

MSU Weed Science Research Program

Enlist corn tolerance to Enlist herbicide systems at V4 corn

Trial ID: C07-12 Study Dir.: Sprague, Powell
Conducted: T-11 Campus Investigator: Christy Sprague

Date Planted: May/21/2012 **Row Spacing:** 30 IN
Variety: Enlist **No. of Reps:** 4
Population: 31,000 seeds/acre **% OM:** 2.6
Soil Type: Loam **pH:** 6.5
Plot Size: 10 X 35 FT **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Spring chisel plow, spring soil finish
Fertilizer: 300 lb/acre urea broadcast, 125 lb/acre 19-19-19 with planter

Crop Code Common Name
1. ZEAMX CORN

Application Description

Application Timing: A
V4
Date Treated: Jun/14/2012
Time Treated: 6:00 PM
% Cloud Cover: 20
Air Temp., Unit: 84 F
% Relative Humidity: 22
Wind Speed/Unit/Dir: 6 mph SE
Soil Temp., Unit: 92 F
Soil/Leaf Surface M: 5 5
Soil Moist (1=w 5=d): 5

Crop Stage at Each Application

Crop Name: A
ZEAMX
Height (In.): 10"
Stage (L): V4

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
A	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Cub	3.8	AIXR	11003	25"	20"	100"	19	Water	28

Comments: 6/18/12 - Broadcast application of glyphosate at 0.75 lb a.e./A + AMS at 17 lb/100 gal

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Enlist corn tolerance to Enlist herbicide systems at V4 corn

Trial ID: C07-12
 Conducted: T-11 Campus

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Crop Code								ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Rating Data Type								injury	growth inhi	chlorosis	necrosis	leaning
Rating Unit								percent	percent	percent	percent	percent
Rating Date								Jun/15/2012	Jun/15/2012	Jun/15/2012	Jun/15/2012	Jun/15/2012
Trt-Eval Interval								1 DA-A	1 DA-A	1 DA-A	1 DA-A	1 DA-A
# Subsamples, Dec.								0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	Code					
1	Surestart	4.16	L	1.65	pt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
2	Surestart	4.16	L	1.65	pt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
3	Surestart	4.16	L	1.65	pt/a	V4	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
4	Surestart	4.16	L	1.65	pt/a	V4	A	0	0	0	0	0
	GF-2939 (Blank)		L	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
5	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
6	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
7	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V4	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
8	Keystone	5.25	L	1.8	qt/a	V4	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
9	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
10	Halex GT	4.38	L	4	pt/a	V4	A	0	0	0	0	0
	Preference (NIS)		L	0.25	% v/v	V4	A					
	N-Pak (AMS)		L	1	% v/v	V4	A					
11	Surestart	4.16	L	3.3	pt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
12	Surestart	4.16	L	3.3	pt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
13	Surestart	4.16	L	3.3	pt/a	V4	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
14	Surestart	4.16	L	3.3	pt/a	V4	A	0	0	0	0	0
	GF-2939 (Blank)		L	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
15	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
16	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
17	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V4	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
18	Keystone	5.25	L	3.6	qt/a	V4	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
19	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					

MSU Weed Science Research Program

Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Rating Data Type	injury	growth inhi	chlorosis	necrosis	leaning
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/21/2012	Jun/21/2012	Jun/21/2012	Jun/21/2012	Jun/21/2012
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code					
1	Surestart	4.16	L	1.65	pt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
2	Surestart	4.16	L	1.65	pt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
3	Surestart	4.16	L	1.65	pt/a	V4	A	1	0	1	0	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
4	Surestart	4.16	L	1.65	pt/a	V4	A	0	0	0	0	0
	GF-2939 (Blank)		L	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
5	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
6	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
7	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V4	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
8	Keystone	5.25	L	1.8	qt/a	V4	A	4	0	0	4	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
9	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
10	Halex GT	4.38	L	4	pt/a	V4	A	0	0	0	0	0
	Preference (NIS)		L	0.25	% v/v	V4	A					
	N-Pak (AMS)		L	1	% v/v	V4	A					
11	Surestart	4.16	L	3.3	pt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
12	Surestart	4.16	L	3.3	pt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
13	Surestart	4.16	L	3.3	pt/a	V4	A	9	0	6	3	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
14	Surestart	4.16	L	3.3	pt/a	V4	A	0	0	0	0	0
	GF-2939 (Blank)		L	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
15	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
16	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
17	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V4	A	7	0	4	5	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
18	Keystone	5.25	L	3.6	qt/a	V4	A	18	0	10	14	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
19	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A	5	0	1	5	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
20	Halex GT	4.38	L	8	pt/a	V4	A	0	0	0	0	0
	Preference (NIS)		L	0.25	% v/v	V4	A					
	N-Pak (AMS)		L	1	% v/v	V4	A					

LSD (P=.05)	1.8	0.0	2.1	2.1	0.0
CV	61.51	0.0	136.34	100.4	0.0

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

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Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	# Subsamples, Dec.	ZEAMX injury percent	ZEAMX growth inhi percent	ZEAMX chlorosis percent	ZEAMX necrosis percent	ZEAMX leaning percent
						Jun/28/2012	Jun/28/2012	Jun/28/2012	Jun/28/2012	Jun/28/2012
						14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A
						0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Surestart	4.16	L	1.65	pt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
2	Surestart	4.16	L	1.65	pt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
3	Surestart	4.16	L	1.65	pt/a	V4	A	1	0	0	1	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
4	Surestart	4.16	L	1.65	pt/a	V4	A	0	0	0	0	0
	GF-2939 (Blank)		L	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
5	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
6	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
7	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V4	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
8	Keystone	5.25	L	1.8	qt/a	V4	A	2	0	2	3	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
9	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
10	Halex GT	4.38	L	4	pt/a	V4	A	0	0	0	0	0
	Preference (NIS)		L	0.25	% v/v	V4	A					
	N-Pak (AMS)		L	1	% v/v	V4	A					
11	Surestart	4.16	L	3.3	pt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
12	Surestart	4.16	L	3.3	pt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
13	Surestart	4.16	L	3.3	pt/a	V4	A	3	1	8	4	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
14	Surestart	4.16	L	3.3	pt/a	V4	A	0	0	0	0	0
	GF-2939 (Blank)		L	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
15	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V4	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
16	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V4	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
17	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V4	A	4	0	7	4	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
18	Keystone	5.25	L	3.6	qt/a	V4	A	6	0	6	10	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A					
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
19	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V4	A	2	1	3	2	0
	N-Pak (AMS)		L	2.5	% v/v	V4	A					
20	Halex GT	4.38	L	8	pt/a	V4	A	0	0	0	0	0
	Preference (NIS)		L	0.25	% v/v	V4	A					
	N-Pak (AMS)		L	1	% v/v	V4	A					

LSD (P=.05)	0.9	0.5	1.8	1.6	0.0
CV	70.06	448.52	96.4	91.62	0.0

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