

MSU Weed Science Research Program

Comparison of commercial herbicide programs in soybean

Trial ID: SOY06-15 Study Dir.: Sprague and Powell  
 Conducted: Campus C-14 Investigator: Christy Sprague

Date Planted: May/06/2015 Row Spacing: 30 IN  
 Variety: see comments No. of Reps: 4  
 Population: 150,000 seeds/A % OM: 2.6  
 Soil Type: Loam pH: 6.9  
 Plot Size: 10 X 30 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow; soil finish twice

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	mainly foxtail species	SETARIA SP.
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
4.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B	C	D
Application Timing:	PRE	EPOS	POST	LPOS
Date Treated:	May/07/2015	Jun/03/2015	Jun/19/2015	Jun/26/2015
Time Treated:	7:30 AM	11:00 AM	3:15 PM	11:15 AM
% Cloud Cover:	5	0	40	90
Air Temp., Unit:	59 F	75 F	70 F	73 F
% Relative Humidity:	88	46	54	60
Wind Speed/Unit/Dir:	2 mph E	2 mph S	5 mph N	4 mph E
Soil Temp., Unit:	55 F	62 F	72 F	64 F
Soil/Leaf Surface M:	4 -	5 5	3 5	4 5
Soil Moist (1=w 5=d):	4	4	2	3

Crop Stage at Each Application

	A	B	C	D
Crop Name:	GLXMA	GLXMA	GLXMA	GLXMA
Height (In.):	-	4"	10"	16"
Stage (L):	-	V1	V4	V5

Weed Stage at Each Application

	A	B	C	D
Weed 1 Name:	ANGR	ANGR	ANGR	ANGR
Height (In.):	-	1.5"	5"	3"
Stage (L):	-	2	4	4
Weed 2 Name:	CHEAL	CHEAL	CHEAL	CHEAL
Height (In.):	-	1.5"	-	1"
Stage (L):	-	4	-	6
Weed 3 Name:	AMBEL	AMBEL	AMBEL	AMBEL
Height (In.):	-	2"	5"	0.75"
Stage (L):	-	4	8	4
Weed 4 Name:	ABUTH	ABUTH	ABUTH	ABUTH
Height (In.):	-	1"	3"	0.75"
Stage (L):	-	2	3	2

Weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	Jun/09/2015	Jun/09/2015	Jun/09/2015	Jun/09/2015	Jun/09/2015
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Density:	280	4	1	111	3

Application Equipment

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	PSI
A	Cub	3.8	AIXR	11003	20"	20"	100"	19	Water	28
B	Cub	3.8	AIXR	11003	24"	20"	100"	19	Water	28
C	Cub	3.8	AIXR	11003	28"	20"	100"	19	Water	28
D	Cub	3.8	AIXR	11003	28"	20"	100"	19	Water	28

Comments: Treatments 1-7 MCIA2512LL  
 Treatments 8-36 P24T05RR

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	# Subsamples, Dec.	GLXMA injury percent Jun/03/2015 27 DA-A	GLXMA injury percent Jun/19/2015 0 DA-C	ANGR control percent Jun/19/2015 0 DA-C	CHEAL control percent Jun/19/2015 0 DA-C
1	LibertyLink soybean						0	0	59	99
1	Authority First	70	WG	6.4	oz/a	PRE A				
1	Liberty	2.34	L	29	fl oz/a	POST C				
1	AMS		WG	8.5	lb/100 gal	POST C				
2	LibertyLink soybean						6	0	58	99
2	Valor XLT	40.3	WG	3	oz/a	PRE A				
2	Liberty	2.34	L	29	fl oz/a	POST C				
2	AMS		WG	8.5	lb/100 gal	POST C				
3	LibertyLink soybean						0	0	48	99
3	Authority MTZ	45	WG	16	oz/a	PRE A				
3	Liberty	2.34	L	29	fl oz/a	POST C				
3	AMS		WG	8.5	lb/100 gal	POST C				
4	LibertyLink soybean						20	5	82	99
4	Fierce	76	WG	3	oz/a	PRE A				
4	Liberty	2.34	L	29	fl oz/a	POST C				
4	AMS		WG	8.5	lb/100 gal	POST C				
5	LibertyLink soybean						8	0	95	99
5	Boundary	6.5	L	1.5	pt/a	PRE A				
5	Liberty	2.34	L	29	fl oz/a	POST C				
5	Outlook	6	L	12	fl oz/a	POST C				
5	AMS		WG	8.5	lb/100 gal	POST C				
6	LibertyLink soybean						0	15	87	99
6	Liberty	2.34	L	29	fl oz/a	EPOS B				
6	Prefix	5.29	L	2	pt/a	EPOS B				
6	AMS		WG	8.5	lb/100 gal	EPOS B				
6	Liberty	2.34	L	29	fl oz/a	LPOS D				
6	AMS		WG	8.5	lb/100 gal	LPOS D				
7	LibertyLink soybean						0	0	0	0
7	Untreated									
8	Boundary	6.5	L	1.8	pt/a	PRE A	12	0	97	99
8	Touchdown Total	4.17	SL	32	fl oz/a	POST C				
8	AMS		WG	8.5	lb/100 gal	POST C				
9	Optill Pro - Optill	68	WG	2	oz/a	PRE A	7	5	89	99
9	Optill Pro - Outlook	6	L	10	fl oz/a	PRE A				
9	Roundup PowerMax	4.5	SL	32	fl oz/a	POST C				
9	AMS		WG	17	lb/100 gal	POST C				
10	Warrant Ultra	3.45	L	3	pt/a	PRE A	8	0	88	99
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST C				
10	AMS		WG	17	lb/100 gal	POST C				
11	Optill	68	WG	2	oz/a	PRE A	14	5	93	99
11	Zidua	85	WG	2	oz/a	PRE A				
11	Roundup PowerMax	4.5	SL	32	fl oz/a	POST C				
11	AMS		WG	17	lb/100 gal	POST C				
12	BroadAxe XC	7	L	25	fl oz/a	PRE A	10	0	97	99
12	Touchdown Total	4.17	SL	32	fl oz/a	POST C				
12	AMS		WG	8.5	lb/100 gal	POST C				

