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Spring Applied Herbicide Treatments for Preemergence and Postemergence Control of Dandelions in Soybean

Trial ID: 04-WBURN-SOYDAN
Location: Woodburn, IN

Study Dir.:
Investigator: Dr. Bill Johnson

GENERAL TRIAL INFORMATION

Investigator: Dr. Bill Johnson

TRIAL LOCATION

City: Woodburn
State/Prov.: IN
E-Longitude of LL Corner °: 275.112560 N-Latitude of LL Corner °: 41.131310
Altitude of LL Corner: 742.00 Unit: feet

COOPERATOR/LANDOWNER

Cooperator: Roger Hadley
City: Woodburn
State/Prov: IN

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	TAROF	DANDELION, COMMON	TARAXACUM OFFICINALE WEBER IN WIGGERS

Crop 1: ZEAMX CORN, FIELD

Variety: 2003 harvest residue

Crop 2: GLXMA SOYBEAN

Planting Date: 6/May/2004

Planting Method: planted

Row Spacing: 15 IN

Emergence Date: 13/May/2004

SITE AND DESIGN

Plot Width, Unit: 10 FT

Plot Length, Unit: 30 FT

Reps: 4

Tillage Type: no-till

Study Design: RANDOMIZED COMPLETE BLOCK

	Previous Crops	Previous Pesticides	Year
1.	corn		

MAINTENANCE

Field Prep./Maintenance:

June 4, 2004 - Blanket glyphosate application (22 oz) to entire study area (see comments).

SOIL DESCRIPTION

% OM:	3	Texture:	med to fine (silt loam/silty clay loam)
pH:	6.5	Soil Name:	Hoytville-Nappanee
CEC:	18	Fert. Level:	good

APPLICATION DESCRIPTION

	A
Application Date:	20/Apr/2004
Time of Day:	0920-1000
Application Method:	SPRAY
Application Timing:	PREPOS
Applic. Placement:	BROFOL
Air Temp., Unit:	61 F
% Relative Humidity:	55
Wind Velocity, Unit:	7.5 MPH
Soil Temp., Unit:	54 F
Soil Moisture:	dry surf
% Cloud Cover:	100

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CROP STAGE AT EACH APPLICATION

A	
Crop 1 Code, Stage:	ZEAMX
Stage Scale:	residue
Height, Unit:	50 %
Crop 2 Code, Stage:	GLXMA
Stage Scale:	na

WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code, Stage:	TAROF
Stage Scale:	3-12"
Density, Unit:	9-35 M2

APPLICATION EQUIPMENT

A	
Appl. Equipment:	CO2 Backp
Operating Pressure:	25 psi
Nozzle Type:	VS
Nozzle Size:	8002
Nozzle Spacing, Unit:	20 IN
Boom Length, Unit:	10 FT
Ground Speed, Unit:	3 MPH
Carrier:	water
Spray Volume, Unit:	15 gpa
Propellant:	CO2

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Spring Applied Herbicide Treatments for Preemergence and Postemergence Control of Dandelions in Soybean

