

MSU Weed Science Research Program

Zemax weed control programs in corn

Trial ID: C08-12 Study Dir.: Sprague, Powell
Conducted: T-11 Campus Investigator: Christy Sprague

Date Planted: May/22/2012 Row Spacing: 30 IN
Variety: DeKalb 46-61 No. of Reps: 4
Population: 31,000 seeds/acre % OM: 2.3
Soil Type: Loam pH: 6.0
Plot Size: 10 X 35 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Spring chisel plow, spring soil finish
Fertilizer: 300 lb/acre urea broadcast, 150 lb/acre 19-19-19 with planter

Crop and Weed Description

Table with 4 columns: Weed, Code, Common Name, Scientific Name. Lists weeds 1-5 and crop 1.

Application Description

Table with 4 columns: Application Timing, Date Treated, Time Treated, % Cloud Cover, Air Temp., % Relative Humidity, Wind Speed/Unit/Dir, Soil Temp., Soil/Leaf Surface M, Soil Moist. Lists treatments A, B, C.

Crop Stage at Each Application

Table with 4 columns: Crop Name, Height (In.), Stage (L). Lists crop ZEAMX at stages V4 and V5.

Weed Stage at Each Application

Table with 4 columns: Weed Name, Height (In.), Stage (L). Lists weeds 1-5 and their stages at applications A, B, C.

Weed Density (plants/sq. ft.)

Table with 4 columns: Weed Name, Date, Density. Lists weed densities for ANGR, CHEAL, AMAPO, AMBEL, ABUTH.

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Appl	Sprayer	Speed	Nozzle	Application Equipment				GPA	Carrier	PSI
				Nozzle	Nozzle	Nozzle	Boom			
A	Cub	3.8	AI XR	11003	22"	20"	100"	19	Water	28
B	Cub	3.8	AI XR	11003	25"	20"	100"	19	Water	28
C	Cub	3.8	AI XR	11003	27"	20"	100"	19	Water	28

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Weed Code		ANGR	CHEAL	AMAPO	AMBEL
Crop Code	ZEAMX				
Rating Data Type	injury	control	control	control	control
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	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A
ARM Action Codes					
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Grow Stg	Appl Code					
1	Zemax	3.67	L	2.4	qt/a	PRE	A	0	98	99	99	99
2	Zemax	3.67	L	1.6	qt/a	EPOS	B					
	Touchdown Total	4.17	SL	30	fl oz/a	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
3	Zemax	3.67	L	1	qt/a	PRE	A					
	Halex GT	4.38	L	3.6	pt/a	EPOS	B					
	NIS		L	0.25	% v/v	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
4	Untreated							0	0	0	0	0
5	Zemax	3.67	L	1.6	qt/a	PRE	A	0	97	99	99	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
6	SureStart	4.25	L	1.75	pt/a	PRE	A	0	91	98	99	98
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
7	Verdict	5.57	L	15	fl oz/a	PRE	A	0	91	96	99	98
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
8	Corvus	2.63	L	3.33	fl oz/a	PRE	A	0	66	64	99	64
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
LSD (P=.05)								0.0	5.8	3.4	0.0	2.5
CV								0.0	5.2	2.99	0.0	2.15

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

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Weed Code		ABUTH		ANGR	CHEAL	AMAPO						
Crop Code			ZEAMX									
Rating Data Type		control	injury	control	control	control						
Rating Unit		percent	percent	percent	percent	percent						
Rating Date		Jun/19/2012	Jun/22/2012	Jun/22/2012	Jun/22/2012	Jun/22/2012						
Trt-Eval Interval		28 DA-A	8 DA-B	8 DA-B	8 DA-B	8 DA-B						
ARM Action Codes												
# Subsamples, Dec.		0	0	0	0	0						
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Zemax	3.67	L	2.4	qt/a	PRE	A	99	0	94	99	99
2	Zemax	3.67	L	1.6	qt/a	EPOS	B		0	99	99	99
	Touchdown Total	4.17	SL	30	fl oz/a	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
3	Zemax	3.67	L	1	qt/a	PRE	A		2	99	97	99
	Halex GT	4.38	L	3.6	pt/a	EPOS	B					
	NIS		L	0.25	% v/v	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
4	Untreated							0	0	0	0	0
5	Zemax	3.67	L	1.6	qt/a	PRE	A	99	0	90	99	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
6	SureStart	4.25	L	1.75	pt/a	PRE	A	85	0	88	91	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
7	Verdict	5.57	L	15	fl oz/a	PRE	A	98	0	88	89	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
8	Corvus	2.63	L	3.33	fl oz/a	PRE	A	74	0	63	69	97
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
LSD (P=.05)								9.0	0.8	5.8	7.9	2.3
CV								7.91	188.56	5.08	6.69	1.84