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	# Subsamples, Dec.	GLXMA injury percent Jun/03/2015 27 DA-A	GLXMA injury percent Jun/19/2015 0 DA-C	ANGR control percent Jun/19/2015 0 DA-C	CHEAL control percent Jun/19/2015 0 DA-C	
13	Fierce	76	WG	3	oz/a	PRE	A	29	11	85	99
13	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
13	AMS		WG	17	lb/100 gal	POST	C				
14	Rowel	51	WG	2	oz/a	PRE	A	24	5	25	99
14	Metribuzin	75	WG	4	oz/a	PRE	A				
14	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C				
14	AMS		WG	17	lb/100 gal	POST	C				
15	Fierce XLT	62.4	WG	4	oz/a	PRE	A	34	28	91	99
15	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
15	AMS		WG	17	lb/100 gal	POST	C				
16	Untreated							0	0	0	0
17	Sonic	70	WG	3	oz/a	PRE	A	1	0	55	99
17	Durango DMA	4	SL	32	fl oz/a	POST	C				
17	AMS LIQUID		L	2.5	% v/v	POST	C				
18	Sonic	70	WG	4.5	oz/a	PRE	A	2	0	60	99
18	Durango DMA	4	SL	32	fl oz/a	POST	C				
18	AMS LIQUID		L	2.5	% v/v	POST	C				
19	Sonic	70	WG	6	oz/a	PRE	A	5	1	80	99
19	Durango DMA	4	SL	32	fl oz/a	POST	C				
19	AMS LIQUID		L	2.5	% v/v	POST	C				
20	Canopy	75	WG	2.25	oz/a	PRE	A	4	5	70	99
20	Metribuzin	75	WG	3	oz/a	PRE	A				
20	Abundit Extra	3	SL	32	fl oz/a	POST	C				
20	AMS		WG	2	lb/a	POST	C				
21	Optill	68	WG	2	oz/a	PRE	A	4	0	70	99
21	Metribuzin	75	WG	6	oz/a	PRE	A				
21	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
21	AMS		WG	17	lb/100 gal	POST	C				
22	Verdict	5.57	L	5	fl oz/a	PRE	A	3	0	0	97
22	Metribuzin	75	WG	6	oz/a	PRE	A				
22	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
22	AMS		WG	17	lb/100 gal	POST	C				
23	Authority MAXX	66	WG	5	oz/a	PRE	A	4	4	79	99
23	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
23	AMS		WG	17	lb/100 gal	POST	C				
24	Trivence	61.3	WG	6	oz/a	PRE	A	23	24	77	99
24	Abundit Extra	3	SL	32	fl oz/a	POST	C				
24	AMS		WG	2	lb/a	POST	C				
25	Boundary	6.5	L	1.8	pt/a	PRE	A	13	4	98	99
25	Flexstar GT	2.82	L	3.5	pt/a	POST	C				
25	MSO		L	1	% v/v	POST	C				
25	AMS		WG	8.5	lb/100 gal	POST	C				
26	Fierce	76	WG	3	oz/a	PRE	A	28	13	83	99
26	Cobra	2	L	8	fl oz/a	POST	C				
26	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
26	AMS		WG	17	lb/100 gal	POST	C				

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Weed Code								GLXMA		ANGR	CHEAL
Crop Code								injury	injury	control	control
Rating Data Type								percent	percent	percent	percent
Rating Unit								Jun/03/2015	Jun/19/2015	Jun/19/2015	Jun/19/2015
Rating Date								27 DA-A	0 DA-C	0 DA-C	0 DA-C
Trt-Eval Interval								0	0	0	0
# Subsamples, Dec.											
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
27	BroadAxe XC	7	L	25	fl oz/a	PRE	A	9	0	99	99
27	Flexstar GT	2.82	L	3.5	pt/a	POST	C				
27	MSO		L	1	% v/v	POST	C				
27	AMS		WG	8.5	lb/100 gal	POST	C				
28	Valor	51	WG	2.5	oz/a	PRE	A	26	8	73	99
28	Cobra	2	L	8	fl oz/a	POST	C				
28	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
28	AMS		WG	17	lb/100 gal	POST	C				
29	Trivence	61.3	WG	6	oz/a	PRE	A	14	7	76	99
29	Cinch	7.64	L	1	pt/a	POST	C				
29	Abundit Extra	3	SL	32	fl oz/a	POST	C				
29	AMS		WG	2	lb/a	POST	C				
30	Rowel	51	WG	2	oz/a	PRE	A	19	1	55	99
30	Warrant	3	L	3	pt/a	POST	C				
30	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C				
30	AMS		WG	17	lb/100 gal	POST	C				
31	Rowel FX	40.3	WG	4	oz/a	PRE	A	24	26	75	99
31	Warrant	3	L	3	pt/a	POST	C				
31	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C				
31	AMS		WG	17	lb/100 gal	POST	C				
32	Tricor	75	WG	8	oz/a	PRE	A	1	0	69	99
32	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A				
32	Ultra Blazer	2	L	1.5	pt/a	POST	C				
32	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C				
32	Surfactant		L	0.25	% v/v	POST	C				
32	AMS		WG	8.5	lb/100 gal	POST	C				
33	Tricor	75	WG	8	oz/a	PRE	A	5	0	71	99
33	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A				
33	Storm	2	L	1.5	pt/a	POST	C				
33	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C				
33	Surfactant		L	0.25	% v/v	POST	C				
33	AMS		WG	8.5	lb/100 gal	POST	C				
34	Tricor	75	WG	8	oz/a	PRE	A	0	0	68	99
34	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A				
34	Cobra	2	L	8	fl oz/a	POST	C				
34	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C				
34	Surfactant		L	0.25	% v/v	POST	C				
34	AMS		WG	8.5	lb/100 gal	POST	C				
35	Tricor	75	WG	8	oz/a	PRE	A	3	1	68	99
35	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A				
35	Reflex	2	L	1	pt/a	POST	C				
35	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C				
35	Surfactant		L	0.25	% v/v	POST	C				
35	AMS		WG	8.5	lb/100 gal	POST	C				
36	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C	0	0	0	0
36	AMS		WG	17	lb/100 gal	POST	C				
LSD (P=.05)								5.4	3.0	7.2	0.5
CV								39.15	46.17	7.71	0.42

