

(01-ASC-2)

Postemergence applied Raptor, Ultra Blazer and Extreme following Prowl and Outlook for weed control in soybean, Ames, Iowa, 2001. Owen, Micheal D.K., James F. Lux, and Damian D. Franzenburg. The purpose of this study was to evaluate imazamox, acifluorfen, and glyphosate applied postemergence for weed efficacy and crop phytotoxicity in a glyphosate resistant soybean variety. The soil was a Canisteo, Nicollet, Clarion Webster clay loam with a pH 6.8 and 4.3% organic matter. The experimental design was a randomized complete block with three replications and plots were 10 by 25 ft. The 2000 crop was corn. Tillage included a fall chisel plowing and spring field cultivation. Preplant treatments were incorporated one pass with a field cultivator operating 2 to 3 inches deep. Crop residue on the soil surface was 12% at planting. "Asgrow variety AG 3302 RR/STS" soybeans were planted 1.25 inches deep on June 8, at 154,000 seeds/A in 30-inch rows. May rainfall included: 0.18, 0.39, 0.83, 0.12, 0.15, 0.22, 0.07, 0.98, 0.26, 1.58, 0.05, 0.15, 0.03, 0.27, 0.20, 0.02, 0.13 and 0.64 inches on May 1, 2, 3, 4, 5, 6, 9, 10, 13, 20, 21, 23, 24, 25, 26, 27, 28 and 31, respectively. Total rainfall for May was 6.27 inches. June rainfall included: 0.07, 0.02, 0.30, 0.14, 0.59, 0.38, 0.16 and 0.01 inches on June 1, 4, 5, 10, 12, 14, 16 and 20, respectively. Total rainfall for June was 1.67 inches. July rainfall included: 0.44 inches and 1.24 inches from July 1 through 15 and 16 through 31, respectively. Rainfall total for August was 2.50 inches. Application information is listed below:

Date	June 8	June 9	June 29	July 3
Treatment	PPI	PRE	EPOST	POST
Sprayer				
gpa	20	20	20	20
psi	30	30	30	30
nozzle	11002	11002	11003	11003
Temperature (C)				
air	27	28	30	31
soil (4 inch)	25	21	28	35
Soil moisture	moist	dry	dry	dry
Wind (mph)	4-6 N	0-7 W	3-4 E	0-3 W
Sky	pt. cloudy	clear	pt. cloudy	pt. cloudy
Relative humidity (%)	59%	56%	68%	78%
Soybean growth				
leaf no.	-	-	V2-3	V3
height (inch)	-	-	3-4	4
Giant foxtail				
leaf no.	-	-	2-4	3-5
height (inch)	-	-	1-3	2-4
infestation (ft <sup>2</sup> )	-	-	0-1	5-10
Common cocklebur				
leaf no.	-	-	3	4-10
height (inch)	-	-	2-4	4-8
infestation (ft <sup>2</sup> )	-	-	0-1	0-1
Common lambsquarters				
leaf no.	-	-	numerous	numerous
height (inch)	-	-	1	4
infestation (ft <sup>2</sup> )	-	-	0-1	0-1
Common ragweed				
leaf no.	-	-	numerous	numerous
height (inch)	-	-	2-4	3-6
infestation (ft <sup>2</sup> )	-	-	0-2	0-2

Common waterhemp				
leaf no.	-	-	numerous	numerous
height (inch)	-	-	2-3	1-5
infestation (ft <sup>2</sup> )	-	-	0-5	0-3
Pennsylvania smartweed				
leaf no.	-	-	numerous	numerous
height (inch)	-	-	1-2	3-4
infestation (ft <sup>2</sup> )	-	-	0-1	0-1
Velvetleaf				
leaf no.	-	-	3-5	3-7
height (inch)	-	-	2-3	4
infestation (ft <sup>2</sup> )	-	-	0-2	0-2

