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Fall and/or Spring Combination Treatments for Spring Emerging Glyphosate-Resistant Horseweed Control

Trial ID: 05-SEPAC-GRH
Location: Butlerville, IN

Study Dir.: Vince Davis
Investigator: Dr. William G. Johnson

GENERAL TRIAL INFORMATION

Study Director: Vince Davis	Title: Research Associate
Affiliation: Purdue University	
Postal Code: 47907	
Investigator: Dr. William G. Johnson	Title: Associate Professor
Affiliation: Purdue University	
Postal Code: 47907	

TRIAL LOCATION

City: Butlerville	
State/Prov.: IN	
Postal Code: 47223	Initiation Date: 27/Oct/2004
Country: USA	Planned Completion Date: 1/Nov/2005

Unit: feet

Directions: Field T2
Field T2

COOPERATOR/LANDOWNER

Cooperator: Southeast Purdue Ag Center	Country: USA
Org: Purdue University	Phone No: 812-458-6977
Address 1: 4425 E Co Rd 350 N	Fax No: 812-458-6979
Address 2: PO Box 216	
City: Butlerville	
State/Prov: IN	
Postal Code: 47223	

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: The objective of this study is to compare the performance of various fall and/or spring herbicide treatments for spring emerging glyphosate resistant horseweed (marestail) control. And, observe crop tolerance.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	RANAB	BUTTERCUP, SMALLFLOWER	RANUNCULUS ABORTIVUS L.
2.	SENGL	GROUNDSEL, CRESSLEAF	Senecio glabellus Poir.
3.	STEME	CHICKWEED, COMMON	STELLARIA MEDIA (L.) VILL./CYR.
4.	ERICA	HORSEWEED	ERIGERON CANADENSIS L.
5.	ERPVE	Whitlowgrass, spring	Draba verna L.
6.	CERVU	CHICKWEED, MOUSEEAR	CERASTIUM VULGATUM L.
7.	POAAN	Bluegrass, Annual	Poa annua L.
8.	CAPBP	SHEPHERDSPURSE	CAPSELLA BURSA-PASTORIS (L.) MEDIK.
9.	VERAR	SPEEDWELL, CORN	VERONICA ARVENSIS L.
10.	LAMPU	Deadnettel, purple	Lamium purpureum
11.	ALLVI	Garlic, wild	Allium vineale
12.	PANDI	Panicum dichotomiflorum	Panicum, fall
13.	IPOHE	Ipomoea hederacea	Morningglory, ivyleaf
14.	SIDSP	Sida spinosa	Prickly sida

Crop 1: ZEAMX CORN, FIELD **Variety:** Harvest Residue (mowed)

Planting Method: No-Till planted

Rate: 27000 S/A **Depth:** 1 IN

Row Spacing: 30 IN

F **Soil Moisture:** NORMAL

Crop 2: GLXMA SOYBEAN **Variety:** P93M80

Planting Date: 10/May/2005 **Planting Method:** No-Till drilled

Rate: 204000 S/A **Depth:** 1 IN

Row Spacing: 7.5 IN

Soil Temperature: 63 F **Soil Moisture:** NORMAL

SITE AND DESIGN

Plot Width, Unit: 10 FT **Plot Length, Unit:** 30 FT **Reps:** 4

Site Type: FIELD

Tillage Type: No-Till

Study Design: RANDOMIZED COMPLETE BLOCK

Previous Crops	Previous Pesticides	Year
1. field corn		2004

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MAINTENANCE

Field Prep./Maintenance: A fall blanket burndown application of glyphosate + 2,4-D (0.75# ae + 0.5# ai) and the corn stalks were mowed for the entire study area during week of 11/8/2004.

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	24/May/2005	Fusion	2.56		L	20	FL OZ/A

SOIL DESCRIPTION

% OM: 1.4	Texture: Silt Loam
pH: 5.9	Soil Name: Clermont
CEC: 6.0	Fert. Level: P - 26 ppm, K - 47 ppm

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.	30/Mar/2005	month	5.74	IN	Total Rainfall		
2.	30/Apr/2005	month	3.79	IN	Total Rainfall		
3.	31/May/2005	month	3.33	IN	Total Rainfall		
4.	30/Jun/2005	month	1.95	IN	Total Rainfall		

Overall Moisture Conditions: Wet early then very dry in the late spring.

Closest Weather Station: Located at SEPAC **Distance:** 0.5 **Unit:** MI

APPLICATION DESCRIPTION

	A	B	C	D	E
Application Date:	16/Nov/2004	11/Apr/2005	22/Apr/2005	5/May/2005	16/Jun/2005
Time of Day:	1:00 pm	9:30 am	11:45 am	9:30 am	10:20 am
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	FALBD	30EPP	15EPP	April 30	POSTBL
Applic. Placement:	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	56 F	77 F	70 F	60 F	74 F
% Relative Humidity:	65	36	65	33	37
Wind Velocity, Unit:	2.5 MPH	6 MPH	5 MPH	4 MPH	3 MPH
Soil Temp., Unit:	48 F	60 F	60 F	51 F	72 F
Soil Moisture:	moist	dry surf	wet	dry surf	moist
% Cloud Cover:	100	30	95	0	10

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E
Crop 1 Code, Stage:	ZEAMX V1	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Stage Scale:	Residue	Residue	Residue	Residue	Residue
Height, Unit:	90 %	80 %	75 %	75 %	55 %
Crop 2 Code, Stage:	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Stage Scale:	NA	29 EPP	20 EPP	5 EPP	V2
	%				
	F				
Crop 1 Code, Stage:	ZEAMX				
Stage Scale:					
Height, Unit:					
Crop 2 Code, Stage:	GLXMA				
Stage Scale:					

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WEED STAGE AT EACH APPLICATION

	A	B	C	D	E
Weed 1 Code, Stage:	RANAB 6 Lf	RANAB	RANAB	RANAB	RANAB
Stage Scale:	3"	1-3"bolti			
Density, Unit:	1 YD2	18 YD2			
Weed 2 Code, Stage:	SENGL 14 Lf	SENGL	SENGL	SENGL	SENGL
Stage Scale:	3-5"	2-5"4leaf			
Density, Unit:	2 YD2	135 YD2			
Weed 3 Code, Stage:	STEME 2-6 Lf	STEME	STEME	STEME	STEME
Stage Scale:	0.5-1"				
Density, Unit:	30 YD2				
Weed 4 Code, Stage:	ERICA 18 Lf	ERICA	ERICA	ERICA	ERICA
Stage Scale:	3-6" DIA	cotyledon	seedlings	seed1-2"	1-3"tall
Density, Unit:	1 YD2	6 YD2	3 YD2	1 YD2	1 YD2
Weed 5 Code, Stage:	ERPVE	ERPVE	ERPVE	ERPVE	ERPVE
Stage Scale:	1-2" bolt	2" tall	seed1-3"	2-6" seed	
Density, Unit:	3 YD2	2 YD2	175 YD2	150 YD2	
Weed 6 Code, Stage:	CERVU 2-6 Lf	CERVU	CERVU	CERVU	CERVU
Stage Scale:	0.5-1.5"				
Density, Unit:	5 YD2				
Weed 7 Code, Stage:	POAAN 3-4 Lf	POAAN	POAAN	POAAN	POAAN
Stage Scale:	0.5-1.5"				
Density, Unit:	50 YD2				
Weed 8 Code, Stage:	CAPBP	CAPBP	CAPBP	CAPBP	CAPBP
Stage Scale:			seedling	1-2" tall	
Density, Unit:	YD2		100 YD2	30 YD2	
Weed 9 Code, Stage:	VERAR	VERAR	VERAR	VERAR	VERAR
Stage Scale:			seeling	seed1-2"	
Density, Unit:	YD2		100 YD2	100 YD2	
Weed10 Code, Stage:	LAMPU 8 Lf	LAMPU	LAMPU	LAMPU	LAMPU
Stage Scale:	1"	2" tall			
Density, Unit:	3 YD2	2 YD2			
Weed11 Code, Stage:	ALLVI	ALLVI	ALLVI	ALLVI	ALLVI
Stage Scale:	5-9"	3" tall	3-12"tall	6-18"tall	
Density, Unit:	20 YD2	20 YD2	25 YD2	25 YD2	
Weed12 Code, Stage:	PANDI	PANDI	PANDI	PANDI	PANDI
Stage Scale:					1-8"tall
Density, Unit:					300 YD2
Weed13 Code, Stage:	IPOHE	IPOHE	IPOHE	IPOHE	IPOHE
Stage Scale:					cotyledon
Density, Unit:					10 YD2
Weed14 Code, Stage:	SIDSP	SIDSP	SIDSP	SIDSP	SIDSP
Stage Scale:					seed1-2"
Density, Unit:					1 YD2