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								AMBEL	ABUTH	GLXMA	ANGR
								control	control	injury	control
								percent	percent	percent	percent
								Jun/19/2015	Jun/19/2015	Jun/26/2015	Jun/26/2015
								0 DA-C	0 DA-C	7 DA-C	7 DA-C
								0	0	0	0
Trt	Treatment	Form	Form	Rate	Grow	Appl					
No.	Name	Conc	Type	Unit	Stg	Code					
1	LibertyLink soybean						28	99	5	97	
1	Authority First	70	WG	6.4	oz/a	PRE A					
1	Liberty	2.34	L	29	fl oz/a	POST C					
1	AMS		WG	8.5	lb/100 gal	POST C					
2	LibertyLink soybean						73	99	4	93	
2	Valor XLT	40.3	WG	3	oz/a	PRE A					
2	Liberty	2.34	L	29	fl oz/a	POST C					
2	AMS		WG	8.5	lb/100 gal	POST C					
3	LibertyLink soybean						38	99	4	95	
3	Authority MTZ	45	WG	16	oz/a	PRE A					
3	Liberty	2.34	L	29	fl oz/a	POST C					
3	AMS		WG	8.5	lb/100 gal	POST C					
4	LibertyLink soybean						83	99	5	98	
4	Fierce	76	WG	3	oz/a	PRE A					
4	Liberty	2.34	L	29	fl oz/a	POST C					
4	AMS		WG	8.5	lb/100 gal	POST C					
5	LibertyLink soybean						0	99	5	99	
5	Boundary	6.5	L	1.5	pt/a	PRE A					
5	Liberty	2.34	L	29	fl oz/a	POST C					
5	Outlook	6	L	12	fl oz/a	POST C					
5	AMS		WG	8.5	lb/100 gal	POST C					
6	LibertyLink soybean						98	98	7	84	
6	Liberty	2.34	L	29	fl oz/a	EPOS B					
6	Prefix	5.29	L	2	pt/a	EPOS B					
6	AMS		WG	8.5	lb/100 gal	EPOS B					
6	Liberty	2.34	L	29	fl oz/a	LPOS D					
6	AMS		WG	8.5	lb/100 gal	LPOS D					
7	LibertyLink soybean						0	0	0	0	
7	Untreated										
8	Boundary	6.5	L	1.8	pt/a	PRE A	60	95	3	99	
8	Touchdown Total	4.17	SL	32	fl oz/a	POST C					
8	AMS		WG	8.5	lb/100 gal	POST C					
9	Optill Pro - Optill	68	WG	2	oz/a	PRE A	65	99	5	99	
9	Optill Pro - Outlook	6	L	10	fl oz/a	PRE A					
9	Roundup PowerMax	4.5	SL	32	fl oz/a	POST C					
9	AMS		WG	17	lb/100 gal	POST C					
10	Warrant Ultra	3.45	L	3	pt/a	PRE A	95	0	3	97	
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST C					
10	AMS		WG	17	lb/100 gal	POST C					
11	Optill	68	WG	2	oz/a	PRE A	79	99	5	99	
11	Zidua	85	WG	2	oz/a	PRE A					
11	Roundup PowerMax	4.5	SL	32	fl oz/a	POST C					
11	AMS		WG	17	lb/100 gal	POST C					
12	BroadAxe XC	7	L	25	fl oz/a	PRE A	0	99	4	99	
12	Touchdown Total	4.17	SL	32	fl oz/a	POST C					
12	AMS		WG	8.5	lb/100 gal	POST C					

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Crop Code											
Rating Data Type								control	control	injury	control
Rating Unit								percent	percent	percent	percent
Rating Date								Jun/19/2015	Jun/19/2015	Jun/26/2015	Jun/26/2015
Trt-Eval Interval								0 DA-C	0 DA-C	7 DA-C	7 DA-C
# Subsamples, Dec.								0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
13	Fierce	76	WG	3	oz/a	PRE	A	85	99	9	99
13	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
13	AMS		WG	17	lb/100 gal	POST	C				
14	Rowel	51	WG	2	oz/a	PRE	A	82	99	6	97
14	Metribuzin	75	WG	4	oz/a	PRE	A				
14	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C				
14	AMS		WG	17	lb/100 gal	POST	C				
15	Fierce XLT	62.4	WG	4	oz/a	PRE	A	88	99	14	99
15	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
15	AMS		WG	17	lb/100 gal	POST	C				
16	Untreated							0	0	0	0
17	Sonic	70	WG	3	oz/a	PRE	A	0	99	4	94
17	Durango DMA	4	SL	32	fl oz/a	POST	C				
17	AMS LIQUID		L	2.5	% v/v	POST	C				
18	Sonic	70	WG	4.5	oz/a	PRE	A	18	99	3	97
18	Durango DMA	4	SL	32	fl oz/a	POST	C				
18	AMS LIQUID		L	2.5	% v/v	POST	C				
19	Sonic	70	WG	6	oz/a	PRE	A	47	99	3	99
19	Durango DMA	4	SL	32	fl oz/a	POST	C				
19	AMS LIQUID		L	2.5	% v/v	POST	C				
20	Canopy	75	WG	2.25	oz/a	PRE	A	0	99	8	96
20	Metribuzin	75	WG	3	oz/a	PRE	A				
20	Abundit Extra	3	SL	32	fl oz/a	POST	C				
20	AMS		WG	2	lb/a	POST	C				
21	Optill	68	WG	2	oz/a	PRE	A	63	99	2	98
21	Metribuzin	75	WG	6	oz/a	PRE	A				
21	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
21	AMS		WG	17	lb/100 gal	POST	C				
22	Verdict	5.57	L	5	fl oz/a	PRE	A	61	99	3	96
22	Metribuzin	75	WG	6	oz/a	PRE	A				
22	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
22	AMS		WG	17	lb/100 gal	POST	C				
23	Authority MAXX	66	WG	5	oz/a	PRE	A	0	99	5	97
23	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
23	AMS		WG	17	lb/100 gal	POST	C				
24	Trivence	61.3	WG	6	oz/a	PRE	A	75	99	15	98
24	Abundit Extra	3	SL	32	fl oz/a	POST	C				
24	AMS		WG	2	lb/a	POST	C				
25	Boundary	6.5	L	1.8	pt/a	PRE	A	63	95	21	99
25	Flexstar GT	2.82	L	3.5	pt/a	POST	C				
25	MSO		L	1	% v/v	POST	C				
25	AMS		WG	8.5	lb/100 gal	POST	C				
26	Fierce	76	WG	3	oz/a	PRE	A	79	99	25	99
26	Cobra	2	L	8	fl oz/a	POST	C				
26	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C				
26	AMS		WG	17	lb/100 gal	POST	C				