Significant soybean injury (27 to 30%) was evident on July 9 for treatments with EPOST Ultra Blazer plus either Pursuit or Raptor. EPOST Extreme treatments resulted in 27 to 28% injury. The POST Extreme treatment demonstrated 18% injury. Injury ratings taken on July 18 were 5 to 8% lower than July 9 injury ratings for the above mentioned treatments. Injury ranged from 7 to 15% for these treatments when observed on August 20. On July 18, PPI Authority plus Pursuit Plus provided 90 and 83% control of common waterhemp and common ragweed, respectively. Common cocklebur control was poor on both evaluation dates. Control of other weeds was excellent. Pre Outlook and Dual II Magnum did not control velvetleaf, common ragweed, and common cocklebur on either evaluation date, but provided good to excellent control of all other weeds evaluated on July 18 and August 20. On August 20, giant foxtail control began to break for EPOST Raptor plus Ultra Blazer, with or without Outlook. PPI Authority plus Pursuit Plus control of common waterhemp and common ragweed was no longer acceptable on August 20. All unmentioned treatments demonstrated excellent weed control on August 20. (Dept. of Agronomy, Iowa State University, Ames)

DATA MEAN

TITLE: Postemergence applied Raptor, Ultra Blazer and Extreme following Prowl and Outlook for weed control in soybean.

CREATED: 06/05/2001 REVISED: 12/13/2001

COMPLETED: N

PROJECT TYPE: HERBICIDE

LOCATION: AMES, IA

RESEARCHED BY: IA State University

DESIGN: RANDOMIZED COMPLETE BLOCK DESIGN

PLOT SIZE: 10.00 FT WIDE X 25.00 FT LONG

REPS: 03

TRT NUM	TREATMENT COMPONENT	DOSAGE			GLXMA	GLXMA	SETFA	ABUTH	AMATA
		RATE	UNIT	TM	PHY % 07/09/01	PHY % 07/18/01	CON % 07/18/01	CON % 07/18/01	CON % 07/18/01
1A	UNTREATED CHECK	0.00	NA	0	0	0	0	0	0
2A	PROWL 3.3EC	1.49	LAA	1	30	22	93	96	98
	B PURSUIT (2SL)	0.063	LAA	3					
	C»ULTRA BLAZER (2SL)	0.188	LAA	3					
	D»CROP OIL CONCENTRATE	1.00	PMV	3					
	E»AMMONIUM SULFATE	2.50	LMA	3					
3A	PROWL 3.3EC	1.49	LAA	1	28	22	98	99	99
	B»RAPTOR (1AS)	0.031	LAA	3					
	C»ULTRA BLAZER (2SL)	0.188	LAA	3					
	D»CROP OIL CONCENTRATE	1.00	PMV	3					
	E»AMMONIUM SULFATE	2.50	LMA	3					
4A»	RAPTOR (1AS)	0.039	LAA	3	27	20	92	99	99
	B»ULTRA BLAZER (2SL)	0.125	LAA	3					
	C»CROP OIL CONCENTRATE	1.00	PMV	3					
	D»AMMONIUM SULFATE	2.50	LMA	3					
5A»	OUTLOOK (6EC)	0.47	LAA	3	30	25	87	99	98
	B»RAPTOR (1AS)	0.039	LAA	3					
	C»ULTRA BLAZER (2SL)	0.125	LAA	3					
	D»CROP OIL CONCENTRATE	1.00	PMV	3					
	E»AMMONIUM SULFATE	2.50	LMA	3					
6A	PURSUIT PLUS (2.9EC)	0.91	LAA	1	0	0	92	95	90
	B»AUTHORITY (75WG)	0.141	LAA	1					
7A	PURSUIT PLUS (2.9EC)	0.91	LAA	1	0	2	99	99	99
	B»ROUNDUP ULTRAMAX (5SL)	1.02	LAA	4					
	C»AMMONIUM SULFATE	8.50	PMG	4					
8A	PROWL 3.3EC	1.24	LAA	1	18	13	99	99	98
	B»EXTREME (2.17SL)	0.814	LAA	4					
	C»NIS	0.125	PMV	4					
	D»AMMONIUM SULFATE	8.50	PMG	4					
9A	PROWL 3.3EC	1.24	LAA	1	2	3	99	99	99
	B»ROUNDUP ULTRAMAX (5SL)	1.02	LAA	4					
	C»AMMONIUM SULFATE	8.50	PMG	4					
10A»	EXTREME (2.17SL)	0.814	LAA	3	28	22	99	99	99
	B»NIS	0.125	PMV	3					
	C»AMMONIUM SULFATE	8.50	PMG	3					
11A»	OUTLOOK (6EC)	0.47	LAA	3	27	20	99	99	98
	B»EXTREME (2.17SL)	0.814	LAA	3					
	C»NIS	0.125	PMV	3					
	D»AMMONIUM SULFATE	17.00	PMG	3					
12A»	OUTLOOK (6EC)	0.98	LAA	2	3	3	95	23	99
13A»	DUAL II MAGNUM (7.64EC)	1.59	LAA	2	0	0	95	10	98
LSD (0.05)					7.11	8.34	4.88	19.73	5.07