APPLICATION EQUIPMENT

	A	B	C	D	E
Appl. Equipment:	CO2 Backp				
Operating Pressure:	26-27 psi	25 psi	25 psi	25 psi	25 psi
Nozzle Type:	XR____VS	XR11002VS	XR11002VS	XR11002VS	XR11002VS
Nozzle Size:	8002	8002	8002	8002	8002
Nozzle Spacing, Unit:	20 IN				
Boom Length, Unit:	10 FT				
Boom Height, Unit:	25 IN				
Ground Speed, Unit:	3 MPH				
Carrier:	water	water	water	water	water
Spray Volume, Unit:	15 gpa				
Propellant:	CO2	CO2	CO2	CO2	CO2

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Trial ID: 05-SEPAC-GRH
Location: Butlerville, IN

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Weed Code								ERICA	Garlicmu	ERICA	GLXMA	GLXMA	
Crop Code								efficacy	efficacy	efficacy	crop INJ	crop INJ	
Rating Data Type								%	%	%	%	%	
Rating Unit								17/May/2005	17/May/2005	31/May/2005	31/May/2005	30/Jun/2005	
Rating Date											VC		
Crop Stage											2-3"		
Crop Stage Scale										1-2"			
Weed Stage								seedling	75 YD2	1-2 YD2			
Weed Density, Unit								1-2 YD2					
Assessed By												VMD/VAM	
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Plot	1	2	3	4	5
1	Untreated Check							101 418 511 813	0 0 0 0*	0 0 0 0*	0 0 0 0*	0 0 0 0	0 5 10 5
								Mean =	0	0	0	0	5
2	Valor	0.064	lb ai/a	2	oz/a	15 EPP	C	102	100	75	100	0	0
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	412	100	100	100	12	0
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	617	100	93	100	5	5
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C	805	100	80	100	5	0
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C						
								Mean =	100	87	100	6	1
3	Valor	0.048	lb ai/a	1.5	oz/a	15 EPP	C	103	100	50	100	10	0
	FirstRate	0.0158	lb ai/a	0.3	oz/a	15 EPP	C	310	100	95	100	20	10
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	602	100	100	100	12	15
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	711	100	85	100	0	0
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C						
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C						
								Mean =	100	83	100	11	6
4	Valor	0.096	lb ai/a	3	oz/a	15 EPP	C	104	100	90	100	20	0
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	413	100	100	100	12	0
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	608	100	50	100	8	0
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C	804	100	100	100	10	0
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C						
								Mean =	100	85	100	13	0
5	Valor	0.064	lb ai/a	2	oz/a	15 EPP	C	105	100	80	100	12	0
	FirstRate	0.021	lb ai/a	0.4	oz/a	15 EPP	C	318	100	98	100	5	0
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	518	100	100	100	5	10
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	702	100	88	100	5	5
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C						
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C						
								Mean =	100	92	100	7	4
6	Valor	0.08	lb ai/a	2.5	oz/a	15 EPP	C	106	100	80	100	20	0
	FirstRate	0.0263	lb ai/a	0.5	oz/a	15 EPP	C	417	100	25	100	8	0
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	605	100	85	0	12	5
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	818	100	100	100	8	5
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C						
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C						
								Mean =	100	73	75	12	3
7	Valor	0.096	lb ai/a	3	oz/a	15 EPP	C	107	100	88	100	12	0
	FirstRate	0.0315	lb ai/a	0.6	oz/a	15 EPP	C	308	100	100	100	12	5
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	509	100	83	100	5	10
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	701	100	80	100	10	5
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C						
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C						
								Mean =	100	88	100	10	5

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Weed Code									ERICA	Garlicmu	ERICA	GLXMA	GLXMA
Crop Code									efficacy	efficacy	efficacy	crop INJ	crop INJ
Rating Data Type									%	%	%	%	%
Rating Unit									17/May/2005	17/May/2005	31/May/2005	31/May/2005	30/Jun/2005
Rating Date									seedling		1-2"	VC	
Crop Stage									1-2 YD2	75 YD2	1-2 YD2	2-3"	
Crop Stage Scale													
Weed Stage													
Weed Density, Unit													
Assessed By													VMD/VAM
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Plot	1	2	3	4	5
8	Clarity	0.125	lb ai/a	4	oz/a	15 EPP	C	108	100	100	100	15	5
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C	314	100	85	100	23	10
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	615	100	100	100	20	20
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	716	100	100	100	10	5
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C						
	Mean =								100	96	100	17	10
9	Clarity	0.25	lb ai/a	8	oz/a	15 EPP	C	109	100	100	100	25	10
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	309	100	100	100	15	5
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	508	100	80	100	3	0
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C	815	100	100	100	15	10
	Mean =								100	95	100	15	6
10	Distinct	0.175	lb ai/a	4	oz/a	15 EPP	C	110	100	95	100	25	10
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	302	100	85	100	10	0
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	609	100	85	100	8	0
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C	811	100	50	100	15	5
	Mean =								100	79	100	15	4
11	Distinct	0.175	lb ai/a	4	oz/a	15 EPP	C	111	100	100	100	15	0
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	311	100	95	100	23	5
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C	505	100	82	100	0	0
								806	95	50	100	0	0
	Mean =								99	82	100	10	1
12	Synchrony XP					15 EPP	C	112	100	100	100	10	5
	Classic	0.027	lb ai/a	1.72	oz/a	15 EPP	C	313	100	75	100	20	5
	Harmony GT	0.0084	lb ai/a	0.18	oz/a	15 EPP	C	516	100	85	100	5	0
	2,4-D Ester	0.5	lb ae/a	1	pt/a	15 EPP	C	713	100	60	100	15	15
	Crop Oil Conc	1	% v/v	1	% v/v	15 EPP	C						
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E						
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E						
	Mean =								100	80	100	13	6
13	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	113	100	100	95	20	10
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C	411	100	90	98	8	10
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E	504	80	85	90	5	0
	Synchrony XP					POSPOS	E	708	100	70	100	5	10
	Classic	0.005	lb ai/a	0.32	oz/a	POSPOS	E						
	Harmony GT	0.00164	lb ai/a	0.035	oz/a	POSPOS	E						
	NIS	0.25	% v/v	0.25	% v/v	POSPOS	E						
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E						
	Mean =								95	86	96	10	8
14	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	114	100	100	100	15	10
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C	303	80	25	85	8	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E	502	100	90	92	12	10
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS	E	704	100	50	100	10	5
	NIS	0.25	% v/v	0.25	% v/v	POSPOS	E						
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E						
	Mean =								95	66	94	11	6