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								AMBEL	ABUTH	GLXMA	ANGR
								control	control	injury	control
								percent	percent	percent	percent
								Jun/19/2015	Jun/19/2015	Jun/26/2015	Jun/26/2015
								0 DA-C	0 DA-C	7 DA-C	7 DA-C
								0	0	0	0
Trt	Treatment	Form	Form	Rate	Grow	Appl					
No.	Name	Conc	Type	Unit	Stg	Code					
27	BroadAxe XC	7	L	25 fl oz/a	PRE	A	0	99	25	99	
27	Flexstar GT	2.82	L	3.5 pt/a	POST	C					
27	MSO		L	1 % v/v	POST	C					
27	AMS		WG	8.5 lb/100 gal	POST	C					
28	Valor	51	WG	2.5 oz/a	PRE	A	81	99	24	97	
28	Cobra	2	L	8 fl oz/a	POST	C					
28	Roundup PowerMax	4.5	SL	32 fl oz/a	POST	C					
28	AMS		WG	17 lb/100 gal	POST	C					
29	Trivence	61.3	WG	6 oz/a	PRE	A	76	99	9	98	
29	Cinch	7.64	L	1 pt/a	POST	C					
29	Abundit Extra	3	SL	32 fl oz/a	POST	C					
29	AMS		WG	2 lb/a	POST	C					
30	Rowel	51	WG	2 oz/a	PRE	A	70	97	5	96	
30	Warrant	3	L	3 pt/a	POST	C					
30	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	C					
30	AMS		WG	17 lb/100 gal	POST	C					
31	Rowel FX	40.3	WG	4 oz/a	PRE	A	78	99	15	99	
31	Warrant	3	L	3 pt/a	POST	C					
31	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	C					
31	AMS		WG	17 lb/100 gal	POST	C					
32	Tricor	75	WG	8 oz/a	PRE	A	65	97	24	98	
32	Satellite Hydrocap	3.8	L	2 pt/a	PRE	A					
32	Ultra Blazer	2	L	1.5 pt/a	POST	C					
32	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	C					
32	Surfactant		L	0.25 % v/v	POST	C					
32	AMS		WG	8.5 lb/100 gal	POST	C					
33	Tricor	75	WG	8 oz/a	PRE	A	68	97	21	98	
33	Satellite Hydrocap	3.8	L	2 pt/a	PRE	A					
33	Storm	2	L	1.5 pt/a	POST	C					
33	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	C					
33	Surfactant		L	0.25 % v/v	POST	C					
33	AMS		WG	8.5 lb/100 gal	POST	C					
34	Tricor	75	WG	8 oz/a	PRE	A	63	99	26	98	
34	Satellite Hydrocap	3.8	L	2 pt/a	PRE	A					
34	Cobra	2	L	8 fl oz/a	POST	C					
34	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	C					
34	Surfactant		L	0.25 % v/v	POST	C					
34	AMS		WG	8.5 lb/100 gal	POST	C					
35	Tricor	75	WG	8 oz/a	PRE	A	66	97	18	98	
35	Satellite Hydrocap	3.8	L	2 pt/a	PRE	A					
35	Reflex	2	L	1 pt/a	POST	C					
35	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	C					
35	Surfactant		L	0.25 % v/v	POST	C					
35	AMS		WG	8.5 lb/100 gal	POST	C					
36	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	C	0	0	6	84	
36	AMS		WG	17 lb/100 gal	POST	C					
LSD (P=.05)								6.2	2.7	4.4	2.8
CV								8.71	2.23	33.67	2.22

## MSU Weed Science Research Program

## Comparison of commercial herbicide programs in soybean

Trial ID: SOY06-15 Study Dir.: Sprague and Powell  
 Conducted: Campus C-14 Investigator: Christy Sprague

Weed Code	CHEAL	AMBEL	ABUTH	GLXMA	ANGR
Crop Code					
Rating Data Type	control	control	control	injury	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/26/2015	Jun/26/2015	Jun/26/2015	Jul/02/2015	Jul/02/2015
Trt-Eval Interval	7 DA-C	7 DA-C	7 DA-C	13 DA-C	13 DA-C
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	CHEAL	AMBEL	ABUTH	GLXMA	ANGR
1	LibertyLink soybean							99	96	99	0	91
1	Authority First	70	WG	6.4	oz/a	PRE	A					
1	Liberty	2.34	L	29	fl oz/a	POST	C					
1	AMS		WG	8.5	lb/100 gal	POST	C					
2	LibertyLink soybean							99	97	99	2	93
2	Valor XLT	40.3	WG	3	oz/a	PRE	A					
2	Liberty	2.34	L	29	fl oz/a	POST	C					
2	AMS		WG	8.5	lb/100 gal	POST	C					
3	LibertyLink soybean							99	97	99	1	91
3	Authority MTZ	45	WG	16	oz/a	PRE	A					
3	Liberty	2.34	L	29	fl oz/a	POST	C					
3	AMS		WG	8.5	lb/100 gal	POST	C					
4	LibertyLink soybean							99	99	99	5	97
4	Fierce	76	WG	3	oz/a	PRE	A					
4	Liberty	2.34	L	29	fl oz/a	POST	C					
4	AMS		WG	8.5	lb/100 gal	POST	C					
5	LibertyLink soybean							99	96	99	1	98
5	Boundary	6.5	L	1.5	pt/a	PRE	A					
5	Liberty	2.34	L	29	fl oz/a	POST	C					
5	Outlook	6	L	12	fl oz/a	POST	C					
5	AMS		WG	8.5	lb/100 gal	POST	C					
6	LibertyLink soybean							99	99	98	14	94
6	Liberty	2.34	L	29	fl oz/a	EPOS	B					
6	Prefix	5.29	L	2	pt/a	EPOS	B					
6	AMS		WG	8.5	lb/100 gal	EPOS	B					
6	Liberty	2.34	L	29	fl oz/a	LPOS	D					
6	AMS		WG	8.5	lb/100 gal	LPOS	D					
7	LibertyLink soybean							0	0	0	0	0
7	Untreated											
8	Boundary	6.5	L	1.8	pt/a	PRE	A	99	94	99	1	98
8	Touchdown Total	4.17	SL	32	fl oz/a	POST	C					
8	AMS		WG	8.5	lb/100 gal	POST	C					
9	Optill Pro - Optill	68	WG	2	oz/a	PRE	A	99	93	97	1	97
9	Optill Pro - Outlook	6	L	10	fl oz/a	PRE	A					
9	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
9	AMS		WG	17	lb/100 gal	POST	C					
10	Warrant Ultra	3.45	L	3	pt/a	PRE	A	99	99	90	0	99
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
10	AMS		WG	17	lb/100 gal	POST	C					
11	Optill	68	WG	2	oz/a	PRE	A	99	97	99	6	97
11	Zidua	85	WG	2	oz/a	PRE	A					
11	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
11	AMS		WG	17	lb/100 gal	POST	C					
12	BroadAxe XC	7	L	25	fl oz/a	PRE	A	99	81	99	4	98
12	Touchdown Total	4.17	SL	32	fl oz/a	POST	C					
12	AMS		WG	8.5	lb/100 gal	POST	C					



MSU Weed Science Research Program

Comparison of commercial herbicide programs in soybean

Trial ID: SOY06-15 Study Dir.: Sprague and Powell  
 Conducted: Campus C-14 Investigator: Christy Sprague

