

# LSU Northeast Research Station

## Influence of tank mixing Impact with selected herbicides on weed control in corn.

Trial ID: SJ07C023      Protocol ID: SJ07C023  
 Location:                      Study Director:  
                                     Investigator: Bill Williams

### General Trial Information

Investigator: Bill Williams

### Crop Description

Crop 1: ZEAMX Zea mays                      Corn  
 Variety: DKC 6971  
 BBCH Scale:                      BCOR                      Planting Date: 10/Apr/07  
 Planting Method:                      SEEDED                      Rate, Unit: 28000 S/A  
 Depth, Unit:                      2.5                      IN  
 Row Spacing, Unit:                      40                      IN  
 Seed Bed:                      MEDIUM  
 Soil Moisture:                      NORMAL  
 Harvest Date:                      30/Aug/07                      Harvest Equipment: Small plot combine  
 Harvested Width, Unit:                      6.67                      FT                      Harvested Length, Unit: 16                      FT  
 % Standard Moisture:                      15.0                      Moisture Meter: Kincaid  
 Weighing Equipment:                      load cell

### Pest Description

Pest 1 Type: W    Code: SIDSP    Sida spinosa  
                                     Common Name: Teaweed  
 Pest 2 Type: W    Code: ECHCG    Echinochloa crus-galli  
                                     Common Name: Common barnyardgrass  
 Pest 3 Type: W    Code: POLCH    Polygonum chinense  
                                     Common Name: Southern smart weed  
 Pest 4 Type: W    Code: SEBEX    Sesbania exaltata  
                                     Common Name: Coffeebean  
 Pest 5 Type: W    Code: AMASP    Amaranthus spinosus  
                                     Common Name: Spiny pigweed

### Site and Design

Plot Width, Unit: 13.66                      FT                      Site Type: FIELD  
 Plot Length, Unit: 38                      FT                      Tillage Type: CONVENTIONAL-TILL  
 Replications: 3                      Study Design: Randomized Complete Block

### Soil Description

Description Name: New Ground  
 % Sand: 16                      % OM: 3.1                      Texture: Clay  
 % Silt: 28                      pH: 6.1                      Soil Name: Sharkey Clay  
 % Clay: 56                      CEC: 22.2                      Fert. Level: EXCELLENT

### Moisture and Weather Conditions

Overall Moisture Conditions: Dry  
 Closest Weather Station: Northeast Research Station                      Distance: 0.25                      Unit: MI

	Date	Amount	Unit
1.	31/Mar/07	0.25	IN
2.	1/Apr/07	0.01	IN
3.	2/Apr/07	0.01	IN
4.	3/Apr/07	0.09	IN
5.	4/Apr/07	0.19	IN
6.	7/Apr/07	0.14	IN
7.	8/Apr/07	0.1	IN
8.	10/Apr/07	1.01	IN
9.	14/Apr/07	0.39	IN
10.	18/Apr/07	0.11	IN
11.	25/Apr/07	1.37	IN
12.	26/Apr/07	0.41	IN
13.	2/May/07	0.04	IN
14.	3/May/07	1.24	IN
15.	15/May/07	0.02	IN
16.	16/May/07	0.01	IN
17.	17/May/07	0.01	IN
18.	3/June/07	0.02	IN
19.	16/June/07	0.01	IN
20.	18/June/07	0.02	IN
21.	19/June/07	0.4	IN
22.	2/July/07	0.3	IN
23.	3/July/07	0.06	IN
24.	4/July/07	1.14	IN
25.	5/July/07	0.31	IN
26.	6/July/07	0.27	IN
27.	7/July/07	1.39	IN
28.	9/July/07	0.36	IN
29.	10/July/07	0.01	IN
30.	11/July/07	0.27	IN
31.	13/July/07	0.3	IN
32.	14/July/07	1.96	IN
33.	15/July/07	2.8	IN
34.	17/July/07	1.56	IN
35.	20/July/07	0.93	IN
36.	21/July/07	0.1	IN
37.	22/July/07	0.01	IN
38.	30/July/07	2.35	IN

**Application Description**

**A**

**Application Date:** 3/May/07  
**Application Method:** SPRAY  
**Application Timing:** EPOST  
**Application Placement:** BROFOL  
**Air Temperature, Unit:** 82 F  
**% Relative Humidity:** 68  
**Wind Velocity, Unit:** 8 MPH  
**Wind Direction:** SE  
**Soil Temperature, Unit:** 82 F  
**Soil Moisture:** DRY  
**% Cloud Cover:** 90