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Weed Code									ERICA	Garlicmu	ERICA	GLXMA	GLXMA
Crop Code									efficacy	efficacy	efficacy	crop INJ	crop INJ
Rating Data Type									%	%	%	%	%
Rating Unit									17/May/2005	17/May/2005	31/May/2005	31/May/2005	30/Jun/2005
Rating Date												VC	
Crop Stage											1-2"	2-3"	
Crop Stage Scale													
Weed Stage									seedling				
Weed Density, Unit									1-2 YD2	75 YD2	1-2 YD2		
Assessed By													VMD/VAM
Trt No.	Treatment Name	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Plot	1	2	3	4	5
15	Prowl H2O	1.42	lb ai/a	3	pt/a	30 EPP	B	115	100	100	100	10	0
	Clarity	0.25	lb ai/a	8	oz/a	30 EPP	B	403	98	80	100	5	0
	Roundup (ae)	0.56	lb ae/a	24	oz/a	30 EPP	B	603	100	70	100	10	10
	AMS	2.5	lb/a	2.5	lb/a	30 EPP	B	715	100	100	100	15	10
	NIS	0.125	% v/v	1	pt/100 gal	30 EPP	B						
								Mean =	100	88	100	10	5
16	Nontreated check							116	0	0	0	0	0
								316	0	0	0	0	0
								512	0	0	0	0	10
								705	0	0	0	0	0
								Mean =	0	0	0	0	3
17	Clarity	0.25	lb ai/a	8	oz/a	30 EPP	B	117	100	0	100	8	0
	Roundup (ae)	0.56	lb ae/a	24	oz/a	30 EPP	B	415	100	90	95	10	5
	AMS	2.5	lb/a	2.5	lb/a	30 EPP	B	612	95	95	85	12	0
	NIS	0.125	% v/v	1	pt/100 gal	30 EPP	B	814	100	100	90	12	5
								Mean =	99	71	93	11	3
18	Extreme	0.81	lb ae/a	3	pt/a	15 EPP	C	118	100	100	100	8	0
	2,4-D Ester	0.5	lb ae/a	1	pt/a	15 EPP	C	307	100	90	100	10	0
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C	501	100	90	100	0	0
	Roundup (ae)	0.56	lb ae/a	24	oz/a	post	E	817	100	100	100	10	5
	AMS	2.5	lb/a	2.5	lb/a	post	E						
								Mean =	100	95	100	7	1
19	E-99 (2,4-D a.e.)	1	lb ae/a	21	oz/a	April 10	B	201	100	35	100	8	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B	317	100	100	100	5	0
	AMS	2.5	lb/a	2.5	lb/a	April 10	B	611	100	99	100	8	0
								712	100	100	100	5	10
								Mean =	100	84	100	7	3
20	Phenoxy 088	1	lb ae/a	45.7	oz/a	April 10	B	202	100	85	100	0	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B	402	100	95	100	8	0
	AMS	2.5	lb/a	2.5	lb/a	April 10	B	503	100	100	100	10	0
								717	100	100	100	0	5
								Mean =	100	95	100	5	1
21	2,4-D LV 6	0.98	lb ae/a	21	oz/a	April 10	B	203	100	55	100	8	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B	306	90	60	100	50	0
	AMS	2.5	lb/a	2.5	lb/a	April 10	B	514	100	100	100	13	5
								710	100	80	100	0	0
								Mean =	98	74	100	18	1
22	E-99 (2,4-D a.e.)	1.01	lb ae/a	1.33	pt/a	April 20	C	204	100	83	95	15	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C	305	100	95	90	8	5
	AMS	2.5	lb/a	2.5	lb/a	April 20	C	506	100	83	100	0	0
								810	100	50	100	12	0
								Mean =	100	78	96	9	1
23	Phenoxy 088	0.46	lb ae/a	1.33	pt/a	April 20	C	205	100	65	100	10	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C	404	85	85	95	8	0
	AMS	2.5	lb/a	2.5	lb/a	April 20	C	507	99	75	90	0	0
								812	100	100	100	15	5
								Mean =	96	81	96	8	1

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Weed Code									ERICA	Garlicmu	ERICA	GLXMA	GLXMA
Crop Code									efficacy	efficacy	efficacy	crop INJ	crop INJ
Rating Data Type									%	%	%	%	%
Rating Unit									17/May/2005	17/May/2005	31/May/2005	31/May/2005	30/Jun/2005
Rating Date												VC	
Crop Stage											1-2"	2-3"	
Crop Stage Scale									seedling	75 YD2	1-2 YD2		
Weed Stage									1-2 YD2				VMD/VAM
Weed Density, Unit													
Assessed By													
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Plot	1	2	3	4	5
24	Nontreated check							206	0	0	0	0	0
								405	0	0	0	0	0
								613	0	0	0	0	0
								801	0	0	0	0	0
								Mean =	0	0	0	0	0
25	2,4-D LV 6	0.5	lb ae/a	0.67	pt/a	April 20	C	207	100	80	100	12	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C	315	100	90	100	20	5
	AMS	2.5	lb/a	2.5	lb/a	April 20	C	517	100	85	100	10	0
								706	100	65	75	5	0
								Mean =	100	80	94	12	1
26	E-99 (2,4-D a.e.)	1.01	lb ae/a	1.33	pt/a	April 30	D	208	100	70	100	30	10
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D	406	100	40	100	25	5
	AMS	2.5	lb/a	2.5	lb/a	April 30	D	614	100	100	100	35	20
								718	100	50	100	20	10
								Mean =	100	65	100	28	11
27	Phenoxy 088	0.46	lb ae/a	1.33	pt/a	April 30	D	209	100	80	100	20	10
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D	410	100	80	100	20	0
	AMS	2.5	lb/a	2.5	lb/a	April 30	D	618	100	80	100	8	5
								807	100	45	100	8	0
								Mean =	100	71	100	14	4
28	E-99 (2,4-D a.e.)	0.51	lb ae/a	0.67	pt/a	April 30	D	210	100	95	100	20	5
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D	414	100	100	100	18	0
	AMS	2.5	lb/a	2.5	lb/a	April 30	D	601	100	75	100	10	5
								808	100	100	100	12	5
								Mean =	100	93	100	15	4
29	2,4-D LV 6	0.5	lb ae/a	0.67	pt/a	April 30	D	211	0	90	100	15	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D	416	100	85	100	15	5
	AMS	2.5	lb/a	2.5	lb/a	April 30	D	616	100	100	100	10	5
								802	100	65	100	28	25
								Mean =	75	85	100	17	9
30								212	0	0	0	0	0
								408	0	0	0	0	0
								607	0	0	100	0	0
								714	0*	0*	34*	0	10
								Mean =	0	0	33	0	3
31								213	0	0	0	0	10
								304	0	0	0	0	0
								606	0	0	0	0	0
								703	0	0	0	0	5
								Mean =	0	0	0	0	4
32								214	100	0	0	0	0
								401	0	0	0	0	0
								604	0	0	100	0	5
								707	0	0	0	0	0
								Mean =	25	0	25	0	1

