

Sonic Followed by Enlist Duo compared to Glyphosate or Glufosinate Based Programs.

Trial ID: 16-50E-N130 Location: Belleville Res. Center Trial Year: 2016
 Investigator: Karla L. Gage, Ph.D.

Trial Status: F one-year/final Initiation Date: 6-3-16 Completion Date: 7-22-16		Trial Location
City: Belleville State/Prov.: Illinois IL Postal Code: 62221	Country: USA	

Objectives:
 Evaluate how Enlist Duo postemergence programs compare to conventional glyphosate or glufosinate based programs following Sonic preemergence in Enlist soybean.

Contacts	
Study Director: Karla Gage, Ph.D. Organization: Southern Illinois University Carbondale Address: 1205 Lincoln Drive MC 4415 City+State/Prov.: Carbondale, IL Postal Code: 62901 Country: USA	Title: Assistant Professor of Weed Science Phone No.: 618-453-7679 E-mail: kgage@siu.edu

Crop Description	
Crop 1: GLXMA Glycine max Variety: 43R15Y9 Description: Enlist RR2Y	Soybean BBCH Scale: BSOY
Planting Rate, Unit: 140000 S/A Depth, Unit: 1 IN Row Spacing, Unit: 30 IN	Planting Date: 6-3-16 Planting Method: SEEDED

Pest Description	
Pest 1 Type: W Code: PANDI Panicum dichotomiflorum Michx. Common Name: panicum, fall	
Pest 2 Type: W Code: AMBTR Ambrosia trifida L. Common Name: ragweed, giant	
Pest 3 Type: W Code: ABUTH Abutilon theophrasti Medik. Common Name: velvetleaf	
Pest 4 Type: W Code: AMATA Amaranthus rudis Sauer Common Name: waterhemp, common	
Pest 5 Type: W Code: IPOHE Ipomoea hederacea (L.) Jacq. Common Name: morningglory, ivyleaf	

Treated Plot Width: 7.5 FT Total Plot Width: 10 FT Treated Plot Length: 40 FT Total Plot Length: 40 FT		Site and Design Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: REDTIL reduced-till Study Design: RACOB L Randomized Complete Block (RCB)						
Replications: 4 Untreated Arrangement: INCLUDED single control randomized in each block								
<table border="1" style="width:100%"> <thead> <tr> <th>No.</th> <th>Previous Crop</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>ZEAMD</td> <td>2015</td> </tr> </tbody> </table>			No.	Previous Crop	Year	1.	ZEAMD	2015
No.	Previous Crop	Year						
1.	ZEAMD	2015						

Maintenance					
<table border="1" style="width:100%"> <thead> <tr> <th>No.</th> <th>Maintenance Product Name</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A</td> </tr> </tbody> </table>	No.	Maintenance Product Name	1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A	
No.	Maintenance Product Name				
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A				

Soil Description										
Description Name: 50E_2013 % OM: 2.9 Texture: SIL silt loam pH: 6.6 Soil Name: Pierron CEC: 10										
Additional Measured Elements										
<table border="1" style="width:100%"> <thead> <tr> <th>Element</th> <th>Quantity</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>67</td> <td>lb/A</td> </tr> <tr> <td>K</td> <td>305</td> <td>lb/A</td> </tr> </tbody> </table>		Element	Quantity	Unit	P1	67	lb/A	K	305	lb/A
Element	Quantity	Unit								
P1	67	lb/A								
K	305	lb/A								

Sonic Followed by Enlist Duo compared to Glyphosate or Glufosinate Based Programs.

