

## Option and Equip for Johnsongrass Control.

Project Code: 03-ARC24C-N90 Location: Agronomy Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA  
 Trial Status: Final Updated: 9-11-03

**Objective:**

Determine the proper use rate and application timing needed for the control of johnsongrass with Option and Equip.

Weed Code	Common Name	Scientific Name
1. SORHA	johnsongrass	Sorghum halepense (L.) Pers.
2. SORHA	johnsongrass	Sorghum halepense (L.) Pers.

Crop 1: ZEAMX corn, field Variety: Pioneer 33P69LL  
 Planting Method: Seeded Planting Date: 6-24-03  
 Rate: 28000 S/A Depth: 1.5 IN  
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 3  
 Tillage Type: Reduced-Till Study Design: Randomized complete block  
 Previous Crop, Year: ZEAMX, 2002

Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 0 LB/A

Soil Name: Weir % OM: 2.3 pH: 6.7 CEC: 10  
 Texture: Silt loam Fert. Level: P1: 115 LB/A, K: 250 LB/A

**APPLICATION DESCRIPTION**

	A	B
Application Date:	7-11-03	7-19-03
Time of Day:	11:00	11:00
Application Method:	Spray	Spray
Application Timing:	12"CORN	16"CORN
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	83 F	76 F
% Relative Humidity:	53	88
Wind Velocity, Unit:	3-5 MPH	1-2 MPH
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	80 F	75 F
Soil Moisture:	NORMAL	ABONOR
% Cloud Cover:	0	100

**CROP STAGE AT EACH APPLICATION**

	A	B
Crop 1 Code, Stage:	ZEAMX V3-V4	ZEAMX V6-V7
Height, Unit:	12-14 IN	24-36 IN

**WEED STAGE AT EACH APPLICATION**

	A	B
Weed 1 Code:	SORHA RH	SORHA RH
Stage(leaves):	10+	10+
Height(inches):	12-20	18-24
Density:	Medium	Medium
Weed 2 Code:	SORHA SE	SORHA SE
Stage(leaves):	2-5	3-6
Height(inches):	3-10	6-10
Density:	Medium	Medium

## APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA

## NOTES:

Not harvested.

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Weed Code												SORHA SE	SORHA RH	SORHA		
Crop Code												ZEAMX	ZEAMX	ZEAMX	ZEAMX	
Rating Data Type												Injury	Injury	Injury	Injury	
Rating Unit												Percent	Percent	Percent	Percent	
Rating Date												7-18-03	7-26-03	8-9-03	8-23-03	
Trt-Eval Interval												7 DA-A	7 DA-B	21 DA-B	35 DA-B	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code							
1	NONTREATED									0	0	0	0	0	0	0
2	OPTION	35	WG	0.0109	LB A/A	0.5	OZ/A	12"	CORN A	0	0	0	0	63	50	57
2	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	12"	CORN A							
2	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	12"	CORN A							
3	OPTION	35	WG	0.0219	LB A/A	1.0	OZ/A	12"	CORN A	0	0	0	0	92	67	70
3	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	12"	CORN A							
3	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	12"	CORN A							
4	OPTION	35	WG	0.0328	LB A/A	1.5	OZ/A	12"	CORN A	0	0	0	0	96	78	82
4	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	12"	CORN A							
4	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	12"	CORN A							
5	EQUIP	32	WG	0.01	LB A/A	0.5	OZ/A	12"	CORN A	0	0	0	0	90	67	80
5	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	12"	CORN A							
5	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	12"	CORN A							
6	EQUIP	32	WG	0.02	LB A/A	1.0	OZ/A	12"	CORN A	0	0	0	0	92	63	72
6	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	12"	CORN A							
6	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	12"	CORN A							
7	EQUIP	32	WG	0.03	LB A/A	1.5	OZ/A	12"	CORN A	0	0	0	0	95	85	89
7	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	12"	CORN A							
7	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	12"	CORN A							
8	OPTION	35	WG	0.0109	LB A/A	0.5	OZ/A	16"	CORN B		0	0	0	87	63	67
8	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	16"	CORN B							
8	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	16"	CORN B							
9	OPTION	35	WG	0.0219	LB A/A	1.0	OZ/A	16"	CORN B		0	0	0	90	80	90
9	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	16"	CORN B							
9	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	16"	CORN B							
10	OPTION	35	WG	0.0328	LB A/A	1.5	OZ/A	16"	CORN B		0	0	0	83	78	88
10	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	16"	CORN B							
10	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	16"	CORN B							
11	EQUIP	32	WG	0.01	LB A/A	0.5	OZ/A	16"	CORN B		0	0	0	80	70	67
11	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	16"	CORN B							
11	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	16"	CORN B							
12	EQUIP	32	WG	0.02	LB A/A	1.0	OZ/A	16"	CORN B		0	0	0	83	77	77
12	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	16"	CORN B							
12	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	16"	CORN B							

Weed Code										SORHA SE	SORHA RH	SORHA
Crop Code												
Rating Data Type										Control	Control	Control
Rating Unit										Percent	Percent	Percent
Rating Date										8-9-03	8-9-03	8-23-03
Trt-Eval Interval										21 DA-B	21 DA-B	35 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code			
13	EQUIP	32	WG	0.03	LB A/A	1.5	OZ/A	16"	CORN B	0	0	0
13	MSO CONCENTRATE	100	LIQ	1.5	PT/A	1.5	PT/A	16"	CORN B			
13	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	16"	CORN B	97	87	90
14	ACCENT	75	WG	0.0234	LB A/A	0.5	OZ/A	12"	CORN A	0	0	0
14	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	12"	CORN A			
14	28% UAN	100	LIQ	2.0	QT/A	2	QT/A	12"	CORN A	96	87	94
15	ACCENT	75	WG	0.0234	LB A/A	0.5	OZ/A	16"	CORN B	0	0	0
15	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	16"	CORN B			
15	28% UAN	100	LIQ	2.0	QT/A	2	QT/A	16"	CORN B	85	85	95
16	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	12"	CORN A	0	0	0
16	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	12"	CORN A			
16	28% UAN	100	LIQ	2.0	QT/A	2	QT/A	12"	CORN A	98	87	95
17	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	16"	CORN B	0	0	0
17	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	16"	CORN B			
17	28% UAN	100	LIQ	2.0	QT/A	2	QT/A	16"	CORN B	90	77	86
18	LIBERTY	1.67	EC	0.444	LB A/A	34	FL OZ/A	12"	CORN A	0	0	0
18	AMS	100	DRY	3	LB A/A	3	LB/A	12"	CORN A	98	97	97
LSD (P=.05)										0.0	0.0	0.0
Replicate F										0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000
										5.147	0.513	1.147
										0.0111	0.6030	0.3295
										57.369	4.891	10.680
										0.0001	0.0001	0.0001

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#### Trial Comments

1. Protocol: Bayer.
2. Ratings: CI 7 days after 12"CORN application, and 7, 21 and 35 days after 16"CORN application.  
WC 21 and 35 days after 16"CORN application.
3. Blanket PRE application of atrazine at 1.0 lbai/A to all plots including the nontreated.
4. For 12"CORN application make application no later than V4 corn.  
For 16"CORN application make application no later than V6 corn.
5. SORHA SE = seedling johnsongrass. SORHA RH = rhizome johnsongrass.
6. Rhizome johnsongrass varied in size. Some plots had rhizome johnsongrass plants with 10-12 stems, spreading horizontally, as large as 36 inches in diameter, which were not always completely controlled.
7. By 35 days after treatment, it was difficult to distinguish between seedling and rhizome johnsongrass.