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Weed Code									ERICA	Garlicmu	ERICA	GLXMA	GLXMA
Crop Code									efficacy	efficacy	efficacy	crop INJ	crop INJ
Rating Data Type									%	%	%	%	%
Rating Unit									17/May/2005	17/May/2005	31/May/2005	31/May/2005	30/Jun/2005
Rating Date									seedling		1-2"	VC	
Crop Stage									1-2 YD2	75 YD2	1-2 YD2	2-3"	
Crop Stage Scale													
Weed Stage													
Weed Density, Unit													
Assessed By													VMD/VAM
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Plot	1	2	3	4	5
33	Classic	0.0234	lb ai/a	1.5	oz/a	FALBD	A	215	100	100	100	12	0
	Express	0.007	lb ai/a	0.15	oz/a	FALBD	A	409	100	85	100	15	0
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	FALBD	A	515	100	100	100	10	5
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	FALBD	A	803	100	10	100	10	5
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	FALBD	A						
	Crop Oil Conc	1	% v/v	1	% v/v	FALBD	A						
								Mean =	100	74	100	12	3
34	Spring Residual Reference							216	100	90	100	8	0
	Classic	0.0234	lb ai/a	1.5	oz/a	30 EPP	B	301	100	100	100	10	0
	Express	0.007	lb ai/a	0.15	oz/a	30 EPP	B	610	100	95	100	5	0
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	30 EPP	B	809	100	95	100	12	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B						
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B						
	Crop Oil Conc	1	% v/v	1	% v/v	30 EPP	B						
								Mean =	100	95	100	9	0
35	Spring glyph. reference							217	100	100	95	15	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B	407	80	95	93	8	0
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B	510	100	45	100	8	5
								709	95	70	100	8	10
								Mean =	94	78	97	10	4
36	Spring glyph/D reference							218	100	100	100	10	0
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B	312	100	100	90	18	0
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B	513	100	100	90	20	10
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	30 EPP	B	816	95	100	100	12	5
								Mean =	99	100	95	15	4

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Weed Code									ERICA	PANDI	GLXMA	ERICA
Crop Code									efficacy	efficacy	crop INJ	efficacy
Rating Data Type									%	%	%	%
Rating Unit									30/Jun/2005	30/Jun/2005	14/Jul/2005	14/Jul/2005
Rating Date												
Crop Stage									4-18"	4-14"	20-28"	6-26"
Crop Stage Scale									5 YD2	40 YD2		5 YD2
Weed Stage									VMD/VAM			
Weed Density, Unit												
Assessed By												
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Plot	6	7	8	9
1	Untreated Check							101 418 511 813	0 100 50 100	0 100 100 100	0 0 0 0	50 0 0 0
								Mean =	63	75	0	13
2	Valor	0.064	lb ai/a	2	oz/a	15 EPP	C	102	100	100	0	100
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	412	100	100	5	98
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	617	100	100	10	96
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C	805	90	100	0	95
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
								Mean =	98	100	4	97
3	Valor	0.048	lb ai/a	1.5	oz/a	15 EPP	C	103	100	100	0	100
	FirstRate	0.0158	lb ai/a	0.3	oz/a	15 EPP	C	310	100	100	0	100
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	602	100	100	15	98
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	711	100	100	0	100
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
								Mean =	100	100	4	100
4	Valor	0.096	lb ai/a	3	oz/a	15 EPP	C	104	100	100	30	95
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	413	100	100	5	95
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	608	100	100	0	88
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C	804	100	100	0	100
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
								Mean =	100	100	9	95
5	Valor	0.064	lb ai/a	2	oz/a	15 EPP	C	105	100	100	5	100
	FirstRate	0.021	lb ai/a	0.4	oz/a	15 EPP	C	318	100	100	5	100
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	518	100	100	10	100
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	702	100	100	5	100
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
								Mean =	100	100	6	100
6	Valor	0.08	lb ai/a	2.5	oz/a	15 EPP	C	106	100	100	5	100
	FirstRate	0.0263	lb ai/a	0.5	oz/a	15 EPP	C	417	100	100	0	100
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	605	100	100	0	100
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	818	100	100	10	100
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
								Mean =	100	100	4	100
7	Valor	0.096	lb ai/a	3	oz/a	15 EPP	C	107	100	100	10	100
	FirstRate	0.0315	lb ai/a	0.6	oz/a	15 EPP	C	308	100	100	0	100
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C	509	100	100	15	100
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	701	100	100	0	100
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
								Mean =	100	100	6	100

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Weed Code									ERICA	PANDI	GLXMA	ERICA
Crop Code									efficacy	efficacy	crop INJ	efficacy
Rating Data Type									%	%	%	%
Rating Unit									30/Jun/2005	30/Jun/2005	14/Jul/2005	14/Jul/2005
Rating Date												
Crop Stage									4-18"	4-14"	20-28"	6-26"
Crop Stage Scale									5 YD2	40 YD2		5 YD2
Weed Stage									VMD/VAM			
Weed Density, Unit												
Assessed By												
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Plot	6	7	8	9
8	Clarity	0.125	lb ai/a	4	oz/a	15 EPP	C	108	100	100	10	100
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C	314	100	100	20	89
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	615	100	100	30	100
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	716	100	100	5	100
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
	Mean =								100	100	16	97
9	Clarity	0.25	lb ai/a	8	oz/a	15 EPP	C	109	100	100	35	95
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	309	100	100	0	100
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	508	90	100	0	100
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C	815	100	100	15	100
	Mean =								98	100	13	99
10	Distinct	0.175	lb ai/a	4	oz/a	15 EPP	C	110	100	100	30	100
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	302	100	100	5	100
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	609	90	100	0	93
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C	811	100	100	0	100
	Mean =								98	100	9	98
11	Distinct	0.175	lb ai/a	4	oz/a	15 EPP	C	111	100	100	5	100
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C	311	90	100	10	97
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C	505	90	100	0	100
								806	100	100	0	100
	Mean =								95	100	4	99
12	Synchrony XP					15 EPP	C	112	100	100	10	100
	Classic	0.027	lb ai/a	1.72	oz/a	15 EPP	C	313	100	100	10	100
	Harmony GT	0.0084	lb ai/a	0.18	oz/a	15 EPP	C	516	100	100	0	100
	2,4-D Ester	0.5	lb ae/a	1	pt/a	15 EPP	C	713	100	100	23	100
	Crop Oil Conc	1	% v/v	1	% v/v	15 EPP	C					
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E					
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E					
	Mean =								100	100	11	100
13	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	113	100	100	25	100
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C	411	100	100	15	95
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E	504	100	100	5	100
	Synchrony XP					POSPOS	E	708	100	100	10	100
	Classic	0.005	lb ai/a	0.32	oz/a	POSPOS	E					
	Harmony GT	0.00164	lb ai/a	0.035	oz/a	POSPOS	E					
	NIS	0.25	% v/v	0.25	% v/v	POSPOS	E					
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E					
	Mean =								100	100	14	99
14	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	114	100	100	5	100
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C	303	75	100	0	95
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E	502	90	100	5	100
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS	E	704	100	100	5	100
	NIS	0.25	% v/v	0.25	% v/v	POSPOS	E					
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E					
	Mean =								91	100	4	99

