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Spring Applied Herbicide Treatments for Preemergence and Postemergence Control of Dandelions

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

Study Dir.:
Investigator: Dr. Bill Johnson

GENERAL TRIAL INFORMATION

Investigator: Dr. Bill Johnson

TRIAL LOCATION

City: Woodburn
State/Prov.: IN
Country: USA
E-Longitude of LL Corner °: 275.123190 N-Latitude of LL Corner °: 41.140080
Altitude of LL Corner: 779.00 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: GLXMA SOYBEAN

Variety: harvest residue

Crop 2: ZEAMX CORN, FIELD

Planting Date: 19/Apr/2004

Planting Method: planter

Row Spacing: 30 IN

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.	soybean		

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	B
Application Date:	20/Apr/2004	20/May/2004
Time of Day:	0800-0900	0830-0900
Application Method:	SPRAY	SPRAY
Application Timing:	PREPOS	POSPOS
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	53 F	75 F
% Relative Humidity:	61	85
Wind Velocity, Unit:	10 MPH	6.5 MPH
Soil Temp., Unit:	53 F	70 F
Soil Moisture:	dry surf	dry surf
% Cloud Cover:	100	100

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	GLXMA	GLXMA
Stage Scale:	residue	residue
Height, Unit:	20 %	20 %
Crop 2 Code, Stage:	ZEAMX	ZEAMX
Stage Scale:	na	V3
Height, Unit:		5 IN

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WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	TAROF	TAROF
Stage Scale:	2-12"	8-16"
Density, Unit:	25+ M2	30 M2

APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment
2	Slight pressure drop noted during 4/20 application (low spray volume?)
3	Slight pressure drop noted during 4/20 application (low spray volume?)

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Spring Applied Herbicide Treatments for Preemergence and Postemergence Control of Dandelions

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

Study Dir.:
 Investigator: Dr. Bill Johnson

Weed Code	ZEAMX		TAROF		ZEAMX		TAROF		ZEAMX	
Crop Code	injury		biomas		injury		biomas		injury	
Part Rated	%stunt		%control		%stunt		%control		%stunt	
Rating Data Type	%		%		%		%		%	
Rating Unit	11/May/2004		11/May/2004		20/May/2004		20/May/2004		4/Jun/2004	
Rating Date	V1		V1		V3		V3		V4-V5	
Crop Stage	2-3"		2-3"		5"		5"		16-20"	
Crop Stage Scale	16-20"		16-20"		6-20"		6-20"		16-20"	
Weed Stage	2-3 FT2		2-3 FT2		28 M2		28 M2		15 DA-B	
Weed Density, Unit	Bill & Vince		Bill & Vince		Bill & Vince		Bill & Vince		Bill & Reece	
Assessed By	21 DA-A		21 DA-A		30 DA-A		30 DA-A		15 DA-B	
Trt-Eval Interval	0		0		0		0		0	
ARM Action Codes	0		0		0		0		0	
# Subsamples, Dec.	0		0		0		0		0	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	1	2	3	4	5	
1	Untreated				0 b	0 c	0 b	0 b	28 ab	
2	Lumax Atrazine Crop Oil Conc AMS	2.47 1	lb ai/a lb ai/a	SPRNGBD SPRNGBD SPRNGBD SPRNGBD	3 b	39 b	5 b	65 a	0 d	
3	Lumax Crop Oil Conc AMS	2.96	lb ai/a	SPRNGBD SPRNGBD SPRNGBD	10 a	58 a	17 a	70 a	2 d	
4	Bicep II Magnum Crop Oil Conc AMS Callisto Atrazine Crop Oil Conc UAN (28%)	2.9 0.094 0.25	lb ai/a lb ai/a lb ai/a	SPRNGBD SPRNGBD SPRNGBD 6" corn 6" corn 6" corn 6" corn	0 b	15 c	0 b	12 b	8 bcd	
5	A14244 (Lexar/Lumax LMF) Crop Oil Conc AMS	3.23	lb ai/a	SPRNGBD SPRNGBD SPRNGBD	1 b	54 ab	10 ab	74 a	1 d	
6	Define SC Atrazine Balance Pro 2,4-D Ester Crop Oil Conc UAN - 28%	0.75 1 0.07 0.5	lb ai/a lb ai/a lb ai/a lb ae/a	SPRNGBD SPRNGBD SPRNGBD SPRNGBD SPRNGBD SPRNGBD	9 a	41 ab	8 ab	61 a	5 cd	
7	Define SC Atrazine Balance Pro 2,4-D Ester Crop Oil Conc AMS Equip MSO UAN - 28%	0.75 1 0.07 0.5 0.03	lb ai/a lb ai/a lb ai/a lb ae/a lb ai/a	SPRNGBD SPRNGBD SPRNGBD SPRNGBD SPRNGBD SPRNGBD 6" corn 6" corn 6" corn	0 b	38 b	3 b	58 a	24 abc	
8	Define SC Atrazine Crop Oil Conc AMS Equip MSO UAN - 28%	0.75 1 0.03	lb ai/a lb ai/a lb ai/a	SPRNGBD SPRNGBD SPRNGBD SPRNGBD 6" corn 6" corn 6" corn	3 b	11 c	0 b	0 b	18 a-d	

