

MSU Weed Science Research Program

Glyphosate-resistant Palmer amaranth control in RR and LL soybean

Trial ID: SOY23-13 Study Dir.: Powell, Sprague, Powell
 Conducted: St. Joseph Co. Investigator: Christy Sprague

Date Planted: May/17/2013 Row Spacing: 30 IN
 Variety: DF9251LL/AG2433 No. of Reps: 4
 Population: 150,000 seeds/A % OM: 2.4
 Soil Type: Sandy loam pH: 6.8
 Plot Size: 10 X 25 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel; spring soil finish
 Fertilizer: None

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	AMAPA	AMARANTH, PALMER	AMARANTHUS PALMERI S.WATS.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B	C	D	E
Application Timing:	PRE	EPOS	POST	LPOS	LPOS2
Date Treated:	May/17/2013	Jun/14/2013	Jun/28/2013	Jul/03/2013	Jul/15/2013
Time Treated:	1:30 PM	1:15 PM	11:00 AM	9:00 AM	10:00 AM
% Cloud Cover:	100	10	20	100	20
Air Temp., Unit:	81 F	74 F	74 F	70 F	84 F
% Relative Humidity:	32	50	67	84	69
Wind Speed/Unit/Dir:	4 mph E	3 mph NE	9 mph NW	2 mph SE	1 mph W
Soil Temp., Unit:	71 F	76 F	76 F	67 F	84 F
Soil/Leaf Surface M:	4 -	5 5	4 2	4 4	4 5
Soil Moist (1=w 5=d):	4	3	2	3	3

Crop Stage at Each Application

	A	B	C	D	E
Crop Name:	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Height (In.):	-	4-5"	14"	14-16"	26"
Stage (L):	-	V1	V5	V7	R2

Weed Stage at Each Application

	A	B	C	D	E
Weed 1 Name:	AMAPA	AMAPA	AMAPA	AMAPA	AMAPA
Height (In.):	-	2-3(3)"	1-10(6)"	3,24"	5"
Stage (L):	-	4-8(8)	4-50(28)	12,40	12

Weed Density (plants/sq. ft.)

	1
Date:	Jun/14/2013
Weed Name:	AMAPA
Density:	22

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom	GPA	Carrier	PSI
	Type	MPH	Type	Size	Height	Spacing	width			
A	Backpack	3.8	AIXR	11003	22"	20"	100"	19	water	30
B	Backpack	3.8	AIXR	11003	25"	20"	100"	19	water	30
C	Backpack	3.8	AIXR	11003	30"	20"	100"	19	water	30
D	Backpack	3.8	AIXR	11003	50"	20"	100"	19	water	30
E	Backpack	3.8	AIXR	11003	44"	20"	100"	19	water	30

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Glyphosate-resistant Palmer amaranth control in RR and LL soybean

Trial ID: SOY23-13 Study Dir.: Powell, Sprague, Powell
 Conducted: St. Joseph Co. Investigator: Christy Sprague