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**PROJECT TYPE:** HERBICIDE

**LOCATION:** AMES, IA

**RESEARCHED BY:** IA State University

**DESIGN:** RANDOMIZED COMPLETE BLOCK DESIGN

**PLOT SIZE:** 10.00 FT WIDE X 25.00 FT LONG

**REPS:** 03

TRT NUM	TREATMENT COMPONENT	DOSAGE			AMBEL	CHEAL	POLPY	XANST	GLXMA
		RATE	UNIT	TM	CON % 07/18/01	CON % 07/18/01	CON % 07/18/01	CON % 07/18/01	PHY % 08/20/01
1A	UNTREATED CHECK	0.00	NA	0	0	0	0	0	0
2A	PROWL 3.3EC	1.49	LAA	1	98	99	99	98	13
	B>PURSUIT (2SL)	0.063	LAA	3					
	C»ULTRA BLAZER (2SL)	0.188	LAA	3					
	D»CROP OIL CONCENTRATE	1.00	PMV	3					
	E»AMMONIUM SULFATE	2.50	LMA	3					
3A	PROWL 3.3EC	1.49	LAA	1	96	99	99	96	15
	B»RAPTOR (1AS)	0.031	LAA	3					
	C»ULTRA BLAZER (2SL)	0.188	LAA	3					
	D»CROP OIL CONCENTRATE	1.00	PMV	3					
	E»AMMONIUM SULFATE	2.50	LMA	3					
4A»	RAPTOR (1AS)	0.039	LAA	3	98	96	99	99	15
	B»ULTRA BLAZER (2SL)	0.125	LAA	3					
	C»CROP OIL CONCENTRATE	1.00	PMV	3					
	D»AMMONIUM SULFATE	2.50	LMA	3					
5A»	OUTLOOK (6EC)	0.47	LAA	3	96	98	99	99	15
	B»RAPTOR (1AS)	0.039	LAA	3					
	C»ULTRA BLAZER (2SL)	0.125	LAA	3					
	D»CROP OIL CONCENTRATE	1.00	PMV	3					
	E»AMMONIUM SULFATE	2.50	LMA	3					
6A	PURSUIT PLUS (2.9EC)	0.91	LAA	1	83	96	99	48	0
	B»AUTHORITY (75WG)	0.141	LAA	1					
7A	PURSUIT PLUS (2.9EC)	0.91	LAA	1	99	99	99	99	0
	B»ROUNDUP ULTRAMAX (5SL)	1.02	LAA	4					
	C»AMMONIUM SULFATE	8.50	PMG	4					
8A	PROWL 3.3EC	1.24	LAA	1	99	99	99	99	7
	B»EXTREME (2.17SL)	0.814	LAA	4					
	C»NIS	0.125	PMV	4					
	D»AMMONIUM SULFATE	8.50	PMG	4					
9A	PROWL 3.3EC	1.24	LAA	1	99	99	98	99	0
	B»ROUNDUP ULTRAMAX (5SL)	1.02	LAA	4					
	C»AMMONIUM SULFATE	8.50	PMG	4					
10A»	EXTREME (2.17SL)	0.814	LAA	3	99	99	96	99	13
	B»NIS	0.125	PMV	3					
	C»AMMONIUM SULFATE	8.50	PMG	3					
11A»	OUTLOOK (6EC)	0.47	LAA	3	99	99	99	98	12
	B»EXTREME (2.17SL)	0.814	LAA	3					
	C»NIS	0.125	PMV	3					
	D»AMMONIUM SULFATE	17.00	PMG	3					
12A»	OUTLOOK (6EC)	0.98	LAA	2	76	86	86	17	0
13A»	DUAL II MAGNUM (7.64EC)	1.59	LAA	2	40	85	83	10	0
LSD (0.05)					21.48	7.90	9.57	13.43	6.59

