

Commercial comparisons in conventional tillage soybean

Trial ID: SOY07-09
Conducted: C-14

Study Dir.: Sprague, Powell
Investigator: Christy Sprague

Date Planted: 5/18/09
Variety: Pioneer 92M61 RR
Population: 156,000
Soil Type: Loam
Plot Size: 10 X 30 FT
Row Spacing: 30 IN
No. of Reps: 4
% OM: 3.3
pH: 6.6
Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall moldboard plow, spring soil finished twice
Fertilizer: None

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISII FOLIA L.
2.	ANGR	foxtail species/barnyardgrass	SETARIA SP./ECHINOCHLOA CRUS-GALLI
3.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
4.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
5.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S. WATS.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B	C	D
Application Timing:	PRE	MPOS	POST	LPOS
Date Treated:	5/18/09	6/23/09	6/25/09	7/20/09
Time Treated:	6:30 pm	6:45 pm	11:00 am	9:00 am
% Cloud Cover:	0	15	0	5
Air Temp., Unit:	70 F	91 F	78 F	66 F
% Relative Humidity:	20	45	42	
Wind Speed/Unit/Dir:	5 mph SW	2 mph NW	2 mph W	0 mph W
Soil Temp., Unit:	65 F	80 F	79 F	65 F
Soil/Leaf Surface M:	5 5	4 5	5 5	5 5
Soil Moist (1=w 5=d):	3	4	4	5

Crop Stage at Each Application

	A	B	C	D
Crop Name:	GLXMA	GLXMA	GLXMA	GLXMA
Height (In.):	-	9	10	19
Stage (L):	-	V4	V4	R1

Weed Stage at Each Application

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

Weed Density (plants/sq. ft.)

	1	2	3	4	5
Weed Name:	ANGR	AMBEL	ABUTH	CHEAL	AMAPO
Density:	28	11	1	<1	<1

Application Equipment

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	23"	20"	100"	19	Water	28
B	Cub	3.8	AirMix	11003	27"	20"	100"	19	Water	28
C	Cub	3.8	AirMix	11003	27"	20"	100"	19	Water	28
D	Cub	3.8	AirMix	11003	30"	20"	100"	19	Water	28

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Weed Code	GLXMA	ANGR	CHEAL	AMBEL	AMAPO	ABUTH	GLXMA	ANGR	CHEAL
Crop Code	injury	control	control	control	control	control	injury	control	control
Rating Data Type	percent	percent	percent	percent	percent	percent	percent	percent	percent
Rating Unit	6/25/09	6/25/09	6/25/09	6/25/09	6/25/09	6/25/09	7/23/09	7/23/09	7/23/09
Rating Date	38 DA-A	38 DA-A	38 DA-A	38 DA-A	38 DA-A	38 DA-A	28 DA-C	28 DA-C	28 DA-C
Tri-Eval Interval									

