

LSU Northeast Research Station

Evaluation of weed management programs for Roundup Ready corn with residual grass activity.

Trial ID: SJ07C028 Protocol ID: SJ0-7C028

Location: Study Director:
Investigator: Bill Williams

General Trial Information

Investigator: Bill Williams

Crop Description

Crop 1: ZEAMX Zea mays Corn
 Variety: DK66-23
 BBCH Scale: BCOR Planting Date: 11/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 Equipment: Small plot combine
 Harvested Width, Unit: 6.67 FT Harvested Length, Unit: 25 FT
 % Standard Moisture: 15.0

Pest Description

Pest 1 Type: W Code: ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass
 Pest 2 Type: W Code: DIGSA Digitaria sanguinalis
 Common Name: Large crabgrass
 Pest 3 Type: W Code: BRAPP Brachiaria platyphylla
 Common Name: Broadleaf signalgrass
 Pest 4 Type: W Code: AMASP Amaranthus spinosus
 Common Name: Spiny pigweed
 Pest 5 Type: W Code: LAMAM Lamium amplexicaule
 Common Name: Henbit
 Pest 6 Type: W Code: ALOCA Alopecurus carolinianus
 Common Name: Carolina foxtail

Site and Design

Plot Width, Unit: 13.3 FT Site Type: FIELD
 Plot Length, Unit: 35 FT Tillage Type: CONVENTIONAL-TILL
 Replications: 3 Study Design: Randomized Complete Block

Soil Description

Description Name: Tunica cut
 % Sand: 21 % OM: 2.8 Texture: Clay
 % Silt: 37 pH: 6.2 Soil Name: Sharkey
 % Clay: 49 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	B
Application Date:	12/Apr/07	3/May/07
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	EPOST
Application Placement:	BROSIO	BROFOL
Air Temperature, Unit:	80 F	82 F
% Relative Humidity:	62	68
Wind Velocity, Unit:	5 MPH	8 MPH
Wind Direction:	NE	SE
Soil Temperature, Unit:	79 F	82 F
% Cloud Cover:	60	90

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	N/A	V4
Stage Majority, Percent:		10"
Stage Maximum, Percent:		10"

Pest Stage At Each Application

	A	B	
Pest 1 Code, Disc., Scale:	ECHCG	WECHCG	W
Stage Majority, Percent:	N/A	2-5 LF	
Stage Minimum, Percent:		.5"	
Stage Maximum, Percent:		3"	
Pest 2 Code, Disc., Scale:	DIGSA	WDIGSA	W
Stage Majority, Percent:	N/A	3 LF	
Stage Minimum, Percent:		1"	
Stage Maximum, Percent:		1"	
Pest 3 Code, Disc., Scale:	BRAPP	WBRAPP	W
Stage Majority, Percent:	N/A	3-4 LF	
Stage Minimum, Percent:		2"	
Stage Maximum, Percent:		3"	
Pest 4 Code, Disc., Scale:	AMASP	WAMASP	W
Stage Majority, Percent:	N/A	4 LF	
Stage Minimum, Percent:		1"	
Stage Maximum, Percent:		1"	
Pest 5 Code, Disc., Scale:	LAMAM	WLAMAM	W
Stage Majority, Percent:	N/A	3 LF	
Stage Minimum, Percent:		1"	
Stage Maximum, Percent:		1"	
Pest 6 Code, Disc., Scale:	ALOCA	WALOCA	W
Stage Majority, Percent:	N/A	3 LF	
Stage Minimum, Percent:		2"	
Stage Maximum, Percent:		2"	

Application Equipment

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

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Location:

