

Glyphosate formulation comparison in Roundup Ready sugarbeet

Trial ID: SB03-19 Study Dir.: Sprague, Powell, Stiles
 Conducted: SVREC Investigator: Christy Sprague

Planting Date: Apr-24-2019 **Row Spacing:** 30 IN
Variety: Crystal G675 **No. of Reps:** 4
Population: 4.25 " spacing **% OM:** 2.5
Soil Type: CL clay loam **pH:** 7.1
Plot Size: 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall moldboard plowed; early spring field cultivated
Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	CHEAL	lambsquarters, common	Chenopodium album
2	POLPY	smartweed, Pennsylvania	Polygonum pensylvanicum
3	AMBEL	ragweed, common	Ambrosia artemisiifolia
4	SOLPT	nightshade, eastern black	Solanum ptychanthum
Crop	Code	Common Name	
1	BETVU	Sugarbeet	

Application Description

	A	B
Application Timing:	2 leaf	6-8 leaf
Date Treated:	May-24-2019	Jun-12-2019
Time Treated:	10:30 AM	7:15 PM
% Cloud Cover:	100	90
Air Temp., Unit:	58 F	73 F
% Relative Humidity:	80	45
Wind Speed/Unit/Dir:	3 mph NNE	7 mph S
Soil Temp, Unit:	61 F	69 F
Leaf Moist/Dew Presence (Y/N):	5	4
Soil Moist:	5	4

Crop Stage at Each Application

	A	B
Crop 1 Name:	BETVU	BETVU
Height:	1 "	6-8 " (7)
Stage:	2L	6-8L

Weed Stage at Each Application

	A	B
Weed 1 Name:	CHEAL	CHEAL
Height:	1.5 "	2-6 " (4)
Stage:	4-6L	10-20L
Weed 2 Name:	POLPY	POLPY
Height:	1.5 "	2-6 " (4)
Stage:	2L	12-16L
Weed 3 Name:	AMBEL	AMBEL
Height:		6 "
Stage:		8L
Weed 4 Name:	SOLPT	SOLPT
Height:		2 "
Stage:		4L

Weed Density

	1	2	3	4
Date:	Jun-12-2019	Jun-12-2019	Jun-12-2019	Jun-12-2019
Weed Name:	CHEAL	POLPY	AMBEL	SOLPT
Density:	5 FT2	1 FT2	1 FT2	1 FT2

Application Equipment

Appl	Sprayer Type	Ground Speed	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	Spray Volume	Carrier	Operation Pressure
A	CUB	3.8 mph	AIXR	11003	22 "	20 "	100 "	19 GAL/AC	WATER	30 psi
B	CUB	3.8 mph	AIXR	11003	22 "	20 "	100 "	19 GAL/AC	WATER	30 psi

Comments:

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Location: SVREC

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code						CHEAL	POLPY	AMBEL				
Crop Type, Code						BETVU			BETVU			
Rating Date						May-31-2019	May-31-2019	May-31-2019	May-31-2019			
Rating Type						injury	control	control	control			
Rating Unit						percent	percent	percent	percent			
Trt-Eval Interval						7 DA-A	7 DA-A	7 DA-A	7 DA-A			
Number of Decimals						0	0	0	0			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Timing	Appl Code					
1	Roundup PowerMax	4.5	SL	64	fl oz/a	2-leaf	A	0	93	100	93	0
2	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A	0	89	100	100	0
2	Roundup PowerMax	4.5	SL	32	fl oz/a	8-leaf	B					
3	Warrant	3	L	3	pt/a	2-leaf	A	1	87	100	85	0
3	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
4	Dual II Magnum	7.64	L	1.33	pt/a	2-leaf	A	2	97	95	100	0
4	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
5	MON 301107	4.79	SL	60	fl oz/a	2-leaf	A	1	91	95	95	0
6	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A	2	89	99	96	0
6	MON 301107	4.79	SL	30	fl oz/a	8-leaf	B					
7	Warrant	3	L	3	pt/a	2-leaf	A	2	74	99	87	0
7	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
8	Dual II Magnum	7.64	L	1.33	pt/a	2-leaf	A	2	89	96	91	0
8	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
9	Notron	4	L	12	fl oz/a	2-leaf	A	0	91	100	95	0
9	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
10	Fusilade	2	L	12	fl oz/a	2-leaf	A	0	81	99	92	0
10	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
11	Stinger	3	L	8	fl oz/a	2-leaf	A	0	80	88	91	0
11	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
12	UpBeet	50	WG	1	oz/a	2-leaf	A	0	83	93	100	0
12	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
13	Notron	4	L	12	fl oz/a	2-leaf	A	0	95	100	94	0
13	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
14	Fusilade	2	L	12	fl oz/a	2-leaf	A	3	91	100	91	4
14	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
15	Stinger	3	L	8	fl oz/a	2-leaf	A	4	89	95	93	5
15	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
16	UpBeet	50	WG	1	oz/a	2-leaf	A	4	89	93	98	8
16	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
17	Untreated 1							0	0	0	0	0
18	Untreated 2							0	0	0	0	0

