

Time of day effects on the activity of Xtend in RR2 Xtend soybean

Trial ID: SOY14-17 Study Dir.: Sprague, Powell, Stiles
 Conducted: Campus B-10 (Quonset) Investigator: Christy Sprague

Planting Date: May-9-2017 **Row Spacing:** 30 IN
Variety: AG25X6 **No. of Reps:** 4
Population: 155000 S/A **% OM:** 2.8
Soil Type: L loam **pH:** 6.9
Plot Size: 10 X 35 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plow; spring soil finish twice
Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	ANGR	mainly foxtail species	Annual grass
2	CHEAL	lambsquarters, common	Chenopodium album
3	AMAPO	amaranth, Powell	Amaranthus powellii
4	AMBEL	ragweed, common	Ambrosia artemisiifolia
5	HIBTR	Venice mallow	Hibiscus trionum
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

	A	B	C	D	E	F
Application Timing:	S.NOON	DARK	SUNRISE	DARK	SUNRISE	S. NOON
Date Treated:	Jun-14-2017	Jun-14-2017	Jun-15-2017	Jun-20-2017	Jun-21-2017	Jun-21-2017
Time Treated:	1:40 PM	9:20 PM	5:55 AM	9:20 PM	5:50 AM	1:40 PM
% Cloud Cover:	50	78	90	0	0	50
Air Temp., Unit:	87 F	79 F	68 F	64 F	52 F	75 F
% Relative Humidity:	58	73	95	71	87	37
Wind Speed/Unit/Dir:	4 mph E	7 mph S	1 mph SW	2 mph W	0 mph	2 mph NW
Soil Temp, Unit:	83 F	86 F	75 F	62 F	64 F	68 F
Leaf Moist/Dew Presence (Y/N):	5	5	4	4	1	3
Soil Moist:	5	5	5	3	3	3

Crop Stage at Each Application

	A	B	C	D	E	F
Crop 1 Name:	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Height:	7 "	7 "	7 "	12 "	12 "	12 "
Stage:	V3	V3	V3	V4	V4	V4

Weed Stage at Each Application

	A	B	C	D	E	F
Weed 1 Name:	ANGR	ANGR	ANGR	ANGR	ANGR	ANGR
Height:	5-6 " (5.5)	5-6 " (5.5)	5-6 " (5.5)	8-16 " (12)	8-16 " (12)	8-16 " (12)
Stage:	5L	5L	5L	5L	5L	5L
Weed 2 Name:	CHEAL	CHEAL	CHEAL	CHEAL	CHEAL	CHEAL
Height:	3-4 " (3.5)	3-4 " (3.5)	3-4 " (3.5)	3-5 " (4)	3-5 " (4)	3-5 " (4)
Stage:	10-14L	10-14L	10-14L	MANY	MANY	MANY
Weed 3 Name:	AMAPO	AMAPO	AMAPO	AMAPO	AMAPO	AMAPO
Height:	3-4 " (3.5)	3-4 " (3.5)	3-4 " (3.5)	4-10 " (7)	4-10 " (7)	4-10 " (7)
Stage:	8-10L	8-10L	8-10L	10-20L	10-20L	10-20L
Weed 4 Name:	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL
Height:	3-5 " (4)	3-5 " (4)	3-5 " (4)	4-12 " (8)	4-12 " (8)	4-12 " (8)
Stage:	6-10L	6-10L	6-10L	8-20L	8-20L	8-20L
Weed 5 Name:	HIBTR	HIBTR	HIBTR	HIBTR	HIBTR	HIBTR
Height:	2-4 " (3)	2-4 " (3)	2-4 " (3)	4-10 " (7)	4-10 " (7)	4-10 " (7)
Stage:	3-4L	3-4L	3-4L	4-7L	4-7L	4-7L

Weed Density

	1	2	3	4	5
Date:	Jun-21-2017	Jun-21-2017	Jun-21-2017	Jun-21-2017	Jun-21-2017
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	HIBTR
Density:	10 FT2	2 FT2	4 FT2	1 FT2	5 FT2

Application Equipment

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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	TTI	11003	24 "	20 "	100 "	19 GPA	WATER	25 PSI
B	Cub	3.8 MPH	TTI	11003	24 "	20 "	100 "	19 GPA	WATER	25 PSI
C	Cub	3.8 MPH	TTI	11003	24 "	20 "	100 "	19 GPA	WATER	25 PSI
D	Cub	3.8 MPH	TTI	11003	29 "	20 "	100 "	19 GPA	WATER	25 PSI
E	Cub	3.8 MPH	TTI	11003	29 "	20 "	100 "	19 GPA	WATER	25 PSI
F	Cub	3.8 MPH	TTI	11003	29 "	20 "	100 "	19 GPA	WATER	25 PSI

Comments: Soybean injury was not evaluated in plots that were damaged by deer and groundhog damage. However, soybean injury was evaluated in at least three reps for each treatment.

