

Control of Johnsongrass with Nicosulfuron.

Project Code: 07-ARC-24B-S70 Location: Agronomy Research Center  
Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Carbondale IL 62901 USA  
Trial Status: Final Updated: 1-23-08**Objective:**Determine the efficacy of CHA 7950 compared with Accent  
on johnsongrass.

Weed Code	Common Name	Scientific Name
1.	SORHA johnsongrass, established	Sorghum halepense
2.	SORHA johnsongrass, seedling	Sorghum halepense
3.	DIGIS crabgrass, smooth	Digitaria ischaemum (Schreb. ex Schweig)

Crop 1:	ZEAMX corn, field	Variety:	P33N58 RR/LL/HX
Planting Method:	Seeded	Planting Date:	4-26-07
Rate:	28000 S/A	Depth:	1.5 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	25 FT	Reps:	4
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2006				
Field Prep./Maintenance:	N 150 LB/A, P205 0 LB/A, K20 120 LB/A				

Soil Name:	Weir	% OM:	1.5	pH:	6.4	CEC:	7.6
Texture:	Silt loam	Fert. Level:	P1: 79 LB/A, K: 218 LB/A				

**APPLICATION DESCRIPTION****A**

Application Date:	6-3-07
Time of Day:	9:00
Application Method:	Spray
Application Timing:	8-12"W
Applic. Placement:	BROFOL
Air Temp., Unit:	75 F
% Relative Humidity:	65
Wind Velocity, Unit:	0-3 MPH
Dew Presence (Y/N):	Y
Soil Temp., Unit:	75 F
Soil Moisture:	NORMAL
% Cloud Cover:	0

**CROP STAGE AT EACH APPLICATION****A**

Crop 1 Code, Stage:	ZEAMX V6-V7
Height, Unit:	18-22 IN

**WEED STAGE AT EACH APPLICATION****A**

Weed 1 Code:	SORHA estab
Stage(leaves):	5-8
Height(inches):	8-24
Density:	High
Weed 2 Code:	SORHA seed
Stage(leaves):	4-7
Height(inches):	7-18
Density:	High
Weed 3 Code:	DIGIS
Stage(leaves):	5-8
Height(inches):	3-6
Density:	Low

**APPLICATION EQUIPMENT****A**

Appl. Equipment:	CO2 sprayer
Operating Pressure:	40 PSI
Nozzle Type:	Flat fan
Nozzle Size:	XR 8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

**NOTES:**

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Weed Code						SORHA										
Crop Code						SORHA										
Rating Data Type						SORHA										
Rating Unit						SORHA										
Rating Date						SORHA										
Trt-Eval Interval						SORHA										
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code	ZEAMX Injury Percent 6-10-07 7 DA-A	ZEAMX Injury Percent 6-17-07 14 DA-A	ZEAMX Injury Percent 6-24-07 21 DA-A	ZEAMX Injury Percent 7-1-07 28 DA-A	Control Percent 6-10-07 7 DA-A	Control Percent 6-17-07 14 DA-A	Control Percent 6-24-07 21 DA-A	Control Percent 7-1-07 28 DA-A
1	CHA 7950	2	OD	0.023 lb ai/a	1.5 fl oz/a	8-12"	A		0 a	0 a	0 a	0 a	64 a	86 ab	89 e	90 b
1	R-WAY	100	LIQ	1.0 % v/v	1 % v/v	8-12"	A									
1	28% UAN	100	LIQ	3.0 % v/v	3 % v/v	8-12"	A									
2	CHA 7950	2	OD	0.047 lb ai/a	3 fl oz/a	8-12"	A		0 a	0 a	0 a	0 a	60 ab	88 a	90 de	90 b
2	R-WAY	100	LIQ	1.0 % v/v	1 % v/v	8-12"	A									
2	28% UAN	100	LIQ	3.0 % v/v	3 % v/v	8-12"	A									
3	CHA 7950	2	OD	0.023 lb ai/a	1.5 fl oz/a	8-12"	A		0 a	0 a	0 a	0 a	73 a	86 ab	94 abc	91 b
3	PREMIUM COC	100	LIQ	1.0 % v/v	1 % v/v	8-12"	A									
3	28% UAN	100	LIQ	3.0 % v/v	3 % v/v	8-12"	A									
4	CHA 7950	2	OD	0.047 lb ai/a	3 fl oz/a	8-12"	A		0 a	0 a	0 a	0 a	68 a	90 a	97 a	95 a
4	PREMIUM COC	100	LIQ	1.0 % v/v	1 % v/v	8-12"	A									
4	28% UAN	100	LIQ	3.0 % v/v	3 % v/v	8-12"	A									
5	CHA 7950	2	OD	0.023 lb ai/a	1.5 fl oz/a	8-12"	A		0 a	0 a	0 a	0 a	66 a	86 ab	91 cde	91 b
5	HERBIMAX	100	LIQ	1.0 % v/v	1 % v/v	8-12"	A									
5	28% UAN	100	LIQ	3.0 % v/v	3 % v/v	8-12"	A									
6	CHA 7950	2	OD	0.047 lb ai/a	3 fl oz/a	8-12"	A		0 a	0 a	0 a	0 a	71 a	88 ab	95 ab	95 a
6	HERBIMAX	100	LIQ	1.0 % v/v	1 % v/v	8-12"	A									
6	28% UAN	100	LIQ	3.0 % v/v	3 % v/v	8-12"	A									
7	CHA 7950	2	OD	0.023 lb ai/a	1.5 fl oz/a	8-12"	A		0 a	0 a	0 a	0 a	68 a	86 ab	93 bcd	95 a
7	ACTIVATOR 90	100	LIQ	0.5 % v/v	0.5 % v/v	8-12"	A									
7	28% UAN	100	LIQ	3.0 % v/v	3 % v/v	8-12"	A									
8	CHA 7950	2	OD	0.047 lb ai/a	3 fl oz/a	8-12"	A		0 a	0 a	0 a	0 a	48 bc	83 b	93 bcd	91 b
8	ACTIVATOR 90	100	LIQ	0.5 % v/v	0.5 % v/v	8-12"	A									
8	28% UAN	100	LIQ	3.0 % v/v	3 % v/v	8-12"	A									
9	ACCENT	75	WG	0.023 lb ai/a	0.5 oz/a	8-12"	A		0 a	0 a	0 a	0 a	48 bc	86 ab	88 e	88 c
9	HERBIMAX	100	LIQ	1.0 % v/v	1 % v/v	8-12"	A									
9	28% UAN	100	LIQ	3.0 % v/v	3 % v/v	8-12"	A									
10	ACCENT	75	WG	0.047 lb ai/a	1 oz/a	8-12"	A		0 a	0 a	0 a	0 a	43 c	88 ab	94 abc	95 a
10	HERBIMAX	100	LIQ	1.0 % v/v	1 % v/v	8-12"	A									
10	28% UAN	100	LIQ	3.0 % v/v	3 % v/v	8-12"	A									
11	NONTREATED								0 a	0 a	0 a	0 a	0 d	0 c	0 f	0 d
12	NONTREATED								0 a	0 a	0 a	0 a	0 d	0 c	0 f	0 d
LSD (P=.05)									0.0	0.0	0.0	0.0	14.0	4.7	3.4	2.2
Replicate F									0.000	0.000	0.000	0.000	1.863	0.711	1.631	0.834
Replicate Prob(F)									1.0000	1.0000	1.0000	1.0000	0.1550	0.5522	0.2010	0.4846
Treatment F									0.000	0.000	0.000	0.000	27.974	427.347	950.016	2258.049
Treatment Prob(F)									1.0000	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