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

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Weed Code	AMBEL	ABUTH	ZEAMX	ANGR	CHEAL							
Crop Code												
Rating Data Type	control	control	injury	control	control							
Rating Unit	percent	percent	percent	percent	percent							
Rating Date	Jun/22/2012	Jun/22/2012	Jun/29/2012	Jun/29/2012	Jun/29/2012							
Trt-Eval Interval	8 DA-B	8 DA-B	7 DA-C	7 DA-C	7 DA-C							
ARM Action Codes												
# Subsamples, Dec.	0	0	0	0	0							
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMBEL	ABUTH	ZEAMX	ANGR	CHEAL
1	Zemax	3.67	L	2.4	qt/a	PRE	A	99	99	0	89	99
2	Zemax	3.67	L	1.6	qt/a	EPOS	B	99	99	0	99	99
	Touchdown Total	4.17	SL	30	fl oz/a	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
3	Zemax	3.67	L	1	qt/a	PRE	A	98	99	0	99	99
	Halex GT	4.38	L	3.6	pt/a	EPOS	B					
	NIS		L	0.25	% v/v	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
4	Untreated							0	0	0	0	0
5	Zemax	3.67	L	1.6	qt/a	PRE	A	99	99	0	99	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
6	SureStart	4.25	L	1.75	pt/a	PRE	A	99	82	0	98	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
7	Verdict	5.57	L	15	fl oz/a	PRE	A	97	91	0	97	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
8	Corvus	2.63	L	3.33	fl oz/a	PRE	A	63	74	0	96	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
LSD (P=.05)								3.8	6.9	0.0	4.5	0.3
CV								3.13	5.83	0.0	3.59	0.2

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

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Weed Code	AMAPO	AMBEL	ABUTH	ZEAMX	ANGR
Crop Code					
Rating Data Type	control	control	control	injury	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/29/2012	Jun/29/2012	Jun/29/2012	Jul/06/2012	Jul/06/2012
Trt-Eval Interval	7 DA-C	7 DA-C	7 DA-C	14 DA-C	14 DA-C
ARM Action Codes					
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMAPO	AMBEL	ABUTH	ZEAMX	ANGR
1	Zemax	3.67	L	2.4	qt/a	PRE	A	99	99	99	0	91
2	Zemax	3.67	L	1.6	qt/a	EPOS	B	99	99	99	0	99
	Touchdown Total	4.17	SL	30	fl oz/a	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
3	Zemax	3.67	L	1	qt/a	PRE	A	99	99	99	0	99
	Halex GT	4.38	L	3.6	pt/a	EPOS	B					
	NIS		L	0.25	% v/v	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
4	Untreated							0	0	0	0	0
5	Zemax	3.67	L	1.6	qt/a	PRE	A	99	99	99	0	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
6	SureStart	4.25	L	1.75	pt/a	PRE	A	99	99	99	0	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
7	Verdict	5.57	L	15	fl oz/a	PRE	A	98	99	98	0	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
8	Corvus	2.63	L	3.33	fl oz/a	PRE	A	98	75	93	0	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
LSD (P=.05)								1.1	2.2	2.0	0.0	3.9
CV								0.89	1.76	1.61	0.0	3.14

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

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Weed Code	CHEAL	AMAPO	AMBEL	ABUTH	ZEAMX							
Crop Code												
Rating Data Type	control	control	control	control	injury							
Rating Unit	percent	percent	percent	percent	percent							
Rating Date	Jul/06/2012	Jul/06/2012	Jul/06/2012	Jul/06/2012	Jul/20/2012							
Trt-Eval Interval	14 DA-C	14 DA-C	14 DA-C	14 DA-C	28 DA-C							
ARM Action Codes												
# Subsamples, Dec.	0	0	0	0	0							
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	CHEAL	AMAPO	AMBEL	ABUTH	ZEAMX
1	Zemax	3.67	L	2.4	qt/a	PRE	A	99	99	99	99	0
2	Zemax	3.67	L	1.6	qt/a	EPOS	B	99	99	99	99	0
	Touchdown Total	4.17	SL	30	fl oz/a	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
3	Zemax	3.67	L	1	qt/a	PRE	A	99	99	99	99	0
	Halex GT	4.38	L	3.6	pt/a	EPOS	B					
	NIS		L	0.25	% v/v	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
4	Untreated							0	0	0	0	0
5	Zemax	3.67	L	1.6	qt/a	PRE	A	99	99	99	99	0
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
6	SureStart	4.25	L	1.75	pt/a	PRE	A	99	99	99	99	0
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
7	Verdict	5.57	L	15	fl oz/a	PRE	A	99	99	99	99	0
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
8	Corvus	2.63	L	3.33	fl oz/a	PRE	A	99	99	98	99	0
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
LSD (P=.05)								0.0	0.0	1.0	0.0	0.0
CV								0.0	0.0	0.78	0.0	0.0

