

University of Tennessee

ENLIST SOYBEAN/ ENLIST DUA/GLUFOSINATE/2,4-D CHOLINE/ AMAPA PROGRAM

Trial ID: NA16P2E004 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16P2E004 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1	CHK						ABC	101	211	304	402	
2	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	102	204	303	411	
3	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	103	202	309	403	
	HERB ENLIST DUO	3.33333325	SL	75	oz/a	<4"/28-30	DAA B					
	FERT AMS		L	2.5	% v/v	<4"/28-30	DAA B					
	HERB ENLIST DUO	3.33333325	SL	75	oz/a	21DAAB	C					
	FERT AMS		L	2.5	% v/v	21DAAB	C					
4	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	104	207	305	405	
	HERB 2,4-D CHOLINE SALT	3.8	SL	32	oz/a	<4"/28-30	DAA B					
	HERB DURANGO DMA	4	SL	32	oz/a	<4"/28-30	DAA B					
	FERT AMS		L	2.5	% v/v	<4"/28-30	DAA B					
	HERB 2,4-D CHOLINE SALT	3.8	SL	32	oz/a	21DAAB	C					
	HERB DURANGO DMA	4	SL	32	oz/a	21DAAB	C					
	FERT AMS		L	2.5	% v/v	21DAAB	C					
5	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	105	212	302	408	
	HERB GLUFOSINATE	2.13266659	SL	29	oz/a	<4"/28-30	DAA B					
	FERT AMS		L	2.5	% v/v	<4"/28-30	DAA B					
	HERB GLUFOSINATE	2.13266659	SL	29	oz/a	21DAAB	C					
	FERT AMS		L	2.5	% v/v	21DAAB	C					
6	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	106	203	308	412	
	HERB ENLIST DUO	3.33333325	SL	75	oz/a	<4"/28-30	DAA B					
	FERT AMS		L	2.5	% v/v	<4"/28-30	DAA B					
	HERB GLUFOSINATE	2.13266659	SL	29	oz/a	21 DAAB	C					
	FERT AMS		L	2.5	% v/v	21 DAAB	C					
7	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	107	210	310	409	
	HERB GLUFOSINATE	2.13266659	SL	29	oz/a	<4"/28-30	DAA B					
	FERT AMS		L	2.5	% v/v	<4"/28-30	DAA B					
	HERB ENLIST DUO	3.33333325	SL	75	oz/a	21 DAAB	C					
	FERT AMS		L	2.5	% v/v	21 DAAB	C					
8	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	108	201	312	401	
	HERB ENLIST DUO	3.33333325	SL	75	oz/a	<4"/28-30	DAA B					
	HERB PREFIX	5.26999998	EC	32	oz/a	<4"/28-30	DAA B					
	FERT AMS		L	2.5	% v/v	<4"/28-30	DAA B					
9	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	109	205	307	404	
	HERB ENLIST DUO	3.33333325	SL	75	oz/a	<4"/28-30	DAA B					
	HERB DUAL II MAGNUM	7.63333321	EC	16	oz/a	<4"/28-30	DAA B					
	FERT AMS		L	2.5	% v/v	<4"/28-30	DAA B					
10	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	110	206	301	406	
	HERB GLUFOSINATE	2.13266659	SL	29	oz/a	<4"/28-30	DAA B					
	HERB PREFIX	5.26999998	EC	32	oz/a	<4"/28-30	DAA B					
	HERB 2,4-D CHOLINE SALT	3.8	SL	32	oz/a	<4"/28-30	DAA B					
	FERT AMS		L	2.5	% v/v	<4"/28-30	DAA B					
11	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	111	209	306	407	
	HERB GLUFOSINATE	2.13266659	SL	29	oz/a	<4"/28-30	DAA B					
	HERB DUAL II MAGNUM	7.63333321	EC	16	oz/a	<4"/28-30	DAA B					
	HERB 2,4-D CHOLINE SALT	3.8	SL	32	oz/a	<4"/28-30	DAA B					
	FERT AMS		L	2.5	% v/v	<4"/28-30	DAA B					
12	HERB SURVEIL		48 WG	2.83	oz/a	PRE	A	112	208	311	410	
	HERB 2,4-D CHOLINE SALT	3.8	SL	32	oz/a	<4"/28-30	DAA B					
	HERB GLUFOSINATE	2.13266659	SL	29	oz/a	<4"/28-30	DAA B					
	FERT AMS		L	2.5	% v/v	<4"/28-30	DAA B					
	HERB 2,4-D CHOLINE SALT	3.8	SL	32	oz/a	21 DAAB	C					
	HERB GLUFOSINATE	2.13266659	SL	29	oz/a	21 DAAB	C					
	FERT AMS		L	2.5	% v/v	21DAAB	C					

Sort Order: Replicate 1

University of Tennessee

ENLIST SOYBEAN/ ENLIST DUA/GLUFOSINATE/2,4-D CHOLINE/ AMAPA PROGRAM

Trial ID: NA16P2E004 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16P2E004 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Planned Completion Date: 8-1-16

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

What is the Performance of Enlist Duo herbicide program compared to competitive standards in the STAR Chart on the Efficacy of AMAPA?