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

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Weed Code	DIGIS	DIGIS	DIGIS	DIGIS
Crop Code				
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Date	6-10-07	6-17-07	6-24-07	7-1-07
Trt-Eval Interval	7 DA-A	14 DA-A	21 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	CHA 7950	2	OD	0.023	lb ai/a	1.5	fl oz/a	8-12"	A	43	cd	53	bc
1	R-WAY	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A			56	de
1	28% UAN	100	LIQ	3.0	% v/v	3	% v/v	8-12"	A			34	d
2	CHA 7950	2	OD	0.047	lb ai/a	3	fl oz/a	8-12"	A	45	bc	53	bc
2	R-WAY	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A			48	f
2	28% UAN	100	LIQ	3.0	% v/v	3	% v/v	8-12"	A			35	d
3	CHA 7950	2	OD	0.023	lb ai/a	1.5	fl oz/a	8-12"	A	45	bc	53	bc
3	PREMIUM COC	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A			50	ef
3	28% UAN	100	LIQ	3.0	% v/v	3	% v/v	8-12"	A			35	d
4	CHA 7950	2	OD	0.047	lb ai/a	3	fl oz/a	8-12"	A	43	cd	51	bc
4	PREMIUM COC	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A			68	ab
4	28% UAN	100	LIQ	3.0	% v/v	3	% v/v	8-12"	A			53	b
5	CHA 7950	2	OD	0.023	lb ai/a	1.5	fl oz/a	8-12"	A	43	cd	50	c
5	HERBIMAX	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A			59	cd
5	28% UAN	100	LIQ	3.0	% v/v	3	% v/v	8-12"	A			48	bc
6	CHA 7950	2	OD	0.047	lb ai/a	3	fl oz/a	8-12"	A	53	ab	59	ab
6	HERBIMAX	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A			73	ab
6	28% UAN	100	LIQ	3.0	% v/v	3	% v/v	8-12"	A			53	b
7	CHA 7950	2	OD	0.023	lb ai/a	1.5	fl oz/a	8-12"	A	60	a	64	a
7	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	8-12"	A			74	a
7	28% UAN	100	LIQ	3.0	% v/v	3	% v/v	8-12"	A			64	a
8	CHA 7950	2	OD	0.047	lb ai/a	3	fl oz/a	8-12"	A	41	cd	55	bc
8	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	8-12"	A			70	ab
8	28% UAN	100	LIQ	3.0	% v/v	3	% v/v	8-12"	A			55	b
9	ACCENT	75	WG	0.023	lb ai/a	0.5	oz/a	8-12"	A	48	bc	48	c
9	HERBIMAX	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A			45	f
9	28% UAN	100	LIQ	3.0	% v/v	3	% v/v	8-12"	A			40	cd
10	ACCENT	75	WG	0.047	lb ai/a	1	oz/a	8-12"	A	35	d	49	c
10	HERBIMAX	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A			65	bc
10	28% UAN	100	LIQ	3.0	% v/v	3	% v/v	8-12"	A			48	bc
11	NONTREATED									0	e	0	d
12	NONTREATED									0	e	0	d
LSD (P=.05)										8.6		7.7	
Replicate F										1.149		2.171	
Replicate Prob(F)										0.3437		0.1101	
Treatment F										39.446		63.080	
Treatment Prob(F)										0.0001		0.0001	

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

Trial Comments

1. Protocol: Cheminova.
2. Ratings: CI/WC 7, 14, 21 + 28 DAT.
3. Blanket PRE application of atrazine (2 lbai/A) applied on 4-27-07, to all plots 10 ft wide, including the nontreated.
4. DA-A = Days after 8-12" application.
5. "SORHA estab" and "SORHA seed" are johnsongrass, established (rhizome) and seedling, respectively.  
 SORHA ratings were combined rhizome and seedling control, predominately (67%) rhizome johnsongrass.
6. Not harvested.