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Weed Code									ERICA	PANDI	GLXMA	ERICA
Crop Code									efficacy	efficacy	crop INJ	efficacy
Rating Data Type									%	%	%	%
Rating Unit									30/Jun/2005	30/Jun/2005	14/Jul/2005	14/Jul/2005
Rating Date												
Crop Stage									4-18"	4-14"	20-28"	6-26"
Crop Stage Scale									5 YD2	40 YD2		5 YD2
Weed Stage									VMD/VAM			
Weed Density, Unit												
Assessed By												
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Plot	6	7	8	9
15	Prowl H2O	1.42	lb ai/a	3	pt/a	30 EPP	B	115	100	100	0	100
	Clarity	0.25	lb ai/a	8	oz/a	30 EPP	B	403	90	100	0	100
	Roundup (ae)	0.56	lb ae/a	24	oz/a	30 EPP	B	603	100	100	5	100
	AMS	2.5	lb/a	2.5	lb/a	30 EPP	B	715	100	100	10	100
	NIS	0.125	% v/v	1	pt/100 gal	30 EPP	B					
								Mean =	98	100	4	100
16	Nontreated check							116	50	100	0	50
								316	75	100	0	0
								512	75	100	0	0
								705	90	100	0	0
								Mean =	73	100	0	13
17	Clarity	0.25	lb ai/a	8	oz/a	30 EPP	B	117	90	100	0	93
	Roundup (ae)	0.56	lb ae/a	24	oz/a	30 EPP	B	415	90	100	5	87
	AMS	2.5	lb/a	2.5	lb/a	30 EPP	B	612	100	100	5	98
	NIS	0.125	% v/v	1	pt/100 gal	30 EPP	B	814	100	100	10	87
								Mean =	95	100	5	91
18	Extreme	0.81	lb ae/a	3	pt/a	15 EPP	C	118	90	100	5	90
	2,4-D Ester	0.5	lb ae/a	1	pt/a	15 EPP	C	307	100	100	0	100
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C	501	100	100	0	100
	Roundup (ae)	0.56	lb ae/a	24	oz/a	post	E	817	100	100	10	100
	AMS	2.5	lb/a	2.5	lb/a	post	E					
								Mean =	98	100	4	98
19	E-99 (2,4-D a.e.)	1	lb ae/a	21	oz/a	April 10	B	201	75	100	0	100
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B	317	100	100	5	85
	AMS	2.5	lb/a	2.5	lb/a	April 10	B	611	90	100	5	86
								712	90	100	15	100
								Mean =	89	100	6	93
20	Phenoxy 088	1	lb ae/a	45.7	oz/a	April 10	B	202	75	100	0	100
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B	402	100	100	0	100
	AMS	2.5	lb/a	2.5	lb/a	April 10	B	503	75	100	0	95
								717	90	100	35	95
								Mean =	85	100	9	98
21	2,4-D LV 6	0.98	lb ae/a	21	oz/a	April 10	B	203	100	100	0	100
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B	306	100	100	0	98
	AMS	2.5	lb/a	2.5	lb/a	April 10	B	514	85	100	10	63
								710	100	100	0	100
								Mean =	96	100	3	90
22	E-99 (2,4-D a.e.)	1.01	lb ae/a	1.33	pt/a	April 20	C	204	100	100	0	100
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C	305	75	100	10	75
	AMS	2.5	lb/a	2.5	lb/a	April 20	C	506	90	100	0	100
								810	100	100	0	98
								Mean =	91	100	3	93
23	Phenoxy 088	0.46	lb ae/a	1.33	pt/a	April 20	C	205	100	100	15	95
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C	404	90	100	0	100
	AMS	2.5	lb/a	2.5	lb/a	April 20	C	507	85	100	0	93
								812	100	100	5	100
								Mean =	94	100	5	97

Purdue University

Weed Code									ERICA	PANDI	GLXMA	ERICA
Crop Code									efficacy	efficacy	crop INJ	efficacy
Rating Data Type									%	%	%	%
Rating Unit									30/Jun/2005	30/Jun/2005	14/Jul/2005	14/Jul/2005
Rating Date												
Crop Stage									4-18"	4-14"	20-28"	6-26"
Crop Stage Scale									5 YD2	40 YD2		5 YD2
Weed Stage									VMD/VAM			
Weed Density, Unit												
Assessed By												
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Plot	6	7	8	9
24	Nontreated check							206	50	100	0	0
								405	90	100	6	100
								613	75	100	0	0
								801	75	100	0	0
								Mean =	73	100	2	25
25	2,4-D LV 6	0.5	lb ae/a	0.67	pt/a	April 20	C	207	100	100	0	100
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C	315	100	100	15	95
	AMS	2.5	lb/a	2.5	lb/a	April 20	C	517	100	100	5	98
								706	90	100	0	78
								Mean =	98	100	5	93
26	E-99 (2,4-D a.e.)	1.01	lb ae/a	1.33	pt/a	April 30	D	208	100	100	15	100
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D	406	100	100	10	100
	AMS	2.5	lb/a	2.5	lb/a	April 30	D	614	100	100	30	98
								718	100	100	15	100
								Mean =	100	100	18	100
27	Phenoxy 088	0.46	lb ae/a	1.33	pt/a	April 30	D	209	100	100	30	98
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D	410	100	100	5	100
	AMS	2.5	lb/a	2.5	lb/a	April 30	D	618	100	100	10	100
								807	100	100	0	98
								Mean =	100	100	11	99
28	E-99 (2,4-D a.e.)	0.51	lb ae/a	0.67	pt/a	April 30	D	210	100	100	20	93
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D	414	100	100	0	97
	AMS	2.5	lb/a	2.5	lb/a	April 30	D	601	100	100	10	100
								808	100	100	5	100
								Mean =	100	100	9	98
29	2,4-D LV 6	0.5	lb ae/a	0.67	pt/a	April 30	D	211	100	100	0	97
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D	416	90	100	5	100
	AMS	2.5	lb/a	2.5	lb/a	April 30	D	616	100	100	15	100
								802	100	100	35	95
								Mean =	98	100	14	98
30								212	75	100	0	50
								408	90	100	0	0
								607	40	100	0	0
								714	100	100	0	0
								Mean =	76	100	0	13
31								213	100	100	0	97
								304	25	100	0	0
								606	75	100	0	0
								703	90	100	0	0
								Mean =	73	100	0	24
32								214	100	100	0	93
								401	75	100	0	0
								604	75	100	0	0
								707	25	100	0	0
								Mean =	69	100	0	23

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Weed Code									ERICA	PANDI	GLXMA	ERICA
Crop Code									efficacy	efficacy	crop INJ	efficacy
Rating Data Type									%	%	%	%
Rating Unit									30/Jun/2005	30/Jun/2005	14/Jul/2005	14/Jul/2005
Rating Date												
Crop Stage												
Crop Stage Scale												
Weed Stage									4-18"	4-14"	20-28"	6-26"
Weed Density, Unit									5 YD2	40 YD2		5 YD2
Assessed By									VMD/VAM			
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Plot	6	7	8	9
33	Classic	0.0234	lb ai/a	1.5	oz/a	FALBD	A	215	100	100	5	100
	Express	0.007	lb ai/a	0.15	oz/a	FALBD	A	409	100	100	10	100
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	FALBD	A	515	100	100	15	100
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	FALBD	A	803	90	100	10	95
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	FALBD	A					
	Crop Oil Conc	1	% v/v	1	% v/v	FALBD	A					
								Mean =	98	100	10	99
34	Spring Residual Reference							216	100	100	0	100
	Classic	0.0234	lb ai/a	1.5	oz/a	30 EPP	B	301	100	100	0	100
	Express	0.007	lb ai/a	0.15	oz/a	30 EPP	B	610	100	100	15	100
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	30 EPP	B	809	100	100	5	100
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B					
	Crop Oil Conc	1	% v/v	1	% v/v	30 EPP	B					
								Mean =	100	100	5	100
35	Spring glyph. reference							217	50	100	0	75
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B	407	100	100	3	100
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B	510	90	100	10	100
								709	90	100	10	85
								Mean =	83	100	6	90
36	Spring glyph/D reference							218	50	100	5	60
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B	312	100	100	15	85
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B	513	75	100	20	77
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	30 EPP	B	816	100	100	15	90
								Mean =	81	100	14	78

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Fall and/or Spring Combination Treatments for Spring Emerging Glyphosate-Resistant Horseweed Control

