2,4-D vs. Dicamba Weed Control and Auxin Tolerance.

Trial ID: 15-26C-W-N30 Location: Belleville Res. Center Trial Year: 2015
Investigator: Ronald F. Krausz

Trial Status: F one-year/final
Initiation Date: 6-12-15
Completion Date: 8-1-15

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate and demonstrate DT soybean tolerance to auxins and the weed control auxins provide.

Contacts

Study Director: Ronald F. Krausz **Title:** Researcher/Farm Manager
Organization: Belleville Research Center - Southern Illinois Univ Carbondale
Address: 2036 Charles Lane **Phone No.:** 618-566-4761
City+State/Prov: Belleville, IL
Postal Code: 62221 **E-mail:** rkrausz@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Dicamba-Tolerant **BBCH Scale:** BSOY
Description: DT

Planting Date: 6-12-15
Planting Rate, Unit: 140000 S/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** XANST Xanthium strumarium L.
Common Name: cocklebur, common

Pest 2 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 4 Type: W **Code:** AMBEL Ambrosia artemisiifolia L.
Common Name: ragweed, common

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 50 FT **Total Plot Length:** 50 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 1 **Study Design:** NONRAN Non-Randomized
Untreated Arrangement: NONE control is other than an untreated

No.	Previous Crop	Year
1.	GLXMA	2014

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

Description Name: 26C_2013
% OM: 2.6 **Texture:** SIL silt loam
pH: 6.4 **Soil Name:** Winfield
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	70	lb/A
K	346	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-3-15					7	DAY	53	89	F
2.	6-5-15	0.17	IN	RAIN	rain	1	DAY			
3.	6-8-15	0.66	IN	RAIN	rain	1	DAY			
4.	6-10-15					7	DAY	64	91	F
5.	6-14-15	0.16	IN	RAIN	rain	1	DAY			
6.	6-15-15	0.11	IN	RAIN	rain	1	DAY			
7.	6-16-15	2.25	IN	RAIN	rain	1	DAY			
8.	6-17-15					7	DAY	69	91	F
9.	6-17-15	0.09	IN	RAIN	rain	1	DAY			
10.	6-18-15	0.14	IN	RAIN	rain	1	DAY			
11.	6-19-15	3.29	IN	RAIN	rain	1	DAY			
12.	6-20-15	0.2	IN	RAIN	rain	2	DAY			
13.	6-24-15					7	DAY	62	93	F
14.	6-25-15	1.66	IN	RAIN	rain	2	DAY			
15.	6-28-15	0.6	IN	RAIN	rain	2	DAY			
16.	7-1-15					7	DAY	63	88	F
17.	7-1-15	0.64	IN	RAIN	rain	2	DAY			
18.	7-7-15	1.33	IN	RAIN	rain	2	DAY			
19.	7-8-15					7	DAY	59	97	F
20.	7-10-15	0.26	IN	RAIN	rain	1	DAY			
21.	7-15-15					7	DAY	69	93	F
22.	7-19-15	0.35	IN	RAIN	rain	2	DAY			
23.	7-22-15					7	DAY	65	95	F
24.	7-26-15	1.21	IN	RAIN	rain	3	DAY			
25.	7-29-15					7	DAY	65	93	F
26.	8-5-15					7	DAY	64	88	F
27.	8-5-15	2.25	IN	RAIN	rain	1	DAY			
28.	8-9-15	0.47	IN	RAIN	rain	1	DAY			

Application Description

	A
Application Date:	7-4-15
Appl. Start Time:	8:30
Appl. Stop Time:	9:00
Application Method:	Spray
Application Timing:	V2-V3
Application Placement:	BROFOL
Applied By:	RFK
Air Temperature, Unit:	77 F
% Relative Humidity:	76
Wind Velocity, Unit:	1 MPH
Wind Direction:	E
Dew Presence (Y/N):	N
Soil Temperature, Unit:	76 F
Soil Moisture:	ABONOR
% Cloud Cover:	0
Next Moisture Occurred On:	7-7-15
Time to Next Moisture, Unit:	3 DAY