Weed Code	CHEAL	AMBEL	ABUTH	GLXMA	ANGR
Crop Code					
Rating Data Type	control	control	control	injury	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/26/2015	Jun/26/2015	Jun/26/2015	Jul/02/2015	Jul/02/2015
Trt-Eval Interval	7 DA-C	7 DA-C	7 DA-C	13 DA-C	13 DA-C
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	CHEAL	AMBEL	ABUTH	GLXMA	ANGR
13	Fierce	76	WG	3	oz/a	PRE	A	99	99	99	11	97
13	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
13	AMS		WG	17	lb/100 gal	POST	C					
14	Rowel	51	WG	2	oz/a	PRE	A	99	98	97	3	98
14	Metribuzin	75	WG	4	oz/a	PRE	A					
14	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
14	AMS		WG	17	lb/100 gal	POST	C					
15	Fierce XLT	62.4	WG	4	oz/a	PRE	A	99	99	99	19	98
15	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
15	AMS		WG	17	lb/100 gal	POST	C					
16	Untreated							0	0	0	0	0
17	Sonic	70	WG	3	oz/a	PRE	A	99	59	99	1	96
17	Durango DMA	4	SL	32	fl oz/a	POST	C					
17	AMS LIQUID		L	2.5	% v/v	POST	C					
18	Sonic	70	WG	4.5	oz/a	PRE	A	99	85	99	0	97
18	Durango DMA	4	SL	32	fl oz/a	POST	C					
18	AMS LIQUID		L	2.5	% v/v	POST	C					
19	Sonic	70	WG	6	oz/a	PRE	A	99	89	99	0	98
19	Durango DMA	4	SL	32	fl oz/a	POST	C					
19	AMS LIQUID		L	2.5	% v/v	POST	C					
20	Canopy	75	WG	2.25	oz/a	PRE	A	99	80	99	13	97
20	Metribuzin	75	WG	3	oz/a	PRE	A					
20	Abundit Extra	3	SL	32	fl oz/a	POST	C					
20	AMS		WG	2	lb/a	POST	C					
21	Optill	68	WG	2	oz/a	PRE	A	99	91	99	0	98
21	Metribuzin	75	WG	6	oz/a	PRE	A					
21	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
21	AMS		WG	17	lb/100 gal	POST	C					
22	Verdict	5.57	L	5	fl oz/a	PRE	A	99	91	99	0	98
22	Metribuzin	75	WG	6	oz/a	PRE	A					
22	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
22	AMS		WG	17	lb/100 gal	POST	C					
23	Authority MAXX	66	WG	5	oz/a	PRE	A	99	82	99	9	98
23	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
23	AMS		WG	17	lb/100 gal	POST	C					
24	Trivence	61.3	WG	6	oz/a	PRE	A	99	97	99	16	97
24	Abundit Extra	3	SL	32	fl oz/a	POST	C					
24	AMS		WG	2	lb/a	POST	C					
25	Boundary	6.5	L	1.8	pt/a	PRE	A	99	98	99	26	99
25	Flexstar GT	2.82	L	3.5	pt/a	POST	C					
25	MSO		L	1	% v/v	POST	C					
25	AMS		WG	8.5	lb/100 gal	POST	C					
26	Fierce	76	WG	3	oz/a	PRE	A	99	99	99	31	96
26	Cobra	2	L	8	fl oz/a	POST	C					
26	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
26	AMS		WG	17	lb/100 gal	POST	C					

MSU Weed Science Research Program

Comparison of commercial herbicide programs in soybean

Trial ID: SOY06-15 Study Dir.: Sprague and Powell  
 Conducted: Campus C-14 Investigator: Christy Sprague

Weed Code								CHEAL	AMBEL	ABUTH	GLXMA	ANGR
Crop Code												
Rating Data Type								control	control	control	injury	control
Rating Unit								percent	percent	percent	percent	percent
Rating Date								Jun/26/2015	Jun/26/2015	Jun/26/2015	Jul/02/2015	Jul/02/2015
Trt-Eval Interval								7 DA-C	7 DA-C	7 DA-C	13 DA-C	13 DA-C
# Subsamples, Dec.								0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
27	BroadAxe XC	7	L	25	fl oz/a	PRE	A	99	97	99	28	99
27	Flexstar GT	2.82	L	3.5	pt/a	POST	C					
27	MSO		L	1	% v/v	POST	C					
27	AMS		WG	8.5	lb/100 gal	POST	C					
28	Valor	51	WG	2.5	oz/a	PRE	A	99	99	99	25	98
28	Cobra	2	L	8	fl oz/a	POST	C					
28	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
28	AMS		WG	17	lb/100 gal	POST	C					
29	Trivence	61.3	WG	6	oz/a	PRE	A	99	96	99	13	99
29	Cinch	7.64	L	1	pt/a	POST	C					
29	Abundit Extra	3	SL	32	fl oz/a	POST	C					
29	AMS		WG	2	lb/a	POST	C					
30	Rowel	51	WG	2	oz/a	PRE	A	99	96	99	4	99
30	Warrant	3	L	3	pt/a	POST	C					
30	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
30	AMS		WG	17	lb/100 gal	POST	C					
31	Rowel FX	40.3	WG	4	oz/a	PRE	A	99	97	99	24	98
31	Warrant	3	L	3	pt/a	POST	C					
31	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
31	AMS		WG	17	lb/100 gal	POST	C					
32	Tricor	75	WG	8	oz/a	PRE	A	99	97	99	30	99
32	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
32	Ultra Blazer	2	L	1.5	pt/a	POST	C					
32	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
32	Surfactant		L	0.25	% v/v	POST	C					
32	AMS		WG	8.5	lb/100 gal	POST	C					
33	Tricor	75	WG	8	oz/a	PRE	A	99	98	99	28	99
33	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
33	Storm	2	L	1.5	pt/a	POST	C					
33	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
33	Surfactant		L	0.25	% v/v	POST	C					
33	AMS		WG	8.5	lb/100 gal	POST	C					
34	Tricor	75	WG	8	oz/a	PRE	A	99	97	99	28	97
34	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
34	Cobra	2	L	8	fl oz/a	POST	C					
34	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
34	Surfactant		L	0.25	% v/v	POST	C					
34	AMS		WG	8.5	lb/100 gal	POST	C					
35	Tricor	75	WG	8	oz/a	PRE	A	99	97	99	19	99
35	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
35	Reflex	2	L	1	pt/a	POST	C					
35	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
35	Surfactant		L	0.25	% v/v	POST	C					
35	AMS		WG	8.5	lb/100 gal	POST	C					
36	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C	81	34	90	0	98
36	AMS		WG	17	lb/100 gal	POST	C					
LSD (P=.05)								1.8	6.6	3.0	4.4	2.0
CV								1.34	5.48	2.29	31.36	1.58

MSU Weed Science Research Program

Comparison of commercial herbicide programs in soybean

Trial ID: SOY06-15 Study Dir.: Sprague and Powell  
 Conducted: Campus C-14 Investigator: Christy Sprague