Trial ID: 05-SEPAC-GRH
Location: Butlerville, IN

Study Dir.: Vince Davis
Investigator: Dr. William G. Johnson

Weed Code								ERICA	Garlicmu	ERICA	GLXMA	GLXMA
Crop Code								efficacy	efficacy	efficacy	crop INJ	crop INJ
Rating Data Type								%	%	%	%	%
Rating Unit								17/May/2005	17/May/2005	31/May/2005	31/May/2005	30/Jun/2005
Rating Date								seedling		1-2"	VC	
Crop Stage								1-2 YD2	75 YD2	1-2 YD2	2-3"	
Crop Stage Scale												
Weed Stage												
Weed Density, Unit												
Assessed By												VMD/VAM
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5
1	Untreated Check							0 d	0 d	0 d	0 g	5 b-f
2	Valor	0.064	lb ai/a	2	oz/a	15 EPP	C	100 a	87 abc	100 a	6 efg	1 ef
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
3	Valor	0.048	lb ai/a	1.5	oz/a	15 EPP	C	100 a	83 abc	100 a	11 b-f	6 a-e
	FirstRate	0.0158	lb ai/a	0.3	oz/a	15 EPP	C					
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
4	Valor	0.096	lb ai/a	3	oz/a	15 EPP	C	100 a	85 abc	100 a	13 b-f	0 f
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
5	Valor	0.064	lb ai/a	2	oz/a	15 EPP	C	100 a	92 abc	100 a	7 d-g	4 c-f
	FirstRate	0.021	lb ai/a	0.4	oz/a	15 EPP	C					
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
6	Valor	0.08	lb ai/a	2.5	oz/a	15 EPP	C	100 a	73 abc	75 b	12 b-f	3 def
	FirstRate	0.0263	lb ai/a	0.5	oz/a	15 EPP	C					
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
7	Valor	0.096	lb ai/a	3	oz/a	15 EPP	C	100 a	88 abc	100 a	10 b-f	5 b-f
	FirstRate	0.0315	lb ai/a	0.6	oz/a	15 EPP	C					
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
8	Clarity	0.125	lb ai/a	4	oz/a	15 EPP	C	100 a	96 ab	100 a	17 bc	10 ab
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C					
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
9	Clarity	0.25	lb ai/a	8	oz/a	15 EPP	C	100 a	95 ab	100 a	15 bcd	6 a-e
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					

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Weed Code Crop Code Rating Data Type Rating Unit Rating Date Crop Stage Crop Stage Scale Weed Stage Weed Density, Unit Assessed By							ERICA efficacy % 17/May/2005 seedling 1-2 YD2	Garlicmu efficacy % 17/May/2005 75 YD2	ERICA efficacy % 31/May/2005 1-2* 1-2 YD2	GLXMA crop INJ % 31/May/2005 VC 2-3"	GLXMA crop INJ % 30/Jun/2005 VMD/VAM	
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5
10	Distinct	0.175	lb ai/a	4	oz/a	15 EPP	C	100 a	79 abc	100 a	15 bcd	4 c-f
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
11	Distinct	0.175	lb ai/a	4	oz/a	15 EPP	C	99 a	82 abc	100 a	10 b-f	1 ef
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C					
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C					
12	Synchrony XP					15 EPP	C	100 a	80 abc	100 a	13 b-f	6 a-e
	Classic	0.027	lb ai/a	1.72	oz/a	15 EPP	C					
	Harmony GT	0.0084	lb ai/a	0.18	oz/a	15 EPP	C					
	2,4-D Ester	0.5	lb ae/a	1	pt/a	15 EPP	C					
	Crop Oil Conc	1	% v/v	1	% v/v	15 EPP	C					
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E					
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E					
13	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	95 a	86 abc	96 a	10 b-f	8 a-d
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C					
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E					
	Synchrony XP					POSPOS	E					
	Classic	0.005	lb ai/a	0.32	oz/a	POSPOS	E					
	Harmony GT	0.00164	lb ai/a	0.035	oz/a	POSPOS	E					
	NIS	0.25	% v/v	0.25	% v/v	POSPOS	E					
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E					
14	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	95 a	66 c	94 ab	11 b-f	6 a-e
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C					
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E					
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS	E					
	NIS	0.25	% v/v	0.25	% v/v	POSPOS	E					
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E					
15	Prowl H2O	1.42	lb ai/a	3	pt/a	30 EPP	B	100 a	88 abc	100 a	10 b-f	5 b-f
	Clarity	0.25	lb ai/a	8	oz/a	30 EPP	B					
	Roundup (ae)	0.56	lb ae/a	24	oz/a	30 EPP	B					
	AMS	2.5	lb/a	2.5	lb/a	30 EPP	B					
	NIS	0.125	% v/v	1	pt/100 gal	30 EPP	B					
16	Nontreated check							0 d	0 d	0 d	0 g	3 def
17	Clarity	0.25	lb ai/a	8	oz/a	30 EPP	B	99 a	71 bc	93 ab	11 b-f	3 def
	Roundup (ae)	0.56	lb ae/a	24	oz/a	30 EPP	B					
	AMS	2.5	lb/a	2.5	lb/a	30 EPP	B					
	NIS	0.125	% v/v	1	pt/100 gal	30 EPP	B					
18	Extreme	0.81	lb ae/a	3	pt/a	15 EPP	C	100 a	95 ab	100 a	7 d-g	1 ef
	2,4-D Ester	0.5	lb ae/a	1	pt/a	15 EPP	C					
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C					
	Roundup (ae)	0.56	lb ae/a	24	oz/a	post	E					
	AMS	2.5	lb/a	2.5	lb/a	post	E					
19	E-99 (2,4-D a.e.)	1	lb ae/a	21	oz/a	April 10	B	100 a	84 abc	100 a	7 d-g	3 def
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B					
	AMS	2.5	lb/a	2.5	lb/a	April 10	B					

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Weed Code Crop Code Rating Data Type Rating Unit Rating Date Crop Stage Crop Stage Scale Weed Stage Weed Density, Unit Assessed By							ERICA efficacy % 17/May/2005 seedling 1-2 YD2	Garlicmu efficacy % 17/May/2005 75 YD2	ERICA efficacy % 31/May/2005 1-2* 1-2 YD2	GLXMA crop INJ % 31/May/2005 VC 2-3"	GLXMA crop INJ % 30/Jun/2005 VMD/VAM	
Trt No.	Treatment Name	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5
20	Phenoxy 088	1	lb ae/a	45.7	oz/a	April 10	B	100 a	95 ab	100 a	5 fg	1 ef
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B					
	AMS	2.5	lb/a	2.5	lb/a	April 10	B					
21	2,4-D LV 6	0.98	lb ae/a	21	oz/a	April 10	B	98 a	74 abc	100 a	18 b	1 ef
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B					
	AMS	2.5	lb/a	2.5	lb/a	April 10	B					
22	E-99 (2,4-D a.e.)	1.01	lb ae/a	1.33	pt/a	April 20	C	100 a	78 abc	96 a	9 c-f	1 ef
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C					
	AMS	2.5	lb/a	2.5	lb/a	April 20	C					
23	Phenoxy 088	0.46	lb ae/a	1.33	pt/a	April 20	C	96 a	81 abc	96 a	8 d-g	1 ef
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C					
	AMS	2.5	lb/a	2.5	lb/a	April 20	C					
24	Nontreated check							0 d	0 d	0 d	0 g	0 f
25	2,4-D LV 6	0.5	lb ae/a	0.67	pt/a	April 20	C	100 a	80 abc	94 ab	12 b-f	1 ef
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C					
	AMS	2.5	lb/a	2.5	lb/a	April 20	C					
26	E-99 (2,4-D a.e.)	1.01	lb ae/a	1.33	pt/a	April 30	D	100 a	65 c	100 a	28 a	11 a
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D					
	AMS	2.5	lb/a	2.5	lb/a	April 30	D					
27	Phenoxy 088	0.46	lb ae/a	1.33	pt/a	April 30	D	100 a	71 bc	100 a	14 b-e	4 c-f
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D					
	AMS	2.5	lb/a	2.5	lb/a	April 30	D					
28	E-99 (2,4-D a.e.)	0.51	lb ae/a	0.67	pt/a	April 30	D	100 a	93 abc	100 a	15 bcd	4 c-f
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D					
	AMS	2.5	lb/a	2.5	lb/a	April 30	D					
29	2,4-D LV 6	0.5	lb ae/a	0.67	pt/a	April 30	D	75 b	85 abc	100 a	17 bc	9 abc
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D					
	AMS	2.5	lb/a	2.5	lb/a	April 30	D					
30								0 d	0 d	33 c	0 g	3 def
31								0 d	0 d	0 d	0 g	4 c-f
32								25 c	0 d	25 c	0 g	1 ef
33	Classic	0.0234	lb ai/a	1.5	oz/a	FALBD	A	100 a	74 abc	100 a	12 b-f	3 def
	Express	0.007	lb ai/a	0.15	oz/a	FALBD	A					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	FALBD	A					
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	FALBD	A					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	FALBD	A					
	Crop Oil Conc	1	% v/v	1	% v/v	FALBD	A					