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Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code	Jun-16-2017	Jun-18-2017	Jun-22-2017	Jun-24-2017	Jun-28-2017
Rating Date	injury	injury	injury	injury	injury
Rating Type	percent	percent	percent	percent	percent
Rating Unit	1 DAT-4"	3 DAT-4"	1 & 7 DAT	3 DAT-8"	7 & 14 DAT
Trt-Eval Interval	0	0	0	0	0
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
1	Roundup PowerMax	4.5	SL	32 fl oz/a		C	2	5	3		0
1	AMS		WG	17 lb/100 gal		C					
2	XtendiMax	2.9	SL	22 fl oz/a		C	3	6	6		3
2	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
2	Intact		L	0.5 % v/v		C					
3	Warrant Ultra	3.49	L	50 fl oz/a		C	15	22	29		17
3	XtendiMax	2.9	SL	22 fl oz/a		C					
3	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
3	Intact		L	0.5 % v/v		C					
4	Cobra	2	L	10 fl oz/a		C	16	22	30		19
4	XtendiMax	2.9	SL	22 fl oz/a		C					
4	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
4	Intact		L	0.5 % v/v		C					
5	Roundup PowerMax	4.5	SL	32 fl oz/a		A	0	2	0		0
5	AMS		WG	17 lb/100 gal		A					
6	XtendiMax	2.9	SL	22 fl oz/a		A	4	5	4		3
6	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
6	Intact		L	0.5 % v/v		A					
7	Warrant Ultra	3.49	L	50 fl oz/a		A	13	16	22		16
7	XtendiMax	2.9	SL	22 fl oz/a		A					
7	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
7	Intact		L	0.5 % v/v		A					
8	Cobra	2	L	10 fl oz/a		A	12	18	22		15
8	XtendiMax	2.9	SL	22 fl oz/a		A					
8	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
8	Intact		L	0.5 % v/v		A					
9	Roundup PowerMax	4.5	SL	32 fl oz/a		B	0	4	0		0
9	AMS		WG	17 lb/100 gal		B					
10	XtendiMax	2.9	SL	22 fl oz/a		B	4	4	3		1
10	Roundup PowerMax	4.5	SL	28.4 fl oz/a		B					
10	Intact		L	0.5 % v/v		B					
11	Warrant Ultra	3.49	L	50 fl oz/a		B	9	18	23		18
11	XtendiMax	2.9	SL	22 fl oz/a		B					
11	Roundup PowerMax	4.5	SL	28.4 fl oz/a		B					
11	Intact		L	0.5 % v/v		B					

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Pest Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code	Jun-16-2017	Jun-18-2017	Jun-22-2017	Jun-24-2017	Jun-28-2017
Rating Date	injury	injury	injury	injury	injury
Rating Type	percent	percent	percent	percent	percent
Rating Unit	1 DAT-4"	3 DAT-4"	1 & 7 DAT	3 DAT-8"	7 & 14 DAT
Trt-Eval Interval	0	0	0	0	0
Number of Decimals					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
12	Cobra	2	L	10	fl oz/a	B	16	22	32		24
12	XtendiMax	2.9	SL	22	fl oz/a	B					
12	Roundup PowerMax	4.5	SL	28.4	fl oz/a	B					
12	Intact		L	0.5	% v/v	B					
13	Roundup PowerMax	4.5	SL	32	fl oz/a	D			0	0	1
13	AMS		WG	17	lb/100 gal	D					
14	XtendiMax	2.9	SL	22	fl oz/a	D			5	3	2
14	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
14	Intact		L	0.5	% v/v	D					
15	Warrant Ultra	3.49	L	50	fl oz/a	D			10	12	13
15	XtendiMax	2.9	SL	22	fl oz/a	D					
15	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
15	Intact		L	0.5	% v/v	D					
16	Cobra	2	L	10	fl oz/a	D			28	30	28
16	XtendiMax	2.9	SL	22	fl oz/a	D					
16	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
16	Intact		L	0.5	% v/v	D					
17	Roundup PowerMax	4.5	SL	32	fl oz/a	F			0	2	2
17	AMS		WG	17	lb/100 gal	F					
18	XtendiMax	2.9	SL	22	fl oz/a	F			3	5	4
18	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
18	Intact		L	0.5	% v/v	F					
19	Warrant Ultra	3.49	L	50	fl oz/a	F			12	16	19
19	XtendiMax	2.9	SL	22	fl oz/a	F					
19	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
19	Intact		L	0.5	% v/v	F					
20	Cobra	2	L	10	fl oz/a	F			21	25	28
20	XtendiMax	2.9	SL	22	fl oz/a	F					
20	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
20	Intact		L	0.5	% v/v	F					
21	Roundup PowerMax	4.5	SL	32	fl oz/a	E			1	1	1
21	AMS		WG	17	lb/100 gal	E					
22	XtendiMax	2.9	SL	22	fl oz/a	E			3	3	2
22	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
22	Intact		L	0.5	% v/v	E					
23	Warrant Ultra	3.49	L	50	fl oz/a	E			11	15	15
23	XtendiMax	2.9	SL	22	fl oz/a	E					
23	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
23	Intact		L	0.5	% v/v	E					

