

**Sugarbeet tolerance of Dual Magnum PRE followed by overlapping residuals**

Trial ID: SB01-21 Study Dir.: Sprague, Powell, Stiles  
 Conducted: SVREC Investigator: Christy Sprague

**Planting Date:** 4-6-21 **Row Spacing:** 30 IN  
**Variety:** Crystal G675RR **No. of Reps:** 4  
**Population:** 4.375 " spacing **% OM:** 2.6  
**Soil Type:** CL clay loam **pH:** 7.9  
**Plot Size:** 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

**Tillage/Previous Crops:** Fall chisel plow; Spring multi-purpose tillage tool followed by a soil finisher  
**Fertilizer:**

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1	CHEAL	common lambsquarters	Chenopodium album
Crop	Code	Common Name	
1	BETVU	Sugarbeet	

**Application Description**

	A	B	C
<b>Application Timing:</b>	PRE	2-leaf	6-8 leaf
<b>Date Treated:</b>	4-7-21	5-7-21	5-27-21
<b>Time Treated:</b>	5:30 PM	9:15 AM	10:00 AM
<b>% Cloud Cover:</b>	75	60	60
<b>Air Temp., Unit:</b>	78 F	39 F	52 F
<b>% Relative Humidity:</b>	39	20	60
<b>Wind Speed/Unit/Dir:</b>	5.5 MPH S	2 MPH SW	3 MPH E
<b>Soil Temp, Unit:</b>	60 F	45 F	64 F
<b>Leaf Moist/Dew Presence (Y/N):</b>	N	N	N
<b>Soil Moist:</b>	5	2	5

**Crop Stage at Each Application**

	A	B	C
<b>Crop 1 Name:</b>	BETVU	BETVU	BETVU
<b>Height:</b>	1-1 " (1)	4-6 " (4)	
<b>Stage:</b>	2L	6L-8L (6L)	

**Weed Stage at Each Application**

	A	B	C
<b>Weed 1 Name:</b>	CHEAL	CHEAL	CHEAL
<b>Height:</b>	0.5-0.5 " (0.5)	1-3 " (2)	
<b>Stage:</b>	2L-2L (2L)	8L-12L (10L)	

**Weed Density**

<b>Date:</b>	1 5-27-21
<b>Weed Name:</b>	CHEAL
<b>Density:</b>	4 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	20.0 "	20.0 "	120.0 "	19 GAL/AC	WATER	30 PSI
B	CUB	3.8 MPH	AIXR	11003	21.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI
C	CUB	3.8 MPH	AIXR	11003	27.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI

**Comments:**



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Location: SVREC

Investigator (Creator): Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code	C, BETVU	C, BETVU	C, BETVU	C, BETVU	CHEAL	CHEAL	CHEAL	CHEAL	CHEAL	C, BETVU	C, BETVU
Crop Type, Code	5-14-21	5-21-21	5-21-21	5-28-21	5-28-21	6-3-21	6-3-21	6-10-21	6-10-21	8-24-21	
Rating Date	injury	injury	stand count	injury	control	injury	control	injury	control	injury	
Rating Type	%	%	100' ROW	%	%	%	%	%	%	%	
Rating Unit											
Trt-Eval Interval	7 DA-B	14 DA-B	14 DA-B	21 DA-B	21 DA-B	7 DA-C	7 DA-C	14 DA-C	14 DA-C	89 DA-C	