Trial ID: 04-WBURN-SOYDAN
 Location: Woodburn, IN

Study Dir.:
 Investigator: Dr. Bill Johnson

Weed Code		TAROF	TAROF	TAROF	TAROF	TAROF		
Part Rated		biomas	biomas	biomas	biomas	biomas		
Rating Data Type		%control	%control	%control	%control	counts		
Rating Unit		%	%	%	%	number		
Rating Date		20/May/2004	4/Jun/2004	18/Jun/2004	1/Jul/2004	7/Oct/2004		
Crop Stage		VC-V1	V2-V3	V3-V4	V5, R1			
Crop Stage Scale		1-2"	4-6"	6-8"	8-10"			
Weed Stage		12-18"	8-16"	1-12"	6-14"	<1-18"		
Weed Density, Unit		9-16M2	10 M2	9-20M2	8-10M2	75FT2		
Assessed By		Bill & Vince	Bill & Reece	Earl & Reece	Earl & Vince	Glenn & Reece		
Trt-Eval Interval		30 DA-A	45 DA-A	14 DA-M	27 DA-M	170 DA-A		
ARM Action Codes								
# Subsamples, Dec.		0	0	0	0	0		
Trt Treatment	Rate	Unit	Grow					
No. Name	Rate	Unit	Stg	1	2	3	4	5
1 Untreated				0 g	0 g	50 h	60 e	109 ab
Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP					
2 Roundup Original Max (ae)	0.77	lb ai/a	SPRNGBD	73 a-e	61 de	75 ef	75 bc	36 bc
NIS AMS			SPRNGBD					
Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP					
3 2,4-D Ester	0.5	lb ai/a	SPRNGBD	48 f	36 f	73 f	78 abc	43 bc
NIS AMS			SPRNGBD					
Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP					
4 Roundup Original Max (ae)	0.77	lb ai/a	SPRNGBD	82 a-e	85 abc	88 abc	91 a	42 bc
Classic	0.0078	lb ai/a	SPRNGBD					
NIS AMS			SPRNGBD					
Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP					
5 2,4-D Ester	0.5	lb ai/a	SPRNGBD	69 cde	73 a-d	86 a-e	92 a	21 c
Classic	0.0078	lb ai/a	SPRNGBD					
NIS AMS			SPRNGBD					
Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP					
6 Roundup Original Max (ae)	0.77	lb ai/a	SPRNGBD	75 a-e	66 cde	78 c-f	80 abc	29 c
FirstRate	0.008	lb ai/a	SPRNGBD					
NIS AMS			SPRNGBD					
Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP					
7 2,4-D Ester	0.5	lb ai/a	SPRNGBD	60 ef	50 ef	77 def	78 abc	58 abc
FirstRate	0.008	lb ai/a	SPRNGBD					
NIS AMS			SPRNGBD					
Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP					
8 Valor	0.063	lb ai/a	SPRNGBD	92 ab	95 a	89 ab	83 abc	31 c
Roundup Original Max (ae)	0.77	lb ai/a	SPRNGBD					
Classic	0.0078	lb ai/a	SPRNGBD					
NIS AMS			SPRNGBD					
Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP					