								CHEAL	AMBEL	ABUTH	GLXMA	ANGR
								control	control	control	injury	control
								percent	percent	percent	percent	percent
								Jul/02/2015	Jul/02/2015	Jul/02/2015	Jul/17/2015	Jul/17/2015
								13 DA-C	13 DA-C	13 DA-C	28 DA-C	28 DA-C
								0	0	0	0	0
Trt	Treatment	Form	Form	Rate	Rate	Grow	Appl					
No.	Name	Conc	Type	Rate	Unit	Stg	Code					
1	LibertyLink soybean							99	98	99	0	85
1	Authority First	70	WG	6.4	oz/a	PRE	A					
1	Liberty	2.34	L	29	fl oz/a	POST	C					
1	AMS		WG	8.5	lb/100 gal	POST	C					
2	LibertyLink soybean							99	98	99	0	93
2	Valor XLT	40.3	WG	3	oz/a	PRE	A					
2	Liberty	2.34	L	29	fl oz/a	POST	C					
2	AMS		WG	8.5	lb/100 gal	POST	C					
3	LibertyLink soybean							99	97	99	0	85
3	Authority MTZ	45	WG	16	oz/a	PRE	A					
3	Liberty	2.34	L	29	fl oz/a	POST	C					
3	AMS		WG	8.5	lb/100 gal	POST	C					
4	LibertyLink soybean							99	97	99	0	89
4	Fierce	76	WG	3	oz/a	PRE	A					
4	Liberty	2.34	L	29	fl oz/a	POST	C					
4	AMS		WG	8.5	lb/100 gal	POST	C					
5	LibertyLink soybean							99	99	99	0	97
5	Boundary	6.5	L	1.5	pt/a	PRE	A					
5	Liberty	2.34	L	29	fl oz/a	POST	C					
5	Outlook	6	L	12	fl oz/a	POST	C					
5	AMS		WG	8.5	lb/100 gal	POST	C					
6	LibertyLink soybean							99	99	99	0	93
6	Liberty	2.34	L	29	fl oz/a	EPOS	B					
6	Prefix	5.29	L	2	pt/a	EPOS	B					
6	AMS		WG	8.5	lb/100 gal	EPOS	B					
6	Liberty	2.34	L	29	fl oz/a	LPOS	D					
6	AMS		WG	8.5	lb/100 gal	LPOS	D					
7	LibertyLink soybean							0	0	0	0	0
7	Untreated											
8	Boundary	6.5	L	1.8	pt/a	PRE	A	99	98	99	0	90
8	Touchdown Total	4.17	SL	32	fl oz/a	POST	C					
8	AMS		WG	8.5	lb/100 gal	POST	C					
9	Optill Pro - Optill	68	WG	2	oz/a	PRE	A	99	98	99	2	87
9	Optill Pro - Outlook	6	L	10	fl oz/a	PRE	A					
9	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
9	AMS		WG	17	lb/100 gal	POST	C					
10	Warrant Ultra	3.45	L	3	pt/a	PRE	A	99	99	99	0	94
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
10	AMS		WG	17	lb/100 gal	POST	C					
11	Optill	68	WG	2	oz/a	PRE	A	99	97	99	0	83
11	Zidua	85	WG	2	oz/a	PRE	A					
11	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
11	AMS		WG	17	lb/100 gal	POST	C					
12	BroadAxe XC	7	L	25	fl oz/a	PRE	A	99	99	99	0	87
12	Touchdown Total	4.17	SL	32	fl oz/a	POST	C					
12	AMS		WG	8.5	lb/100 gal	POST	C					

MSU Weed Science Research Program

Comparison of commercial herbicide programs in soybean

Trial ID: SOY06-15 Study Dir.: Sprague and Powell  
 Conducted: Campus C-14 Investigator: Christy Sprague

Weed Code								CHEAL	AMBEL	ABUTH	GLXMA	ANGR
Crop Code								control	control	control	injury	control
Rating Data Type								percent	percent	percent	percent	percent
Rating Unit								Jul/02/2015	Jul/02/2015	Jul/02/2015	Jul/17/2015	Jul/17/2015
Rating Date								13 DA-C	13 DA-C	13 DA-C	28 DA-C	28 DA-C
Trt-Eval Interval								0	0	0	0	0
# Subsamples, Dec.												
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
13	Fierce	76	WG	3	oz/a	PRE	A	99	98	99	2	86
13	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
13	AMS		WG	17	lb/100 gal	POST	C					
14	Rowel	51	WG	2	oz/a	PRE	A	99	98	98	0	89
14	Metribuzin	75	WG	4	oz/a	PRE	A					
14	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
14	AMS		WG	17	lb/100 gal	POST	C					
15	Fierce XLT	62.4	WG	4	oz/a	PRE	A	99	98	99	4	87
15	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
15	AMS		WG	17	lb/100 gal	POST	C					
16	Untreated							0	0	0	0	0
17	Sonic	70	WG	3	oz/a	PRE	A	99	98	99	0	90
17	Durango DMA	4	SL	32	fl oz/a	POST	C					
17	AMS LIQUID		L	2.5	% v/v	POST	C					
18	Sonic	70	WG	4.5	oz/a	PRE	A	99	98	99	3	86
18	Durango DMA	4	SL	32	fl oz/a	POST	C					
18	AMS LIQUID		L	2.5	% v/v	POST	C					
19	Sonic	70	WG	6	oz/a	PRE	A	99	97	98	0	89
19	Durango DMA	4	SL	32	fl oz/a	POST	C					
19	AMS LIQUID		L	2.5	% v/v	POST	C					
20	Canopy	75	WG	2.25	oz/a	PRE	A	98	98	99	5	86
20	Metribuzin	75	WG	3	oz/a	PRE	A					
20	Abundit Extra	3	SL	32	fl oz/a	POST	C					
20	AMS		WG	2	lb/a	POST	C					
21	Optill	68	WG	2	oz/a	PRE	A	98	97	99	0	91
21	Metribuzin	75	WG	6	oz/a	PRE	A					
21	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
21	AMS		WG	17	lb/100 gal	POST	C					
22	Verdict	5.57	L	5	fl oz/a	PRE	A	99	97	99	0	91
22	Metribuzin	75	WG	6	oz/a	PRE	A					
22	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
22	AMS		WG	17	lb/100 gal	POST	C					
23	Authority MAXX	66	WG	5	oz/a	PRE	A	99	99	99	3	88
23	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
23	AMS		WG	17	lb/100 gal	POST	C					
24	Trivence	61.3	WG	6	oz/a	PRE	A	99	97	99	5	85
24	Abundit Extra	3	SL	32	fl oz/a	POST	C					
24	AMS		WG	2	lb/a	POST	C					
25	Boundary	6.5	L	1.8	pt/a	PRE	A	99	99	99	6	93
25	Flexstar GT	2.82	L	3.5	pt/a	POST	C					
25	MSO		L	1	% v/v	POST	C					
25	AMS		WG	8.5	lb/100 gal	POST	C					
26	Fierce	76	WG	3	oz/a	PRE	A	99	99	99	8	78
26	Cobra	2	L	8	fl oz/a	POST	C					
26	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
26	AMS		WG	17	lb/100 gal	POST	C					