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	0	11	180	2	73	7	83	0	94	0
10	Dual II Magnum	0.5 pt/a		A										
10	Warrant	3 pt/a		B										
10	Roundup PowerMax	32 fl oz/a		B										
10	AMS	17 lb/100 gal		B										
10	Dual II Magnum	1.33 pt/a		C										
10	Roundup PowerMax	22 fl oz/a		C										
10	AMS	17 lb/100 gal		C										
11	Dual II Magnum	0.5 pt/a		A	0	13	184	3	91	7	98	1	99	0
11	Outlook	16 fl oz/a		B										
11	Roundup PowerMax	32 fl oz/a		B										
11	AMS	17 lb/100 gal		B										
11	Dual II Magnum	1.33 pt/a		C										
11	Roundup PowerMax	22 fl oz/a		C										
11	AMS	17 lb/100 gal		C										
12	Untreated				0	0	177	0	0	0	0	0	0	0
13	Dual II Magnum	0.5 pt/a		A	0	13	168	1	56	3	57	3	64	0
13	Warrant	3 pt/a		B										
13	Roundup PowerMax	32 fl oz/a		B										
13	AMS	17 lb/100 gal		B										
13	Warrant	3 pt/a		C										
13	Roundup PowerMax	22 fl oz/a		C										
13	AMS	17 lb/100 gal		C										
14	Dual II Magnum	0.5 pt/a		A	0	14	167	5	80	5	93	1	96	0
14	Outlook	12 fl oz/a		B										
14	Roundup PowerMax	32 fl oz/a		B										
14	AMS	17 lb/100 gal		B										
14	Outlook	12 fl oz/a		C										
14	Roundup PowerMax	22 fl oz/a		C										
14	AMS	17 lb/100 gal		C										
15	Dual II Magnum	0.5 pt/a		A	0	10	194	2	68	10	80	4	82	0
15	Stinger	2 fl oz/a		B										
15	Roundup PowerMax	32 fl oz/a		B										
15	AMS	17 lb/100 gal		B										
15	Stinger	4 fl oz/a		C										
15	Roundup PowerMax	22 fl oz/a		C										
15	AMS	17 lb/100 gal		C										
16	Dual II Magnum	0.5 pt/a		A	0	11	189	2	61	8	78	9	85	0
16	Stinger	2 fl oz/a		B										
16	Warrant	3 pt/a		B										
16	Roundup PowerMax	32 fl oz/a		B										
16	AMS	17 lb/100 gal		B										
16	Stinger	4 fl oz/a		C										
16	Dual II Magnum	1.33 pt/a		C										
16	Roundup PowerMax	22 fl oz/a		C										
16	AMS	17 lb/100 gal		C										
LSD	P=.05				.	6.1	27.6	3.4	8.0	5.0	8.7	3.2	5.8	.
Standard Deviation					0.0	4.3	19.4	2.4	5.6	3.5	6.1	2.3	4.1	0.0
CV					0.0	40.46	10.67	123.22	7.94	67.9	7.88	126.69	4.95	0.0

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Study Director: Sprague, Powell, Stiles

Pest Code	CHEAL					
Crop Type, Code	C, BETVU	C, BETVU	C, BETVU	C, BETVU	C, BETVU	C, BETVU
Rating Date	8-24-21	9-1-21	9-1-21	9-1-21	9-1-21	9-1-21
Rating Type	control	stand count	sugar	RWST	yield	RWSA
Rating Unit	%	100' ROW	%	lb/ton	ton/A	# / acre
Trt-Eval Interval	89 DA-C	97 DA-C	97 DA-C	97 DA-C	97 DA-C	97 DA-C

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	89 DA-C	97 DA-C	97 DA-C	97 DA-C	97 DA-C	97 DA-C
1	Roundup PowerMax	32 fl oz/a		B	83	373	16	239	34.8	8307
1	AMS	17 lb/100 gal		B						
1	Roundup PowerMax	22 fl oz/a		C						
1	AMS	17 lb/100 gal		C						
2	Dual II Magnum	1.33 pt/a		B	90	346	16	238	31.4	7453
2	Roundup PowerMax	32 fl oz/a		B						
2	AMS	17 lb/100 gal		B						
2	Dual II Magnum	1.33 pt/a		C						
2	Roundup PowerMax	22 fl oz/a		C						
2	AMS	17 lb/100 gal		C						
3	Warrant	3 pt/a		B	57	359	16	239	28.7	6867
3	Roundup PowerMax	32 fl oz/a		B						
3	AMS	17 lb/100 gal		B						
3	Warrant	3 pt/a		C						
3	Roundup PowerMax	22 fl oz/a		C						
3	AMS	17 lb/100 gal		C						
4	Outlook	12 fl oz/a		B	96	371	16	239	36.0	8592
4	Roundup PowerMax	32 fl oz/a		B						
4	AMS	17 lb/100 gal		B						
4	Outlook	12 fl oz/a		C						
4	Roundup PowerMax	22 fl oz/a		C						
4	AMS	17 lb/100 gal		C						
5	Dual II Magnum	0.5 pt/a		A	84	365	16	225	36.6	8222
5	Dual II Magnum	1.33 pt/a		B						
5	Roundup PowerMax	32 fl oz/a		B						
5	AMS	17 lb/100 gal		B						
5	Roundup PowerMax	22 fl oz/a		C						
5	AMS	17 lb/100 gal		C						
6	Dual II Magnum	0.5 pt/a		A	77	352	17	244	31.8	7747
6	Sequence	2.5 pt/a		B						
6	AMS	17 lb/100 gal		B						
6	Roundup PowerMax	22 fl oz/a		C						
6	AMS	17 lb/100 gal		C						
7	Dual II Magnum	0.5 pt/a		A	79	337	17	246	34.3	8428
7	Warrant	3 pt/a		B						
7	Roundup PowerMax	32 fl oz/a		B						
7	AMS	17 lb/100 gal		B						
7	Roundup PowerMax	22 fl oz/a		C						
7	AMS	17 lb/100 gal		C						
8	Dual II Magnum	0.5 pt/a		A	86	337	16	239	36.9	8812
8	Outlook	16 fl oz/a		B						
8	Roundup PowerMax	32 fl oz/a		B						
8	AMS	17 lb/100 gal		B						
8	Roundup PowerMax	22 fl oz/a		C						
8	AMS	17 lb/100 gal		C						
9	Dual II Magnum	0.5 pt/a		A	99	330	16	228	34.8	7914
9	Dual II Magnum	1.33 pt/a		B						
9	Roundup PowerMax	32 fl oz/a		B						
9	AMS	17 lb/100 gal		B						
9	Dual II Magnum	1.33 pt/a		C						
9	Roundup PowerMax	22 fl oz/a		C						
9	AMS	17 lb/100 gal		C						