Weed Code	GLXMA	AMAPA	GLXMA	AMAPA
Crop Code	injury	control	injury	control
Rating Data Type	percent	percent	percent	percent
Rating Unit	Jun/06/2013	Jun/06/2013	Jun/13/2013	Jun/13/2013
Rating Date	20 DA-A	20 DA-A	27 DA-A	27 DA-A
Trt-Eval Interval	0	0	0	0
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	GLXMA injury percent	AMAPA control percent	GLXMA injury percent	AMAPA control percent
1	LibertyLink Seed							0	0	0	0
	Liberty	2.34	L	29	fl oz/a	EPOS	B				
	AMS		WG	8.5	lb/100 gal	EPOS	B				
	Liberty	2.34	L	29	fl oz/a	LPOS	D				
	AMS		WG	8.5	lb/100 gal	LPOS	D				
2	LibertyLink Seed							16	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Liberty	2.34	L	29	fl oz/a	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
	Liberty	2.34	L	29	fl oz/a	LPOS2	E				
	AMS		WG	8.5	lb/100 gal	LPOS2	E				
3	LibertyLink Seed							18	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Liberty	2.34	L	29	fl oz/a	POST	C				
	Warrant	3	L	3	pt/a	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
4	RR2 Yield Seed							0	0	0	0
	Roundup PowerMax	4.5	L	22	fl oz/a	EPOS	B				
	AMS		WG	17	lb/100 gal	EPOS	B				
	Roundup PowerMax	4.5	L	22	fl oz/a	LPOS	D				
	AMS		WG	17	lb/100 gal	LPOS	D				
5	RR2 Yield Seed							18	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Flexstar	1.88	L	1	pt/a	POST	C				
	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C				
	COC		L	1	% v/v	POST	C				
	AMS		WG	17	lb/100 gal	POST	C				
	Cobra	2	L	8	fl oz/a	LPOS2	E				
	COC		L	0.5	% v/v	LPOS2	E				
	AMS		WG	17	lb/100 gal	LPOS2	E				
6	LibertyLink Seed							21	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Liberty	2.34	L	29	fl oz/a	POST	C				
	Warrant	3	L	3	pt/a	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
	Liberty	2.34	L	29	fl oz/a	LPOS2	E				
	AMS		WG	8.5	lb/100 gal	LPOS2	E				
7	LibertyLink Seed							18	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Liberty	2.34	L	29	fl oz/a	POST	C				
	Dual II Magnum	7.64	L	1.33	pt/a	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
8	LibertyLink Seed							19	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Liberty	2.34	L	29	fl oz/a	POST	C				
	Dual II Magnum	7.64	L	1.33	pt/a	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
	Liberty	2.34	L	29	fl oz/a	LPOS2	E				
	AMS		WG	8.5	lb/100 gal	LPOS2	E				

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	# Subsamples, Dec.	GLXMA injury percent	AMAPA control percent	GLXMA injury percent	AMAPA control percent	
							Jun/06/2013	Jun/06/2013	Jun/13/2013	Jun/13/2013	
							20 DA-A	20 DA-A	27 DA-A	27 DA-A	
							0	0	0	0	
9	LibertyLink Seed	51	WG	2	oz/a	PRE	A	16	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Liberty	2.34	L	29	fl oz/a	POST	C				
	Dual II Magnum	7.64	L	1.33	pt/a	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
	Flexstar	2.34	L	1	pt/a	LPOS2	E				
	AMS		WG	8.5	lb/100 gal	LPOS2	E				
10	LibertyLink Seed	51	WG	2	oz/a	PRE	A	18	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Prefix	5.29	L	2	pt/a	POST	C				
	COC		L	1	% v/v	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
	Liberty	2.34	L	29	fl oz/a	LPOS2	E				
	AMS		WG	8.5	lb/100 gal	LPOS2	E				
11	LibertyLink Seed	45	WG	20	oz/a	PRE	A	13	99	2	98
	Authority MTZ	45	WG	20	oz/a	PRE	A				
	Liberty	2.34	L	29	fl oz/a	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
12	RR2 Yield Seed	51	WG	2	oz/a	PRE	A	15	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Flexstar	1.88	L	1	pt/a	POST	C				
	Warrant	3	L	3	pt/a	POST	C				
	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C				
	COC		L	1	% v/v	POST	C				
	AMS		WG	17	lb/100 gal	POST	C				
13	RR2 Yield Seed	51	WG	2	oz/a	PRE	A	18	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Flexstar	1.88	L	1	pt/a	POST	C				
	Dual II Magnum	7.64	L	1.33	pt/a	POST	C				
	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C				
	COC		L	1	% v/v	POST	C				
	AMS		WG	17	lb/100 gal	POST	C				
14	LibertyLink Seed	7	L	28	fl oz/a	PRE	A	8	99	3	99
	Authority Elite	7	L	28	fl oz/a	PRE	A				
	Liberty	2.34	L	29	fl oz/a	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
15	LibertyLink Seed	45	WG	20	oz/a	PRE	A	10	99	2	99
	Authority MTZ	45	WG	20	oz/a	PRE	A				
	Anthem	2.15	L	6	fl oz/a	POST	C				
	Liberty	2.34	L	29	fl oz/a	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
16	LibertyLink Seed	51	WG	2	oz/a	PRE	A	16	99	5	99
	Valor	51	WG	2	oz/a	PRE	A				
	Liberty	2.34	L	29	fl oz/a	POST	C				
	Flexstar	2.34	L	1	pt/a	POST	C				
	Warrant	3	L	3	pt/a	POST	C				
	AMS		WG	8.5	lb/100 gal	POST	C				
	Liberty	2.34	L	29	fl oz/a	LPOS2	E				
	AMS		WG	8.5	lb/100 gal	LPOS2	E				
LSD (P=.05)							5.0	0.0	1.3	0.7	
CV							25.37	0.0	23.63	0.58	