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Location: SVREC

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code	CHEAL	POLPY	AMBEL	CHEAL
Crop Type, Code				BETVU
Rating Date	Jun-7-2019	Jun-7-2019	Jun-7-2019	Jun-19-2019
Rating Type	control	control	control	injury
Rating Unit	percent	percent	percent	percent
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	7 DA-B
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Timing	Appl Code						
1	Roundup PowerMax	4.5	SL	64	fl oz/a	2-leaf	A	100	100	100	0	98	
2	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A	100	100	100	0	100	
	2 Roundup PowerMax	4.5	SL	32	fl oz/a	8-leaf	B						
3	Warrant	3	L	3	pt/a	2-leaf	A	95	96	96	0	89	
	3 Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A						
4	Dual II Magnum	7.64	L	1.33	pt/a	2-leaf	A	100	100	100	0	100	
	4 Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A						
5	MON 301107	4.79	SL	60	fl oz/a	2-leaf	A	100	100	100	0	96	
6	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A	100	100	100	0	100	
	6 MON 301107	4.79	SL	30	fl oz/a	8-leaf	B						
7	Warrant	3	L	3	pt/a	2-leaf	A	93	100	100	0	85	
	7 MON 301107	4.79	SL	30	fl oz/a	2-leaf	A						
8	Dual II Magnum	7.64	L	1.33	pt/a	2-leaf	A	95	100	95	0	100	
	8 MON 301107	4.79	SL	30	fl oz/a	2-leaf	A						
9	Notron	4	L	12	fl oz/a	2-leaf	A	100	100	100	0	99	
	9 Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A						
10	Fusilade	2	L	12	fl oz/a	2-leaf	A	97	100	100	0	96	
	10 Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A						
11	Stinger	3	L	8	fl oz/a	2-leaf	A	100	100	100	0	96	
	11 Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A						
12	UpBeet	50	WG	1	oz/a	2-leaf	A	100	100	100	0	100	
	12 Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A						
13	Notron	4	L	12	fl oz/a	2-leaf	A	100	100	100	0	96	
	13 MON 301107	4.79	SL	30	fl oz/a	2-leaf	A						
14	Fusilade	2	L	12	fl oz/a	2-leaf	A	100	99	100	0	97	
	14 MON 301107	4.79	SL	30	fl oz/a	2-leaf	A						
15	Stinger	3	L	8	fl oz/a	2-leaf	A	100	100	100	0	99	
	15 MON 301107	4.79	SL	30	fl oz/a	2-leaf	A						
16	UpBeet	50	WG	1	oz/a	2-leaf	A	100	100	100	9	100	
	16 MON 301107	4.79	SL	30	fl oz/a	2-leaf	A						
17	Untreated 1							0	0	0	0	0	
18	Untreated 2							0	0	0	0	0	