Tri No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code	GLXMA	ANGR	CHEAL	AMBEL	AMAPO	ABUTH	GLXMA	ANGR	CHEAL
16	Gangster (2.4 oz/A)							30	73	99	84	99	99	3	88	96
16	Gangster FR	84	WG	0.4	oz/a	PRE	A									
16	Gangster V	51	WG	2	oz/a	PRE	A									
16	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C									
16	AMS		WG	17	lb/100 gal	POST	C									
17	Canopy	75	DF	2.25	oz/a	PRE	A	1	3	91	50	99	53	1	91	99
17	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C									
17	AMS		WG	17	lb/100 gal	POST	C									
18	Python	80	WG	0.8	oz/a	PRE	A	4	3	99	33	99	88	1	94	99
18	Durango DMA	4	SL	24	fl oz/a	POST	C									
18	AMS		WG	17	lb/100 gal	POST	C									
19	Boundary	6.5	L	1.75	pt/a	PRE	A	11	92	96	66	99	89	0	98	99
19	Flexstar GT	3.31	SL	3	pt/a	POST	C									
19	Activator 90		L	0.25	% v/v	POST	C									
19	AMS		WG	17	lb/100 gal	POST	C									
20	Sequence	5.25	L	2.5	pt/a	MPOS	B							1	99	99
20	AMS		WG	17	lb/100 gal	MPOS	B									
20	Touchdown Total	4.17	L	24	fl oz/a	LPOS	D									
20	AMS		WG	17	lb/100 gal	LPOS	D									
21	Touchdown Total	4.17	L	24	fl oz/a	MPOS	B							0	97	99
21	AMS		WG	17	lb/100 gal	MPOS	B									
21	Touchdown Total	4.17	L	24	fl oz/a	LPOS	D									
21	AMS		WG	17	lb/100 gal	LPOS	D									
22	Roundup PowerMax	4.5	L	22	fl oz/a	MPOS	B							0	98	99
22	AMS		WG	17	lb/100 gal	MPOS	B									
22	Roundup PowerMax	4.5	L	22	fl oz/a	LPOS	D									
22	AMS		WG	17	lb/100 gal	LPOS	D									
23	Flexstar GT	3.31	SL	3	pt/a	MPOS	B							1	99	99
23	Activator 90		L	0.25	% v/v	MPOS	B									
23	AMS		WG	17	lb/100 gal	MPOS	B									
23	Touchdown Total	4.17	L	24	fl oz/a	LPOS	D									
23	AMS		WG	17	lb/100 gal	LPOS	D									
24	FirstRate	84	WG	0.3	oz/a	MPOS	B							0	98	99
24	Durango DMA	4	SL	24	fl oz/a	MPOS	B									
24	AMS		WG	17	lb/100 gal	MPOS	B									
24	Durango DMA	4	SL	24	fl oz/a	LPOS	D									
24	AMS		WG	17	lb/100 gal	LPOS	D									
25	Weed-free							0	99	99	99	99	99	0	99	99
LSD (P=.05)								5.7	10.3	5.3	7.2	0.6	8.2	2.8	4.0	4.0
Standard Deviation								4.0	7.3	3.7	5.1	0.4	5.8	2.0	2.8	2.8
CV								28.31	10.87	4.12	9.7	0.48	7.27	158.12	3.17	3.0

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Weed Code				AMBEL	AMAPO	ABUTH	GLXMA	ANGR	CHEAL	AMBEL	AMAPO	ABUTH				
Crop Code				control	control	control	injury	control	control	control	control	control				
Rating Data Type				percent	percent	percent	percent	percent	percent	percent	percent	percent				
Rating Unit				7/23/09	7/23/09	7/23/09	8/20/09	8/20/09	8/20/09	8/20/09	8/20/09	8/20/09				
Rating Date				28 DA-C	28 DA-C	28 DA-C	56 DA-C	56 DA-C	56 DA-C	56 DA-C	56 DA-C	56 DA-C				
Tri-Eval Interval																
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code									
16	Gangster (2.4 oz/A)							99	99	96	1	86	98	97	99	
16	Gangster FR	84	WG	0.4	oz/a	PRE	A									
16	Gangster V	51	WG	2	oz/a	PRE	A									
16	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C									
16	AMS		WG	17	lb/100 gal	POST	C									
17	Canopy	75	DF	2.25	oz/a	PRE	A	99	99	98	1	91	99	99	99	
17	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C									
17	AMS		WG	17	lb/100 gal	POST	C									
18	Python	80	WG	0.8	oz/a	PRE	A	95	99	99	1	91	99	94	99	
18	Durango DMA	4	SL	24	fl oz/a	POST	C									
18	AMS		WG	17	lb/100 gal	POST	C									
19	Boundary	6.5	L	1.75	pt/a	PRE	A	99	99	99	1	98	99	99	99	
19	Flexstar GT	3.31	SL	3	pt/a	POST	C									
19	Activator 90		L	0.25	% v/v	POST	C									
19	AMS		WG	17	lb/100 gal	POST	C									
20	Sequence	5.25	L	2.5	pt/a	MPOS	B	97	99	97	0	99	99	99	99	
20	AMS		WG	17	lb/100 gal	MPOS	B									
20	Touchdown Total	4.17	L	24	fl oz/a	LPOS	D									
20	AMS		WG	17	lb/100 gal	LPOS	D									
21	Touchdown Total	4.17	L	24	fl oz/a	MPOS	B	96	99	99	0	99	99	99	99	
21	AMS		WG	17	lb/100 gal	MPOS	B									
21	Touchdown Total	4.17	L	24	fl oz/a	LPOS	D									
21	AMS		WG	17	lb/100 gal	LPOS	D									
22	Roundup PowerMax	4.5	L	22	fl oz/a	MPOS	B	99	99	98	0	99	99	99	99	
22	AMS		WG	17	lb/100 gal	MPOS	B									
22	Roundup PowerMax	4.5	L	22	fl oz/a	LPOS	D									
22	AMS		WG	17	lb/100 gal	LPOS	D									
23	Flexstar GT	3.31	SL	3	pt/a	MPOS	B	99	99	99	0	99	99	99	99	
23	Activator 90		L	0.25	% v/v	MPOS	B									
23	AMS		WG	17	lb/100 gal	MPOS	B									
23	Touchdown Total	4.17	L	24	fl oz/a	LPOS	D									
23	AMS		WG	17	lb/100 gal	LPOS	D									
24	FirstRate	84	WG	0.3	oz/a	MPOS	B	99	99	99	0	99	99	99	99	
24	Durango DMA	4	SL	24	fl oz/a	MPOS	B									
24	AMS		WG	17	lb/100 gal	MPOS	B									
24	Durango DMA	4	SL	24	fl oz/a	LPOS	D									
24	AMS		WG	17	lb/100 gal	LPOS	D									
25	Weed-free							99	99	99	0	99	99	99	99	
LSD (P=.05)								4.0	0.6	2.7	1.5	6.1	3.2	5.2	0.0	2.3
Standard Deviation								2.8	0.4	1.9	1.1	4.3	2.2	3.7	0.0	1.7
CV								3.13	0.47	2.02	312.48	4.89	2.36	4.14	0.0	1.74