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Weed Code				ZEAMX	TAROF	ZEAMX	TAROF	ZEAMX	
Crop Code				injury	biomas	injury	biomas	injury	
Part Rated				%stunt	%control	%stunt	%control	%stunt	
Rating Data Type				%	%	%	%	%	
Rating Unit				11/May/2004	11/May/2004	20/May/2004	20/May/2004	4/Jun/2004	
Rating Date				V1	V1	V3	V3	V4-V5	
Crop Stage				2-3"	2-3"	5"	5"	16-20"	
Crop Stage Scale					16-20"		6-20"		
Weed Stage					2-3 FT2		28 M2		
Weed Density, Unit				Bill & Vince	Bill & Vince	Bill & Vince	Bill & Vince	Bill & Reece	
Assessed By				21 DA-A	21 DA-A	30 DA-A	30 DA-A	15 DA-B	
Trt-Eval Interval									
ARM Action Codes									
# Subsamples, Dec.				0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	1	2	3	4	5
9	Define SC	0.75	lb ai/a	SPRNGBD	0 b	0 c	0 b	0 b	30 a
	Atrazine	1	lb ai/a	SPRNGBD					
	Crop Oil Conc			SPRNGBD					
	AMS			SPRNGBD					
	Equip	0.03	lb ai/a	6" corn					
	Distinct	0.0955	lb ai/a	6" corn					
	MSO			6" corn					
	UAN - 28%			6" corn					
10	Define SC	0.75	lb ai/a	SPRNGBD	0 b	0 c	0 b	0 b	22 abc
	Atrazine	1	lb ai/a	SPRNGBD					
	Crop Oil Conc			SPRNGBD					
	AMS			SPRNGBD					
	Equip	0.03	lb ai/a	6" corn					
	Callisto	0.0625	lb ai/a	6" corn					
	MSO			6" corn					
	UAN - 28%			6" corn					
11	Define SC	0.75	lb ai/a	SPRNGBD	0 b	0 c	0 b	0 b	33 a
	Atrazine	1	lb ai/a	SPRNGBD					
	Crop Oil Conc			SPRNGBD					
	AMS			SPRNGBD					
	Steadfast	0.035	lb ai/a	6" corn					
	Callisto	0.047	lb ai/a	6" corn					
	Crop Oil Conc			6" corn					
	UAN - 28%			6" corn					
12	Untreated				0 b	6 c	0 b	0 b	20 a-d
LSD (P=.05)				5.0	13.8	7.9	16.7	12.9	
Standard Deviation				3.5	9.6	5.4	11.4	8.8	
CV				166.24	44.01	152.59	40.25	55.36	
Grand Mean				2.08	21.77	3.53	28.26	15.83	
Bartlett's X2				2.885	5.827	2.006	5.03	9.496	
P(Bartlett's X2)				0.577	0.56	0.735	0.412	0.486	
Replicate F				1.158	2.593	0.888	0.288	0.068	
Replicate Prob(F)				0.3405	0.0692	0.4634	0.8335	0.9764	
Treatment F				4.200	21.815	4.089	34.205	7.442	
Treatment Prob(F)				0.0007	0.0001	0.0027	0.0001	0.0001	