Means followed by same letter do not significantly differ (P=.05, LSD)

MSU Weed Science Research Program

Weed Code							AMAPA		AMAPA	
Crop Code							GLXMA		GLXMA	GLXMA
Rating Data Type							injury	control	injury	control
Rating Unit							percent	percent	percent	percent
Rating Date							Jun/21/2013	Jun/21/2013	Jun/28/2013	Jun/28/2013
Trt-Eval Interval							7 DA-B	7 DA-B	14 DA-B	14 DA-B
# Subsamples, Dec.							0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	LibertyLink Seed							0	97	0
	Liberty	2.34	L	29	fl oz/a	EPOS	B			90
	AMS		WG	8.5	lb/100 gal	EPOS	B			0
	Liberty	2.34	L	29	fl oz/a	LPOS	D			
	AMS		WG	8.5	lb/100 gal	LPOS	D			
2	LibertyLink Seed							6	99	0
	Valor	51	WG	2	oz/a	PRE	A			93
	Liberty	2.34	L	29	fl oz/a	POST	C			0
	AMS		WG	8.5	lb/100 gal	POST	C			
	Liberty	2.34	L	29	fl oz/a	LPOS2	E			
	AMS		WG	8.5	lb/100 gal	LPOS2	E			
3	LibertyLink Seed							6	98	0
	Valor	51	WG	2	oz/a	PRE	A			93
	Liberty	2.34	L	29	fl oz/a	POST	C			0
	Warrant	3	L	3	pt/a	POST	C			
	AMS		WG	8.5	lb/100 gal	POST	C			
4	RR2 Yield Seed							0	0	0
	Roundup PowerMax	4.5	L	22	fl oz/a	EPOS	B			0
	AMS		WG	17	lb/100 gal	EPOS	B			0
	Roundup PowerMax	4.5	L	22	fl oz/a	LPOS	D			
	AMS		WG	17	lb/100 gal	LPOS	D			
5	RR2 Yield Seed							5	99	0
	Valor	51	WG	2	oz/a	PRE	A			92
	Flexstar	1.88	L	1	pt/a	POST	C			6
	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C			
	COC		L	1	% v/v	POST	C			
	AMS		WG	17	lb/100 gal	POST	C			
	Cobra	2	L	8	fl oz/a	LPOS2	E			
	COC		L	0.5	% v/v	LPOS2	E			
	AMS		WG	17	lb/100 gal	LPOS2	E			
6	LibertyLink Seed							6	99	0
	Valor	51	WG	2	oz/a	PRE	A			96
	Liberty	2.34	L	29	fl oz/a	POST	C			0
	Warrant	3	L	3	pt/a	POST	C			
	AMS		WG	8.5	lb/100 gal	POST	C			
	Liberty	2.34	L	29	fl oz/a	LPOS2	E			
	AMS		WG	8.5	lb/100 gal	LPOS2	E			
7	LibertyLink Seed							6	99	0
	Valor	51	WG	2	oz/a	PRE	A			95
	Liberty	2.34	L	29	fl oz/a	POST	C			0
	Dual II Magnum	7.64	L	1.33	pt/a	POST	C			
	AMS		WG	8.5	lb/100 gal	POST	C			
8	LibertyLink Seed							5	99	0
	Valor	51	WG	2	oz/a	PRE	A			94
	Liberty	2.34	L	29	fl oz/a	POST	C			0
	Dual II Magnum	7.64	L	1.33	pt/a	POST	C			
	AMS		WG	8.5	lb/100 gal	POST	C			
	Liberty	2.34	L	29	fl oz/a	LPOS2	E			
	AMS		WG	8.5	lb/100 gal	LPOS2	E			