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Weed Code								GLXMA	GLXMA
Crop Code								moisture	yield
Rating Data Type								percent	bu/acre
Rating Unit								10/15/09	10/15/09
Rating Date								150 DA-A	at 13% M
Trt-Eval Interval									

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
1	Canopy	75	DF	2.25	oz/a	PRE	A	19.6	47.0
1	Linex	4	L	1	pt/a	PRE	A		
1	Cinch	7.8	L	1	pt/a	PRE	A		
2	Prowl H2O	3.8	L	2	pt/a	PRE	A	15.5	68.7
2	Raptor	1	L	4	fl oz/a	MPOS	B		
2	Flexstar	1.88	L	10	fl oz/a	MPOS	B		
2	Herbimax (COC)		L	1	% v/v	MPOS	B		
2	AMS		WG	8.5	lb/100 gal	MPOS	B		
3	Prowl H2O	3.8	L	2	pt/a	PRE	A	17.1	69.7
3	Pursuit	70	DG	1.4	oz/a	PRE	A		
3	Flexstar	1.88	L	10	fl oz/a	MPOS	B		
3	Herbimax (COC)		L	1	% v/v	MPOS	B		
4	Authority Assist	4	L	10	fl oz/a	PRE	A	15.5	76.8
4	Flexstar	1.88	L	1	pt/a	MPOS	B		
4	Select	2	L	6	fl oz/a	MPOS	B		
4	Herbimax (COC)		L	1	% v/v	MPOS	B		
5	Boundary	6.5	L	1.75	pt/a	PRE	A	17.8	72.8
5	Flexstar	1.88	L	1	pt/a	POST	C		
5	Fusion	2.56	L	8	fl oz/a	POST	C		
5	Herbimax (COC)		L	0.5	% v/v	POST	C		
6	Untreated							16.6	38.4
7	Prowl H2O	3.8	L	2	pt/a	PRE	A	15.3	71.4
7	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C		
7	AMS		WG	17	lb/100 gal	POST	C		
8	Prefix	5.29	L	2	pt/a	PRE	A	14.4	77.7
8	Touchdown Total	4.17	SL	24	fl oz/a	POST	C		
8	AMS		WG	17	lb/100 gal	POST	C		
9	Sonic	70	WG	3	oz/a	PRE	A	14.5	78.2
9	Durango DMA	4	SL	24	fl oz/a	POST	C		
9	AMS		WG	17	lb/100 gal	POST	C		
10	Envive (2.5 oz/A)	41.3	WG					15.3	74.6
10	Classic	25	WG	0.92	oz/a	PRE	A		
10	Harmony SG	50	WG	0.15	oz/a	PRE	A		
10	Valor	51	WG	1.5	oz/a	PRE	A		
10	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C		
10	AMS		WG	17	lb/100 gal	POST	C		
11	Authority Assist	4	L	5	fl oz/a	PRE	A	15.7	77.1
11	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C		
11	AMS		WG	17	lb/100 gal	POST	C		
12	Authority MTZ	45	DF	12	oz/a	PRE	A	14.7	76.4
12	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C		
12	AMS		WG	17	lb/100 gal	POST	C		
13	IntRRo	4	L	2	qt/a	PRE	A	16.1	75.5
13	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C		
13	AMS		WG	17	lb/100 gal	POST	C		
14	Valor	51	WG	2	oz/a	PRE	A	16.0	75.2
14	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C		
14	AMS		WG	17	lb/100 gal	POST	C		
15	Valor XLT	40.3	WG	3	oz/a	PRE	A	15.7	73.4
15	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C		
15	AMS		WG	17	lb/100 gal	POST	C		