**Crop Stage At Each Application**

**A**

**Crop 1 Code, BBCH Scale:** ZEAMX BCOR  
**Stage Scale Used:** V4  
**Stage Majority, Percent:** 10"  
**Stage Maximum, Percent:** 10"

**Pest Stage At Each Application**

**A**

Pest 1 Code, Disc., Scale:SIDSP W  
Stage Majority, Percent:3 LF  
Stage Minimum, Percent: 2"  
Stage Maximum, Percent: 2"  
Pest 2 Code, Disc., Scale:ECHCG W  
Stage Majority, Percent:5 LF  
Stage Minimum, Percent: 1.5"  
Stage Maximum, Percent: 1.5"  
Pest 3 Code, Disc., Scale:POLCH W  
Stage Majority, Percent:3-6 LF  
Stage Minimum, Percent: 1"  
Stage Maximum, Percent: 3"  
Pest 4 Code, Disc., Scale:SEBEX W  
Stage Majority, Percent:4-5 LF  
Stage Minimum, Percent: 3"  
Stage Maximum, Percent: 3"  
Pest 5 Code, Disc., Scale:AMASP W  
Stage Majority, Percent:5 LF  
Stage Minimum, Percent: 3"  
Stage Maximum, Percent: 3"

**Application Equipment**

**A**

Appl. Equipment: Tractor  
Operating Pressure, Unit: 40 psi  
Nozzle Type: Greenleaf  
Nozzle Size: 11002  
Nozzle Spacing, Unit: 20 in  
Nozzles/Row: 2  
Carrier: Water

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## Influence of tank mixing Impact with selected herbicides on weed control in corn.

Trial ID: SJ07C023

Protocol ID: SJ07C023

Location:

Study Director:

Investigator: Bill Williams

Pest Type										
Pest Code			BRAPP	BRAPP	BRAPP	BRAPP	SIDSP	SIDSP		
Crop Code										
Part Rated			PLATOT P	PLATOT P	PLATOT P	PLATOT P	PLATOT P	PLATOT P	PLATOT P	PLATOT P
Rating Date			18/May/07	28/May/07	28/Jun/07	15/Aug/07	18/May/07	28/May/07		
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%		
Trt-Eval Interval			15 DA-A	25 DA-A	56 DA-A	104 DA-A	15 DA-A	25 DA-A		
Trt Treatment	Rate	Growth								
No.	Name	Rate Unit	Stage	1	2	3	4	5	6	
1	Impact	0.75 OZ/A	EPOST73		b67	b47	c 30	e 95	a95	a
	Atrazine	1.5 QT/A	EPOST							
	COC	1 % V/V	EPOST							
2	Impact	0.75 OZ/A	EPOST90		a90	a77	b 70	cd 95	a95	a
	Accent	0.5 OZ/A	EPOST							
	Atrazine	1.5 QT/A	EPOST							
	COC	1 % V/V	EPOST							
3	Impact	0.75 OZ/A	EPOST90		a90	a83	ab77	abc95	a95	a
	Resolve	1.0 OZ/A	EPOST							
	Atrazine	1.5 QT/A	EPOST							
	COC	1 % V/V	EPOST							
4	Impact	0.75 OZ/A	EPOST90		a90	a90	a 83	a 95	a95	a
	Steadfast	0.5 OZ/A	EPOST							
	Atrazine	1.5 QT/A	EPOST							
	COC	1 % V/V	EPOST							
5	Impact	0.75 OZ/A	EPOST90		a90	a80	ab67	cd 95	a95	a
	Stout	0.5 OZ/A	EPOST							
	Atrazine	1.5 QT/A	EPOST							
	COC	1 % V/V	EPOST							
6	Impact	0.75 OZ/A	EPOST90		a90	a80	ab67	cd 95	a95	a
	Option	1.5 OZ/A	EPOST							
	Atrazine	1.5 QT/A	EPOST							
	COC	1 % V/V	EPOST							
7	Impact	0.5 OZ/A	EPOST90		a90	a87	a 72	bcd95	a95	a
	Accent	0.5 OZ/A	EPOST							
	Atrazine	1.5 QT/A	EPOST							
	COC	1 % V/V	EPOST							
8	Impact	0.5 OZ/A	EPOST88		a90	a90	a 80	ab 95	a95	a
	Resolve	1.0 OZ/A	EPOST							
	Atrazine	1.5 QT/A	EPOST							