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Weed Code								ERICA	Garlicmu	ERICA	GLXMA	GLXMA
Crop Code								efficacy	efficacy	efficacy	crop INJ	crop INJ
Rating Data Type								%	%	%	%	%
Rating Unit								17/May/2005	17/May/2005	31/May/2005	31/May/2005	30/Jun/2005
Rating Date											VC	
Crop Stage											2-3"	
Crop Stage Scale												
Weed Stage								seedling		1-2"		
Weed Density, Unit								1-2 YD2	75 YD2	1-2 YD2		
Assessed By												VMD/VAM
Trt	Treatment	Rate	Unit	Product	Product	Grow	Appl	1	2	3	4	5
No.	Name			Rate	Rate Unit	Stg	Code					
34	Spring Residual Reference							100 a	95 ab	100 a	9 c-f	0 f
	Classic	0.0234	lb ai/a	1.5	oz/a	30 EPP	B					
	Express	0.007	lb ai/a	0.15	oz/a	30 EPP	B					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	30 EPP	B					
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B					
	Crop Oil Conc	1	% v/v	1	% v/v	30 EPP	B					
35	Spring glyph. reference							94 a	78 abc	97 a	10 b-f	4 c-f
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B					
36	Spring glyph/D reference							99 a	100 a	95 ab	15 bcd	4 c-f
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	30 EPP	B					
LSD (P=.05)								17.5	27.7	20.7	8.5	6.1
Standard Deviation								12.5	19.8	14.8	6.1	4.3
CV								15.14	28.55	17.81	62.86	120.35
Grand Mean								82.59	69.32	83.17	9.71	3.61
Bartlett's X2								75.679	49.153	60.86	49.556	30.043
P(Bartlett's X2)								0.001*	0.008*	0.001*	0.01*	0.566
Replicate F								0.148	0.915	0.220	4.855	4.485
Replicate Prob(F)								0.9308	0.4363	0.8823	0.0033	0.0053
Treatment F								33.208	10.838	21.191	3.932	1.641
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0286

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

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Weed Code								ERICA	PANDI	GLXMA	ERICA
Crop Code								efficacy	efficacy	crop INJ	efficacy
Rating Data Type								%	%	%	%
Rating Unit								30/Jun/2005	30/Jun/2005	14/Jul/2005	14/Jul/2005
Rating Date											
Crop Stage											
Crop Stage Scale											
Weed Stage								4-18"	4-14"	20-28"	6-26"
Weed Density, Unit								5 YD2	40 YD2		5 YD2
Assessed By								VMD/VAM			
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	6	7	8	9
1	Untreated Check							63 e	75 a	0 a	13 b
2	Valor	0.064	lb ai/a	2	oz/a	15 EPP	C	98 a	100 a	4 a	97 a
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C				
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C				
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C				
3	Valor	0.048	lb ai/a	1.5	oz/a	15 EPP	C	100 a	100 a	4 a	100 a
	FirstRate	0.0158	lb ai/a	0.3	oz/a	15 EPP	C				
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C				
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C				
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C				
4	Valor	0.096	lb ai/a	3	oz/a	15 EPP	C	100 a	100 a	9 a	95 a
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C				
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C				
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C				
5	Valor	0.064	lb ai/a	2	oz/a	15 EPP	C	100 a	100 a	6 a	100 a
	FirstRate	0.021	lb ai/a	0.4	oz/a	15 EPP	C				
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C				
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C				
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C				
6	Valor	0.08	lb ai/a	2.5	oz/a	15 EPP	C	100 a	100 a	4 a	100 a
	FirstRate	0.0263	lb ai/a	0.5	oz/a	15 EPP	C				
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C				
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C				
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C				
7	Valor	0.096	lb ai/a	3	oz/a	15 EPP	C	100 a	100 a	6 a	100 a
	FirstRate	0.0315	lb ai/a	0.6	oz/a	15 EPP	C				
	Roundup Weathermax	0.387	lb ae/a	11	oz/a	15 EPP	C				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C				
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C				
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C				
8	Clarity	0.125	lb ai/a	4	oz/a	15 EPP	C	100 a	100 a	16 a	97 a
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	15 EPP	C				
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C				
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C				
9	Clarity	0.25	lb ai/a	8	oz/a	15 EPP	C	98 a	100 a	13 a	99 a
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C				
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C				
10	Distinct	0.175	lb ai/a	4	oz/a	15 EPP	C	98 a	100 a	9 a	98 a
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C				
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C				

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Weed Code Crop Code Rating Data Type Rating Unit Rating Date Crop Stage Crop Stage Scale Weed Stage Weed Density, Unit Assessed By							ERICA efficacy % 30/Jun/2005 4-18" 5 YD2 VMD/VAM	PANDI efficacy % 30/Jun/2005 4-14" 40 YD2	GLXMA crop INJ % 14/Jul/2005 20-28"	ERICA efficacy % 14/Jul/2005 6-26" 5 YD2	
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	6	7	8	9
11	Distinct	0.175	lb ai/a	4	oz/a	15 EPP	C	95 ab	100 a	4 a	99 a
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	15 EPP	C				
	NIS	0.25	% v/v	0.25	% v/v	15 EPP	C				
12	Synchrony XP					15 EPP	C	100 a	100 a	11 a	100 a
	Classic	0.027	lb ai/a	1.72	oz/a	15 EPP	C				
	Harmony GT	0.0084	lb ai/a	0.18	oz/a	15 EPP	C				
	2,4-D Ester	0.5	lb ae/a	1	pt/a	15 EPP	C				
	Crop Oil Conc	1	% v/v	1	% v/v	15 EPP	C				
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E				
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E				
13	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	100 a	100 a	14 a	99 a
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C				
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E				
	Synchrony XP					POSPOS	E				
	Classic	0.005	lb ai/a	0.32	oz/a	POSPOS	E				
	Harmony GT	0.00164	lb ai/a	0.035	oz/a	POSPOS	E				
	NIS	0.25	% v/v	0.25	% v/v	POSPOS	E				
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E				
14	Roundup Weathermax	0.77	lb ae/a	22	oz/a	15 EPP	C	91 abc	100 a	4 a	99 a
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C				
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	POSPOS	E				
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS	E				
	NIS	0.25	% v/v	0.25	% v/v	POSPOS	E				
	AMS	2.5	lb/a	2.5	lb/a	POSPOS	E				
15	Prowl H2O	1.42	lb ai/a	3	pt/a	30 EPP	B	98 a	100 a	4 a	100 a
	Clarity	0.25	lb ai/a	8	oz/a	30 EPP	B				
	Roundup (ae)	0.56	lb ae/a	24	oz/a	30 EPP	B				
	AMS	2.5	lb/a	2.5	lb/a	30 EPP	B				
	NIS	0.125	% v/v	1	pt/100 gal	30 EPP	B				
16	Nontreated check							73 cde	100 a	0 a	13 b
17	Clarity	0.25	lb ai/a	8	oz/a	30 EPP	B	95 ab	100 a	5 a	91 a
	Roundup (ae)	0.56	lb ae/a	24	oz/a	30 EPP	B				
	AMS	2.5	lb/a	2.5	lb/a	30 EPP	B				
	NIS	0.125	% v/v	1	pt/100 gal	30 EPP	B				
18	Extreme	0.81	lb ae/a	3	pt/a	15 EPP	C	98 a	100 a	4 a	98 a
	2,4-D Ester	0.5	lb ae/a	1	pt/a	15 EPP	C				
	AMS	2.5	lb/a	2.5	lb/a	15 EPP	C				
	Roundup (ae)	0.56	lb ae/a	24	oz/a	post	E				
	AMS	2.5	lb/a	2.5	lb/a	post	E				
19	E-99 (2,4-D a.e.)	1	lb ae/a	21	oz/a	April 10	B	89 a-d	100 a	6 a	93 a
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B				
	AMS	2.5	lb/a	2.5	lb/a	April 10	B				
20	Phenoxy 088	1	lb ae/a	45.7	oz/a	April 10	B	85 a-d	100 a	9 a	98 a
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B				
	AMS	2.5	lb/a	2.5	lb/a	April 10	B				