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Pest Code					
Crop Code					
Rating Date	GLXMA Jun-16-2017	GLXMA Jun-18-2017	GLXMA Jun-22-2017	GLXMA Jun-24-2017	GLXMA Jun-28-2017
Rating Type	injury	injury	injury	injury	injury
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	1 DAT-4"	3 DAT-4"	1 & 7 DAT	3 DAT-8"	7 & 14 DAT
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
24	Cobra	2	L	10	fl oz/a	E			26	26	29
24	XtendiMax	2.9	SL	22	fl oz/a	E					
24	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
24	Intact		L	0.5	% v/v	E					
25	Untreated 1								0	0	0
26	Untreated 2								0	0	0
27	Untreated 3								0	0	0
28	Untreated 4								0	0	0
LSD P=.05							5.2	4.9	3.5	4.2	5.0
Standard Deviation							3.6	3.4	2.5	2.9	3.5
CV							50.54	31.51	26.6	37.93	42.75

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Pest Code	ANGR	AMAPO	AMBEL	HIBTR	GLXMA
Crop Code					
Rating Date	Jun-28-2017	Jun-28-2017	Jun-28-2017	Jun-28-2017	Jul-5-2017
Rating Type	control	control	control	control	injury
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	7 & 14 DAT	7 & 14 DAT	7 & 14 DAT	7 & 14 DAT	14 & 21 DAT
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
1	Roundup PowerMax	4.5	SL	32 fl oz/a		C	100	99	100	95	0
1	AMS		WG	17 lb/100 gal		C					
2	XtendiMax	2.9	SL	22 fl oz/a		C	100	100	100	99	0
2	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
2	Intact		L	0.5 % v/v		C					
3	Warrant Ultra	3.49	L	50 fl oz/a		C	100	100	100	100	12
3	XtendiMax	2.9	SL	22 fl oz/a		C					
3	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
3	Intact		L	0.5 % v/v		C					
4	Cobra	2	L	10 fl oz/a		C	100	100	100	98	2
4	XtendiMax	2.9	SL	22 fl oz/a		C					
4	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
4	Intact		L	0.5 % v/v		C					
5	Roundup PowerMax	4.5	SL	32 fl oz/a		A	100	100	100	90	0
5	AMS		WG	17 lb/100 gal		A					
6	XtendiMax	2.9	SL	22 fl oz/a		A	100	100	100	100	0
6	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
6	Intact		L	0.5 % v/v		A					
7	Warrant Ultra	3.49	L	50 fl oz/a		A	100	100	100	97	12
7	XtendiMax	2.9	SL	22 fl oz/a		A					
7	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
7	Intact		L	0.5 % v/v		A					
8	Cobra	2	L	10 fl oz/a		A	100	100	100	96	1
8	XtendiMax	2.9	SL	22 fl oz/a		A					
8	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
8	Intact		L	0.5 % v/v		A					
9	Roundup PowerMax	4.5	SL	32 fl oz/a		B	100	100	100	92	0
9	AMS		WG	17 lb/100 gal		B					
10	XtendiMax	2.9	SL	22 fl oz/a		B	100	100	100	98	0
10	Roundup PowerMax	4.5	SL	28.4 fl oz/a		B					
10	Intact		L	0.5 % v/v		B					
11	Warrant Ultra	3.49	L	50 fl oz/a		B	100	100	100	97	10
11	XtendiMax	2.9	SL	22 fl oz/a		B					
11	Roundup PowerMax	4.5	SL	28.4 fl oz/a		B					
11	Intact		L	0.5 % v/v		B					