Trial ID: 16-50E-N130 Location: Belleville Res. Center Trial Year: 2016
Investigator: Karla L. Gage, Ph.D.**Moisture and Weather Conditions****Overall Moisture Conditions: NORMAL**
Closest Weather Station: ICN - Belleville IL**Distance, Unit: 0.5 MI**

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-16					7	DAY	32	75	F
2.	4-6-16	0.49	IN	RAIN	rain	1	DAY			
3.	4-8-16					7	DAY	28	71	F
4.	4-10-16	0.97	IN	RAIN	rain	2	DAY			
5.	4-15-16					7	DAY	48	81	F
6.	4-20-16	0.45	IN	RAIN	rain	3	DAY			
7.	4-22-16					7	DAY	47	85	F
8.	4-26-16	1.74	IN	RAIN	rain	2	DAY			
9.	4-29-16					7	DAY	46	75	F
10.	4-29-16	1.94	IN	RAIN	rain	2	DAY			
11.	5-4-16	0.02	IN	RAIN	rain	1	DAY			
12.	5-6-16					7	DAY	44	87	F
13.	5-7-16	0.07	IN	RAIN	rain	1	DAY			
14.	5-9-16	2.12	IN	RAIN	rain	5	DAY			
15.	5-13-16					7	DAY	41	76	F
16.	5-16-16	1.06	IN	RAIN	rain	2	DAY			
17.	5-20-16					7	DAY	51	83	F
18.	5-20-16	0.06	IN	RAIN	rain	1	DAY			
19.	5-25-16	0.68	IN	RAIN	rain	3	DAY			
20.	5-27-16					7	DAY	62	88	F
21.	5-31-16	0.03	IN	RAIN	rain	2	DAY			
22.	6-3-16					7	DAY	55	89	F
23.	6-3-16	0.01	IN	RAIN	rain	1	DAY			
24.	6-4-16	0.72	IN	RAIN	rain	1	DAY			
25.	6-10-16					7	DAY	65	96	F
26.	6-13-16	0.03	IN	RAIN	rain	1	DAY			
27.	6-17-16					7	DAY	67	97	F
28.	6-21-16	0.01	IN	RAIN	rain	1	DAY			
29.	6-24-16					7	DAY	57	95	F
30.	6-25-16	0.02	IN	RAIN	rain	1	DAY			
31.	6-30-16	0.03	IN	RAIN	rain	1	DAY			
32.	7-1-16					7	DAY	60	91	F
33.	7-1-16	2.26	IN	RAIN	rain	4	DAY			
34.	7-6-16	0.32	IN	RAIN	rain	3	DAY			
35.	7-8-16					7	DAY	67	93	F
36.	7-13-16	0.49	IN	RAIN	rain	2	DAY			
37.	7-15-16					7	DAY	68	93	F
38.	7-17-16	0.02	IN	RAIN	rain	1	DAY			
39.	7-19-16	1.47	IN	RAIN	rain	2	DAY			
40.	7-22-16					7	DAY	72	94	F
41.	7-25-16	0.1	IN	RAIN	rain	1	DAY			

Comment:

Rainfall was recorded on station and provided by Illinois Climate Network.
 Air temperature was recorded at Scott Air Force Base 2.5 miles north and provided by NOAA's National Centers for Environmental Information.
 Air temperatures given are summarized as weekly high and low, detailed weather data is available on request.

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Trial ID: 16-50E-N130 Location: Belleville Res. Center Trial Year: 2016
Investigator: Karla L. Gage, Ph.D.**Application Description**

	A	B
Application Date:	6-3-16	6-24-16
Appl. Start Time:	18:05	12:50
Appl. Stop Time:	18:30	13:45
Application Method:	Spray	Spray
Application Timing:	PRE	3-4"W
Application Placement:	BROSOI	BROFOL
Applied By:	MCG	RLS
Air Temperature, Unit:	73 F	89 F
% Relative Humidity:	76	47
Wind Velocity, Unit:	2 MPH	4 MPH
Wind Direction:	ESE	W
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	72 F	80 F
Soil Moisture:	NORMAL	BELNOR
% Cloud Cover:	0	5
Next Moisture Occurred On:	6-4-16	6-30-16
Time to Next Moisture, Unit:	12 HR	6 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V2
Stage Minimum, Percent:		V1
Stage Maximum, Percent:		V2
Height, Unit:		4 IN
Height Minimum, Maximum:		3 4

Sonic Followed by Enlist Duo compared to Glyphosate or Glufosinate Based Programs.