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Weed Code				TAROF	TAROF	TAROF	TAROF	TAROF	
Part Rated				biomas	biomas	biomas	biomas	biomas	
Rating Data Type				%control	%control	%control	%control	counts	
Rating Unit				%	%	%	%	number	
Rating Date				20/May/2004	4/Jun/2004	18/Jun/2004	1/Jul/2004	7/Oct/2004	
Crop Stage				VC-V1	V2-V3	V3-V4	V5, R1		
Crop Stage Scale				1-2"	4-6"	6-8"	8-10"		
Weed Stage				12-18"	8-16"	1-12"	6-14"	<1-18"	
Weed Density, Unit				9-16M2	10 M2	9-20M2	8-10M2	75FT2	
Assessed By				Bill & Vince	Bill & Reece	Earl & Reece	Earl & Vince	Glenn & Reece	
Trt-Eval Interval				30 DA-A	45 DA-A	14 DA-M	27 DA-M	170 DA-A	
ARM Action Codes									
# Subsamples, Dec.				0	0	0	0	0	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	1	2	3	4	5
9	Valor	0.063	lb ai/a	SPRNGBD	70 b-e	67 b-e	79 b-f	82 abc	37 bc
	Roundup Original Max (ae)	0.77	lb ai/a	SPRNGBD					
	FirstRate	0.008	lb ai/a	SPRNGBD					
	NIS			SPRNGBD					
	AMS			SPRNGBD					
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP					
	AMS			4-6 WAP					
10	Valor	0.063	lb ai/a	SPRNGBD	93 a	93 a	93 a	90 a	15 c
	2,4-D Ester	0.5	lb ai/a	SPRNGBD					
	Classic	0.0078	lb ai/a	SPRNGBD					
	NIS			SPRNGBD					
	AMS			SPRNGBD					
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP					
	AMS			4-6 WAP					
11	Valor	0.063	lb ai/a	SPRNGBD	72 a-e	76 a-d	85 a-e	88 ab	14 c
	2,4-D Ester	0.5	lb ai/a	SPRNGBD					
	FirstRate	0.008	lb ai/a	SPRNGBD					
	NIS			SPRNGBD					
	AMS			SPRNGBD					
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP					
	AMS			4-6 WAP					
12	Valor	0.063	lb ai/a	SPRNGBD	90 abc	88 abc	90 ab	90 a	15 c
	2,4-D Ester	0.5	lb ai/a	SPRNGBD					
	Canopy XL (1 oz / acre)			SPRNGBD					
	Classic	0.0059	lb ai/a	SPRNGBD					
	Authority	0.0293	lb ai/a	SPRNGBD					
	NIS			SPRNGBD					
	AMS			SPRNGBD					
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP					
	AMS			4-6 WAP					
13	Valor	0.063	lb ai/a	SPRNGBD	73 a-e	72 a-d	85 a-e	89 a	17 c
	2,4-D Ester	0.5	lb ai/a	SPRNGBD					
	NIS			SPRNGBD					
	AMS			SPRNGBD					
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP					
	AMS			4-6 WAP					
14	Gangster - 1.8 oz				84 a-d	89 ab	91 a	92 a	6 c
	Valor	0.048	lb ai/a	SPRBD					
	FirstRate	0.0157	lb ai/a	SPRBD					
	GF-1279 (IPA-salt glyph)	0.75	lb ae/a	SPRBD					
	2,4-D Ester	0.5	lb ae/a	SPRBD					
	Crop Oil Conc			SPRBD					
	AMS			SPRBD					
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP					
	AMS			4-6 WAP					
15	Python	0.04	lb ai/a	SPRBD	75 a-e	81 a-d	89 ab	92 a	28 c
	GF-1279 (IPA-salt glyph)	0.75	lb ae/a	SPRBD					
	2,4-D Ester	0.5	lb ae/a	SPRBD					
	Crop Oil Conc			SPRBD					
	AMS			SPRBD					
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP					
	AMS			4-6 WAP					

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Weed Code				TAROF	TAROF	TAROF	TAROF	TAROF
Part Rated				biomas	biomas	biomas	biomas	biomas
Rating Data Type				%control	%control	%control	%control	counts
Rating Unit				%	%	%	%	number
Rating Date				20/May/2004	4/Jun/2004	18/Jun/2004	1/Jul/2004	7/Oct/2004
Crop Stage				VC-V1	V2-V3	V3-V4	V5, R1	
Crop Stage Scale				1-2"	4-6"	6-8"	8-10"	
Weed Stage				12-18"	8-16"	1-12"	6-14"	<1-18"
Weed Density, Unit				9-16M2	10 M2	9-20M2	8-10M2	75FT2
Assessed By				Bill & Vince	Bill & Reece	Earl & Reece	Earl & Vince	Glenn & Reece
Trt-Eval Interval				30 DA-A	45 DA-A	14 DA-M	27 DA-M	170 DA-A
ARM Action Codes								
# Subsamples, Dec.				0	0	0	0	0
Trt No.	Treatment Name	Rate	Grow Unit Stg	1	2	3	4	5
16	FirstRate	0.0157 lb ai/a	SPRBD	78 a-e	80 a-d	88 a-d	90 a	27 c
	GF-1279 (IPA-salt glyph)	0.75 lb ae/a	SPRBD					
	2,4-D Ester	0.5 lb ae/a	SPRBD					
	Crop Oil Conc		SPRBD					
	AMS		SPRBD					
	Roundup Weathermax	0.77 lb ae/a	4-6 WAP					
	AMS		4-6 WAP					
17	Touchdown Total	0.78 lb ae/a	SPRBD	66 de	51 ef	70 f	71 cd	53 abc
	Flexstar	0.117 lb ai/a	SPRBD					
	AMS		SPRBD					
	Roundup Weathermax	0.77 lb ae/a	4-6 WAP					
	AMS		4-6 WAP					
18	Untreated			0 g	0 g	62 g	65 de	117 a
	Roundup Weathermax	0.77 lb ae/a	4-6 WAP					
	AMS		4-6 WAP					
LSD (P=.05)				13.1	13.6	6.9	8.3	48.4
Standard Deviation				9.3	9.6	4.9	5.9	34.2
CV				13.91	14.92	6.03	7.14	88.43
Grand Mean				66.57	64.51	80.38	82.28	38.67
Bartlett's X2				28.549	32.764	27.552	20.513	71.753
P(Bartlett's X2)				0.018*	0.005*	0.036*	0.249	0.001*
Replicate F				1.419	0.788	1.268	3.059	0.297
Replicate Prob(F)				0.2479	0.5061	0.2952	0.0364	0.8275
Treatment F				33.128	34.420	21.383	11.189	3.153
Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	0.0008