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Weed Code							ERICA	PANDI	GLXMA	ERICA		
Crop Code							efficacy	efficacy	crop INJ	efficacy		
Rating Data Type							%	%	%	%		
Rating Unit							30/Jun/2005	30/Jun/2005	14/Jul/2005	14/Jul/2005		
Rating Date												
Crop Stage												
Crop Stage Scale												
Weed Stage							4-18"	4-14"	20-28"	6-26"		
Weed Density, Unit							5 YD2	40 YD2		5 YD2		
Assessed By							VMD/VAM					
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	6	7	8	9	
21	2,4-D LV 6	0.98	lb ae/a	21	oz/a	April 10	B	96 ab	100 a	3 a	90 a	
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 10	B					
	AMS	2.5	lb/a	2.5	lb/a	April 10	B					
22	E-99 (2,4-D a.e.)	1.01	lb ae/a	1.33	pt/a	April 20	C	91 abc	100 a	3 a	93 a	
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C					
	AMS	2.5	lb/a	2.5	lb/a	April 20	C					
23	Phenoxy 088	0.46	lb ae/a	1.33	pt/a	April 20	C	94 ab	100 a	5 a	97 a	
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C					
	AMS	2.5	lb/a	2.5	lb/a	April 20	C					
24	Nontreated check								73 cde	100 a	2 a	25 b
25	2,4-D LV 6	0.5	lb ae/a	0.67	pt/a	April 20	C	98 a	100 a	5 a	93 a	
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 20	C					
	AMS	2.5	lb/a	2.5	lb/a	April 20	C					
26	E-99 (2,4-D a.e.)	1.01	lb ae/a	1.33	pt/a	April 30	D	100 a	100 a	18 a	100 a	
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D					
	AMS	2.5	lb/a	2.5	lb/a	April 30	D					
27	Phenoxy 088	0.46	lb ae/a	1.33	pt/a	April 30	D	100 a	100 a	11 a	99 a	
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D					
	AMS	2.5	lb/a	2.5	lb/a	April 30	D					
28	E-99 (2,4-D a.e.)	0.51	lb ae/a	0.67	pt/a	April 30	D	100 a	100 a	9 a	98 a	
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D					
	AMS	2.5	lb/a	2.5	lb/a	April 30	D					
29	2,4-D LV 6	0.5	lb ae/a	0.67	pt/a	April 30	D	98 a	100 a	14 a	98 a	
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	April 30	D					
	AMS	2.5	lb/a	2.5	lb/a	April 30	D					
30									76 b-e	100 a	0 a	13 b
31									73 cde	100 a	0 a	24 b
32									69 de	100 a	0 a	23 b
33	Classic	0.0234	lb ai/a	1.5	oz/a	FALBD	A	98 a	100 a	10 a	99 a	
	Express	0.007	lb ai/a	0.15	oz/a	FALBD	A					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	FALBD	A					
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	FALBD	A					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	FALBD	A					
	Crop Oil Conc	1	% v/v	1	% v/v	FALBD	A					
34	Spring Residual Reference							100 a	100 a	5 a	100 a	
	Classic	0.0234	lb ai/a	1.5	oz/a	30 EPP	B					
	Express	0.007	lb ai/a	0.15	oz/a	30 EPP	B					
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	30 EPP	B					
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B					
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B					
	Crop Oil Conc	1	% v/v	1	% v/v	30 EPP	B					

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Weed Code								ERICA	PANDI	GLXMA	ERICA
Crop Code										crop INJ	
Rating Data Type								efficacy	efficacy	%	efficacy
Rating Unit								%	%	%	%
Rating Date								30/Jun/2005	30/Jun/2005	14/Jul/2005	14/Jul/2005
Crop Stage											
Crop Stage Scale											
Weed Stage								4-18"	4-14"	20-28"	6-26"
Weed Density, Unit								5 YD2	40 YD2		5 YD2
Assessed By								VMD/VAM			
Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	6	7	8	9
35	Spring glyph. reference							83 a-e	100 a	6 a	90 a
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B				
36	Spring glyph/D reference							81 a-e	100 a	14 a	78 a
	Roundup Weathermax	0.77	lb ae/a	22	oz/a	30 EPP	B				
	Ammonium Sulfate	2.55	lb/a	17	lb/100 gal	30 EPP	B				
	2,4-D ESTER	0.5	lb ae/a	1	pt/a	30 EPP	B				
LSD (P=.05)								20.3	11.7	11.5	22.9
Standard Deviation								14.5	8.3	8.2	16.4
CV								15.76	8.39	127.75	19.6
Grand Mean								91.81	99.31	6.44	83.48
Bartlett's X2								72.278	0.0	44.765	185.34
P(Bartlett's X2)								0.001*	.	0.041*	0.001*
Replicate F								1.324	1.000	0.866	2.562
Replicate Prob(F)								0.2706	0.3960	0.4614	0.0588
Treatment F								2.245	1.000	1.375	13.400
Treatment Prob(F)								0.0009	0.4816	0.1104	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Trial Comments

E-Longitude Determination

$$W\ 085._____ \implies 360 - 85._____ = 274._____$$

Nov-16-2004 Note: SEPAC farm crew applied a blanket glyphosate + 2,4-D application to the entire study area sometime during the week of 11/8/2004. This study is designed to focus on spring emerging horseweed, so a blanket fall burndown application was made to stimulate a 'relatively pure' culture of horseweed due to lack of winter annual competition.

Apr-16-04 Note: Weather data for herbicide application collected from SEPAC weather station data (% cloud cover & relative humidity not available).

(What the heck are these notes below? Reece had them in here, but I don't think they belong for this trial.) VMD

Jul-08-04 Rating note:

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The SEPAC farm crew made a blanket glyphosate application (0.75 lb ae/acre) on 06/24/2004. We evaluated horseweed control (based on above canopy visibility) on 07/08/2004. We will also assess horseweed control at least one more time (possibly late August / early September) to determine if any residual treatments impacted post glyphosate efficacy.

October 5, 2004

Final horseweed rating date. Soybean leaves had dropped, so one final assessment of horseweed populations was collected. Following the blanket glyphosate application on 6/24 and due to the non-competitive nature of horseweed, some of the fall and spring treated plots were actually more weedy than the 'UNTREATED CHECK' plots. We selected the weediest plots as a reference point (0% control), and rated all plots accordingly. Therefore, the untreated check plots do not necessarily carry a 0% weed control rating.