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Pest Code	ANGR	AMAPO	AMBEL	HIBTR	GLXMA
Crop Code					
Rating Date	Jun-28-2017	Jun-28-2017	Jun-28-2017	Jun-28-2017	Jul-5-2017
Rating Type	control	control	control	control	injury
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	7 & 14 DAT	7 & 14 DAT	7 & 14 DAT	7 & 14 DAT	14 & 21 DAT
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
12	Cobra	2	L	10	fl oz/a	B	100	100	100	96	8
12	XtendiMax	2.9	SL	22	fl oz/a	B					
12	Roundup PowerMax	4.5	SL	28.4	fl oz/a	B					
12	Intact		L	0.5	% v/v	B					
13	Roundup PowerMax	4.5	SL	32	fl oz/a	D	97	37	32	36	0
13	AMS		WG	17	lb/100 gal	D					
14	XtendiMax	2.9	SL	22	fl oz/a	D	95	54	50	26	0
14	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
14	Intact		L	0.5	% v/v	D					
15	Warrant Ultra	3.49	L	50	fl oz/a	D	99	77	85	70	11
15	XtendiMax	2.9	SL	22	fl oz/a	D					
15	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
15	Intact		L	0.5	% v/v	D					
16	Cobra	2	L	10	fl oz/a	D	98	95	98	87	12
16	XtendiMax	2.9	SL	22	fl oz/a	D					
16	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
16	Intact		L	0.5	% v/v	D					
17	Roundup PowerMax	4.5	SL	32	fl oz/a	F	92	97	89	90	0
17	AMS		WG	17	lb/100 gal	F					
18	XtendiMax	2.9	SL	22	fl oz/a	F	92	99	91	91	0
18	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
18	Intact		L	0.5	% v/v	F					
19	Warrant Ultra	3.49	L	50	fl oz/a	F	98	90	95	80	14
19	XtendiMax	2.9	SL	22	fl oz/a	F					
19	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
19	Intact		L	0.5	% v/v	F					
20	Cobra	2	L	10	fl oz/a	F	97	95	96	86	17
20	XtendiMax	2.9	SL	22	fl oz/a	F					
20	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
20	Intact		L	0.5	% v/v	F					
21	Roundup PowerMax	4.5	SL	32	fl oz/a	E	94	28	28	25	0
21	AMS		WG	17	lb/100 gal	E					
22	XtendiMax	2.9	SL	22	fl oz/a	E	91	50	50	15	0
22	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
22	Intact		L	0.5	% v/v	E					
23	Warrant Ultra	3.49	L	50	fl oz/a	E	96	71	79	66	13
23	XtendiMax	2.9	SL	22	fl oz/a	E					
23	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
23	Intact		L	0.5	% v/v	E					

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Pest Code	ANGR	AMAPO	AMBEL	HIBTR	GLXMA
Crop Code					
Rating Date	Jun-28-2017	Jun-28-2017	Jun-28-2017	Jun-28-2017	Jul-5-2017
Rating Type	control	control	control	control	injury
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	7 & 14 DAT	7 & 14 DAT	7 & 14 DAT	7 & 14 DAT	14 & 21 DAT
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
24	Cobra	2	L	10	fl oz/a	E	98	91	99	80	16
24	XtendiMax	2.9	SL	22	fl oz/a	E					
24	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
24	Intact		L	0.5	% v/v	E					
25	Untreated 1						0	0	0	0	0
26	Untreated 2						0	0	0	0	0
27	Untreated 3						0	0	0	0	0
28	Untreated 4						0	0	0	0	0
	LSD P=.05						3.3	6.5	6.9	10.9	4.1
	Standard Deviation						2.3	4.6	4.9	7.8	2.9
	CV						2.78	6.19	6.55	11.3	68.78

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Pest Code	ANGR	CHEAL	AMAPO	AMBEL	HIBTR
Crop Code					
Rating Date	Jul-5-2017	Jul-5-2017	Jul-5-2017	Jul-5-2017	Jul-5-2017
Rating Type	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	14 & 21 DAT	14 & 21 DAT	14 & 21 DAT	14 & 21 DAT	14 & 21 DAT
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
1	Roundup PowerMax	4.5	SL	32 fl oz/a		C	97	98	100	98	94
1	AMS		WG	17 lb/100 gal		C					
2	XtendiMax	2.9	SL	22 fl oz/a		C	100	100	100	100	99
2	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
2	Intact		L	0.5 % v/v		C					
3	Warrant Ultra	3.49	L	50 fl oz/a		C	100	100	100	100	100
3	XtendiMax	2.9	SL	22 fl oz/a		C					
3	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
3	Intact		L	0.5 % v/v		C					
4	Cobra	2	L	10 fl oz/a		C	100	100	100	100	100
4	XtendiMax	2.9	SL	22 fl oz/a		C					
4	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
4	Intact		L	0.5 % v/v		C					
5	Roundup PowerMax	4.5	SL	32 fl oz/a		A	100	100	97	97	92
5	AMS		WG	17 lb/100 gal		A					
6	XtendiMax	2.9	SL	22 fl oz/a		A	100	100	100	100	100
6	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
6	Intact		L	0.5 % v/v		A					
7	Warrant Ultra	3.49	L	50 fl oz/a		A	100	100	100	100	100
7	XtendiMax	2.9	SL	22 fl oz/a		A					
7	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
7	Intact		L	0.5 % v/v		A					
8	Cobra	2	L	10 fl oz/a		A	100	100	100	100	95
8	XtendiMax	2.9	SL	22 fl oz/a		A					
8	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
8	Intact		L	0.5 % v/v		A					
9	Roundup PowerMax	4.5	SL	32 fl oz/a		B	96	98	100	99	87
9	AMS		WG	17 lb/100 gal		B					
10	XtendiMax	2.9	SL	22 fl oz/a		B	100	100	100	100	99
10	Roundup PowerMax	4.5	SL	28.4 fl oz/a		B					
10	Intact		L	0.5 % v/v		B					
11	Warrant Ultra	3.49	L	50 fl oz/a		B	100	100	100	100	99
11	XtendiMax	2.9	SL	22 fl oz/a		B					
11	Roundup PowerMax	4.5	SL	28.4 fl oz/a		B					
11	Intact		L	0.5 % v/v		B					

