

MSU Weed Science Research Program

Evaluation of soil-applied NAI-1492 for weed control in corn

Trial ID: C08-15 Study Dir.: Sprague and Powell
 Conducted: Campus C-28 Investigator: Christy Sprague

Date Planted: Apr/29/2015 Row Spacing: 30 IN
 Variety: Dekalb 49-72 No. of Reps: 4
 Population: 32,000 seeds/A % OM: 3.3
 Soil Type: Sandy loam pH: 6.0
 Plot Size: 10 X 35 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow/spring soil finish
 Fertilizer: 300lb/A Urea broadcast and incorporated; 150lb/A 19-19-19 starter

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	mainly foxtail sp.	SETARIA SP.
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S.WATS.
4.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
5.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
6.	SOLPT	NIGHTSHADE, EASTERN BLACK	SOLANUM PTYCANTHUM DUNAL
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

Application Description

A
 Application Timing: PRE
 Date Treated: Apr/29/2015
 Time Treated: 2:30 pm
 % Cloud Cover: 60
 Air Temp., Unit: 70 F
 % Relative Humidity: 40
 Wind Speed/Unit/Dir: 6 mph
 Soil Temp., Unit: 62 F
 Soil/Leaf Surface M: 4 -
 Soil Moist (1=w 5=d): 3

Crop Stage at Each Application

A
 Crop Name: ZEAMX
 Height (In.): -
 Stage (L): -

Weed Stage at Each Application

A
 Weed 1 Name: ANGR
 Height (In.): -
 Stage (L): -
 Weed 2 Name: CHEAL
 Height (In.): -
 Stage (L): -
 Weed 3 Name: AMAPO
 Height (In.): -
 Stage (L): -
 Weed 4 Name: AMBEL
 Height (In.): -
 Stage (L): -
 Weed 5 Name: ABUTH
 Height (In.): -
 Stage (L): -
 Weed 6 Name: SOLPT
 Height (In.): -
 Stage (L): -

Weed Density (plants/sq. ft.)

Date:	1	2	3	4	5	6
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	ABUTH	SOLPT
Density:	1	11	1	2	<1	1

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom				
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI	
A	Cub	3.8	AIXR	11003	20"	20"	80"	19	Water	28	

Comments: Plots were too weedy to evaluate after the 45 DAT evaluation.

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Weed Code										ANGR	CHEAL	AMAPO	AMBEL
Crop Code										control	control	control	control
Rating Data Type										percent	percent	percent	percent
Rating Unit										percent	percent	percent	percent
Rating Date										May/29/2015	May/29/2015	May/29/2015	May/29/2015
Trt-Eval Interval										30 DA-A	30 DA-A	30 DA-A	30 DA-A
# Subsamples, Dec.										0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	NAI-1492	4	L	32	fl oz/a	PRE	A	0	64	90	97	65	
2	NAI-1492	4	L	24	fl oz/a	PRE	A	0	61	94	97	55	
3	NAI-1492	4	L	16	fl oz/a	PRE	A	0	20	93	94	10	
4	NAI-1492	4	L	8	fl oz/a	PRE	A	0	15	70	67	0	
5	NAI-1492	4	L	4	fl oz/a	PRE	A	0	5	25	30	0	
6	ET	.208	L	2.75	fl oz/a	PRE	A	0	0	0	0	0	
7	Untreated							0	0	0	0	0	
8	NAI-1492	4	L	32	fl oz/a	PRE	A	0	60	90	99	72	
8	ET	.208	L	2.75	fl oz/a	PRE	A						
9	NAI-1492	4	L	24	fl oz/a	PRE	A	0	60	99	99	65	
9	ET	.208	L	2.75	fl oz/a	PRE	A						
10	NAI-1492	4	L	16	fl oz/a	PRE	A	0	35	93	99	28	
10	ET	.208	L	2.75	fl oz/a	PRE	A						
11	NAI-1492	4	L	8	fl oz/a	PRE	A	0	0	81	99	10	
11	ET	.208	L	2.75	fl oz/a	PRE	A						
12	NAI-1492	4	L	4	fl oz/a	PRE	A	0	0	20	35	0	
12	ET	.208	L	2.75	fl oz/a	PRE	A						
LSD (P=.05)								0.0	20.5	11.4	13.4	13.9	
CV								0.0	53.24	12.55	13.6	37.96	