Trial ID: 16-50E-N130 Location: Belleville Res. Center Trial Year: 2016
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Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	PANDI W	PANDI W
Stage Majority, Percent:	NA	3
Stage Minimum, Percent:		2
Stage Maximum, Percent:		5
Height, Unit:		3 IN
Height Minimum, Maximum:		1 5
Density, Unit:		15 FT2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		8
Height, Unit:		3 IN
Height Minimum, Maximum:		1 5
Density, Unit:		0.2 FT2
Pest 3 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		6
Height, Unit:		1 IN
Height Minimum, Maximum:		0.5 3
Density, Unit:		0.5 FT2
Pest 4 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		4
Stage Maximum, Percent:		10
Height, Unit:		2 IN
Height Minimum, Maximum:		1 5
Density, Unit:		1 FT2
Pest 5 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		2
Stage Maximum, Percent:		10+
Height, Unit:		1 IN
Height Minimum, Maximum:		1 3
Density, Unit:		0.05 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	40 PSI
Nozzle Type:	XR	AIXR
Nozzle Size:	8002	110015
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

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Trial ID: 16-50E-N130 Location: Belleville Res. Center Trial Year: 2016
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Pest Code	Crop Code	Rating Date	Rating Type	Rating Unit	Rating Timing	Trt-Eval Interval	GLXMA 6-24-16 Injury Percent 0 DA-B 21 DA-A	GLXMA 7-8-16 Injury Percent 14 DA-B	GLXMA 7-22-16 Injury Percent 28 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate	Growth Stage	Appl Code
1	NONTREATED								
2	SONIC DURANGO DMA AMS - LIQUID	70 WG 4 SL 100 SL		0.197 lb ai/a 1 lb ae/a 2.5 % v/v		4.5 oz/a 32 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W	A B B
3	SONIC ENLIST DUO AMS - LIQUID	70 WG 3.34 SL 100 SL		0.197 lb ai/a 1.46 lb ae/a 2.5 % v/v		4.5 oz/a 56 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W	A B B
4	SONIC ENLIST DUO AMS - LIQUID	70 WG 3.34 SL 100 SL		0.197 lb ai/a 1.96 lb ae/a 2.5 % v/v		4.5 oz/a 75 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W	A B B
5	SONIC 2,4-D CHOLINE SALT DURANGO DMA AMS - LIQUID	70 WG 3.8 SL 4 SL 100 SL		0.197 lb ai/a 0.71 lb ae/a 0.75 lb ae/a 2.5 % v/v		4.5 oz/a 24 fl oz/a 24 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W 3-4"W	A B B B
6	SONIC 2,4-D CHOLINE SALT DURANGO DMA AMS - LIQUID	70 WG 3.8 SL 4 SL 100 SL		0.197 lb ai/a 0.95 lb ae/a 1 lb ae/a 2.5 % v/v		4.5 oz/a 32 fl oz/a 32 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W 3-4"W	A B B B
7	SONIC GLUFOSINATE-AMMONIUM AMS - LIQUID	70 WG 2.34 EC 100 SL		0.197 lb ai/a 0.53 lb ai/a 2.5 % v/v		4.5 oz/a 29 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W	A B B
8	SONIC 2,4-D CHOLINE SALT GLUFOSINATE-AMMONIUM AMS - LIQUID	70 WG 3.8 SL 2.34 EC 100 SL		0.197 lb ai/a 0.71 lb ae/a 0.53 lb ai/a 2.5 % v/v		4.5 oz/a 24 fl oz/a 29 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W 3-4"W	A B B B
9	SONIC 2,4-D CHOLINE SALT GLUFOSINATE-AMMONIUM AMS - LIQUID	70 WG 3.8 SL 2.34 EC 100 SL		0.197 lb ai/a 0.95 lb ae/a 0.53 lb ai/a 2.5 % v/v		4.5 oz/a 32 fl oz/a 29 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W 3-4"W	A B B B
LSD P=.05							.	.	.
Standard Deviation							0.0	0.0	0.0
CV							0.0	0.0	0.0
Replicate F							0.000	0.000	0.000
Replicate Prob(F)							1.0000	1.0000	1.0000
Treatment F							0.000	0.000	0.000
Treatment Prob(F)							1.0000	1.0000	1.0000