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RESEARCHED BY: IA State University

DESIGN: RANDOMIZED COMPLETE BLOCK DESIGN

PLOT SIZE: 10.00 FT WIDE X 25.00 FT LONG

REPS: 03

TRT NUM	TREATMENT COMPONENT	DOSAGE			SETFA	ABUTH	AMATA	AMBEL	CHEAL	
		RATE	UNIT	TM	CON % 08/20/01	CON % 08/20/01	CON % 08/20/01	CON % 08/20/10	CON % 08/20/01	
1A	UNTREATED CHECK	0.00	NA	0	0	0	0	0	0	
2A	PROWL 3.3EC	1.49	LAA	1	90	92	98	93	95	
	B PURSUIT (2SL)	0.063	LAA	3						
	C»ULTRA BLAZER (2SL)	0.188	LAA	3						
	D»CROP OIL CONCENTRATE	1.00	PMV	3						
	E»AMMONIUM SULFATE	2.50	LMA	3						
3A	PROWL 3.3EC	1.49	LAA	1	95	98	99	92	96	
	B»RAPTOR (1AS)	0.031	LAA	3						
	C»ULTRA BLAZER (2SL)	0.188	LAA	3						
	D»CROP OIL CONCENTRATE	1.00	PMV	3						
	E»AMMONIUM SULFATE	2.50	LMA	3						
4A»	RAPTOR (1AS)	0.039	LAA	3	80	95	95	90	93	
	B»ULTRA BLAZER (2SL)	0.125	LAA	3						
	C»CROP OIL CONCENTRATE	1.00	PMV	3						
	D»AMMONIUM SULFATE	2.50	LMA	3						
5A»	OUTLOOK (6EC)	0.47	LAA	3	73	99	91	85	96	
	B»RAPTOR (1AS)	0.039	LAA	3						
	C»ULTRA BLAZER (2SL)	0.125	LAA	3						
	D»CROP OIL CONCENTRATE	1.00	PMV	3						
	E»AMMONIUM SULFATE	2.50	LMA	3						
6A	PURSUIT PLUS (2.9EC)	0.91	LAA	1	92	95	77	67	96	
	B»AUTHORITY (75WG)	0.141	LAA	1						
7A	PURSUIT PLUS (2.9EC)	0.91	LAA	1	99	98	99	99	99	
	B»ROUNDUP ULTRAMAX (5SL)	1.02	LAA	4						
	C»AMMONIUM SULFATE	8.50	PMG	4						
8A	PROWL 3.3EC	1.24	LAA	1	99	99	96	99	99	
	B»EXTREME (2.17SL)	0.814	LAA	4						
	C»NIS	0.125	PMV	4						
	D»AMMONIUM SULFATE	8.50	PMG	4						
9A	PROWL 3.3EC	1.24	LAA	1	99	99	99	99	99	
	B»ROUNDUP ULTRAMAX (5SL)	1.02	LAA	4						
	C»AMMONIUM SULFATE	8.50	PMG	4						
10A»	EXTREME (2.17SL)	0.814	LAA	3	98	99	96	99	99	
	B»NIS	0.125	PMV	3						
	C»AMMONIUM SULFATE	8.50	PMG	3						
11A»	OUTLOOK (6EC)	0.47	LAA	3	98	99	93	98	99	
	B»EXTREME (2.17SL)	0.814	LAA	3						
	C»NIS	0.125	PMV	3						
	D»AMMONIUM SULFATE	17.00	PMG	3						
12A»	OUTLOOK (6EC)	0.98	LAA	2	95	17	98	76	86	
13A»	DUAL II MAGNUM (7.64EC)	1.59	LAA	2	95	10	95	40	85	
					LSD (0.05)	5.62	14.77	7.63	24.00	8.41