* Adjusted means

Could not calculate LSD (% mean diff) for columns 16,22 because error mean square = 0.

Time of day effects on the activity of Xtend in RR2 Xtend soybean

Trial ID: SOY14-17

Location: Campus B-10 (Quonset)

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code	ANGR	CHEAL	AMAPO	AMBEL	HIBTR
Crop Code					
Rating Date	Jul-5-2017	Jul-5-2017	Jul-5-2017	Jul-5-2017	Jul-5-2017
Rating Type	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	14 & 21 DAT	14 & 21 DAT	14 & 21 DAT	14 & 21 DAT	14 & 21 DAT
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
12	Cobra	2	L	10	fl oz/a	B	100	100	100	100	96
12	XtendiMax	2.9	SL	22	fl oz/a	B					
12	Roundup PowerMax	4.5	SL	28.4	fl oz/a	B					
12	Intact		L	0.5	% v/v	B					
13	Roundup PowerMax	4.5	SL	32	fl oz/a	D	100	100	44	43	58
13	AMS		WG	17	lb/100 gal	D					
14	XtendiMax	2.9	SL	22	fl oz/a	D	100	100	68	57	50
14	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
14	Intact		L	0.5	% v/v	D					
15	Warrant Ultra	3.49	L	50	fl oz/a	D	100	100	88	93	85
15	XtendiMax	2.9	SL	22	fl oz/a	D					
15	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
15	Intact		L	0.5	% v/v	D					
16	Cobra	2	L	10	fl oz/a	D	100	100	99	100	92
16	XtendiMax	2.9	SL	22	fl oz/a	D					
16	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
16	Intact		L	0.5	% v/v	D					
17	Roundup PowerMax	4.5	SL	32	fl oz/a	F	100	100	100	99	97
17	AMS		WG	17	lb/100 gal	F					
18	XtendiMax	2.9	SL	22	fl oz/a	F	100	100	100	100	100
18	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
18	Intact		L	0.5	% v/v	F					
19	Warrant Ultra	3.49	L	50	fl oz/a	F	100	100	96	100	85
19	XtendiMax	2.9	SL	22	fl oz/a	F					
19	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
19	Intact		L	0.5	% v/v	F					
20	Cobra	2	L	10	fl oz/a	F	100	100	98	100	98
20	XtendiMax	2.9	SL	22	fl oz/a	F					
20	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
20	Intact		L	0.5	% v/v	F					
21	Roundup PowerMax	4.5	SL	32	fl oz/a	E	100	100	61	55	48
21	AMS		WG	17	lb/100 gal	E					
22	XtendiMax	2.9	SL	22	fl oz/a	E	100	100	80	64	51
22	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
22	Intact		L	0.5	% v/v	E					
23	Warrant Ultra	3.49	L	50	fl oz/a	E	100	99	85	84	70
23	XtendiMax	2.9	SL	22	fl oz/a	E					
23	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
23	Intact		L	0.5	% v/v	E					

* Adjusted means

Could not calculate LSD (% mean diff) for columns 16,22 because error mean square = 0.

Time of day effects on the activity of Xtend in RR2 Xtend soybean

Trial ID: SOY14-17

Location: Campus B-10 (Quonset)

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code	ANGR	CHEAL	AMAPO	AMBEL	HIBTR
Crop Code					
Rating Date	Jul-5-2017	Jul-5-2017	Jul-5-2017	Jul-5-2017	Jul-5-2017
Rating Type	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	14 & 21 DAT	14 & 21 DAT	14 & 21 DAT	14 & 21 DAT	14 & 21 DAT
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
24	Cobra	2	L	10	fl oz/a	E	100	100	94	100	95
24	XtendiMax	2.9	SL	22	fl oz/a	E					
24	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
24	Intact		L	0.5	% v/v	E					
25	Untreated 1						0	0	0	0	0
26	Untreated 2						0	0	0	0	0
27	Untreated 3						0	0	0	0	0
28	Untreated 4						0	0	0	0	0
	LSD P=.05						1.2	2.1	7.5	5.2	9.2
	Standard Deviation						0.8	1.5	5.3	3.7	6.5
	CV						0.98	1.73	6.76	4.68	8.72

* Adjusted means

Could not calculate LSD (% mean diff) for columns 16,22 because error mean square = 0.