Means followed by same letter or symbol do not significantly differ (P=.05, LSD)
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Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate	Growth Stage	Appl Code
1	NONTREATED								
2	SONIC DURANGO DMA AMS - LIQUID	70 WG 4 SL 100 SL		0.197 lb ai/a 1 lb ae/a 2.5 % v/v		4.5 oz/a 32 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W	A B B
3	SONIC ENLIST DUO AMS - LIQUID	70 WG 3.34 SL 100 SL		0.197 lb ai/a 1.46 lb ae/a 2.5 % v/v		4.5 oz/a 56 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W	A B B
4	SONIC ENLIST DUO AMS - LIQUID	70 WG 3.34 SL 100 SL		0.197 lb ai/a 1.96 lb ae/a 2.5 % v/v		4.5 oz/a 75 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W	A B B
5	SONIC 2,4-D CHOLINE SALT DURANGO DMA AMS - LIQUID	70 WG 3.8 SL 4 SL 100 SL		0.197 lb ai/a 0.71 lb ae/a 0.75 lb ae/a 2.5 % v/v		4.5 oz/a 24 fl oz/a 24 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W 3-4"W	A B B B
6	SONIC 2,4-D CHOLINE SALT DURANGO DMA AMS - LIQUID	70 WG 3.8 SL 4 SL 100 SL		0.197 lb ai/a 0.95 lb ae/a 1 lb ae/a 2.5 % v/v		4.5 oz/a 32 fl oz/a 32 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W 3-4"W	A B B B
7	SONIC GLUFOSINATE-AMMONIUM AMS - LIQUID	70 WG 2.34 EC 100 SL		0.197 lb ai/a 0.53 lb ai/a 2.5 % v/v		4.5 oz/a 29 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W	A B B
8	SONIC 2,4-D CHOLINE SALT GLUFOSINATE-AMMONIUM AMS - LIQUID	70 WG 3.8 SL 2.34 EC 100 SL		0.197 lb ai/a 0.71 lb ae/a 0.53 lb ai/a 2.5 % v/v		4.5 oz/a 24 fl oz/a 29 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W 3-4"W	A B B B
9	SONIC 2,4-D CHOLINE SALT GLUFOSINATE-AMMONIUM AMS - LIQUID	70 WG 3.8 SL 2.34 EC 100 SL		0.197 lb ai/a 0.95 lb ae/a 0.53 lb ai/a 2.5 % v/v		4.5 oz/a 32 fl oz/a 29 fl oz/a 2.5 % v/v		PRE 3-4"W 3-4"W 3-4"W	A B B B
LSD P=.05							11.8	6.2	6.3
Standard Deviation							8.0	4.2	4.3
CV							10.86	4.44	4.7
Replicate F							8.362	1.146	0.373
Replicate Prob(F)							0.0008	0.3536	0.7735
Treatment F							1.270	1.729	4.715
Treatment Prob(F)							0.3117	0.1564	0.0026

