Jul/24/2014 13 DA-C 0	control percent Jul/24/2014 13 DA-C 0	control percent Jul/24/2014 13 DA-C 0
Trt No.	Treatment Name		Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1 1 1	Roundup PowerMax AMS Roundup PowerMax AMS		SL WG SL WG	22 17 22 17	fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	98	0	97	99	99
2 2 2 2 2	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 2 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	99	1	98	99	97
3 3 3 3	Roundup PowerMax Stinger AMS Roundup PowerMax	3	SL L WG SL	22 3 17 22	fl oz/a fl oz/a lb/100 gal fl oz/a	2-leaf 2-leaf 2-leaf 6-leaf	A A A B	99	1	98	99	98
3 4 4 4 4 4	AMS Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	WG SL L WG SL WG	17 22 4 17 22 17	Ib/100 gal fl oz/a fl oz/a Ib/100 gal fl oz/a Ib/100 gal	2-leaf 2-leaf 2-leaf 6-leaf	B A A B B	99	1	99	99	98
5 5 5 5 5	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 6 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	2-leaf 2-leaf	A A A B B	99	0	95	99	99
6 6 6 6 6	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L	22 2 17 22 2	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf 6-leaf	A A A B B	98	0	96	99	99
7 7 7 7 7	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L	22 3 17 22 3 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf 6-leaf	A A A B B	99	1	97	99	99
8 8 8 8	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 2 17 22 4 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	2-leaf 2-leaf 2-leaf 6-leaf 6-leaf	A A A B B	98	1	98	99	99
9 9 9 9	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 4 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	99	0	91	99	99

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	ed Code o Code							POLCO	BETVU	CHEAL	AMARE	POLCO
	ng Data Type ng Unit							control percent	injury percent	control percent	control percent	control percent
	ng Date Eval Interval							Jun/26/2014 30 DA-A	Jul/24/2014 13 DA-C	Jul/24/2014 13 DA-C	Jul/24/2014 13 DA-C	Jul/24/2014 13 DA-C
	ubsamples, Dec.							0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
10 10	Roundup PowerMax AMS	4.5	SL WG	22 17	fl oz/a lb/100 gal	2-leaf 2-leaf	A A	98	0	97	99	99
10	Roundup PowerMax		SL	22	fl oz/a	6-leaf	В					
10 10	Stinger AMS	3	L WG	6 17	fl oz/a lb/100 gal	6-leaf 6-leaf	B B					
11	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	Α	98	1	99	99	99
11 11	AMS Roundup PowerMax	4.5	WG SL	17 22	lb/100 gal fl oz/a	2-leaf 6-leaf	A B					
11 11	Stinger AMS	3	L WG	8 17	fl oz/a lb/100 gal	6-leaf 6-leaf	B B					
12	Roundup PowerMax	45	SL	22	fl oz/a	2-leaf	A	99	0	99	99	98
12	Stinger .	3	L	2	fl oz/a	2-leaf	Α	00	· ·	00	00	
12 12	AMS Roundup PowerMax		WG SL	17 22	lb/100 gal fl oz/a	2-leaf 6-leaf	A B					
12 12	Stinger AMS	3	L WG	4 17	fl oz/a lb/100 gal	6-leaf 6-leaf	B B					
12 12	Roundup PowerMax Stinger	4.5 3	SL L	22 4	fl oz/a fl oz/a	canopy canopy	C					
12	AMS	J	WG	17	lb/100 gal	canopy	Č					
13	Sequence	5.25	L	2.5	pt/a	2-leaf	A	97	0	80	99	96
13 13	AMS Abundit Extra	3	WG SL	17 32	lb/100 gal fl oz/a	2-leaf 6-leaf	A B					
13 13	Upbeet Destiny HC	50	WG L	1 1	oz/a pt/a	6-leaf 6-leaf	B B					
13	AMS		WG	17	lb/100 gal	6-leaf	В					
14 14	Abundit Extra Upbeet	3 50	SL WG	32 0.5	fl oz/a oz/a	2-leaf 2-leaf	A A	98	0	93	99	99
14	Destiny HC	30	L	1	pt/a	2-leaf	Α					
14 14	AMS Abundit Extra	3	WG SL	17 32	lb/100 gal fl oz/a	2-leaf 6-leaf	A B					
14 14	Upbeet Destiny HC	50	WG L	0.5 1	oz/a pt/a	6-leaf 6-leaf	B B					
14	AMS		WG	17	lb/100 gal		В					
15 15	Abundit Extra Upbeet	3 50	SL WG	32 1	fl oz/a oz/a	2-leaf 2-leaf	A	99	0	84	99	99
15	Destiny HC	30	L	1	pt/a	2-leaf	A A					
15 15	AMS Abundit Extra	3	WG SL	17 32	lb/100 gal fl oz/a	2-leaf 6-leaf	A B					
15 15	Upbeet Destiny HC	50	WG L	1 1	oz/a pt/a	6-leaf 6-leaf	B B					
15	AMS		WG	17	lb/100 gal		В					
16	Untreated							0	0	0	0	0
LSD) (P=.05)							2.1 1.61	1.9 329.1	5.5 4.36	0.0 0.0	2.2 1.65