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**PROJECT TYPE:** HERBICIDE  
**LOCATION:** AMES, IA **RESEARCHED BY:** IA State University  
**DESIGN:** RANDOMIZED COMPLETE BLOCK DESIGN  
**PLOT SIZE:** 10.00 FT WIDE X 25.00 FT LONG **REPS:** 03

TRT NUM	TREATMENT COMPONENT	DOSAGE			POLPY	XANST
		RATE	UNIT	TM	CON % 08/20/01	CON % 08/20/01
1A	UNTREATED CHECK	0.00	NA	0	0	0
2A	PROWL 3.3EC	1.49	LAA	1	98	98
	B>PURSUIT (2SL)	0.063	LAA	3		
	C>ULTRA BLAZER (2SL)	0.188	LAA	3		
	D>CROP OIL CONCENTRATE	1.00	PMV	3		
	E>AMMONIUM SULFATE	2.50	LMA	3		
3A	PROWL 3.3EC	1.49	LAA	1	99	95
	B>RAPTOR (1AS)	0.031	LAA	3		
	C>ULTRA BLAZER (2SL)	0.188	LAA	3		
	D>CROP OIL CONCENTRATE	1.00	PMV	3		
	E>AMMONIUM SULFATE	2.50	LMA	3		
4A	RAPTOR (1AS)	0.039	LAA	3	99	99
	B>ULTRA BLAZER (2SL)	0.125	LAA	3		
	C>CROP OIL CONCENTRATE	1.00	PMV	3		
	D>AMMONIUM SULFATE	2.50	LMA	3		
5A	OUTLOOK (6EC)	0.47	LAA	3	99	99
	B>RAPTOR (1AS)	0.039	LAA	3		
	C>ULTRA BLAZER (2SL)	0.125	LAA	3		
	D>CROP OIL CONCENTRATE	1.00	PMV	3		
	E>AMMONIUM SULFATE	2.50	LMA	3		
6A	PURSUIT PLUS (2.9EC)	0.91	LAA	1	99	20
	B>AUTHORITY (75WG)	0.141	LAA	1		
7A	PURSUIT PLUS (2.9EC)	0.91	LAA	1	99	99
	B>ROUNDUP ULTRAMAX (5SL)	1.02	LAA	4		
	C>AMMONIUM SULFATE	8.50	PMG	4		
8A	PROWL 3.3EC	1.24	LAA	1	99	99
	B>EXTREME (2.17SL)	0.814	LAA	4		
	C>NIS	0.125	PMV	4		
	D>AMMONIUM SULFATE	8.50	PMG	4		
9A	PROWL 3.3EC	1.24	LAA	1	98	99
	B>ROUNDUP ULTRAMAX (5SL)	1.02	LAA	4		
	C>AMMONIUM SULFATE	8.50	PMG	4		
10A	EXTREME (2.17SL)	0.814	LAA	3	98	99
	B>NIS	0.125	PMV	3		
	C>AMMONIUM SULFATE	8.50	PMG	3		
11A	OUTLOOK (6EC)	0.47	LAA	3	99	96
	B>EXTREME (2.17SL)	0.814	LAA	3		
	C>NIS	0.125	PMV	3		
	D>AMMONIUM SULFATE	17.00	PMG	3		
12A	OUTLOOK (6EC)	0.98	LAA	2	86	2
13A	DUAL II MAGNUM (7.64EC)	1.59	LAA	2	80	10
					LSD (0.05)	8.43 16.94

>> = SUPPLEMENTAL CHEMICAL

\* TIMING CODES

00 = UNTRCHK / UNTREATED TIMING (FP)  
 01 = PRE INC / PPI 06/08/2001(1)  
 02 = PREPRE / PRE 06/09/2001(2)  
 03 = EAPOWE / EPOST 06/29/2001(3)  
 04 = POSPOS / POST 07/03/2001(4)