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Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V3
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V3
Height, Unit:	6 IN
Height Minimum, Maximum:	5 6

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	XANST W
Stage Majority, Percent:	6
Stage Minimum, Percent:	2
Stage Maximum, Percent:	8
Height, Unit:	3 IN
Height Minimum, Maximum:	1 4
Density, Unit:	0.1 FT2
Pest 2 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	6
Stage Minimum, Percent:	2
Stage Maximum, Percent:	10
Height, Unit:	2 IN
Height Minimum, Maximum:	2 3
Density, Unit:	2 FT2
Pest 3 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	6
Stage Minimum, Percent:	4
Stage Maximum, Percent:	10
Height, Unit:	3 IN
Height Minimum, Maximum:	1 4
Density, Unit:	0.01 FT2
Pest 4 Code, Type, Scale:	AMBEL W
Stage Majority, Percent:	4
Stage Minimum, Percent:	2
Stage Maximum, Percent:	6
Height, Unit:	2 IN
Height Minimum, Maximum:	1 3
Density, Unit:	0.01 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TTI
Nozzle Size:	11002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-11-15 Injury Percent 7 DA-A	GLXMA 7-18-15 Injury Percent 14 DA-A	GLXMA 8-1-15 Injury Percent 28 DA-A	XANST 7-11-15 Control Percent 7 DA-A	XANST 7-18-15 Control Percent 14 DA-A	XANST 8-1-15 Control Percent 28 DA-A
1	ENGENIA	5	SL	0.5	lb ae/a	12.8	fl oz/a	V2-V3	A	0	0	0	90	99	99
2	WEEDAR 64	3.8	SL	0.802	lb ae/a	27	fl oz/a	V2-V3	A	80	80	75	80	99	99
3	STATUS	56	WG	0.175	lb ae/a	5	oz/a	V2-V3	A	50	50	50	90	99	99
LSD P=.05										.	.	.	.	.	.
Standard Deviation										.	.	.	.	.	.
CV										.	.	.	.	.	.

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Could not calculate LSD (% mean diff) for columns 5,10,15,6,11,16,7,12,17,8,13,18,9,14,19 because error mean square = 0.

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Pest Code								AMATA	AMATA	AMATA	AMBTR	AMBTR	AMBTR
Crop Code													
Rating Date								7-11-15	7-18-15	8-1-15	7-11-15	7-18-15	8-1-15
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing													
Trt-Eval Interval								7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	ENGENIA	5	SL	0.5	lb ae/a	12.8	fl oz/a	V2-V3	A	90	99	99	90	99	99
2	WEEDAR 64	3.8	SL	0.802	lb ae/a	27	fl oz/a	V2-V3	A	80	90	80	80	99	99
3	STATUS	56	WG	0.175	lb ae/a	5	oz/a	V2-V3	A	90	90	90	90	99	99
LSD P=.05										.	.	.	.	.	.
Standard Deviation										.	.	.	.	.	.
CV										.	.	.	.	.	.

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBEL 7-11-15 Control Percent 7 DA-A	AMBEL 7-18-15 Control Percent 14 DA-A	AMBEL 8-1-15 Control Percent 28 DA-A
1	ENGENIA	5	SL	0.5	lb ae/a	12.8	fl oz/a	V2-V3	A	90	99	99
2	WEEDAR 64	3.8	SL	0.802	lb ae/a	27	fl oz/a	V2-V3	A	80	99	99
3	STATUS	56	WG	0.175	lb ae/a	5	oz/a	V2-V3	A	90	99	99
LSD P=.05										.	.	.
Standard Deviation										.	.	.
CV										.	.	.

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Trial Comments

1. Protocol: BASF (DEV-H-2015-US-D0K-A-01.0)
2. Ratings:
   CI at 7, 14, and 28 DA-A.
   WC at 14 and 28 DA-A.
3. No Yield (crop destruct).
4. Blanket application of Select Max (1 pt/A) plus COC (1%) at V1 to all plots on 6-25-15.
5. Photos.
6. Rainfall following the V2-V3 application was 1.33 inch over 2 days beginning 3 days later.
7. Not harvested (crop-destruct).