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

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Weed Code				TAROF	ZEAMX	TAROF	TAROF	
Crop Code				biomas	injury	biomas	PLANT P	
Part Rated				%control	%stunt	%control	COUPLA	
Rating Data Type				%	%	%	/75 sqft	
Rating Unit				4/Jun/2004	18/Jun/2004	18/Jun/2004	9/Nov/2004	
Rating Date				V4-V5	V6-V7	V6-V7	harveste	
Crop Stage				16-20"	42-48"	42-48"		
Crop Stage Scale				8-16"		12-18"	<1-18"	
Weed Stage				2-3 FT2		5-6 FT2	75FT2	
Weed Density, Unit				Bill & Reece	Earl & Reece	Earl & Reece	Brad, Glenn, & Reece	
Assessed By				15 DA-B	29 DA-B	29 DA-B	173 DA-B	
Trt-Eval Interval								
ARM Action Codes								
# Subsamples, Dec.				0	0	0	0	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	6	7	8	9
1	Untreated				0 c	33 a	0 c	217 a
2	Lumax	2.47	lb ai/a	SPRNGBD	79 a	0 c	82 b	104 abc
	Atrazine	1	lb ai/a	SPRNGBD				
	Crop Oil Conc			SPRNGBD				
	AMS			SPRNGBD				
3	Lumax	2.96	lb ai/a	SPRNGBD	83 a	0 c	91 ab	59 bc
	Crop Oil Conc			SPRNGBD				
	AMS			SPRNGBD				
4	Bicep II Magnum	2.9	lb ai/a	SPRNGBD	84 a	7 bc	96 a	102 abc
	Crop Oil Conc			SPRNGBD				
	AMS			SPRNGBD				
	Callisto	0.094	lb ai/a	6" corn				
	Atrazine	0.25	lb ai/a	6" corn				
	Crop Oil Conc			6" corn				
	UAN (28%)			6" corn				
5	A14244 (Lexar/Lumax LMF)	3.23	lb ai/a	SPRNGBD	93 a	3 bc	98 a	48 bc
	Crop Oil Conc			SPRNGBD				
	AMS			SPRNGBD				
6	Define SC	0.75	lb ai/a	SPRNGBD	79 a	5 bc	86 ab	113 abc
	Atrazine	1	lb ai/a	SPRNGBD				
	Balance Pro	0.07	lb ai/a	SPRNGBD				
	2,4-D Ester	0.5	lb ae/a	SPRNGBD				
	Crop Oil Conc			SPRNGBD				
	UAN - 28%			SPRNGBD				
7	Define SC	0.75	lb ai/a	SPRNGBD	85 a	18 abc	100 a	20 c
	Atrazine	1	lb ai/a	SPRNGBD				
	Balance Pro	0.07	lb ai/a	SPRNGBD				
	2,4-D Ester	0.5	lb ae/a	SPRNGBD				
	Crop Oil Conc			SPRNGBD				
	AMS			SPRNGBD				
	Equip	0.03	lb ai/a	6" corn				
	MSO			6" corn				
	UAN - 28%			6" corn				
8	Define SC	0.75	lb ai/a	SPRNGBD	47 b	20 abc	100 a	99 abc
	Atrazine	1	lb ai/a	SPRNGBD				
	Crop Oil Conc			SPRNGBD				
	AMS			SPRNGBD				
	Equip	0.03	lb ai/a	6" corn				
	MSO			6" corn				
	UAN - 28%			6" corn				
9	Define SC	0.75	lb ai/a	SPRNGBD	50 b	33 a	100 a	80 abc
	Atrazine	1	lb ai/a	SPRNGBD				
	Crop Oil Conc			SPRNGBD				
	AMS			SPRNGBD				
	Equip	0.03	lb ai/a	6" corn				
	Distinct	0.0955	lb ai/a	6" corn				
	MSO			6" corn				
	UAN - 28%			6" corn				

