

Control of Johnsongrass with Laudis.

Project Code: 07-ARC-24B-N90 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 Laudis on johnsongrass applied alone and in tank-mixtures compared with competitive standards.

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, K2O 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:	8:30
Application Method:	Spray
Application Timing:	8-12"
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	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Crop Code	Moisture	Test wt.	Yield	Injury	Injury	Injury
Rating Data Type	Percent	lb/bu	bu/A	Percent	Percent	Percent
Rating Unit	9-17-07	9-17-07	9-17-07	6-10-07	6-17-07	7-1-07
Rating Date				7 DA-A	14 DA-A	28 DA-A
Trt-Eval Interval						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code												
1	NONTREATED									14.7	b	55.8	c	34	c	0	a	0	a	0	a
2	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	16.4	ab	56.9	bc	58	abc	0	a	0	a	0	a
2	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A												
2	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
3	ACCENT	75	WG	0.0117	lb ai/a	0.25	oz/a	8-12"	A	16.4	ab	56.8	bc	57	abc	0	a	0	a	0	a
3	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A												
3	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
4	ACCENT	75	WG	0.0234	lb ai/a	0.5	oz/a	8-12"	A	14.7	b	57.3	ab	65	ab	0	a	0	a	0	a
4	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A												
4	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
5	OPTION	35	WG	0.0164	lb ai/a	0.75	oz/a	8-12"	A	14.9	b	57.3	ab	69	ab	0	a	0	a	0	a
5	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A												
5	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
6	OPTION	35	WG	0.0328	lb ai/a	1.5	oz/a	8-12"	A	16.0	ab	58.0	ab	65	ab	0	a	0	a	0	a
6	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A												
6	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
7	SP102000017385	2.34	SL	0.402	lb ai/a	22	fl oz/a	8-12"	A	15.1	b	58.5	a	68	ab	0	a	0	a	0	a
7	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"	A	18.0	a	57.5	ab	83	a	0	a	0	a	0	a
8	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
9	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	16.9	ab	57.4	ab	64	ab	0	a	0	a	0	a
9	ACCENT	75	WG	0.0117	lb ai/a	0.25	oz/a	8-12"	A												
9	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A												
9	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
10	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	17.3	ab	57.6	ab	58	abc	0	a	0	a	0	a
10	ACCENT	75	WG	0.0234	lb ai/a	0.5	oz/a	8-12"	A												
10	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A												
10	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
11	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	15.7	ab	57.3	ab	52	bc	0	a	0	a	0	a
11	OPTION	35	WG	0.0164	lb ai/a	0.75	oz/a	8-12"	A												
11	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A												
11	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
12	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	15.3	ab	57.0	bc	55	bc	0	a	0	a	0	a
12	OPTION	35	WG	0.0328	lb ai/a	1.5	oz/a	8-12"	A												
12	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A												
12	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
13	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	15.9	ab	57.6	ab	66	ab	0	a	0	a	0	a
13	SP102000017385	2.34	SL	0.402	lb ai/a	22	fl oz/a	8-12"	A												
13	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
14	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	15.9	ab	57.8	ab	74	ab	0	a	0	a	0	a
14	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"	A												
14	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A												
LSD (P=.05)										2.84		1.38		28.2		0.0		0.0		0.0	
Replicate F										0.814		1.430		5.654		0.000		0.000		0.000	
Replicate Prob(F)										0.4941		0.2490		0.0026		1.0000		1.0000		1.0000	
Treatment F										0.999		1.677		1.350		0.000		0.000		0.000	
Treatment Prob(F)										0.4709		0.1067		0.2285		1.0000		1.0000		1.0000	