Trial ID: SB01-14 Conducted: SVREC Study Dir.: Sprague and Powell Investigator: Christy Sprague

Crop Rati Rati Rati Trt-l	ed Code o Code ng Data Type ng Unit ng Date Eval Interval ubsamples, Dec.							BETVU stand count 100' row Sep/23/2014 74 DA-C 0	BETVU % sugar Sep/24/2014 75 DA-C 1	BETVU yield ton/acre Sep/24/2014 74 DA-C 1	BETVU RWST # / ton Sep/24/2014 75 DA-C 0
Trt No.	Treatment Name		Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1 1 1	Roundup PowerMax AMS Roundup PowerMax AMS		SL WG SL WG	22 17 22 17	fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	237	16.4	31.8	245
2 2 2 2 2	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 2 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A A B B	243	16.5	35.9	248
3 3 3 3	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 3 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A A B B	251	16.8	30.5	251
4 4 4 4	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 4 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A A B	248	16.8	31.7	253
5 5 5 5 5	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 6 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A A B	241	16.5	32.6	244
6 6 6 6 6	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 2 17 22 2 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	239	16.8	32.9	251
7 7 7 7 7	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 3 17 22 3 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A A B B	246	16.9	31.9	253
8 8 8 8 8	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 2 17 22 4 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B B	257	16.1	32.4	242
9 9 9 9	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 4 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	239	16.5	31.7	248

Impact of glyphosate-resistant horseweed treatments on sugarbeet yield

Trial ID: SB01-14 Study Dir.: Sprague and Powell Conducted: SVREC Investigator: Christy Sprague

Crop Rati Rati Rati Trt-E	ed Code D Code Ing Data Type Ing Unit Ing Date Eval Interval Lubsamples, Dec.							BETVU stand count 100' row Sep/23/2014 74 DA-C 0	BETVU % sugar Sep/24/2014 75 DA-C 1	BETVU yield ton/acre Sep/24/2014 74 DA-C 1	BETVU RWST # / ton Sep/24/2014 75 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
10 10 10 10 10	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 6 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	237	16.8	33.8	252
11 11 11 11	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 8 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	251	16.7	33.5	249
12 12 12 12 12 12 12 12 12	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3 4.5 3	SL L WG SL L WG SL L	22 2 17 22 4 17 22 4 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf 6-leaf canopy canopy	С	256	16.0	33.6	238
13 13 13 13 13 13	Sequence AMS Abundit Extra Upbeet Destiny HC AMS	5.25 3 50	L WG SL WG L WG	2.5 17 32 1 1	pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	2-leaf 2-leaf 6-leaf 6-leaf 6-leaf	A A B B B	239	16.8	31.4	252
14 14 14 14 14 14 14	Abundit Extra Upbeet Destiny HC AMS Abundit Extra Upbeet Destiny HC AMS	3 50 3 50	SL WG L WG SL WG L	32 0.5 1 17 32 0.5 1	fl oz/a oz/a pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	6-leaf 6-leaf 6-leaf	A A A B B B B	244	16.7	32.4	249
15 15 15 15 15 15 15	Abundit Extra Upbeet Destiny HC AMS Abundit Extra Upbeet Destiny HC AMS	3 50 3 50	SL WG L WG SL WG L	32 1 1 17 32 1 1	fl oz/a oz/a pt/a lb/100 gal fl oz/a oz/a pt/a lb/100 gal	6-leaf 6-leaf 6-leaf	A A A B B B B	249	17.1	33.8	257
16	Untreated							240	16.4	23.5	247
LSD CV	(P=.05)							31.0 8.86	0.89 3.76	4.39 9.58	15.1 4.25

Impact of glyphosate-resistant horseweed treatments on sugarbeet yield

Trial ID: SB01-14 Study Dir.: Sprague and Powell Conducted: SVREC Investigator: Christy Sprague

Weed Code Crop Code Rating Data Type Rating Unit Rating Date Trt-Eval Interval # Subsamples, Dec.