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

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

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Pest Code	Crop Code	Rating Date	Rating Type	Rating Unit	Rating Timing	Trt-Eval Interval	AMBTR	AMBTR	AMBTR			
							6-24-16	7-8-16	7-22-16			
							Control	Control	Control			
							Percent	Percent	Percent			
							0 DA-B	0 DA-B	0 DA-B			
							21 DA-A	14 DA-B	28 DA-B			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	NONTREATED									0	0	0
2	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	99 a	95 a	94 a
	DURANGO DMA	4	SL	1	lb ae/a	32	fl oz/a	3-4"W	B			
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	3-4"W	B			
3	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	97 a	99 a	98 a
	ENLIST DUO	3.34	SL	1.46	lb ae/a	56	fl oz/a	3-4"W	B			
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	3-4"W	B			
4	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	98 a	99 a	96 a
	ENLIST DUO	3.34	SL	1.96	lb ae/a	75	fl oz/a	3-4"W	B			
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	3-4"W	B			
5	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	96 a	99 a	97 a
	2,4-D CHOLINE SALT	3.8	SL	0.71	lb ae/a	24	fl oz/a	3-4"W	B			
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	3-4"W	B			
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	3-4"W	B			
6	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	96 a	98 a	97 a
	2,4-D CHOLINE SALT	3.8	SL	0.95	lb ae/a	32	fl oz/a	3-4"W	B			
	DURANGO DMA	4	SL	1	lb ae/a	32	fl oz/a	3-4"W	B			
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	3-4"W	B			
7	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	95 a	94 a	95 a
	GLUFOSINATE-AMMONIUM	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W	B			
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	3-4"W	B			
8	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	95 a	98 a	97 a
	2,4-D CHOLINE SALT	3.8	SL	0.71	lb ae/a	24	fl oz/a	3-4"W	B			
	GLUFOSINATE-AMMONIUM	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W	B			
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	3-4"W	B			
9	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	97 a	99 a	99 a
	2,4-D CHOLINE SALT	3.8	SL	0.95	lb ae/a	32	fl oz/a	3-4"W	B			
	GLUFOSINATE-AMMONIUM	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W	B			
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	3-4"W	B			
LSD P=.05										4.5	3.7	4.0
Standard Deviation										3.1	2.5	2.7
CV										3.19	2.57	2.81
Replicate F										2.134	0.405	0.118
Replicate Prob(F)										0.1263	0.7511	0.9487
Treatment F										0.864	2.192	1.269
Treatment Prob(F)										0.5501	0.0775	0.3122

Means followed by same letter or symbol 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 5,10,16 because error mean square = 0.