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

MSU Weed Science Research Program

Weed Code								ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Crop Code												
Rating Data Type								control	control	control	control	control
Rating Unit								percent	percent	percent	percent	percent
Rating Date								Jul/20/2012	Jul/20/2012	Jul/20/2012	Jul/20/2012	Jul/20/2012
Trt-Eval Interval								28 DA-C	28 DA-C	28 DA-C	28 DA-C	28 DA-C
ARM Action Codes												
# Subsamples, Dec.								0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Zemax	3.67	L	2.4	qt/a	PRE	A	81	99	99	99	99
2	Zemax	3.67	L	1.6	qt/a	EPOS	B	99	99	99	99	99
	Touchdown Total	4.17	SL	30	fl oz/a	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
3	Zemax	3.67	L	1	qt/a	PRE	A	99	99	99	98	99
	Halex GT	4.38	L	3.6	pt/a	EPOS	B					
	NIS		L	0.25	% v/v	EPOS	B					
	N-Pak AMS		L	2.5	% v/v	EPOS	B					
4	Untreated							0	0	0	0	0
5	Zemax	3.67	L	1.6	qt/a	PRE	A	99	99	99	99	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
6	SureStart	4.25	L	1.75	pt/a	PRE	A	99	99	99	99	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
7	Verdict	5.57	L	15	fl oz/a	PRE	A	99	99	99	99	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
8	Corvus	2.63	L	3.33	fl oz/a	PRE	A	99	99	99	97	99
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C					
	N-Pak AMS		L	2.5	% v/v	POST	C					
LSD (P=.05)								2.6	0.3	0.0	1.1	0.3
CV								2.08	0.24	0.0	0.84	0.27

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

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Weed Code			
Crop Code			
Rating Data Type	ZEAMX	ZEAMX	ZEAMX
Rating Unit	moisture	test weight	yield
Rating Date	percent	lb/bu	bu/acre
Trt-Eval Interval	Nov/09/2012	Nov/09/2012	Nov/09/2012
ARM Action Codes	140 DA-C	140 DA-C	140 DA-C
# Subsamples, Dec.	1	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	Zemax	3.67	L	2.4	qt/a	PRE	A	17.6	60	151
2	Zemax	3.67	L	1.6	qt/a	EPOS	B	18.1	60	142
	Touchdown Total	4.17	SL	30	fl oz/a	EPOS	B			
	N-Pak AMS		L	2.5	% v/v	EPOS	B			
3	Zemax	3.67	L	1	qt/a	PRE	A	18.2	60	143
	Halex GT	4.38	L	3.6	pt/a	EPOS	B			
	NIS		L	0.25	% v/v	EPOS	B			
	N-Pak AMS		L	2.5	% v/v	EPOS	B			
4	Untreated							16.5	60	63
5	Zemax	3.67	L	1.6	qt/a	PRE	A	18.1	59	138
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C			
	N-Pak AMS		L	2.5	% v/v	POST	C			
6	SureStart	4.25	L	1.75	pt/a	PRE	A	18.1	59	136
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C			
	N-Pak AMS		L	2.5	% v/v	POST	C			
7	Verdict	5.57	L	15	fl oz/a	PRE	A	18.1	59	142
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C			
	N-Pak AMS		L	2.5	% v/v	POST	C			
8	Corvus	2.63	L	3.33	fl oz/a	PRE	A	16.8	60	137
	Touchdown Total	4.17	SL	30	fl oz/a	POST	C			
	N-Pak AMS		L	2.5	% v/v	POST	C			
LSD (P=.05)								1.14	1.1	15.6
CV								4.4	1.23	8.07

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