	COC	1	% V/VEPOST							
9	Impact	0.5	OZ/A EPOST88	a 90	a 90	a 83	a 95	a 95	a	
	Steadfast	0.5	OZ/A EPOST							
	Atrazine	1.5	QT/A EPOST							
	COC	1	% V/VEPOST							
10	Impact	0.5	OZ/A EPOST90	a 90	a 90	a 83	a 95	a 95	a	
	Stout	0.5	OZ/A EPOST							
	Atrazine	1.5	QT/A EPOST							
	COC	1	% V/VEPOST							
11	Impact	0.5	OZ/A EPOST90	a 90	a 80	ab 67	cd 95	a 95	a	
	Option	1.5	OZ/A EPOST							
	Atrazine	1.5	QT/A EPOST							
	COC	1	% V/VEPOST							
12	Steadfast	0.75	OZ/A EPOST87	a 90	a 83	ab 77	abc 95	a 95	a	
	Atrazine	1.5	QT/A EPOST							
	COC	1	% V/VEPOST							
13	Accent	0.66	OZ/A EPOST92	a 90	a 80	ab 63	d 95	a 95	a	
	Atrazine	1.5	QT/A EPOST							
	COC	1	% V/VEPOST							
14	nontreated		0	c 0	c 0	d 0	f 0	b 0	b	
	LSD (P=.10)		3.5	2.1	5.7	6.3	0.0	0.0		
	Standard Deviation		2.5	1.5	4.1	4.5	0.0	0.0		
	CV		3.03	1.88	5.47	6.93	0.0	0.0		
	Grand Mean		82.02	81.9	75.48	65.6	88.21	88.21		
	Bartlett's X2		2.213	0.0	1.823	1.085	0.0	0.0		
	P(Bartlett's X2)		0.697	.	0.768	0.999	.	.		
	Replicate F		1.830	1.000	2.656	1.931	0.000	0.000		
	Replicate Prob(F)		0.1805	0.3816	0.0892	0.1652	1.0000	1.0000		
	Treatment F		280.244	748.923	104.355	78.574	0.000	0.000		
	Treatment Prob(F)		0.0001	0.0001	0.0001	0.0001	1.0000	1.0000		

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Pest Type						
Pest Code		BRAPP	BRAPP	BRAPP	BRAPP	SIDSP SIDSP
Crop Code						
Part Rated		PLATOT P	PLATOT P	PLATOT P	PLATOT P	PLATOT P PLATOT P
Rating Date		18/May/07	28/May/07	28/Jun/07	15/Aug/07	18/May/07 28/May/07
Rating Data Type		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL CONTROL
Rating Unit		%	%	%	%	%
Trt-Eval Interval		15 DA-A	25 DA-A	56 DA-A	104 DA-A	15 DA-A 25 DA-A
Trt Treatment	Rate	Growth				
No. Name	Rate Unit	Stage	1	2	3	4 5 6

Means followed by same letter do not significantly differ (P=.10, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

# LSU Northeast Research Station

Pest Type							
Pest Code		SIDSP	SIDSP				
Crop Code				ZEAMX	ZEAMX	ZEAMX	
Part Rated		PLATOT P	PLATOT P	GRAIN	CGRAIN	CGRAIN	C
Rating Date		28/Jun/07	15/Aug/07	30/Aug/07	30/Aug/07	30/Aug/07	
Rating Data Type		CONTROL	CONTROL	Yield	Moisture	YIELD	
Rating Unit		%	%	lb/plt	%	BU	
Trt-Eval Interval		56 DA-A	104 DA-A	119 DA-A	119 DA-A	119 DA-A	