Time of day effects on the activity of Xtend in RR2 Xtend soybean

Trial ID: SOY14-17

Location: Campus B-10 (Quonset)

Investigator: Christy Sprague
Study Director: Sprague, Powell, Stiles

Pest Code		ANGR	CHEAL	AMAPO	AMBEL
Crop Code	GLXMA				
Rating Date	Jul-13-2017	Jul-13-2017	Jul-13-2017	Jul-13-2017	Jul-13-2017
Rating Type	injury	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	21 & 28 DAT	21 & 28 DAT	21 & 28 DAT	21 & 28 DAT	21 & 28 DAT
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
1	Roundup PowerMax	4.5	SL	32 fl oz/a		C	0	83	96	91	96
1	AMS		WG	17 lb/100 gal		C					
2	XtendiMax	2.9	SL	22 fl oz/a		C	0	95	100	100	100
2	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
2	Intact		L	0.5 % v/v		C					
3	Warrant Ultra	3.49	L	50 fl oz/a		C	0	100	100	100	100
3	XtendiMax	2.9	SL	22 fl oz/a		C					
3	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
3	Intact		L	0.5 % v/v		C					
4	Cobra	2	L	10 fl oz/a		C	0	95	99	100	100
4	XtendiMax	2.9	SL	22 fl oz/a		C					
4	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C					
4	Intact		L	0.5 % v/v		C					
5	Roundup PowerMax	4.5	SL	32 fl oz/a		A	0	87	86	91	84
5	AMS		WG	17 lb/100 gal		A					
6	XtendiMax	2.9	SL	22 fl oz/a		A	0	97	100	100	100
6	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
6	Intact		L	0.5 % v/v		A					
7	Warrant Ultra	3.49	L	50 fl oz/a		A	0	100	100	100	100
7	XtendiMax	2.9	SL	22 fl oz/a		A					
7	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
7	Intact		L	0.5 % v/v		A					
8	Cobra	2	L	10 fl oz/a		A	0	96	100	100	100
8	XtendiMax	2.9	SL	22 fl oz/a		A					
8	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A					
8	Intact		L	0.5 % v/v		A					
9	Roundup PowerMax	4.5	SL	32 fl oz/a		B	0	82	87	94	91
9	AMS		WG	17 lb/100 gal		B					
10	XtendiMax	2.9	SL	22 fl oz/a		B	0	94	100	100	100
10	Roundup PowerMax	4.5	SL	28.4 fl oz/a		B					
10	Intact		L	0.5 % v/v		B					
11	Warrant Ultra	3.49	L	50 fl oz/a		B	0	100	100	100	100
11	XtendiMax	2.9	SL	22 fl oz/a		B					
11	Roundup PowerMax	4.5	SL	28.4 fl oz/a		B					
11	Intact		L	0.5 % v/v		B					

* Adjusted means

Could not calculate LSD (% mean diff) for columns 16,22 because error mean square = 0.

Time of day effects on the activity of Xtend in RR2 Xtend soybean

Trial ID: SOY14-17

Location: Campus B-10 (Quonset)