MSU Weed Science Research Program

Weed Code							AMAPA			AMAPA		
Crop Code							GLXMA			GLXMA		
Rating Data Type							injury	control		injury	control	
Rating Unit							percent	percent		percent	percent	
Rating Date							Jun/21/2013	Jun/21/2013		Jun/28/2013	Jun/28/2013	
Trt-Eval Interval							7 DA-B	7 DA-B		14 DA-B	14 DA-B	
# Subsamples, Dec.							0	0		0	0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
9	LibertyLink Seed	51	WG	2	oz/a	PRE	A	5	99	0	91	0
	Valor	2.34	L	29	fl oz/a	POST	C					
	Liberty	7.64	L	1.33	pt/a	POST	C					
	Dual II Magnum		WG	8.5	lb/100 gal	POST	C					
	AMS	2.34	L	1	pt/a	LPOS2	E					
	Flexstar		WG	8.5	lb/100 gal	LPOS2	E					
10	LibertyLink Seed	51	WG	2	oz/a	PRE	A	5	99	0	94	9
	Valor	5.29	L	2	pt/a	POST	C					
	Prefix		L	1	% v/v	POST	C					
	COC		WG	8.5	lb/100 gal	POST	C					
	AMS	2.34	L	29	fl oz/a	LPOS2	E					
	Liberty		WG	8.5	lb/100 gal	LPOS2	E					
11	LibertyLink Seed	45	WG	20	oz/a	PRE	A	4	97	0	92	0
	Authority MTZ	2.34	L	29	fl oz/a	POST	C					
	Liberty		WG	8.5	lb/100 gal	POST	C					
	AMS											
12	RR2 Yield Seed	51	WG	2	oz/a	PRE	A	6	99	0	92	9
	Valor	1.88	L	1	pt/a	POST	C					
	Flexstar	3	L	3	pt/a	POST	C					
	Warrant	4.5	L	22	fl oz/a	POST	C					
	Roundup PowerMax		L	1	% v/v	POST	C					
	COC		WG	17	lb/100 gal	POST	C					
	AMS											
13	RR2 Yield Seed	51	WG	2	oz/a	PRE	A	6	99	0	95	9
	Valor	1.88	L	1	pt/a	POST	C					
	Flexstar	7.64	L	1.33	pt/a	POST	C					
	Dual II Magnum	4.5	L	22	fl oz/a	POST	C					
	Roundup PowerMax		L	1	% v/v	POST	C					
	COC		WG	17	lb/100 gal	POST	C					
	AMS											
14	LibertyLink Seed	7	L	28	fl oz/a	PRE	A	3	98	0	96	0
	Authority Elite	2.34	L	29	fl oz/a	POST	C					
	Liberty		WG	8.5	lb/100 gal	POST	C					
	AMS											
15	LibertyLink Seed	45	WG	20	oz/a	PRE	A	3	99	0	97	7
	Authority MTZ	2.15	L	6	fl oz/a	POST	C					
	Anthem	2.34	L	29	fl oz/a	POST	C					
	Liberty		WG	8.5	lb/100 gal	POST	C					
	AMS											
16	LibertyLink Seed	51	WG	2	oz/a	PRE	A	5	99	0	93	8
	Valor	2.34	L	29	fl oz/a	POST	C					
	Liberty	2.34	L	1	pt/a	POST	C					
	Flexstar	3	L	3	pt/a	POST	C					
	Warrant		WG	8.5	lb/100 gal	POST	C					
	AMS	2.34	L	29	fl oz/a	LPOS2	E					
	Liberty		WG	8.5	lb/100 gal	LPOS2	E					
	AMS											
LSD (P=.05)								2.3	1.5	0.0	4.6	1.2
CV								36.96	1.15	0.0	3.68	29.63