Trt No.	Treatment	Rate	Growth	7	8	9	10	11
No.	Name	Rate Unit	Stage					
1	Impact	0.75 OZ/A	EPOST95		a 67	a 17	a 14	a 127 b
	Atrazine	1.5 QT/A	EPOST					
	COC	1 % V/V	EPOST					
2	Impact	0.75 OZ/A	EPOST95		a 67	a 20	a 15	a 144 ab
	Accent	0.5 OZ/A	EPOST					
	Atrazine	1.5 QT/A	EPOST					
	COC	1 % V/V	EPOST					
3	Impact	0.75 OZ/A	EPOST95		a 67	a 19	a 15	a 139 ab
	Resolve	1.0 OZ/A	EPOST					
	Atrazine	1.5 QT/A	EPOST					
	COC	1 % V/V	EPOST					
4	Impact	0.75 OZ/A	EPOST95		a 67	a 19	a 14	a 140 ab
	Steadfast	0.5 OZ/A	EPOST					
	Atrazine	1.5 QT/A	EPOST					
	COC	1 % V/V	EPOST					
5	Impact	0.75 OZ/A	EPOST95		a 67	a 19	a 14	a 138 ab
	Stout	0.5 OZ/A	EPOST					
	Atrazine	1.5 QT/A	EPOST					
	COC	1 % V/V	EPOST					
6	Impact	0.75 OZ/A	EPOST95		a 67	a 19	a 14	a 143 ab
	Option	1.5 OZ/A	EPOST					
	Atrazine	1.5 QT/A	EPOST					
	COC	1 % V/V	EPOST					
7	Impact	0.5 OZ/A	EPOST95		a 67	a 19	a 14	a 139 ab
	Accent	0.5 OZ/A	EPOST					
	Atrazine	1.5 QT/A	EPOST					
	COC	1 % V/V	EPOST					
8	Impact	0.5 OZ/A	EPOST95		a 70	a 21	a 14	a 154 a
	Resolve	1.0 OZ/A	EPOST					
	Atrazine	1.5 QT/A	EPOST					
	COC	1 % V/V	EPOST					
9	Impact	0.5 OZ/A	EPOST95		a 67	a 18	a 14	a 136 ab
	Steadfast	0.5 OZ/A	EPOST					
	Atrazine	1.5 QT/A	EPOST					
	COC	1 % V/V	EPOST					
10	Impact	0.5 OZ/A	EPOST95		a 67	a 19	a 14	a 139 ab
	Stout	0.5 OZ/A	EPOST					

Atrazine	1.5	QT/A	EPOST					
COC	1	% V/VE	EPOST					
11 Impact	0.5	OZ/A	EPOST95	a 63	a 19	a 14	a 141	ab
Option	1.5	OZ/A	EPOST					
Atrazine	1.5	QT/A	EPOST					
COC	1	% V/VE	EPOST					
12 Steadfast	0.75	OZ/A	EPOST95	a 67	a 19	a 14	a 141	ab
Atrazine	1.5	QT/A	EPOST					
COC	1	% V/VE	EPOST					
13 Accent	0.66	OZ/A	EPOST95	a 63	a 18	a 14	a 133	ab
Atrazine	1.5	QT/A	EPOST					
COC	1	% V/VE	EPOST					
14 nontreated				0	b 0	b 19	a 13	a 140
LSD (P=.10)				0.0	4.0	1.5	0.8	10.9
Standard Deviation				0.0	2.8	1.1	0.6	7.8
CV				0.0	4.6	5.69	4.32	5.61
Grand Mean				88.21	61.67	18.93	14.06	139.53
Bartlett's X2				0.0	0.0	28.394	17.362	34.92
P(Bartlett's X2)				.	.	0.008*	0.183	0.001*
Replicate F				0.000	36.636	1.316	10.864	1.787
Replicate Prob(F)				1.0000	0.0001	0.2856	0.0004	0.1875
Treatment F				0.000	118.205	1.677	0.874	1.802
Treatment Prob(F)				1.0000	0.0001	0.1270	0.5875	0.0976

# LSU Northeast Research Station

Pest Type							
Pest Code		SIDSP	SIDSP				
Crop Code				ZEAMX	ZEAMX	ZEAMX	
Part Rated		PLATOT P	PLATOT P	GRAIN	CGRAIN	CGRAIN C	
Rating Date		28/Jun/07	15/Aug/07	30/Aug/07	30/Aug/07	30/Aug/07	
Rating Data Type		CONTROL	CONTROL	Yield	Moisture	YIELD	
Rating Unit		%	%	lb/plt	%	BU	
Trt-Eval Interval		56 DA-A	104 DA-A	119 DA-A	119 DA-A	119 DA-A	
Trt Treatment	Rate	Growth					
No. Name	Rate Unit	Stage	7	8	9	10	11

Means followed by same letter do not significantly differ (P=.10, Student-Newman-Keuls)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Column 11:  $TY1 = 7.288766 * [9] * (100 - [10]) / 85$