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code					
Crop Code	GLXMA	ANGR	CHEAL	AMAPO	AMBEL
Rating Date	Jul-13-2017	Jul-13-2017	Jul-13-2017	Jul-13-2017	Jul-13-2017
Rating Type	injury	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	21 & 28 DAT	21 & 28 DAT	21 & 28 DAT	21 & 28 DAT	21 & 28 DAT
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
12	Cobra	2	L	10	fl oz/a	B	0	98	100	100	100
12	XtendiMax	2.9	SL	22	fl oz/a	B					
12	Roundup PowerMax	4.5	SL	28.4	fl oz/a	B					
12	Intact		L	0.5	% v/v	B					
13	Roundup PowerMax	4.5	SL	32	fl oz/a	D	0	93	100	66	47
13	AMS		WG	17	lb/100 gal	D					
14	XtendiMax	2.9	SL	22	fl oz/a	D	0	96	100	76	64
14	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
14	Intact		L	0.5	% v/v	D					
15	Warrant Ultra	3.49	L	50	fl oz/a	D	0	100	100	91	90
15	XtendiMax	2.9	SL	22	fl oz/a	D					
15	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
15	Intact		L	0.5	% v/v	D					
16	Cobra	2	L	10	fl oz/a	D	0	95	100	97	100
16	XtendiMax	2.9	SL	22	fl oz/a	D					
16	Roundup PowerMax	4.5	SL	28.4	fl oz/a	D					
16	Intact		L	0.5	% v/v	D					
17	Roundup PowerMax	4.5	SL	32	fl oz/a	F	0	91	100	100	94
17	AMS		WG	17	lb/100 gal	F					
18	XtendiMax	2.9	SL	22	fl oz/a	F	0	98	100	100	100
18	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
18	Intact		L	0.5	% v/v	F					
19	Warrant Ultra	3.49	L	50	fl oz/a	F	0	99	100	100	100
19	XtendiMax	2.9	SL	22	fl oz/a	F					
19	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
19	Intact		L	0.5	% v/v	F					
20	Cobra	2	L	10	fl oz/a	F	0	96	100	100	100
20	XtendiMax	2.9	SL	22	fl oz/a	F					
20	Roundup PowerMax	4.5	SL	28.4	fl oz/a	F					
20	Intact		L	0.5	% v/v	F					
21	Roundup PowerMax	4.5	SL	32	fl oz/a	E	0	93	95	68	59
21	AMS		WG	17	lb/100 gal	E					
22	XtendiMax	2.9	SL	22	fl oz/a	E	0	98	100	86	69
22	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
22	Intact		L	0.5	% v/v	E					
23	Warrant Ultra	3.49	L	50	fl oz/a	E	0	100	100	88	92
23	XtendiMax	2.9	SL	22	fl oz/a	E					
23	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
23	Intact		L	0.5	% v/v	E					

* Adjusted means

Could not calculate LSD (% mean diff) for columns 16,22 because error mean square = 0.

Time of day effects on the activity of Xtend in RR2 Xtend soybean

Trial ID: SOY14-17

Location: Campus B-10 (Quonset)

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code		ANGR	CHEAL	AMAPO	AMBEL
Crop Code	GLXMA				
Rating Date	Jul-13-2017	Jul-13-2017	Jul-13-2017	Jul-13-2017	Jul-13-2017
Rating Type	injury	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	21 & 28 DAT	21 & 28 DAT	21 & 28 DAT	21 & 28 DAT	21 & 28 DAT
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
24	Cobra	2	L	10	fl oz/a	E	0	99	100	96	100
24	XtendiMax	2.9	SL	22	fl oz/a	E					
24	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E					
24	Intact		L	0.5	% v/v	E					
25	Untreated 1						0	0	0	0	0
26	Untreated 2						0	0	0	0	0
27	Untreated 3						0	0	0	0	0
28	Untreated 4						0	0	0	0	0
	LSD P=.05						.	5.1	6.5	7.8	7.5
	Standard Deviation						0.0	3.6	4.6	5.5	5.4
	CV						0.0	4.47	5.54	6.92	6.85

* Adjusted means

Could not calculate LSD (% mean diff) for columns 16,22 because error mean square = 0.

Time of day effects on the activity of Xtend in RR2 Xtend soybean

Trial ID: SOY14-17

Location: Campus B-10 (Quonset)

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code	HIBTR
Crop Code	
Rating Date	Jul-13-2017
Rating Type	control
Rating Unit	percent
Trt-Eval Interval	21 & 28 DAT
Number of Decimals	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*
1	Roundup PowerMax	4.5	SL	32 fl oz/a		C	80
1	AMS		WG	17 lb/100 gal		C	
2	XtendiMax	2.9	SL	22 fl oz/a		C	98
2	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C	
2	Intact		L	0.5 % v/v		C	
3	Warrant Ultra	3.49	L	50 fl oz/a		C	100
3	XtendiMax	2.9	SL	22 fl oz/a		C	
3	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C	
3	Intact		L	0.5 % v/v		C	
4	Cobra	2	L	10 fl oz/a		C	98
4	XtendiMax	2.9	SL	22 fl oz/a		C	
4	Roundup PowerMax	4.5	SL	28.4 fl oz/a		C	
4	Intact		L	0.5 % v/v		C	
5	Roundup PowerMax	4.5	SL	32 fl oz/a		A	60
5	AMS		WG	17 lb/100 gal		A	
6	XtendiMax	2.9	SL	22 fl oz/a		A	97
6	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A	
6	Intact		L	0.5 % v/v		A	
7	Warrant Ultra	3.49	L	50 fl oz/a		A	97
7	XtendiMax	2.9	SL	22 fl oz/a		A	
7	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A	
7	Intact		L	0.5 % v/v		A	
8	Cobra	2	L	10 fl oz/a		A	91
8	XtendiMax	2.9	SL	22 fl oz/a		A	
8	Roundup PowerMax	4.5	SL	28.4 fl oz/a		A	
8	Intact		L	0.5 % v/v		A	
9	Roundup PowerMax	4.5	SL	32 fl oz/a		B	61
9	AMS		WG	17 lb/100 gal		B	
10	XtendiMax	2.9	SL	22 fl oz/a		B	97
10	Roundup PowerMax	4.5	SL	28.4 fl oz/a		B	
10	Intact		L	0.5 % v/v		B	
11	Warrant Ultra	3.49	L	50 fl oz/a		B	95
11	XtendiMax	2.9	SL	22 fl oz/a		B	
11	Roundup PowerMax	4.5	SL	28.4 fl oz/a		B	
11	Intact		L	0.5 % v/v		B	

* Adjusted means

Could not calculate LSD (% mean diff) for columns 16,22 because error mean square = 0.