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

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Trt	Treatment	Form	Form	Rate	Rate	Prod	Prod	Grow	Appl	SORHA	SORHA	SORHA	SORHA	SORHA_e	DIGIS	DIGIS	DIGIS	DIGIS
										Control	Control	Control	Control	Control	Control	Control	Control	
No.	Name	Conc	Type	Unit	Unit	Rate	Unit	Stg	Code	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1	NONTREATED									0 f	0 g	0 e	0 f	0 g	0 f	0 e	0 e	0 e
2	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	71 bc	81 c	79 d	65 e	60 e	71 bc	83 b	80 b	87 b
2	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A									
2	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
3	ACCENT	75	WG	0.0117	lb ai/a	0.25	oz/a	8-12"	A	60 d	91 ab	91 a	95 a	94 a	60 d	44 d	45 d	40 cd
3	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A									
3	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
4	ACCENT	75	WG	0.0234	lb ai/a	0.5	oz/a	8-12"	A	73 bc	90 b	91 ab	95 a	95 a	73 bc	69 c	68 c	45 c
4	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A									
4	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
5	OPTION	35	WG	0.0164	lb ai/a	0.75	oz/a	8-12"	A	69 c	93 ab	93 a	94 ab	84 c	69 c	38 d	41 d	38 d
5	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A									
5	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
6	OPTION	35	WG	0.0328	lb ai/a	1.5	oz/a	8-12"	A	76 b	95 a	95 a	95 a	93 ab	76 b	46 d	50 d	36 d
6	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A									
6	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
7	SP102000017385	2.34	SL	0.402	lb ai/a	22	fl oz/a	8-12"	A	90 a	95 a	95 a	95 a	94 a	90 a	95 a	95 a	95 a
7	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"	A	90 a	95 a	95 a	97 a	96 a	90 a	95 a	95 a	97 a
8	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
9	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	35 e	79 cd	84 c	90 b	83 c	35 e	78 bc	84 b	91 ab
9	ACCENT	75	WG	0.0117	lb ai/a	0.25	oz/a	8-12"	A									
9	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A									
9	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
10	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	38 e	76 de	86 bc	90 b	88 bc	38 e	75 bc	88 ab	91 ab
10	ACCENT	75	WG	0.0234	lb ai/a	0.5	oz/a	8-12"	A									
10	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A									
10	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
11	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	38 e	71 f	83 cd	70 d	51 f	38 e	81 b	88 ab	91 ab
11	OPTION	35	WG	0.0164	lb ai/a	0.75	oz/a	8-12"	A									
11	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A									
11	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
12	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	38 e	73 ef	85 c	78 c	68 d	38 e	75 bc	85 b	93 ab
12	OPTION	35	WG	0.0328	lb ai/a	1.5	oz/a	8-12"	A									
12	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	8-12"	A									
12	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
13	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	90 a	94 a	95 a	95 a	91 ab	90 a	94 a	95 a	95 a
13	SP102000017385	2.34	SL	0.402	lb ai/a	22	fl oz/a	8-12"	A									
13	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
14	AE 0172747	3.5	SC	0.082	lb ai/a	3	fl oz/a	8-12"	A	90 a	95 a	95 a	95 a	95 a	90 a	95 a	95 a	95 a
14	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"	A									
14	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	8-12"	A									
LSD (P=.05)										5.4	4.1	4.5	4.6	5.6	5.4	10.1	9.3	5.7
Replicate F										0.201	0.429	2.038	1.699	2.636	0.201	1.741	0.774	0.629
Replicate Prob(F)										0.8949	0.7337	0.1244	0.1830	0.0632	0.8949	0.1745	0.5155	0.6009
Treatment F										217.939	297.646	238.932	259.712	184.408	217.939	61.485	75.885	257.286
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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

Trial Comments

1. Protocol: SIU/MW.
2. Ratings: CI/WC 7, 14 + 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\_e at 56 DA-A is johnsongrass established (rhizome).
6. SORHA ratings at 7, 14, 28 and 56 DA-A were combined rhizome and seedling control, predominately (67%) rhizome johnsongrass.
7. Harvested 9-17-07, (2) 30 inch rows by 22 ft.