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

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Weed Code				ABUTH		SOLPT		ZEAMX		ANGR		CHEAL	
Crop Code				control		control		injury		control		control	
Rating Data Type				percent		percent		percent		percent		percent	
Rating Unit				May/29/2015		May/29/2015		Jun/12/2015		Jun/12/2015		Jun/12/2015	
Rating Date				30 DA-A		30 DA-A		44 DA-A		44 DA-A		44 DA-A	
Trt-Eval Interval				0		0		0		0		0	
# Subsamples, Dec.													
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	NAI-1492	4	L	32	fl oz/a	PRE	A	81	99	5	25	86	
2	NAI-1492	4	L	24	fl oz/a	PRE	A	58	99	3	23	91	
3	NAI-1492	4	L	16	fl oz/a	PRE	A	8	99	0	0	90	
4	NAI-1492	4	L	8	fl oz/a	PRE	A	10	99	0	0	76	
5	NAI-1492	4	L	4	fl oz/a	PRE	A	0	80	0	5	40	
6	ET	.208	L	2.75	fl oz/a	PRE	A	0	0	0	0	0	
7	Untreated							0	0	0	0	0	
8	NAI-1492	4	L	32	fl oz/a	PRE	A	80	99	4	30	92	
8	ET	.208	L	2.75	fl oz/a	PRE	A						
9	NAI-1492	4	L	24	fl oz/a	PRE	A	66	99	3	35	90	
9	ET	.208	L	2.75	fl oz/a	PRE	A						
10	NAI-1492	4	L	16	fl oz/a	PRE	A	35	99	0	23	87	
10	ET	.208	L	2.75	fl oz/a	PRE	A						
11	NAI-1492	4	L	8	fl oz/a	PRE	A	5	99	0	15	55	
11	ET	.208	L	2.75	fl oz/a	PRE	A						
12	NAI-1492	4	L	4	fl oz/a	PRE	A	0	99	0	0	20	
12	ET	.208	L	2.75	fl oz/a	PRE	A						
LSD (P=.05)								17.4	9.5	1.2	22.5	6.7	
CV								42.14	8.16	67.83	120.68	7.65	

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Weed Code	AMAPO	AMBEL	ABUTH	SOLPT
Crop Code				
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	Jun/12/2015	Jun/12/2015	Jun/12/2015	Jun/12/2015
Trt-Eval Interval	44 DA-A	44 DA-A	44 DA-A	44 DA-A
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMAPO	AMBEL	ABUTH	SOLPT
1	NAI-1492	4	L	32	fl oz/a	PRE	A	81	64	76	92
2	NAI-1492	4	L	24	fl oz/a	PRE	A	79	68	66	95
3	NAI-1492	4	L	16	fl oz/a	PRE	A	72	48	45	91
4	NAI-1492	4	L	8	fl oz/a	PRE	A	40	40	15	90
5	NAI-1492	4	L	4	fl oz/a	PRE	A	10	13	0	0
6	ET	.208	L	2.75	fl oz/a	PRE	A	0	0	0	0
7	Untreated							0	0	0	0
8	NAI-1492	4	L	32	fl oz/a	PRE	A	89	70	88	93
8	ET	.208	L	2.75	fl oz/a	PRE	A				
9	NAI-1492	4	L	24	fl oz/a	PRE	A	88	55	59	97
9	ET	.208	L	2.75	fl oz/a	PRE	A				
10	NAI-1492	4	L	16	fl oz/a	PRE	A	92	45	53	94
10	ET	.208	L	2.75	fl oz/a	PRE	A				
11	NAI-1492	4	L	8	fl oz/a	PRE	A	86	35	30	92
11	ET	.208	L	2.75	fl oz/a	PRE	A				
12	NAI-1492	4	L	4	fl oz/a	PRE	A	56	0	0	78
12	ET	.208	L	2.75	fl oz/a	PRE	A				
LSD (P=.05)								23.0	23.6	25.6	8.3
CV								27.63	45.04	49.36	8.43

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