Time of day effects on the activity of Xtend in RR2 Xtend soybean

Trial ID: SOY14-17

Location: Campus B-10 (Quonset)

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code	HIBTR
Crop Code	
Rating Date	Jul-13-2017
Rating Type	control
Rating Unit	percent
Trt-Eval Interval	21 & 28 DAT
Number of Decimals	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*
12	Cobra	2	L	10 fl oz/a	B	94	
12	XtendiMax	2.9	SL	22 fl oz/a	B		
12	Roundup PowerMax	4.5	SL	28.4 fl oz/a	B		
12	Intact		L	0.5 % v/v	B		
13	Roundup PowerMax	4.5	SL	32 fl oz/a	D	63	
13	AMS		WG	17 lb/100 gal	D		
14	XtendiMax	2.9	SL	22 fl oz/a	D	60	
14	Roundup PowerMax	4.5	SL	28.4 fl oz/a	D		
14	Intact		L	0.5 % v/v	D		
15	Warrant Ultra	3.49	L	50 fl oz/a	D	86	
15	XtendiMax	2.9	SL	22 fl oz/a	D		
15	Roundup PowerMax	4.5	SL	28.4 fl oz/a	D		
15	Intact		L	0.5 % v/v	D		
16	Cobra	2	L	10 fl oz/a	D	80	
16	XtendiMax	2.9	SL	22 fl oz/a	D		
16	Roundup PowerMax	4.5	SL	28.4 fl oz/a	D		
16	Intact		L	0.5 % v/v	D		
17	Roundup PowerMax	4.5	SL	32 fl oz/a	F	86	
17	AMS		WG	17 lb/100 gal	F		
18	XtendiMax	2.9	SL	22 fl oz/a	F	99	
18	Roundup PowerMax	4.5	SL	28.4 fl oz/a	F		
18	Intact		L	0.5 % v/v	F		
19	Warrant Ultra	3.49	L	50 fl oz/a	F	90	
19	XtendiMax	2.9	SL	22 fl oz/a	F		
19	Roundup PowerMax	4.5	SL	28.4 fl oz/a	F		
19	Intact		L	0.5 % v/v	F		
20	Cobra	2	L	10 fl oz/a	F	95	
20	XtendiMax	2.9	SL	22 fl oz/a	F		
20	Roundup PowerMax	4.5	SL	28.4 fl oz/a	F		
20	Intact		L	0.5 % v/v	F		
21	Roundup PowerMax	4.5	SL	32 fl oz/a	E	45	
21	AMS		WG	17 lb/100 gal	E		
22	XtendiMax	2.9	SL	22 fl oz/a	E	73	
22	Roundup PowerMax	4.5	SL	28.4 fl oz/a	E		
22	Intact		L	0.5 % v/v	E		
23	Warrant Ultra	3.49	L	50 fl oz/a	E	78	
23	XtendiMax	2.9	SL	22 fl oz/a	E		
23	Roundup PowerMax	4.5	SL	28.4 fl oz/a	E		
23	Intact		L	0.5 % v/v	E		

* Adjusted means

Could not calculate LSD (% mean diff) for columns 16,22 because error mean square = 0.

Time of day effects on the activity of Xtend in RR2 Xtend soybean

Trial ID: SOY14-17

Location: Campus B-10 (Quonset)

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code	HIBTR
Crop Code	
Rating Date	Jul-13-2017
Rating Type	control
Rating Unit	percent
Trt-Eval Interval	21 & 28 DAT
Number of Decimals	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*
24	Cobra	2	L	10	fl oz/a	E	88
24	XtendiMax	2.9	SL	22	fl oz/a	E	
24	Roundup PowerMax	4.5	SL	28.4	fl oz/a	E	
24	Intact		L	0.5	% v/v	E	
25	Untreated 1						0
26	Untreated 2						0
27	Untreated 3						0
28	Untreated 4						0
	LSD P=.05						9.9 .
	Standard Deviation						7.0 .
	CV						9.77 .

* Adjusted means

Could not calculate LSD (% mean diff) for columns 16,22 because error mean square = 0.