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Pest Code	POLPY	AMBEL	SOLPT	BETVU	CHEAL
Crop Type, Code					
Rating Date	Jun-19-2019	Jun-19-2019	Jun-19-2019	Jun-26-2019	Jun-26-2019
Rating Type	control	control	control	injury	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	7 DA-B	7 DA-B	7 DA-B	14 DA-B	14 DA-B
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Timing	Appl Code	POLPY	AMBEL	SOLPT	BETVU	CHEAL
1	Roundup PowerMax	4.5	SL	64	fl oz/a	2-leaf	A	100	100	99	0	90
2	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A	100	100	100	0	100
	Roundup PowerMax	4.5	SL	32	fl oz/a	8-leaf	B					
3	Warrant	3	L	3	pt/a	2-leaf	A	100	100	100	0	87
	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
4	Dual II Magnum	7.64	L	1.33	pt/a	2-leaf	A	100	100	100	0	100
	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
5	MON 301107	4.79	SL	60	fl oz/a	2-leaf	A	100	100	98	0	96
6	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A	99	100	100	0	100
	MON 301107	4.79	SL	30	fl oz/a	8-leaf	B					
7	Warrant	3	L	3	pt/a	2-leaf	A	100	94	100	0	85
	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
8	Dual II Magnum	7.64	L	1.33	pt/a	2-leaf	A	100	100	100	0	99
	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
9	Notron	4	L	12	fl oz/a	2-leaf	A	100	98	100	0	90
	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
10	Fusilade	2	L	12	fl oz/a	2-leaf	A	100	100	100	0	94
	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
11	Stinger	3	L	8	fl oz/a	2-leaf	A	98	98	100	0	88
	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
12	UpBeet	50	WG	1	oz/a	2-leaf	A	100	100	100	0	96
	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A					
13	Notron	4	L	12	fl oz/a	2-leaf	A	100	100	100	0	94
	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
14	Fusilade	2	L	12	fl oz/a	2-leaf	A	100	98	98	0	95
	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
15	Stinger	3	L	8	fl oz/a	2-leaf	A	100	100	100	0	96
	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
16	UpBeet	50	WG	1	oz/a	2-leaf	A	100	100	100	13	99
	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A					
17	Untreated 1							0	0	0	0	0
18	Untreated 2							0	0	0	0	0

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Pest Code	POLPY	AMBEL	SOLPT
Crop Type, Code			
Rating Date	Jun-19-2019	Jun-19-2019	Jun-19-2019
Rating Type	control	control	control
Rating Unit	percent	percent	percent
Trt-Eval Interval	7 DA-B	7 DA-B	7 DA-B
Number of Decimals	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Timing	Appl Code			
1	Roundup PowerMax	4.5	SL	64	fl oz/a	2-leaf	A	100	94	95
2	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A	100	100	100
2	Roundup PowerMax	4.5	SL	32	fl oz/a	8-leaf	B			
3	Warrant	3	L	3	pt/a	2-leaf	A	100	94	100
3	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A			
4	Dual II Magnum	7.64	L	1.33	pt/a	2-leaf	A	100	100	100
4	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A			
5	MON 301107	4.79	SL	60	fl oz/a	2-leaf	A	98	99	94
6	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A	100	100	100
6	MON 301107	4.79	SL	30	fl oz/a	8-leaf	B			
7	Warrant	3	L	3	pt/a	2-leaf	A	100	94	100
7	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A			
8	Dual II Magnum	7.64	L	1.33	pt/a	2-leaf	A	99	98	98
8	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A			
9	Notron	4	L	12	fl oz/a	2-leaf	A	100	95	99
9	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A			
10	Fusilade	2	L	12	fl oz/a	2-leaf	A	100	98	94
10	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A			
11	Stinger	3	L	8	fl oz/a	2-leaf	A	98	99	93
11	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A			
12	UpBeet	50	WG	1	oz/a	2-leaf	A	100	100	97
12	Roundup PowerMax	4.5	SL	32	fl oz/a	2-leaf	A			
13	Notron	4	L	12	fl oz/a	2-leaf	A	100	95	98
13	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A			
14	Fusilade	2	L	12	fl oz/a	2-leaf	A	100	96	96
14	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A			
15	Stinger	3	L	8	fl oz/a	2-leaf	A	100	100	99
15	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A			
16	UpBeet	50	WG	1	oz/a	2-leaf	A	100	100	100
16	MON 301107	4.79	SL	30	fl oz/a	2-leaf	A			
17	Untreated 1							0	0	0
18	Untreated 2							0	0	0

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Pest Code	POLPY	AMBEL	SOLPT
Crop Type, Code			
Rating Date	Jun-19-2019	Jun-19-2019	Jun-19-2019
Rating Type	control	control	control
Rating Unit	percent	percent	percent
Trt-Eval Interval	7 DA-B	7 DA-B	7 DA-B
Number of Decimals	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Timing	Appl Code
19	Untreated 3			0			0
20	Untreated 4			0			0
	LSD P=.05			2.3			6.2
	Standard Deviation			1.7			4.4
	CV			2.07			5.61