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Weed Code									
Crop Code								GLXMA	GLXMA
Rating Data Type								moisture	yield
Rating Unit								percent	bu/acre
Rating Date								10/15/09	10/15/09
Trt-Eval Interval								150 DA-A	at 13% M

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
16	Gangster (2.4 oz/A)							16.7	72.7
16	Gangster FR	84	WG	0.4	oz/a	PRE	A		
16	Gangster V	51	WG	2	oz/a	PRE	A		
16	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C		
16	AMS		WG	17	lb/100 gal	POST	C		
17	Canopy	75	DF	2.25	oz/a	PRE	A	16.5	71.5
17	Roundup PowerMax	4.5	L	22	fl oz/a	POST	C		
17	AMS		WG	17	lb/100 gal	POST	C		
18	Python	80	WG	0.8	oz/a	PRE	A	15.4	73.4
18	Durango DMA	4	SL	24	fl oz/a	POST	C		
18	AMS		WG	17	lb/100 gal	POST	C		
19	Boundary	6.5	L	1.75	pt/a	PRE	A	16.7	74.0
19	Flexstar GT	3.31	SL	3	pt/a	POST	C		
19	Activator 90		L	0.25	% v/v	POST	C		
19	AMS		WG	17	lb/100 gal	POST	C		
20	Sequence	5.25	L	2.5	pt/a	MPOS	B	16.5	74.9
20	AMS		WG	17	lb/100 gal	MPOS	B		
20	Touchdown Total	4.17	L	24	fl oz/a	LPOS	D		
20	AMS		WG	17	lb/100 gal	LPOS	D		
21	Touchdown Total	4.17	L	24	fl oz/a	MPOS	B	15.1	75.2
21	AMS		WG	17	lb/100 gal	MPOS	B		
21	Touchdown Total	4.17	L	24	fl oz/a	LPOS	D		
21	AMS		WG	17	lb/100 gal	LPOS	D		
22	Roundup PowerMax	4.5	L	22	fl oz/a	MPOS	B	14.1	77.8
22	AMS		WG	17	lb/100 gal	MPOS	B		
22	Roundup PowerMax	4.5	L	22	fl oz/a	LPOS	D		
22	AMS		WG	17	lb/100 gal	LPOS	D		
23	Flexstar GT	3.31	SL	3	pt/a	MPOS	B	16.4	72.9
23	Activator 90		L	0.25	% v/v	MPOS	B		
23	AMS		WG	17	lb/100 gal	MPOS	B		
23	Touchdown Total	4.17	L	24	fl oz/a	LPOS	D		
23	AMS		WG	17	lb/100 gal	LPOS	D		
24	FirstRate	84	WG	0.3	oz/a	MPOS	B	16.5	75.8
24	Durango DMA	4	SL	24	fl oz/a	MPOS	B		
24	AMS		WG	17	lb/100 gal	MPOS	B		
24	Durango DMA	4	SL	24	fl oz/a	LPOS	D		
24	AMS		WG	17	lb/100 gal	LPOS	D		
25	Weed-free							17.6	72.3
LSD (P=.05)								3.27	5.07
Standard Deviation								2.31	3.59
CV								14.41	5.0