

MSU Weed Science Research Program

Weed control in corn with Instigate

Trial ID: C09-12 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 with their respective codes and names.

Application Description

Table with 3 columns: Application Timing, Date Treated, Time Treated, % Cloud Cover, Air Temp., Unit, % Relative Humidity, Wind Speed/Unit/Dir, Soil Temp., Unit, Soil/Leaf Surface M, Soil Moist (1=w 5=d). Compares treatments A and B.

Crop Stage at Each Application

Table with 3 columns: Crop Name, Height (In.), Stage (L). Shows crop stage for treatments A and B.

Weed Stage at Each Application

Table with 3 columns: Weed Name, Height (In.), Stage (L). Lists weed stages for treatments A and B across weeds 1-5.

Weed Density (plants/sq. ft.)

Table with 3 columns: Date, Weed Name, Density. Lists weed density for treatments 1 and 2 across weeds 1-5.

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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	29"	20"	100"	19	Water	28

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Weed control in corn with Instigate

Trial ID: C09-12 Study Dir.: Sprague, Powell
 Conducted: T-11 Campus Investigator: Christy Sprague

Weed Code									
Crop Code									
Rating Data Type									
Rating Unit									
Rating Date									
Trt-Eval Interval									
ARM Action Codes									
# Subsamples, Dec.									

Trt	Treatment	Form	Form	Rate	Grow	Appl				
No.	Name	Conc	Type	Rate	Stg	Code				
1	Instigate (6 oz)						0	89	97	99
	Rimsulfuron (Premix)	25	WG	1 oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5 oz/a	PRE	A				
	Realm Q	38.7	WG	4 oz/a	POST	B				
	Abundit Extra	3	SL	1 qt/a	POST	B				
	AMS		WG	17 lb/100 gal	POST	B				
2	Instigate (6 oz)						0	94	99	99
	Rimsulfuron (Premix)	25	WG	1 oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5 oz/a	PRE	A				
	Breakfree ATZ Lite	5.5	L	3 pt/a	PRE	A				
	Abundit Extra	3	SL	1 qt/a	POST	B				
	AMS		WG	17 lb/100 gal	POST	B				
3	Instigate (6 oz)						0	97	99	99
	Rimsulfuron (Premix)	25	WG	1 oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5 oz/a	PRE	A				
	Breakfree ATZ Lite	5.5	L	4 pt/a	PRE	A				
	Abundit Extra	3	SL	1 qt/a	POST	B				
	AMS		WG	17 lb/100 gal	POST	B				
4	Untreated						0	0	0	0
5	Instigate (6 oz)						0	91	99	99
	Rimsulfuron (Premix)	25	WG	1 oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5 oz/a	PRE	A				
	Breakfree	6.4	L	1.25 pt/a	PRE	A				
	Abundit Extra	3	SL	1 qt/a	POST	B				
	AMS		WG	17 lb/100 gal	POST	B				
6	Instigate (6 oz)						0	94	99	99
	Rimsulfuron (Premix)	25	WG	1 oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5 oz/a	PRE	A				
	Breakfree	6.4	L	2 pt/a	PRE	A				
	Abundit Extra	3	SL	1 qt/a	POST	B				
	AMS		WG	17 lb/100 gal	POST	B				
7	Lumax	3.95	L	2.5 qt/a	PRE	A	0	96	99	99
	Abundit Extra	3	SL	1 qt/a	POST	B				
	AMS		WG	17 lb/100 gal	POST	B				
8	Instigate (6 oz)						0	90	97	99
	Rimsulfuron (Premix)	25	WG	1 oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5 oz/a	PRE	A				
	Abundit Extra	3	SL	1 qt/a	POST	B				
	AMS		WG	17 lb/100 gal	POST	B				
	LSD (P=.05)						0.0	6.5	3.0	0.0
	CV						0.0	5.46	2.37	0.0

