

MSU Weed Science Research Program

One-pass early postemergence strategies for weed control in corn

Trial ID: C09-13 Study Dir.: Sprague, Powell
 Conducted: Campus C-28 Investigator: Christy Sprague

Date Planted: May/06/2013 **Row Spacing:** 30 IN
Variety: P9807 **No. of Reps:** 4
Population: 32,000 seeds/A **% OM:** 3.4
Soil Type: Loam **pH:** 6.5
Plot Size: 10 X 30 FT **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel, spring soil finish x2
Fertilizer: 300 lb urea broadcast, 150 lb 19-19-19 starter

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	mainly foxtail species	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.	SOLPT	NIGHTSHADE, EASTERN BLACK	SOLANUM PTYCANTHUM DUNAL
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

Application Description

Application Timing: EPOS
Date Treated: Jun/03/2013
Time Treated: 5:15 PM
% Cloud Cover: 10
Air Temp., Unit: 67 F
% Relative Humidity: 34
Wind Speed/Unit/Dir: 6 mph NW
Soil Temp., Unit: 64 F
Soil/Leaf Surface M: 3 5
Soil Moist (1=w 5=d): 3

Crop Stage at Each Application

Crop Name: ZEAMX
Height (In.): 7-8"
Stage (L): V3-V4

Weed Stage at Each Application

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

Weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	Jul/11/2013	Jul/11/2013	Jul/11/2013	Jul/11/2013	Jul/11/2013
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	SOLPT
Density:	2	3	<1	4	<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	25"	20"	100"	19	water	35

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Weed Code	ANGR	CHEAL	AMAPO	AMBEL
Crop Code	ZEAMX			
Rating Data Type	injury	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	Jun/11/2013	Jun/11/2013	Jun/11/2013	Jun/11/2013
Trt-Eval Interval	8 DA-A	8 DA-A	8 DA-A	8 DA-A
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code					
1	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	0	99	99	99	92	
			WG	17	lb/100 gal	EPOS A						
2	AAtrex	4	L	1.25	qt/a	EPOS A	0	99	99	99	98	
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A						
			WG	17	lb/100 gal	EPOS A						
3	Harness Xtra	5.6	L	2	qt/a	EPOS A	9	97	99	99	99	
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A						
			WG	17	lb/100 gal	EPOS A						
4	Halex GT Surfactant AMS	4.38	L	3.6	pt/a	EPOS A	1	99	99	99	94	
			L	0.25	% v/v	EPOS A						
			WG	17	lb/100 gal	EPOS A						
5	Halex GT	4.38	L	3.6	pt/a	EPOS A	2	99	99	99	99	
	AAtrex	4	L	1	qt/a	EPOS A						
	Surfactant		L	0.25	% v/v	EPOS A						
	AMS		WG	17	lb/100 gal	EPOS A						
6	Untreated					EPOS A	0	0	0	0	0	
7	Capreno	3.45	L	3	fl oz/a	EPOS A	4	99	99	99	98	
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A						
			WG	17	lb/100 gal	EPOS A						
8	Capreno	3.45	L	3	fl oz/a	EPOS A	4	99	99	99	99	
	AAtrex	4	L	1	qt/a	EPOS A						
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A						
			WG	17	lb/100 gal	EPOS A						
9	Capreno	3.45	L	3	fl oz/a	EPOS A	19	99	99	99	99	
	Clarity	4	L	1	pt/a	EPOS A						
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A						
			WG	17	lb/100 gal	EPOS A						
10	Warrant	3	L	3	pt/a	EPOS A	2	99	99	99	99	
	Impact	2.8	L	0.75	fl oz/a	EPOS A						
	AAtrex	4	L	1	qt/a	EPOS A						
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A						
			L	1	% v/v	EPOS A						
			WG	17	lb/100 gal	EPOS A						
11	Zidua	85	WG	2.5	oz/a	EPOS A	14	99	99	99	99	
	Armezon	2.8	L	0.75	fl oz/a	EPOS A						
	AAtrex	4	L	1.5	qt/a	EPOS A						
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A						
			L	1	% v/v	EPOS A						
			WG	17	lb/100 gal	EPOS A						
12	Guardsman Max	5	L	3.5	pt/a	EPOS A	19	99	99	99	99	
	Armezon	2.8	L	0.75	fl oz/a	EPOS A						
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A						
			L	1	% v/v	EPOS A						
			WG	17	lb/100 gal	EPOS A						
LSD (P=.05)								3.8	1.2	0.0	0.0	4.2
CV								44.6	0.9	0.0	0.0	3.22