MSU Weed Science Research Program

Comparison of commercial herbicide programs in soybean

Trial ID: SOY06-15 Study Dir.: Sprague and Powell  
 Conducted: Campus C-14 Investigator: Christy Sprague

Weed Code								CHEAL	AMBEL	ABUTH	GLXMA	ANGR
Crop Code												
Rating Data Type								control	control	control	injury	control
Rating Unit								percent	percent	percent	percent	percent
Rating Date								Jul/02/2015	Jul/02/2015	Jul/02/2015	Jul/17/2015	Jul/17/2015
Trt-Eval Interval								13 DA-C	13 DA-C	13 DA-C	28 DA-C	28 DA-C
# Subsamples, Dec.								0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
27	BroadAxe XC	7	L	25	fl oz/a	PRE	A	99	99	98	10	94
27	Flexstar GT	2.82	L	3.5	pt/a	POST	C					
27	MISO		L	1	% v/v	POST	C					
27	AMS		WG	8.5	lb/100 gal	POST	C					
28	Valor	51	WG	2.5	oz/a	PRE	A	99	98	99	6	82
28	Cobra	2	L	8	fl oz/a	POST	C					
28	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
28	AMS		WG	17	lb/100 gal	POST	C					
29	Trivence	61.3	WG	6	oz/a	PRE	A	99	96	99	2	99
29	Cinch	7.64	L	1	pt/a	POST	C					
29	Abundit Extra	3	SL	32	fl oz/a	POST	C					
29	AMS		WG	2	lb/a	POST	C					
30	Rowel	51	WG	2	oz/a	PRE	A	99	98	99	0	95
30	Warrant	3	L	3	pt/a	POST	C					
30	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
30	AMS		WG	17	lb/100 gal	POST	C					
31	Rowel FX	40.3	WG	4	oz/a	PRE	A	99	98	99	6	95
31	Warrant	3	L	3	pt/a	POST	C					
31	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
31	AMS		WG	17	lb/100 gal	POST	C					
32	Tricor	75	WG	8	oz/a	PRE	A	98	98	97	8	95
32	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
32	Ultra Blazer	2	L	1.5	pt/a	POST	C					
32	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
32	Surfactant		L	0.25	% v/v	POST	C					
32	AMS		WG	8.5	lb/100 gal	POST	C					
33	Tricor	75	WG	8	oz/a	PRE	A	98	98	99	4	93
33	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
33	Storm	2	L	1.5	pt/a	POST	C					
33	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
33	Surfactant		L	0.25	% v/v	POST	C					
33	AMS		WG	8.5	lb/100 gal	POST	C					
34	Tricor	75	WG	8	oz/a	PRE	A	99	99	99	7	81
34	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
34	Cobra	2	L	8	fl oz/a	POST	C					
34	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
34	Surfactant		L	0.25	% v/v	POST	C					
34	AMS		WG	8.5	lb/100 gal	POST	C					
35	Tricor	75	WG	8	oz/a	PRE	A	99	98	99	2	96
35	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
35	Reflex	2	L	1	pt/a	POST	C					
35	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
35	Surfactant		L	0.25	% v/v	POST	C					
35	AMS		WG	8.5	lb/100 gal	POST	C					
36	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C	92	98	99	0	83
36	AMS		WG	17	lb/100 gal	POST	C					
LSD (P=.05)								1.1	1.3	1.2	3.5	4.7
CV								0.84	1.01	0.88	110.74	3.96

MSU Weed Science Research Program

Comparison of commercial herbicide programs in soybean

Trial ID: SOY06-15 Study Dir.: Sprague and Powell  
 Conducted: Campus C-14 Investigator: Christy Sprague

Weed Code	CHEAL	AMBEL	ABUTH	GLXMA	GLXMA
Crop Code	control	control	control	moisture	yield
Rating Data Type	percent	percent	percent	percent	bu/acre
Rating Unit	Jul/17/2015	Jul/17/2015	Jul/17/2015	Oct/16/2015	Oct/16/2015
Rating Date	28 DA-C	28 DA-C	28 DA-C	119 DA-C	at 13% M
Trt-Eval Interval	0	0	0	1	1
# Subsamples, Dec.					
1 LibertyLink soybean	99	94	99	16.4	82.0
1 Authority First					
1 Liberty					
1 AMS					
2 LibertyLink soybean	99	96	99	16.4	81.4
2 Valor XLT					
2 Liberty					
2 AMS					
3 LibertyLink soybean	99	95	99	16.4	83.0
3 Authority MTZ					
3 Liberty					
3 AMS					
4 LibertyLink soybean	99	94	99	16.4	79.6
4 Fierce					
4 Liberty					
4 AMS					
5 LibertyLink soybean	99	98	99	16.4	85.0
5 Boundary					
5 Liberty					
5 Outlook					
5 AMS					
6 LibertyLink soybean	99	96	99	16.6	79.3
6 Liberty					
6 Prefix					
6 AMS					
6 Liberty					
6 AMS					
7 LibertyLink soybean	0	0	0	16.3	41.5
7 Untreated					
8 Boundary	98	94	99	15.9	76.0
8 Touchdown Total					
8 AMS					
9 Optill Pro - Optill	99	95	99	16.1	77.0
9 Optill Pro - Outlook					
9 Roundup PowerMax					
9 AMS					
10 Warrant Ultra	99	96	99	15.7	80.1
10 Roundup PowerMax					
10 AMS					
11 Optill	99	86	99	15.6	77.9
11 Zidua					
11 Roundup PowerMax					
11 AMS					
12 BroadAxe XC	99	97	99	16.1	76.7
12 Touchdown Total					
12 AMS					