Means followed by same letter do not significantly differ (P=.05, LSD)

MSU Weed Science Research Program

Weed Code	AMAPA	GLXMA	AMAPA	GLXMA	AMAPA
Crop Code	control	injury	control	injury	control
Rating Data Type	percent	percent	percent	percent	percent
Rating Unit	Jul/10/2013	Jul/15/2013	Jul/15/2013	Jul/24/2013	Jul/24/2013
Rating Date	12 DA-C	12 DA-D	12 DA-D	9 DA-E	9 DA-E
Trt-Eval Interval	0	0	0	0	0
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMAPA	GLXMA	AMAPA	GLXMA	AMAPA
1	LibertyLink Seed							99	0	98	0	93
	Liberty	2.34	L	29	fl oz/a	EPOS	B					
	AMS		WG	8.5	lb/100 gal	EPOS	B					
	Liberty	2.34	L	29	fl oz/a	LPOS	D					
	AMS		WG	8.5	lb/100 gal	LPOS	D					
2	LibertyLink Seed							98	0	93	0	99
	Valor	51	WG	2	oz/a	PRE	A					
	Liberty	2.34	L	29	fl oz/a	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
	Liberty	2.34	L	29	fl oz/a	LPOS2	E					
	AMS		WG	8.5	lb/100 gal	LPOS2	E					
3	LibertyLink Seed							99	0	99	2	99
	Valor	51	WG	2	oz/a	PRE	A					
	Liberty	2.34	L	29	fl oz/a	POST	C					
	Warrant	3	L	3	pt/a	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
4	RR2 Yield Seed							3	0	0	0	0
	Roundup PowerMax	4.5	L	22	fl oz/a	EPOS	B					
	AMS		WG	17	lb/100 gal	EPOS	B					
	Roundup PowerMax	4.5	L	22	fl oz/a	LPOS	D					
	AMS		WG	17	lb/100 gal	LPOS	D					
5	RR2 Yield Seed							99	0	99	23	99
	Valor	51	WG	2	oz/a	PRE	A					
	Flexstar	1.88	L	1	pt/a	POST	C					
	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C					
	COC		L	1	% v/v	POST	C					
	AMS		WG	17	lb/100 gal	POST	C					
	Cobra	2	L	8	fl oz/a	LPOS2	E					
	COC		L	0.5	% v/v	LPOS2	E					
	AMS		WG	17	lb/100 gal	LPOS2	E					
6	LibertyLink Seed							99	0	98	2	99
	Valor	51	WG	2	oz/a	PRE	A					
	Liberty	2.34	L	29	fl oz/a	POST	C					
	Warrant	3	L	3	pt/a	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
	Liberty	2.34	L	29	fl oz/a	LPOS2	E					
	AMS		WG	8.5	lb/100 gal	LPOS2	E					
7	LibertyLink Seed							99	0	98	1	99
	Valor	51	WG	2	oz/a	PRE	A					
	Liberty	2.34	L	29	fl oz/a	POST	C					
	Dual II Magnum	7.64	L	1.33	pt/a	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
8	LibertyLink Seed							99	0	99	2	99
	Valor	51	WG	2	oz/a	PRE	A					
	Liberty	2.34	L	29	fl oz/a	POST	C					
	Dual II Magnum	7.64	L	1.33	pt/a	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
	Liberty	2.34	L	29	fl oz/a	LPOS2	E					
	AMS		WG	8.5	lb/100 gal	LPOS2	E					