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

MSU Weed Science Research Program

Weed Code						AMBEL	ABUTH	ZEAMX	ANGR
Crop Code									
Rating Data Type						control	control	injury	control
Rating Unit						percent	percent	percent	percent
Rating Date						Jun/22/2012	Jun/22/2012	Jun/28/2012	Jun/28/2012
Trt-Eval Interval						31 DA-A	31 DA-A	6 DA-B	6 DA-B
ARM Action Codes									
# Subsamples, Dec.						0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
1	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		8
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		99
	Realm Q	38.7	WG	4	oz/a	POST	B		
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
2	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		0
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		99
	Breakfree ATZ Lite	5.5	L	3	pt/a	PRE	A		
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
3	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		0
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		99
	Breakfree ATZ Lite	5.5	L	4	pt/a	PRE	A		
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
4	Untreated							0	0
5	Instigate (6 oz)							98	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		0
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		99
	Breakfree	6.4	L	1.25	pt/a	PRE	A		
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
6	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		0
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		99
	Breakfree	6.4	L	2	pt/a	PRE	A		
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
7	Lumax	3.95	L	2.5	qt/a	PRE	A	99	99
	Abundit Extra	3	SL	1	qt/a	POST	B		0
	AMS		WG	17	lb/100 gal	POST	B		99
8	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		0
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		99
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
LSD (P=.05)						1.2	0.0	1.3	0.6
CV						0.98	0.0	86.6	0.47

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

MSU Weed Science Research Program

Weed Code	CHEAL	AMAPO	AMBEL	ABUTH							
Crop Code											
Rating Data Type	control	control	control	control							
Rating Unit	percent	percent	percent	percent							
Rating Date	Jun/28/2012	Jun/28/2012	Jun/28/2012	Jun/28/2012							
Trt-Eval Interval	6 DA-B	6 DA-B	6 DA-B	6 DA-B							
ARM Action Codes											
# Subsamples, Dec.	0	0	0	0							
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Instigate (6 oz)							99	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Realm Q	38.7	WG	4	oz/a	POST	B				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
2	Instigate (6 oz)							99	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Breakfree ATZ Lite	5.5	L	3	pt/a	PRE	A				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
3	Instigate (6 oz)							99	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Breakfree ATZ Lite	5.5	L	4	pt/a	PRE	A				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
4	Untreated							0	0	0	0
5	Instigate (6 oz)							99	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Breakfree	6.4	L	1.25	pt/a	PRE	A				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
6	Instigate (6 oz)							99	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Breakfree	6.4	L	2	pt/a	PRE	A				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
7	Lumax	3.95	L	2.5	qt/a	PRE	A	99	99	99	99
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
8	Instigate (6 oz)							99	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
LSD (P=.05)								0.0	0.0	0.0	0.0
CV								0.0	0.0	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
Crop Code								ZEAMX			
Rating Data Type								injury	control	control	control
Rating Unit								percent	percent	percent	percent
Rating Date								Jul/06/2012	Jul/06/2012	Jul/06/2012	Jul/06/2012
Trt-Eval Interval								14 DA-B	14 DA-B	14 DA-B	14 DA-B
ARM Action Codes											
# Subsamples, Dec.								0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Instigate (6 oz)							13	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Realm Q	38.7	WG	4	oz/a	POST	B				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
2	Instigate (6 oz)							0	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Breakfree ATZ Lite	5.5	L	3	pt/a	PRE	A				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
3	Instigate (6 oz)							0	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Breakfree ATZ Lite	5.5	L	4	pt/a	PRE	A				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
4	Untreated							0	0	0	0
5	Instigate (6 oz)							0	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Breakfree	6.4	L	1.25	pt/a	PRE	A				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
6	Instigate (6 oz)							0	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Breakfree	6.4	L	2	pt/a	PRE	A				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
7	Lumax	3.95	L	2.5	qt/a	PRE	A	0	99	99	99
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
8	Instigate (6 oz)							0	99	99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A				
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A				
	Abundit Extra	3	SL	1	qt/a	POST	B				
	AMS		WG	17	lb/100 gal	POST	B				
LSD (P=.05)								1.5	0.0	0.0	0.0
CV								65.32	0.0	0.0	0.0