MSU Weed Science Research Program

Comparison of commercial herbicide programs in soybean

Trial ID: SOY06-15 Study Dir.: Sprague and Powell  
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Weed Code								CHEAL	AMBEL	ABUTH	GLXMA	GLXMA
Crop Code								control	control	control	moisture	yield
Rating Data Type								percent	percent	percent	percent	bu/acre
Rating Unit								Jul/17/2015	Jul/17/2015	Jul/17/2015	Oct/16/2015	Oct/16/2015
Rating Date								28 DA-C	28 DA-C	28 DA-C	119 DA-C	at 13% M
Trt-Eval Interval								0	0	0	1	1
# Subsamples, Dec.												
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
13	Fierce	76	WG	3	oz/a	PRE	A	99	91	99	15.7	72.5
13	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
13	AMS		WG	17	lb/100 gal	POST	C					
14	Rowel	51	WG	2	oz/a	PRE	A	99	92	99	15.8	75.9
14	Metribuzin	75	WG	4	oz/a	PRE	A					
14	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
14	AMS		WG	17	lb/100 gal	POST	C					
15	Fierce XLT	62.4	WG	4	oz/a	PRE	A	99	94	99	15.6	71.2
15	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
15	AMS		WG	17	lb/100 gal	POST	C					
16	Untreated							0	0	0	16.3	31.6
17	Sonic	70	WG	3	oz/a	PRE	A	99	98	99	16.1	79.6
17	Durango DMA	4	SL	32	fl oz/a	POST	C					
17	AMS LIQUID		L	2.5	% v/v	POST	C					
18	Sonic	70	WG	4.5	oz/a	PRE	A	99	98	99	15.9	77.2
18	Durango DMA	4	SL	32	fl oz/a	POST	C					
18	AMS LIQUID		L	2.5	% v/v	POST	C					
19	Sonic	70	WG	6	oz/a	PRE	A	99	97	99	15.8	73.6
19	Durango DMA	4	SL	32	fl oz/a	POST	C					
19	AMS LIQUID		L	2.5	% v/v	POST	C					
20	Canopy	75	WG	2.25	oz/a	PRE	A	99	98	99	15.8	74.1
20	Metribuzin	75	WG	3	oz/a	PRE	A					
20	Abundit Extra	3	SL	32	fl oz/a	POST	C					
20	AMS		WG	2	lb/a	POST	C					
21	Optill	68	WG	2	oz/a	PRE	A	99	93	99	15.7	81.2
21	Metribuzin	75	WG	6	oz/a	PRE	A					
21	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
21	AMS		WG	17	lb/100 gal	POST	C					
22	Verdict	5.57	L	5	fl oz/a	PRE	A	99	94	99	15.8	79.8
22	Metribuzin	75	WG	6	oz/a	PRE	A					
22	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
22	AMS		WG	17	lb/100 gal	POST	C					
23	Authority MAXX	66	WG	5	oz/a	PRE	A	99	99	99	15.6	76.2
23	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
23	AMS		WG	17	lb/100 gal	POST	C					
24	Trivence	61.3	WG	6	oz/a	PRE	A	99	89	99	16.0	67.9
24	Abundit Extra	3	SL	32	fl oz/a	POST	C					
24	AMS		WG	2	lb/a	POST	C					
25	Boundary	6.5	L	1.8	pt/a	PRE	A	99	99	99	15.4	69.0
25	Flexstar GT	2.82	L	3.5	pt/a	POST	C					
25	MSO		L	1	% v/v	POST	C					
25	AMS		WG	8.5	lb/100 gal	POST	C					
26	Fierce	76	WG	3	oz/a	PRE	A	99	96	99	15.9	69.3
26	Cobra	2	L	8	fl oz/a	POST	C					
26	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
26	AMS		WG	17	lb/100 gal	POST	C					

MSU Weed Science Research Program

Comparison of commercial herbicide programs in soybean

Trial ID: SOY06-15 Study Dir.: Sprague and Powell  
 Conducted: Campus C-14 Investigator: Christy Sprague

Weed Code								CHEAL	AMBEL	ABUTH	GLXMA	GLXMA
Crop Code											moisture	yield
Rating Data Type								control	control	control	percent	bu/acre
Rating Unit								percent	percent	percent		
Rating Date								Jul/17/2015	Jul/17/2015	Jul/17/2015	Oct/16/2015	Oct/16/2015
Trt-Eval Interval								28 DA-C	28 DA-C	28 DA-C	119 DA-C	at 13% M
# Subsamples, Dec.								0	0	0	1	1
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
27	BroadAxe XC	7	L	25	fl oz/a	PRE	A	99	99	99	15.6	68.4
27	Flexstar GT	2.82	L	3.5	pt/a	POST	C					
27	M50		L	1	% v/v	POST	C					
27	AMS		WG	8.5	lb/100 gal	POST	C					
28	Valor	51	WG	2.5	oz/a	PRE	A	99	96	99	15.9	71.3
28	Cobra	2	L	8	fl oz/a	POST	C					
28	Roundup PowerMax	4.5	SL	32	fl oz/a	POST	C					
28	AMS		WG	17	lb/100 gal	POST	C					
29	Trivence	61.3	WG	6	oz/a	PRE	A	99	94	99	15.7	76.4
29	Cinch	7.64	L	1	pt/a	POST	C					
29	Abundit Extra	3	SL	32	fl oz/a	POST	C					
29	AMS		WG	2	lb/a	POST	C					
30	Rowel	51	WG	2	oz/a	PRE	A	99	95	99	15.8	76.4
30	Warrant	3	L	3	pt/a	POST	C					
30	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
30	AMS		WG	17	lb/100 gal	POST	C					
31	Rowel FX	40.3	WG	4	oz/a	PRE	A	99	94	99	15.9	71.7
31	Warrant	3	L	3	pt/a	POST	C					
31	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
31	AMS		WG	17	lb/100 gal	POST	C					
32	Tricor	75	WG	8	oz/a	PRE	A	99	96	99	15.6	71.3
32	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
32	Ultra Blazer	2	L	1.5	pt/a	POST	C					
32	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
32	Surfactant		L	0.25	% v/v	POST	C					
32	AMS		WG	8.5	lb/100 gal	POST	C					
33	Tricor	75	WG	8	oz/a	PRE	A	97	94	99	16.0	67.9
33	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
33	Storm	2	L	1.5	pt/a	POST	C					
33	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
33	Surfactant		L	0.25	% v/v	POST	C					
33	AMS		WG	8.5	lb/100 gal	POST	C					
34	Tricor	75	WG	8	oz/a	PRE	A	99	92	99	16.0	70.3
34	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
34	Cobra	2	L	8	fl oz/a	POST	C					
34	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
34	Surfactant		L	0.25	% v/v	POST	C					
34	AMS		WG	8.5	lb/100 gal	POST	C					
35	Tricor	75	WG	8	oz/a	PRE	A	99	99	99	16.1	73.1
35	Satellite Hydrocap	3.8	L	2	pt/a	PRE	A					
35	Reflex	2	L	1	pt/a	POST	C					
35	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C					
35	Surfactant		L	0.25	% v/v	POST	C					
35	AMS		WG	8.5	lb/100 gal	POST	C					
36	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C	87	95	99	16.0	78.2
36	AMS		WG	17	lb/100 gal	POST	C					
LSD (P=.05)								2.3	4.8	0.2	0.60	6.81
CV								1.73	3.79	0.18	2.7	6.62