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Pest Code							ABUTH	ABUTH	ABUTH		
Crop Code							6-24-16	7-8-16	7-22-16		
Rating Date							Control	Control	Control		
Rating Type							Percent	Percent	Percent		
Rating Unit							0 DA-B	14 DA-B	28 DA-B		
Rating Timing							21 DA-A	14 DA-B	28 DA-B		
Trt-Eval Interval											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	NONTREATED								0	0	0
2	SONIC	70	WG	0.197 lb ai/a	4.5 oz/a		PRE	A	95 a	99 a	98 a
	DURANGO DMA	4	SL	1 lb ae/a	32 fl oz/a		3-4"W	B			
	AMS - LIQUID	100	SL	2.5 % v/v	2.5 % v/v		3-4"W	B			
3	SONIC	70	WG	0.197 lb ai/a	4.5 oz/a		PRE	A	93 a	99 a	98 a
	ENLIST DUO	3.34	SL	1.46 lb ae/a	56 fl oz/a		3-4"W	B			
	AMS - LIQUID	100	SL	2.5 % v/v	2.5 % v/v		3-4"W	B			
4	SONIC	70	WG	0.197 lb ai/a	4.5 oz/a		PRE	A	93 a	99 a	99 a
	ENLIST DUO	3.34	SL	1.96 lb ae/a	75 fl oz/a		3-4"W	B			
	AMS - LIQUID	100	SL	2.5 % v/v	2.5 % v/v		3-4"W	B			
5	SONIC	70	WG	0.197 lb ai/a	4.5 oz/a		PRE	A	94 a	99 a	99 a
	2,4-D CHOLINE SALT	3.8	SL	0.71 lb ae/a	24 fl oz/a		3-4"W	B			
	DURANGO DMA	4	SL	0.75 lb ae/a	24 fl oz/a		3-4"W	B			
	AMS - LIQUID	100	SL	2.5 % v/v	2.5 % v/v		3-4"W	B			
6	SONIC	70	WG	0.197 lb ai/a	4.5 oz/a		PRE	A	92 a	99 a	99 a
	2,4-D CHOLINE SALT	3.8	SL	0.95 lb ae/a	32 fl oz/a		3-4"W	B			
	DURANGO DMA	4	SL	1 lb ae/a	32 fl oz/a		3-4"W	B			
	AMS - LIQUID	100	SL	2.5 % v/v	2.5 % v/v		3-4"W	B			
7	SONIC	70	WG	0.197 lb ai/a	4.5 oz/a		PRE	A	93 a	98 a	98 a
	GLUFOSINATE-AMMONIUM	2.34	EC	0.53 lb ai/a	29 fl oz/a		3-4"W	B			
	AMS - LIQUID	100	SL	2.5 % v/v	2.5 % v/v		3-4"W	B			
8	SONIC	70	WG	0.197 lb ai/a	4.5 oz/a		PRE	A	94 a	99 a	99 a
	2,4-D CHOLINE SALT	3.8	SL	0.71 lb ae/a	24 fl oz/a		3-4"W	B			
	GLUFOSINATE-AMMONIUM	2.34	EC	0.53 lb ai/a	29 fl oz/a		3-4"W	B			
	AMS - LIQUID	100	SL	2.5 % v/v	2.5 % v/v		3-4"W	B			
9	SONIC	70	WG	0.197 lb ai/a	4.5 oz/a		PRE	A	90 a	99 a	99 a
	2,4-D CHOLINE SALT	3.8	SL	0.95 lb ae/a	32 fl oz/a		3-4"W	B			
	GLUFOSINATE-AMMONIUM	2.34	EC	0.53 lb ai/a	29 fl oz/a		3-4"W	B			
	AMS - LIQUID	100	SL	2.5 % v/v	2.5 % v/v		3-4"W	B			
LSD P=.05							4.4	1.0	1.2		
Standard Deviation							3.0	0.7	0.8		
CV							3.19	0.69	0.81		
Replicate F							39.934	5.505	1.717		
Replicate Prob(F)							0.0001	0.0060	0.1941		
Treatment F							1.242	0.767	1.245		
Treatment Prob(F)							0.3250	0.6208	0.3233		

Means followed by same letter or symbol 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 5,10,16 because error mean square = 0.

Sonic Followed by Enlist Duo compared to Glyphosate or Glufosinate Based Programs.

Trial ID: 16-50E-N130 Location: Belleville Res. Center Trial Year: 2016
Investigator: Karla L. Gage, Ph.D.