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

MSU Weed Science Research Program

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						Jul/06/2012	Jul/20/2012	Jul/20/2012	Jul/20/2012	Jul/20/2012
Trt-Eval Interval						14 DA-B	28 DA-B	28 DA-B	28 DA-B	28 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	Instigate (6 oz)							99	0	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A			99
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A			
	Realm Q	38.7	WG	4	oz/a	POST	B			
	Abundit Extra	3	SL	1	qt/a	POST	B			
	AMS		WG	17	lb/100 gal	POST	B			
2	Instigate (6 oz)							99	0	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A			99
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A			
	Breakfree ATZ Lite	5.5	L	3	pt/a	PRE	A			
	Abundit Extra	3	SL	1	qt/a	POST	B			
	AMS		WG	17	lb/100 gal	POST	B			
3	Instigate (6 oz)							99	0	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A			99
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A			
	Breakfree ATZ Lite	5.5	L	4	pt/a	PRE	A			
	Abundit Extra	3	SL	1	qt/a	POST	B			
	AMS		WG	17	lb/100 gal	POST	B			
4	Untreated							0	0	0
5	Instigate (6 oz)							99	0	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A			99
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A			
	Breakfree	6.4	L	1.25	pt/a	PRE	A			
	Abundit Extra	3	SL	1	qt/a	POST	B			
	AMS		WG	17	lb/100 gal	POST	B			
6	Instigate (6 oz)							99	0	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A			99
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A			
	Breakfree	6.4	L	2	pt/a	PRE	A			
	Abundit Extra	3	SL	1	qt/a	POST	B			
	AMS		WG	17	lb/100 gal	POST	B			
7	Lumax	3.95	L	2.5	qt/a	PRE	A	99	0	99
	Abundit Extra	3	SL	1	qt/a	POST	B			
	AMS		WG	17	lb/100 gal	POST	B			
8	Instigate (6 oz)							99	0	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A			99
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A			
	Abundit Extra	3	SL	1	qt/a	POST	B			
	AMS		WG	17	lb/100 gal	POST	B			
LSD (P=.05)								0.0	0.0	0.0
CV								0.0	0.0	0.0

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

MSU Weed Science Research Program

Weed Code						AMBEL	ABUTH		
Crop Code								ZEAMX	ZEAMX
Rating Data Type						control	control	moisture	yield
Rating Unit						percent	percent	percent	bu/acre
Rating Date						Jul/20/2012	Jul/20/2012	Nov/09/2012	Nov/09/2012
Trt-Eval Interval						28 DA-B	28 DA-B	140 DA-B	at 15% M
ARM Action Codes									TY1
# Subsamples, Dec.						0	0	1	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
1	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		17.9
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		141
	Realm Q	38.7	WG	4	oz/a	POST	B		
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
2	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		17.3
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		138
	Breakfree ATZ Lite	5.5	L	3	pt/a	PRE	A		
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
3	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		17.6
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		135
	Breakfree ATZ Lite	5.5	L	4	pt/a	PRE	A		
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
4	Untreated							0	0
5	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		16.5
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		78
	Breakfree	6.4	L	1.25	pt/a	PRE	A		151
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
6	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		17.6
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		141
	Breakfree	6.4	L	2	pt/a	PRE	A		
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
7	Lumax	3.95	L	2.5	qt/a	PRE	A	99	99
	Abundit Extra	3	SL	1	qt/a	POST	B		18.5
	AMS		WG	17	lb/100 gal	POST	B		143
8	Instigate (6 oz)							99	99
	Rimsulfuron (Premix)	25	WG	1	oz/a	PRE	A		18.0
	Mesotrione dry (Premix)	50	WG	5	oz/a	PRE	A		152
	Abundit Extra	3	SL	1	qt/a	POST	B		
	AMS		WG	17	lb/100 gal	POST	B		
LSD (P=.05)						0.0	0.0	1.18	19.7
CV						0.0	0.0	4.55	9.92

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