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

MSU Weed Science Research Program

Weed Code			SOLPT			ANGR	CHEAL	AMAPO			
Crop Code			control	ZEAMX		control	control	control			
Rating Data Type			percent	injury		percent	percent	percent			
Rating Unit			Jun/11/2013	Jun/17/2013		Jun/17/2013	Jun/17/2013	Jun/17/2013			
Rating Date			8 DA-A	14 DA-A		14 DA-A	14 DA-A	14 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	Roundup PowerMax AMS	4.5	SL	22 fl oz/a	EPOS A	99	0	90	99	99	
			WG	17 lb/100 gal	EPOS A						
2	AAtrex	4	L	1.25 qt/a	EPOS A	99	0	99	99	99	
	Roundup PowerMax AMS	4.5	SL	22 fl oz/a	EPOS A						
			WG	17 lb/100 gal	EPOS A						
3	Harness Xtra	5.6	L	2 qt/a	EPOS A	99	4	99	99	99	
	Roundup PowerMax AMS	4.5	SL	22 fl oz/a	EPOS A						
			WG	17 lb/100 gal	EPOS A						
4	Halex GT	4.38	L	3.6 pt/a	EPOS A	99	1	99	99	99	
	Surfactant AMS		L	0.25 % v/v	EPOS A						
			WG	17 lb/100 gal	EPOS A						
5	Halex GT	4.38	L	3.6 pt/a	EPOS A	99	0	99	99	99	
	AAtrex	4	L	1 qt/a	EPOS A						
	Surfactant AMS		L	0.25 % v/v	EPOS A						
			WG	17 lb/100 gal	EPOS A						
6	Untreated					0	0	0	0	0	
7	Capreno	3.45	L	3 fl oz/a	EPOS A	99	0	99	99	99	
	Roundup PowerMax AMS	4.5	SL	22 fl oz/a	EPOS A						
			WG	17 lb/100 gal	EPOS A						
8	Capreno	3.45	L	3 fl oz/a	EPOS A	99	1	99	99	99	
	AAtrex	4	L	1 qt/a	EPOS A						
	Roundup PowerMax AMS	4.5	SL	22 fl oz/a	EPOS A						
			WG	17 lb/100 gal	EPOS A						
9	Capreno	3.45	L	3 fl oz/a	EPOS A	99	6	99	99	99	
	Clarity	4	L	1 pt/a	EPOS A						
	Roundup PowerMax AMS	4.5	SL	22 fl oz/a	EPOS A						
			WG	17 lb/100 gal	EPOS A						
10	Warrant	3	L	3 pt/a	EPOS A	99	0	99	99	99	
	Impact	2.8	L	0.75 fl oz/a	EPOS A						
	AAtrex	4	L	1 qt/a	EPOS A						
	Roundup PowerMax AMS	4.5	SL	22 fl oz/a	EPOS A						
			L	1 % v/v	EPOS A						
			WG	17 lb/100 gal	EPOS A						
11	Zidua	85	WG	2.5 oz/a	EPOS A	99	5	99	99	99	
	Armezon	2.8	L	0.75 fl oz/a	EPOS A						
	AAtrex	4	L	1.5 qt/a	EPOS A						
	Roundup PowerMax AMS	4.5	SL	22 fl oz/a	EPOS A						
			L	1 % v/v	EPOS A						
			WG	17 lb/100 gal	EPOS A						
12	Guardsman Max	5	L	3.5 pt/a	EPOS A	99	13	99	99	99	
	Armezon	2.8	L	0.75 fl oz/a	EPOS A						
	Roundup PowerMax AMS	4.5	SL	22 fl oz/a	EPOS A						
			L	1 % v/v	EPOS A						
			WG	17 lb/100 gal	EPOS A						
LSD (P=.05)							0.0	3.8	0.6	0.0	0.0
CV							0.0	107.85	0.46	0.0	0.0