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Weed Code	TAROF	ZEAMX	TAROF	TAROF
Crop Code				
Part Rated	biomas	injury	biomas	PLANT P
Rating Data Type	%control	%stunt	%control	COUPLA
Rating Unit	%	%	%	/75 sqft
Rating Date	4/Jun/2004	18/Jun/2004	18/Jun/2004	9/Nov/2004
Crop Stage	V4-V5	V6-V7	V6-V7	harveste
Crop Stage Scale	16-20"	42-48"	42-48"	
Weed Stage	8-16"		12-18"	<1-18"
Weed Density, Unit	2-3 FT2		5-6 FT2	75FT2
Assessed By	Bill & Reece	Earl & Reece	Earl & Reece	Brad, Glenn, & Reece
Trt-Eval Interval	15 DA-B	29 DA-B	29 DA-B	173 DA-B
ARM Action Codes				
# Subsamples, Dec.	0	0	0	0
Trt No.				
Treatment Name				
Rate				
Rate Unit				
Grow Stg				
	6	7	8	9
10 Define SC	0.75 lb ai/a			
Atrazine	1 lb ai/a			
Crop Oil Conc				
AMS				
Equip	0.03 lb ai/a			
Callisto	0.0625 lb ai/a			
MSO				
UAN - 28%				
11 Define SC	0.75 lb ai/a			
Atrazine	1 lb ai/a			
Crop Oil Conc				
AMS				
Steadfast	0.035 lb ai/a			
Callisto	0.047 lb ai/a			
Crop Oil Conc				
UAN - 28%				
12 Untreated				
	0 c	17 abc	0 c	179 ab
LSD (P=.05)	14.3	13.6	8.6	85.4
Standard Deviation	9.7	9.3	5.8	59.2
CV	17.03	62.91	7.36	58.33
Grand Mean	56.94	14.72	79.06	101.44
Bartlett's X2	7.626	7.99	21.282	23.394
P(Bartlett's X2)	0.572	0.535	0.003*	0.016*
Replicate F	0.372	0.868	1.115	1.284
Replicate Prob(F)	0.7742	0.4730	0.3653	0.2961
Treatment F	44.883	6.425	165.147	3.282
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0040