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Pest Type				GRASS	GRASS	GRASS	GRASS	GRASS	
Pest Code									
Crop Code									
Part Rated				PLATOT P	PLATOT P	PLATOT P	PLATOT P	PLATOT P	
Rating Date				18/Apr/07	26/Apr/07	2/May/07	18/May/07	20/Jun/07	
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit				%	%	%	%	%	
Trt-Eval Interval				6 DA-A	14 DA-A	20 DA-A	15 DA-B	48 DA-B	
Trt Treatment	Rate	Growth							
No. Name	Rate Unit	Stage		1	2	3	4	5	
1 Degree	3.0	PT/A PRE	95		a95	a92	a90	ab90	a
Roundup Originalmax	22	OZ/AASNPST							
2 Degree	2.2	PT/A EPOST	0		b0	b0	b95	a95	a
Roundup Originalmax	22	OZ/AEPOST							
3 Harness	1.5	PT/A PRE	95		a95	a92	a90	ab92	a
Roundup Originalmax	22	OZ/AASNPST							
4 Harness	1.2	PT/A EPOST	0		b0	b0	b95	a93	a
Roundup Originalmax	22	OZ/AEPOST							
5 Duall II Magnum	1.25	PT/A PRE	95		a95	a92	a87	ab87	a
Roundup Originalmax	22	OZ/AASNPST							
6 Sequence	2.5	PT/A EPOST	0		b0	b0	b95	a93	a
7 Resolve	1	OZ/APRE	93		a95	a90	a85	b90	a
Roundup Originalmax	22	OZ/AASNPST							
8 Resolve	0.75	OZ/AEPOST	0		b0	b0	b95	a95	a
Roundup Originalmax	22	OZ/AEPOST							
9 Prowl H2O	2.1	PT/A PRE	93		a93	a88	a87	ab87	a
Roundup Originalmax	22	OZ/AASNPST							
10 Prowl H2O	1.6	PT/A EPOST	0		b0	b0	b93	a95	a
Roundup Originalmax	22	OZ/AEPOST							
LSD (P=.10)				1.7	1.3	2.6	4.6	5.3	
Standard Deviation				1.2	0.9	1.8	3.3	3.7	
CV				2.58	1.93	4.03	3.59	4.08	
Grand Mean				47.17	47.33	45.33	91.17	91.67	
Bartlett's X2				0.0	0.0	0.0	1.97	4.109	
P(Bartlett's X2)				.	.	.	0.579	0.534	
Replicate F				2.250	1.000	1.000	4.966	2.921	
Replicate Prob(F)				0.1342	0.3874	0.3874	0.0192	0.0797	
Treatment F				5006.313	8962.668	2056.000	4.491	2.252	
Treatment Prob(F)				0.0001	0.0001	0.0001	0.0033	0.0682	

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Pest Type					
Pest Code		GRASS	GRASS	GRASS	GRASS
Crop Code					
Part Rated		PLATOT P	PLATOT P	PLATOT P	PLATOT P
Rating Date		18/Apr/07	26/Apr/07	2/May/07	18/May/07
Rating Data Type		CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit		%	%	%	%
Trt-Eval Interval		6 DA-A	14 DA-A	20 DA-A	15 DA-B
Trt Treatment					
No.	Rate	Growth			
Name	Unit	Stage	1	2	3
				4	5

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.

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Pest Type			
Pest Code	BRAPP	ECHCG	DIGSA
Crop Code			
Part Rated	PLATOT P	PLATOT P	PLATOT P
Rating Date	15/Aug/07	15/Aug/07	15/Aug/07
Rating Data Type	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%
Trt-Eval Interval	104 DA-B	104 DA-B	104 DA-B

Trt No.	Treatment Name	Rate	Growth Stage	6	7	8
1	Degree Roundup Originalmax	3.0	PT/A PRE	95	a 78	c 95
		22	OZ/A ASNPST			a
2	Degree Roundup Originalmax	2.2	PT/A EPOST	93	a 95	a 95
		22	OZ/A EPOST			a
3	Harness Roundup Originalmax	1.5	PT/A PRE	90	a 92	ab 92
		22	OZ/A ASNPST			a
4	Harness Roundup Originalmax	1.2	PT/A EPOST	88	a 82	c 90
		22	OZ/A EPOST			a
5	Duall II Magnum Roundup Originalmax	1.25	PT/A PRE	82	b 95	a 93
		22	OZ/A ASNPST			a
6	Sequence Roundup Originalmax	2.5	PT/A EPOST	95	a 88	b 67
		22	OZ/A ASNPST			b
7	Resolve Roundup Originalmax	1	OZ/A PRE	92	a 67	d 90
		22	OZ/A ASNPST			a
8	Resolve Roundup Originalmax	0.75	OZ/A EPOST	93	a 30	e 95
		22	OZ/A EPOST			a
9	Prowl H2O Roundup Originalmax	2.1	PT/A PRE	93	a 90	ab 90
		22	OZ/A ASNPST			a
10	Prowl H2O Roundup Originalmax	1.6	PT/A EPOST	93	a 68	d 95
		22	OZ/A EPOST			a
LSD (P=.10)				5.8	3.6	3.2
Standard Deviation				4.1	2.5	2.3
CV				4.51	3.22	2.53
Grand Mean				91.5	78.5	90.17
Bartlett's X2				4.914	1.908	1.327
P(Bartlett's X2)				0.555	0.862	0.515
Replicate F				1.761	2.739	0.643
Replicate Prob(F)				0.2002	0.0915	0.5374
Treatment F				2.875	185.348	42.304
Treatment Prob(F)				0.0270	0.0001	0.0001

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