Pest Code	Crop Code	Rating Date	Rating Type	Rating Unit	Rating Timing	Trt-Eval Interval	AMATA	AMATA	AMATA	IPOHE	IPOHE	
							6-24-16 Control Percent 0 DA-B 21 DA-A	7-8-16 Control Percent 14 DA-B	7-22-16 Control Percent 28 DA-B	7-8-16 Control Percent 14 DA-B	7-22-16 Control Percent 28 DA-B	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate	Growth Unit	Other Rate	Other Rate	Other Rate	App Code
1	NONTREATED											
2	SONIC DURANGO DMA AMS - LIQUID	70 4 100	WG SL SL	0.197 1 2.5	lb ai/a lb ae/a % v/v	4.5 32 2.5	oz/a fl oz/a % v/v	PRE 3-4" 3-4"	A W W			
3	SONIC ENLIST DUO AMS - LIQUID	70 3.34 100	WG SL SL	0.197 1.46 2.5	lb ai/a lb ae/a % v/v	4.5 56 2.5	oz/a fl oz/a % v/v	PRE 3-4" 3-4"	A W W			
4	SONIC ENLIST DUO AMS - LIQUID	70 3.34 100	WG SL SL	0.197 1.96 2.5	lb ai/a lb ae/a % v/v	4.5 75 2.5	oz/a fl oz/a % v/v	PRE 3-4" 3-4"	A W W			
5	SONIC 2,4-D CHOLINE SALT DURANGO DMA AMS - LIQUID	70 3.8 4 100	WG SL SL SL	0.197 0.71 0.75 2.5	lb ai/a lb ae/a lb ae/a % v/v	4.5 24 24 2.5	oz/a fl oz/a fl oz/a % v/v	PRE 3-4" 3-4" 3-4"	A W W W			
6	SONIC 2,4-D CHOLINE SALT DURANGO DMA AMS - LIQUID	70 3.8 4 100	WG SL SL SL	0.197 0.95 1 2.5	lb ai/a lb ae/a lb ae/a % v/v	4.5 32 32 2.5	oz/a fl oz/a fl oz/a % v/v	PRE 3-4" 3-4" 3-4"	A W W W			
7	SONIC GLUFOSINATE-AMMONIUM AMS - LIQUID	70 2.34 100	WG EC SL	0.197 0.53 2.5	lb ai/a lb ai/a % v/v	4.5 29 2.5	oz/a fl oz/a % v/v	PRE 3-4" 3-4"	A W W			
8	SONIC 2,4-D CHOLINE SALT GLUFOSINATE-AMMONIUM AMS - LIQUID	70 3.8 2.34 100	WG SL EC SL	0.197 0.71 0.53 2.5	lb ai/a lb ae/a lb ai/a % v/v	4.5 24 29 2.5	oz/a fl oz/a fl oz/a % v/v	PRE 3-4" 3-4" 3-4"	A W W W			
9	SONIC 2,4-D CHOLINE SALT GLUFOSINATE-AMMONIUM AMS - LIQUID	70 3.8 2.34 100	WG SL EC SL	0.197 0.95 0.53 2.5	lb ai/a lb ae/a lb ai/a % v/v	4.5 32 29 2.5	oz/a fl oz/a fl oz/a % v/v	PRE 3-4" 3-4" 3-4"	A W W W			
LSD	P=.05						12.0	3.9	4.4	2.2	1.1	
	Standard Deviation						8.1	2.6	3.0	1.5	0.7	
	CV						9.31	2.72	3.14	1.53	0.75	
	Replicate F						0.454	1.366	0.316	0.790	2.973	
	Replicate Prob(F)						0.7171	0.2803	0.8140	0.5130	0.0550	
	Treatment F						0.269	10.623	5.940	1.630	1.636	
	Treatment Prob(F)						0.9595	0.0001	0.0007	0.1817	0.1801	

Means followed by same letter or symbol 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 5,10,16 because error mean square = 0.

Sonic Followed by Enlist Duo compared to Glyphosate or Glufosinate Based Programs.

Trial ID: 16-50E-N130 Location: Belleville Res. Center Trial Year: 2016
Investigator: Karla L. Gage, Ph.D.

Trial Comments

1. Protocol: Dow (E003).
2. Ratings:
CI 25-30 DA-A or at B; 14 and 28 DA-B.
Rate CI as overall, stunt, necrosis, and chlorosis.
WC 25-30 DA-A or at B; 14 and 28 DA-B.
3. No yield, crop destruct at R4.
4. Application timing B is 25-30 DA-A and less than 4 inch weeds.
5. Rate before spray application B.
6. Do not plant soybeans within 40 ft of these Enlist soybean.
Minimum 10 ft bare soil or mowed grass border on all sides.
7. Report planting within 2 days.
8. Photos not requested.
9. Rainfall following the PRE application A was 0.73 inch over 2 days beginning 12 hours later.
Rainfall following the 3-4"W application B was 2.61 inch over 9 days beginning 6 days later.
10. There was no crop injury observed at any time.
11. IPOHE emerged later than other weeds in the nontreated areas and could not be rated early.
12. Not harvested.