

MSU Weed Science Research Program

Enlist corn tolerance to Enlist herbicide systems at V2 corn

Trial ID: C06-12 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
V2
Date Treated: Jun/05/2012
Time Treated: 10:45 AM
% Cloud Cover: 50
Air Temp., Unit: 64 F
% Relative Humidity: 50
Wind Speed/Unit/Dir: 5 mph NE
Soil Temp., Unit: 62 F
Soil/Leaf Surface M: 3 5
Soil Moist (1=w 5=d): 2

Crop Stage at Each Application

Crop Name: A
ZEAMX
Height (In.): 3"
Stage (L): V2

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	22"	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

MSU Weed Science Research Program

Enlist corn tolerance to Enlist herbicide systems at V2 corn

Trial ID: C06-12
 Conducted: T-11 Campus

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Crop Code	ZEAMX injury	ZEAMX growth inhi	ZEAMX chlorosis	ZEAMX necrosis	ZEAMX leaning
Rating Data Type	percent	percent	percent	percent	percent
Rating Unit	Jun/06/2012	Jun/06/2012	Jun/06/2012	Jun/06/2012	Jun/06/2012
Rating Date	1 DA-A	1 DA-A	1 DA-A	1 DA-A	1 DA-A
Trt-Eval Interval	0	0	0	0	0
# Subsamples, Dec.					

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	Code					
1	Surestart	4.16	L	1.65	pt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
2	Surestart	4.16	L	1.65	pt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
3	Surestart	4.16	L	1.65	pt/a	V2	A	1	0	0	1	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
4	Surestart	4.16	L	1.65	pt/a	V2	A	0	0	0	0	0
	GF-2939 (Blank)		L	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
5	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V2	A	1	0	0	1	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
6	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
7	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V2	A	1	0	0	1	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
8	Keystone	5.25	L	1.8	qt/a	V2	A	1	0	0	1	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
9	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
10	Halex GT	4.38	L	4	pt/a	V2	A	0	0	0	0	0
	Preference (NIS)		L	0.25	% v/v	V2	A					
	N-Pak (AMS)		L	1	% v/v	V2	A					
11	Surestart	4.16	L	3.3	pt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
12	Surestart	4.16	L	3.3	pt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
13	Surestart	4.16	L	3.3	pt/a	V2	A	11	0	0	11	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
14	Surestart	4.16	L	3.3	pt/a	V2	A	0	0	0	0	0
	GF-2939 (Blank)		L	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
15	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
16	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V2	A	1	0	0	1	0
	Durango DMA	4	SL	4	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
17	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V2	A	4	0	0	4	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
18	Keystone	5.25	L	3.6	qt/a	V2	A	5	0	0	5	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
19	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A	3	0	0	3	0
	N-Pak (AMS)		L	2.5	% v/v	V2	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/06/2012	Jun/06/2012	Jun/06/2012	Jun/06/2012	Jun/06/2012
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	Unit Unit	Grow Stg	Appl Code					
20	Halex GT Preference (NIS) N-Pak (AMS)	4.38	L	8	pt/a	V2	A	0	0	0	0	
			L	0.25	% v/v	V2	A					
			L	1	% v/v	V2	A					
LSD (P=.05)								2.9	0.0	0.0	2.9	0.0
CV								140.66	0.0	0.0	140.66	0.0

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

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/12/2012	Jun/12/2012	Jun/12/2012	Jun/12/2012	Jun/12/2012
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	Grow Unit	Appl Stg	Code					
1	Surestart	4.16	L	1.65	pt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
2	Surestart	4.16	L	1.65	pt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
3	Surestart	4.16	L	1.65	pt/a	V2	A	2	0	0	2	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
4	Surestart	4.16	L	1.65	pt/a	V2	A	2	0	0	3	0
	GF-2939 (Blank)		L	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
5	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
6	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
7	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V2	A	1	0	0	1	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
8	Keystone	5.25	L	1.8	qt/a	V2	A	2	0	0	3	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
9	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
10	Halex GT	4.38	L	4	pt/a	V2	A	3	0	1	0	1
	Preference (NIS)		L	0.25	% v/v	V2	A					
	N-Pak (AMS)		L	1	% v/v	V2	A					
11	Surestart	4.16	L	3.3	pt/a	V2	A	1	0	0	1	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
12	Surestart	4.16	L	3.3	pt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
13	Surestart	4.16	L	3.3	pt/a	V2	A	8	0	0	14	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
14	Surestart	4.16	L	3.3	pt/a	V2	A	1	0	1	0	0
	GF-2939 (Blank)		L	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
15	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
16	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
17	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V2	A	2	0	0	5	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
18	Keystone	5.25	L	3.6	qt/a	V2	A	6	0	0	9	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
19	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A	4	0	0	5	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
20	Halex GT	4.38	L	8	pt/a	V2	A	4	0	3	0	1
	Preference (NIS)		L	0.25	% v/v	V2	A					
	N-Pak (AMS)		L	1	% v/v	V2	A					

LSD (P=.05)

3.0

0.0

1.1

3.2

1.1

CV

124.65

0.0

388.43

107.01

637.98

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

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/19/2012	Jun/19/2012	Jun/19/2012	Jun/19/2012	Jun/19/2012
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code					
1	Surestart	4.16	L	1.65	pt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
2	Surestart	4.16	L	1.65	pt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
3	Surestart	4.16	L	1.65	pt/a	V2	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
4	Surestart	4.16	L	1.65	pt/a	V2	A	0	0	0	0	0
	GF-2939 (Blank)		L	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
5	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
6	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	2	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
7	GF-2836 (Ace + Atr)	3.33	L	2.7	qt/a	V2	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
8	Keystone	5.25	L	1.8	qt/a	V2	A	0	0	0	0	0
	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
9	Enlist Duo (GF-2726)	3.33	SL	4.67	pt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
10	Halex GT	4.38	L	4	pt/a	V2	A	0	0	0	0	0
	Preference (NIS)		L	0.25	% v/v	V2	A					
	N-Pak (AMS)		L	1	% v/v	V2	A					
11	Surestart	4.16	L	3.3	pt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
12	Surestart	4.16	L	3.3	pt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
13	Surestart	4.16	L	3.3	pt/a	V2	A	3	0	0	5	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
14	Surestart	4.16	L	3.3	pt/a	V2	A	0	0	0	0	0
	GF-2939 (Blank)		L	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
15	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V2	A	0	0	0	0	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
16	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V2	A	0	0	0	0	0
	Durango DMA	4	SL	4	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
17	GF-2836 (Ace + Atr)	3.33	L	5.4	qt/a	V2	A	2	0	0	2	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
18	Keystone	5.25	L	3.6	qt/a	V2	A	3	0	0	3	0
	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A					
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
19	Enlist Duo (GF-2726)	3.33	SL	9.35	pt/a	V2	A	3	0	0	2	0
	N-Pak (AMS)		L	2.5	% v/v	V2	A					
20	Halex GT	4.38	L	8	pt/a	V2	A	1	0	0	1	0
	Preference (NIS)		L	0.25	% v/v	V2	A					
	N-Pak (AMS)		L	1	% v/v	V2	A					

LSD (P=.05)	0.7	0.0	0.0	1.0	0.0
CV	78.36	0.0	0.0	108.79	0.0

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