MSU Weed Science Research Program

Weed Code	AMAPA	GLXMA	AMAPA	GLXMA	AMAPA
Crop Code	control	injury	control	injury	control
Rating Data Type	percent	percent	percent	percent	percent
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jul/10/2013	Jul/15/2013	Jul/15/2013	Jul/24/2013	Jul/24/2013
Trt-Eval Interval	12 DA-C	12 DA-D	12 DA-D	9 DA-E	9 DA-E
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMAPA	GLXMA	AMAPA	GLXMA	AMAPA
9	LibertyLink Seed	51	WG	2	oz/a	PRE	A	99	0	98	12	99
	Valor	51	WG	2	oz/a	PRE	A					
	Liberty	2.34	L	29	fl oz/a	POST	C					
	Dual II Magnum	7.64	L	1.33	pt/a	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
	Flexstar	2.34	L	1	pt/a	LPOS2	E					
	AMS		WG	8.5	lb/100 gal	LPOS2	E					
10	LibertyLink Seed	51	WG	2	oz/a	PRE	A	99	0	98	0	99
	Valor	51	WG	2	oz/a	PRE	A					
	Prefix	5.29	L	2	pt/a	POST	C					
	COC		L	1	% v/v	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
	Liberty	2.34	L	29	fl oz/a	LPOS2	E					
	AMS		WG	8.5	lb/100 gal	LPOS2	E					
11	LibertyLink Seed	45	WG	20	oz/a	PRE	A	98	0	97	0	93
	Authority MTZ	45	WG	20	oz/a	PRE	A					
	Liberty	2.34	L	29	fl oz/a	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
12	RR2 Yield Seed	51	WG	2	oz/a	PRE	A	99	0	99	0	99
	Valor	51	WG	2	oz/a	PRE	A					
	Flexstar	1.88	L	1	pt/a	POST	C					
	Warrant	3	L	3	pt/a	POST	C					
	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C					
	COC		L	1	% v/v	POST	C					
	AMS		WG	17	lb/100 gal	POST	C					
13	RR2 Yield Seed	51	WG	2	oz/a	PRE	A	99	0	99	0	99
	Valor	51	WG	2	oz/a	PRE	A					
	Flexstar	1.88	L	1	pt/a	POST	C					
	Dual II Magnum	7.64	L	1.33	pt/a	POST	C					
	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C					
	COC		L	1	% v/v	POST	C					
	AMS		WG	17	lb/100 gal	POST	C					
14	LibertyLink Seed	7	L	28	fl oz/a	PRE	A	99	0	97	0	94
	Authority Elite	7	L	28	fl oz/a	PRE	A					
	Liberty	2.34	L	29	fl oz/a	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
15	LibertyLink Seed	45	WG	20	oz/a	PRE	A	99	0	99	0	99
	Authority MTZ	45	WG	20	oz/a	PRE	A					
	Anthem	2.15	L	6	fl oz/a	POST	C					
	Liberty	2.34	L	29	fl oz/a	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
16	LibertyLink Seed	51	WG	2	oz/a	PRE	A	99	0	99	0	99
	Valor	51	WG	2	oz/a	PRE	A					
	Liberty	2.34	L	29	fl oz/a	POST	C					
	Flexstar	2.34	L	1	pt/a	POST	C					
	Warrant	3	L	3	pt/a	POST	C					
	AMS		WG	8.5	lb/100 gal	POST	C					
	Liberty	2.34	L	29	fl oz/a	LPOS2	E					
	AMS		WG	8.5	lb/100 gal	LPOS2	E					

LSD (P=.05)	1.9	0.0	2.1	1.4	2.6
CV	1.43	0.0	1.58	37.7	1.97

Means followed by same letter do not significantly differ (P=.05, LSD)