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

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

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Weed Code Part Rated Rating Data Type Rating Unit Rating Date Crop Stage Crop Stage Scale Weed Stage Weed Density, Unit Assessed By Trt-Eval Interval ARM Action Codes # Subsamples, Dec.				TAROF biomas counts number 7/Oct/2004 <1-18" 75FT2 Glenn & Reece 170 DA-A TS[5] 2	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	
1	Untreated				94.51 ab
	Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP	
2	Roundup Original Max (ae)	0.77	lb ai/a	SPRNGBD	34.46 abc
	NIS AMS			SPRNGBD SPRNGBD	
	Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP	
3	2,4-D Ester	0.5	lb ai/a	SPRNGBD	40.81 abc
	NIS AMS			SPRNGBD SPRNGBD	
	Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP	
4	Roundup Original Max (ae)	0.77	lb ai/a	SPRNGBD	38.84 abc
	Classic	0.0078	lb ai/a	SPRNGBD	
	NIS AMS			SPRNGBD SPRNGBD	
	Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP	
5	2,4-D Ester	0.5	lb ai/a	SPRNGBD	20.29 bc
	Classic	0.0078	lb ai/a	SPRNGBD	
	NIS AMS			SPRNGBD SPRNGBD	
	Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP	
6	Roundup Original Max (ae)	0.77	lb ai/a	SPRNGBD	25.79 abc
	FirstRate	0.008	lb ai/a	SPRNGBD	
	NIS AMS			SPRNGBD SPRNGBD	
	Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP	
7	2,4-D Ester	0.5	lb ai/a	SPRNGBD	55.56 abc
	FirstRate	0.008	lb ai/a	SPRNGBD	
	NIS AMS			SPRNGBD SPRNGBD	
	Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP	
8	Valor	0.063	lb ai/a	SPRNGBD	30.33 abc
	Roundup Original Max (ae)	0.77	lb ai/a	SPRNGBD	
	Classic	0.0078	lb ai/a	SPRNGBD	
	NIS AMS			SPRNGBD SPRNGBD	
	Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP	
9	Valor	0.063	lb ai/a	SPRNGBD	34.28 abc
	Roundup Original Max (ae)	0.77	lb ai/a	SPRNGBD	
	FirstRate	0.008	lb ai/a	SPRNGBD	
	NIS AMS			SPRNGBD SPRNGBD	
	Roundup Weathermax AMS	0.77	lb ae/a	4-6 WAP 4-6 WAP	