BETVU RWSA # / acre Sep/24/2014 75 DA-C

# Su	ıbsamples, Dec.						0	
Trt No.	Treatment Name		Form Type	Rate	Rate Unit	Grow Stg	Appl Code	
1 1 1	Roundup PowerMax AMS Roundup PowerMax AMS		SL WG SL WG	22 17 22 17	fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	7780
2 2 2 2 2	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 2 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	8885
3 3 3 3	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 3 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	7692
4 4 4 4	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 4 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	8024
5 5 5 5	Roundup PowerMax Stinger AMS Roundup PowerMax AMS	3	SL L WG SL WG	22 6 17 22 17	fl oz/a fl oz/a lb/100 gal fl oz/a lb/100 gal	6-leaf	A A B B	7933
6 6 6 6 6	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 2 17 22 2 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B B	8259
7 7 7 7 7	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 3 17 22 3 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	8095
8 8 8 8 8	Roundup PowerMax Stinger AMS Roundup PowerMax Stinger AMS	3	SL L WG SL L WG	22 2 17 22 4 17	fl oz/a fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	7852
9 9 9 9	Roundup PowerMax AMS Roundup PowerMax Stinger AMS		SL WG SL L WG	22 17 22 4 17	fl oz/a lb/100 gal fl oz/a fl oz/a lb/100 gal	6-leaf 6-leaf	A A B B	7837

Trial ID: SB01-14	Study Dir.: Sprague and Powell
Conducted: SVREC	Investigator: Christy Sprague

Weed Code	
Crop Code	BETVU
Rating Data Type	RWSA
Rating Unit	#/acre
Rating Date	Sep/24/2014
Trt-Eval Interval	75 DA-C
# Subsamples, Dec.	0

	ubsamples, Dec.							0
	Treatment	Form	Form		Rate	Grow	Appl	
No.	Name	Conc	Type	Rate	Unit	Stg	Code	
10	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	Α	8514
10 10	AMS Roundup PowerMax	15	WG SL	17 22	lb/100 gal fl oz/a	2-leaf 6-leaf	A B	
10	Stinger	3	L	6	fl oz/a	6-leaf	В	
10	AMS		WG	17	lb/100 gal	6-leaf	В	
11	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	Α	8350
11	AMS		WG	17	lb/100 gal		Α	
11 11	Roundup PowerMax Stinger	4.5 3	SL L	22 8	fl oz/a fl oz/a	6-leaf 6-leaf	B B	
11	AMS	3	WG	17	lb/100 gal		В	
12	Roundup PowerMax	4.5	SL	22	fl oz/a	2-leaf	Α	7982
12	Stinger	3	L	2	fl oz/a	2-leaf	A	7502
12	AMS	4.5	WG	17	lb/100 gal		A	
12 12	Roundup PowerMax Stinger	4.5 3	SL L	22 4	fl oz/a fl oz/a	6-leaf 6-leaf	B B	
12	AMŠ		WG	17	lb/100 gal	6-leaf	В	
12 12	Roundup PowerMax Stinger	4.5 3	SL L	22 4	fl oz/a fl oz/a	canopy canopy		
12	AMS	J	WG	17	lb/100 gal			
13	Coguence	5.25	L	2.5	pt/a	2 loof	۸	7908
13	Sequence AMS	5.25	WG	2.3 17	lb/100 gal	2-leaf 2-leaf	A A	7900
13	Abundit Extra	3	SL	32	fl oz/a	6-leaf	В	
13 13	Upbeet Destiny HC	50	WG L	1 1	oz/a pt/a	6-leaf 6-leaf	B B	
13	AMS		WG	17	lb/100 gal		В	
14	Abundit Extra	3	SL	32	fl oz/a	2-leaf	Α	8086
14	Upbeet	50	WG	0.5	oz/a	2-leaf	Α	
14 14	Destiny HC AMS		L WG	1 17	pt/a lb/100 gal	2-leaf 2-leaf	A A	
14	Abundit Extra	3	SL	32	fl oz/a	6-leaf	В	
14	Upbeet	50	WG	0.5	oz/a	6-leaf	В	
14 14	Destiny HC AMS		L WG	1 17	pt/a lb/100 gal	6-leaf 6-leaf	B B	
		•			Ü			0000
15 15	Abundit Extra Upbeet	3 50	SL WG	32 1	fl oz/a oz/a	2-leaf 2-leaf	A A	8666
15	Destiny HC		L	1	pt/a	2-leaf	Α	
15	AMS	2	WG	17	lb/100 gal	2-leaf	A	
15 15	Abundit Extra Upbeet	3 50	SL WG	32 1	fl oz/a oz/a	6-leaf 6-leaf	B B	
15	Destiny HC		L	1	pt/a	6-leaf	В	
15	AMS		WG	17	lb/100 gal	6-leaf	В	
16	Untreated							5843
	(P=.05)							1241.7
CV								10.89