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Weed Code				TAROF
Crop Code				PLANT P
Part Rated				COUPLA
Rating Data Type				/75 sqft
Rating Unit				9/Nov/2004
Rating Date				harveste
Crop Stage				<1-18"
Crop Stage Scale				75FT2
Weed Stage				Brad, Glenn, & Reece
Weed Density, Unit				173 DA-B
Assessed By				TS[9]
Trt-Eval Interval				2
ARM Action Codes				
# Subsamples, Dec.				
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg
				10
1	Untreated			203.59 a
2	Lumax	2.47	lb ai/a	SPRNGBD
	Atrazine	1	lb ai/a	SPRNGBD
	Crop Oil Conc			SPRNGBD
	AMS			SPRNGBD
				98.47 abc
3	Lumax	2.96	lb ai/a	SPRNGBD
	Crop Oil Conc			SPRNGBD
	AMS			SPRNGBD
				53.12 bc
4	Bicep II Magnum	2.9	lb ai/a	SPRNGBD
	Crop Oil Conc			SPRNGBD
	AMS			SPRNGBD
	Callisto	0.094	lb ai/a	6" corn
	Atrazine	0.25	lb ai/a	6" corn
	Crop Oil Conc			6" corn
	UAN (28%)			6" corn
				85.41 abc
5	A14244 (Lexar/Lumax LMF)	3.23	lb ai/a	SPRNGBD
	Crop Oil Conc			SPRNGBD
	AMS			SPRNGBD
				43.54 bc
6	Define SC	0.75	lb ai/a	SPRNGBD
	Atrazine	1	lb ai/a	SPRNGBD
	Balance Pro	0.07	lb ai/a	SPRNGBD
	2,4-D Ester	0.5	lb ae/a	SPRNGBD
	Crop Oil Conc			SPRNGBD
	UAN - 28%			SPRNGBD
				103.05 abc
7	Define SC	0.75	lb ai/a	SPRNGBD
	Atrazine	1	lb ai/a	SPRNGBD
	Balance Pro	0.07	lb ai/a	SPRNGBD
	2,4-D Ester	0.5	lb ae/a	SPRNGBD
	Crop Oil Conc			SPRNGBD
	AMS			SPRNGBD
	Equip	0.03	lb ai/a	6" corn
	MSO			6" corn
	UAN - 28%			6" corn
				19.13 c
8	Define SC	0.75	lb ai/a	SPRNGBD
	Atrazine	1	lb ai/a	SPRNGBD
	Crop Oil Conc			SPRNGBD
	AMS			SPRNGBD
	Equip	0.03	lb ai/a	6" corn
	MSO			6" corn
	UAN - 28%			6" corn
				98.95 abc
9	Define SC	0.75	lb ai/a	SPRNGBD
	Atrazine	1	lb ai/a	SPRNGBD
	Crop Oil Conc			SPRNGBD
	AMS			SPRNGBD
	Equip	0.03	lb ai/a	6" corn
	Distinct	0.0955	lb ai/a	6" corn
	MSO			6" corn
	UAN - 28%			6" corn
				78.68 abc

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Weed Code				TAROF
Crop Code				PLANT P
Part Rated				COUPLA
Rating Data Type				/75 sqft
Rating Unit				9/Nov/2004
Rating Date				harveste
Crop Stage				<1-18"
Crop Stage Scale				75FT2
Weed Stage				Brad, Glenn, & Reece
Weed Density, Unit				173 DA-B
Assessed By				TS[9]
Trt-Eval Interval				2
ARM Action Codes				
# Subsamples, Dec.				
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg
10	Define SC	0.75	lb ai/a	SPRNGBD
	Atrazine	1	lb ai/a	SPRNGBD
	Crop Oil Conc			SPRNGBD
	AMS			SPRNGBD
	Equip	0.03	lb ai/a	6" corn
	Callisto	0.0625	lb ai/a	6" corn
	MSO			6" corn
	UAN - 28%			6" corn
11	Define SC	0.75	lb ai/a	SPRNGBD
	Atrazine	1	lb ai/a	SPRNGBD
	Crop Oil Conc			SPRNGBD
	AMS			SPRNGBD
	Steadfast	0.035	lb ai/a	6" corn
	Callisto	0.047	lb ai/a	6" corn
	Crop Oil Conc			6" corn
	UAN - 28%			6" corn
12	Untreated			
				10
				77.62 abc
				101.38 abc
				173.70 ab
LSD (P=.05)				4.162t
Standard Deviation				2.882t
CV				30.59
Grand Mean				9.42t
Bartlett's X2				15.036
P(Bartlett's X2)				0.181
Replicate F				1.935
Replicate Prob(F)				0.1431
Treatment F				3.381
Treatment Prob(F)				0.0033

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

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Column 10: TS[9] = SQR([9] + .5)