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Weed Code				TAROF	
Part Rated				biomas	
Rating Data Type				counts	
Rating Unit				number	
Rating Date				7/Oct/2004	
Crop Stage					
Crop Stage Scale					
Weed Stage				<1-18"	
Weed Density, Unit				75FT2	
Assessed By				Glenn & Reece	
Trt-Eval Interval				170 DA-A	
ARM Action Codes				TS[5]	
# Subsamples, Dec.				2	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	
				6	
10	Valor	0.063	lb ai/a	SPRNGBD	14.87 c
	2,4-D Ester	0.5	lb ai/a	SPRNGBD	
	Classic	0.0078	lb ai/a	SPRNGBD	
	NIS			SPRNGBD	
	AMS			SPRNGBD	
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP	
	AMS			4-6 WAP	
11	Valor	0.063	lb ai/a	SPRNGBD	10.64 c
	2,4-D Ester	0.5	lb ai/a	SPRNGBD	
	FirstRate	0.008	lb ai/a	SPRNGBD	
	NIS			SPRNGBD	
	AMS			SPRNGBD	
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP	
	AMS			4-6 WAP	
12	Valor	0.063	lb ai/a	SPRNGBD	13.06 c
	2,4-D Ester	0.5	lb ai/a	SPRNGBD	
	Canopy XL (1 oz / acre)			SPRNGBD	
	Classic	0.0059	lb ai/a	SPRNGBD	
	Authority	0.0293	lb ai/a	SPRNGBD	
	NIS			SPRNGBD	
	AMS			SPRNGBD	
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP	
	AMS			4-6 WAP	
13	Valor	0.063	lb ai/a	SPRNGBD	15.48 c
	2,4-D Ester	0.5	lb ai/a	SPRNGBD	
	NIS			SPRNGBD	
	AMS			SPRNGBD	
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP	
	AMS			4-6 WAP	
14	Gangster - 1.8 oz				4.66 c
	Valor	0.048	lb ai/a	SPRBD	
	FirstRate	0.0157	lb ai/a	SPRBD	
	GF-1279 (IPA-salt glyph)	0.75	lb ae/a	SPRBD	
	2,4-D Ester	0.5	lb ae/a	SPRBD	
	Crop Oil Conc			SPRBD	
	AMS			SPRBD	
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP	
	AMS			4-6 WAP	
15	Python	0.04	lb ai/a	SPRBD	24.98 abc
	GF-1279 (IPA-salt glyph)	0.75	lb ae/a	SPRBD	
	2,4-D Ester	0.5	lb ae/a	SPRBD	
	Crop Oil Conc			SPRBD	
	AMS			SPRBD	
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP	
	AMS			4-6 WAP	
16	FirstRate	0.0157	lb ai/a	SPRBD	24.43 abc
	GF-1279 (IPA-salt glyph)	0.75	lb ae/a	SPRBD	
	2,4-D Ester	0.5	lb ae/a	SPRBD	
	Crop Oil Conc			SPRBD	
	AMS			SPRBD	
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP	
	AMS			4-6 WAP	

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Weed Code				TAROF
Part Rated				biomas
Rating Data Type				counts
Rating Unit				number
Rating Date				7/Oct/2004
Crop Stage				
Crop Stage Scale				
Weed Stage				<1-18"
Weed Density, Unit				75FT2
Assessed By				Glenn & Reece
Trt-Eval Interval				170 DA-A
ARM Action Codes				TS[5]
# Subsamples, Dec.				2
Trt No.	Treatment Name	Rate	Unit	Grow Stg
				6
17	Touchdown Total	0.78	lb ae/a	SPRBD
	Flexstar	0.117	lb ai/a	SPRBD
	AMS			SPRBD
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP
	AMS			4-6 WAP
18	Untreated			
	Roundup Weathermax	0.77	lb ae/a	4-6 WAP
	AMS			4-6 WAP
LSD (P=.05)				3.072t
Standard Deviation				2.172t
CV				38.54
Grand Mean				5.64t
Bartlett's X2				35.482
P(Bartlett's X2)				0.005*
Replicate F				0.618
Replicate Prob(F)				0.6068
Treatment F				3.540
Treatment Prob(F)				0.0002

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

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

Column 6: TS[5] = SQR([5] + .5)