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

MSU Weed Science Research Program

Weed Code	AMBEL	SOLPT	ZEAMX	ANGR	CHEAL
Crop Code					
Rating Data Type	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/17/2013	Jun/17/2013	Jul/01/2013	Jul/01/2013	Jul/01/2013
Trt-Eval Interval	14 DA-A	14 DA-A	28 DA-A	28 DA-A	28 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	AMBEL	SOLPT	ZEAMX	ANGR	CHEAL
1	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A	97	99	0	78	87
			WG	17	lb/100 gal	EPOS A	A					
2	AAtrex	4	L	1.25	qt/a	EPOS A	A	99	99	0	93	99
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
3	Harness Xtra	5.6	L	2	qt/a	EPOS A	A	99	99	0	99	99
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
4	Halex GT	4.38	L	3.6	pt/a	EPOS A	A	98	99	0	99	99
	Surfactant AMS		L	0.25	% v/v	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
5	Halex GT	4.38	L	3.6	pt/a	EPOS A	A	99	99	0	99	99
	AAtrex	4	L	1	qt/a	EPOS A	A					
	Surfactant AMS		L	0.25	% v/v	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
6	Untreated							0	0	0	0	0
7	Capreno	3.45	L	3	fl oz/a	EPOS A	A	99	99	0	99	99
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
8	Capreno	3.45	L	3	fl oz/a	EPOS A	A	99	99	0	99	99
	AAtrex	4	L	1	qt/a	EPOS A	A					
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
9	Capreno	3.45	L	3	fl oz/a	EPOS A	A	99	99	14	99	99
	Clarity	4	L	1	pt/a	EPOS A	A					
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
10	Warrant	3	L	3	pt/a	EPOS A	A	99	99	0	99	99
	Impact	2.8	L	0.75	fl oz/a	EPOS A	A					
	AAtrex	4	L	1	qt/a	EPOS A	A					
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			L	1	% v/v	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
11	Zidua	85	WG	2.5	oz/a	EPOS A	A	99	99	4	99	99
	Armezon	2.8	L	0.75	fl oz/a	EPOS A	A					
	AAtrex	4	L	1.5	qt/a	EPOS A	A					
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			L	1	% v/v	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
12	Guardsman Max	5	L	3.5	pt/a	EPOS A	A	99	99	11	99	99
	Armezon	2.8	L	0.75	fl oz/a	EPOS A	A					
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			L	1	% v/v	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
LSD (P=.05)								2.1	0.0	1.8	1.4	1.1
CV								1.59	0.0	53.16	1.07	0.84

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

MSU Weed Science Research Program

Weed Code	AMAPO	AMBEL	SOLPT	ZEAMX	ZEAMX
Crop Code					
Rating Data Type	control	control	control	moisture	yield
Rating Unit	percent	percent	percent	percent	bu/acre
Rating Date	Jul/01/2013	Jul/01/2013	Jul/01/2013	Nov/23/2013	Nov/23/2013
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	173 DA-A	at 15% M
# Subsamples, Dec.	0	0	0	1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMAPO	AMBEL	SOLPT	ZEAMX	ZEAMX
1	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A	96	84	96	17.3	250.8
			WG	17	lb/100 gal	EPOS A	A					
2	AAtrex	4	L	1.25	qt/a	EPOS A	A	99	99	99	17.9	257.0
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
3	Harness Xtra	5.6	L	2	qt/a	EPOS A	A	99	99	99	18.0	246.3
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
4	Halex GT	4.38	L	3.6	pt/a	EPOS A	A	99	99	99	18.1	238.1
	Surfactant AMS		L	0.25	% v/v	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
5	Halex GT	4.38	L	3.6	pt/a	EPOS A	A	99	99	99	17.8	249.7
	AAtrex	4	L	1	qt/a	EPOS A	A					
	Surfactant AMS		L	0.25	% v/v	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
6	Untreated							0	0	0	17.9	204.5
7	Capreno	3.45	L	3	fl oz/a	EPOS A	A	99	99	99	17.9	235.4
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
8	Capreno	3.45	L	3	fl oz/a	EPOS A	A	99	99	99	18.2	240.4
	AAtrex	4	L	1	qt/a	EPOS A	A					
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
9	Capreno	3.45	L	3	fl oz/a	EPOS A	A	99	99	99	17.7	220.9
	Clarity	4	L	1	pt/a	EPOS A	A					
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
10	Warrant	3	L	3	pt/a	EPOS A	A	99	99	99	18.1	237.1
	Impact	2.8	L	0.75	fl oz/a	EPOS A	A					
	AAtrex	4	L	1	qt/a	EPOS A	A					
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			L	1	% v/v	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
11	Zidua	85	WG	2.5	oz/a	EPOS A	A	99	99	99	18.1	245.1
	Armezon	2.8	L	0.75	fl oz/a	EPOS A	A					
	AAtrex	4	L	1.5	qt/a	EPOS A	A					
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			L	1	% v/v	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
12	Guardsman Max	5	L	3.5	pt/a	EPOS A	A	99	99	99	18.1	246.7
	Armezon	2.8	L	0.75	fl oz/a	EPOS A	A					
	Roundup PowerMax AMS	4.5	SL	22	fl oz/a	EPOS A	A					
			L	1	% v/v	EPOS A	A					
			WG	17	lb/100 gal	EPOS A	A					
LSD (P=.05)								2.9	4.4	1.8	0.48	17.60
CV								2.23	3.42	1.38	1.85	5.09

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