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Rating Date	8-24-21	9-1-21	9-1-21	9-1-21	9-1-21	9-1-21
Rating Type	control	stand count	sugar	RWST	yield	RWSA
Rating Unit	%	100' ROW	%	lb/ton	ton/A	# / acre
Trt-Eval Interval	89 DA-C	97 DA-C	97 DA-C	97 DA-C	97 DA-C	97 DA-C

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code						
10	Dual II Magnum	0.5 pt/a		A	93	328	16	241	32.5	7821
	10 Warrant	3 pt/a		B						
	10 Roundup PowerMax	32 fl oz/a		B						
	10 AMS	17 lb/100 gal		B						
	10 Dual II Magnum	1.33 pt/a		C						
	10 Roundup PowerMax	22 fl oz/a		C						
	10 AMS	17 lb/100 gal		C						
11	Dual II Magnum	0.5 pt/a		A	95	353	16	240	34.0	8147
	11 Outlook	16 fl oz/a		B						
	11 Roundup PowerMax	32 fl oz/a		B						
	11 AMS	17 lb/100 gal		B						
	11 Dual II Magnum	1.33 pt/a		C						
	11 Roundup PowerMax	22 fl oz/a		C						
	11 AMS	17 lb/100 gal		C						
12	Untreated				0	202	16	236	13.7	3269
13	Dual II Magnum	0.5 pt/a		A	47	348	16	232	24.4	5649
	13 Warrant	3 pt/a		B						
	13 Roundup PowerMax	32 fl oz/a		B						
	13 AMS	17 lb/100 gal		B						
	13 Warrant	3 pt/a		C						
	13 Roundup PowerMax	22 fl oz/a		C						
	13 AMS	17 lb/100 gal		C						
14	Dual II Magnum	0.5 pt/a		A	93	317	16	239	32.4	7745
	14 Outlook	12 fl oz/a		B						
	14 Roundup PowerMax	32 fl oz/a		B						
	14 AMS	17 lb/100 gal		B						
	14 Outlook	12 fl oz/a		C						
	14 Roundup PowerMax	22 fl oz/a		C						
	14 AMS	17 lb/100 gal		C						
15	Dual II Magnum	0.5 pt/a		A	87	364	16	240	33.9	8119
	15 Stinger	2 fl oz/a		B						
	15 Roundup PowerMax	32 fl oz/a		B						
	15 AMS	17 lb/100 gal		B						
	15 Stinger	4 fl oz/a		C						
	15 Roundup PowerMax	22 fl oz/a		C						
	15 AMS	17 lb/100 gal		C						
16	Dual II Magnum	0.5 pt/a		A	94	355	16	234	33.3	7751
	16 Stinger	2 fl oz/a		B						
	16 Warrant	3 pt/a		B						
	16 Roundup PowerMax	32 fl oz/a		B						
	16 AMS	17 lb/100 gal		B						
	16 Stinger	4 fl oz/a		C						
	16 Dual II Magnum	1.33 pt/a		C						
	16 Roundup PowerMax	22 fl oz/a		C						
	16 AMS	17 lb/100 gal		C						
LSD P=.05					9.2	76.1	0.9	15.4	5.92	1396.0
Standard Deviation					6.5	53.4	0.6	10.8	4.15	979.6
CV					8.25	15.71	3.88	4.55	13.03	12.97