Contacts

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA	Glycine max	Soybean
Variety: 43R15Y9		BBCH Scale: BSOY
Description: AAD-12/GLU/GLY-TOL		
Planting Rate, Unit: 140000 S/A		Planting Date: 5-5-16
Depth, Unit: 1 IN		Planting Method: PLANTD planted
Row Spacing, Unit: 30 IN		Planting Equipment: PP Plot Planter
Soil Temperature, Unit: 63 F		
Soil Moisture: SLIWET	slightly wet, moist	
Seed Bed: MEDIUM	medium	

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Description: GLY-RES

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 12 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Comment: NW CORNER
 N35.63110
 W088.85755

Field Prep./Maintenance:

MAR 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A - Burndown
 MAY 4 - Gramoxone SL 48 oz/a + COC 1%
 June 13 - Select Max 16 oz/A + COC 0.5%

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ENLIST SOYBEAN/ ENLIST DUA/GLUFOSINATE/2,4-D CHOLINE/ AMAPA PROGRAM

Trial ID: NA16P2E004 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16P2E004 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

Application Description

	A	B
Application Date:	5-6-16	6-14-16
Appl. Start Time:	8:13 AM	7:35 AM
Appl. Stop Time:	8:21 AM	7:45 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	4"28-30 DAA
Application Placement:	BROSOL	BROFOL
Applied By:	GM	GM
Air Temperature, Unit:	54 F	82 F
% Relative Humidity:	73	70
Wind Velocity, Unit:	3 MPH	0 MPH
Wind Direction:	N	
Dew Presence (Y/N):	Y yes	Y yes
Soil Temperature, Unit:	54 F	80 F
Soil Moisture:	NORMAL	DRY
% Cloud Cover:	0	5

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMAPA W --	AMAPA W 10+L
Height, Unit:		4 IN
Height Minimum, Maximum:		2 6

Application Equipment

	A	B
Appl. Equipment:	Tractor	BACKPACK
Equipment Type:		BACCAI
Operation Pressure, Unit:	40 PSI	27 PSI
Nozzle Type:	AIR INDUC	AIXR
Nozzle Size:	AI110015	11003
Nozzle Spacing, Unit:	19 IN	20 IN
Nozzles/Row:	2	
Boom ID:		5 FT @ 15GPA
Boom Length, Unit:		5 FT
Boom Height, Unit:	10 FT	16 IN
Ground Speed, Unit:	15 IN	4 MPH
Incorporation Equip.:	4	
Hours to Incorpor.:	MPH	
Carrier:	WATER	
Spray Volume, Unit:	11.5 GPA	15 GAL/AC
Mix Size, Unit:		0.528 gallons
Spray pH:		0.528
Propellant:	PUMROL	COMCO2
Tank Mix (Y/N):	N no	Y yes

University of Tennessee

ARYLEX GLY-RES EFFICACY / BURNDOWN TIMING

Trial ID: NA16D2C015 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16D2C015 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1	CHK NONTREATED					AB	101	205	304	405	
2	HERB DURANGO DMA	4	SL	32 oz/a	14 DBP	A	102	207	302	404	
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	14 DBP	A					
	HERB DURANGO DMA	4	SL	32 oz/a	V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	V2/V3	B					
3	HERB DURANGO DMA	4	SL	32 oz/a	14 DBP	A	103	214	313	403	
	HERB 2,4-D ESTER LV	5.6	EC	11.4 oz/a	14 DBP	A					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	14 DBP	A					
	HERB DURANGO DMA	4	SL	32 oz/a	V2/V3	B					
	HERB FIRSTRATE	84	WG	0.3 oz/a	V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	V2/V3	B					
4	HERB HALAUXIFEN-METHYL	.570833325	SC	1 oz/a	14 DBP	A	104	206	308	413	
	HERB DURANGO DMA	4	SL	32 oz/a	14 DBP	A					
	ADJ MSO CONCENTRATE		L	1 % v/v	14 DBP	A					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	14 DBP	A					
	HERB ENLIST DUO	3.33333325	SL	75 oz/a	V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	V2/V3	B					
5	HERB HALAUXIFEN-METHYL	.570833325	SC	1 oz/a	14 DBP	A	105	209	301	401	
	HERB FIRSTRATE	84	WG	0.3 oz/a	14 DBP	A					
	HERB DURANGO DMA	4	SL	32 oz/a	14 DBP	A					
	ADJ MSO CONCENTRATE		L	1 % v/v	14 DBP	A					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	14 DBP	A					
	HERB ENLIST DUO	3.33333325	SL	75 oz/a	V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	V2/V3	B					
6	HERB HALAUXIFEN-METHYL	.570833325	SC	1 oz/a	14 DBP	A	106	201	312	407	
	HERB SURVEIL	48	WG	3 oz/a	14 DBP	A					
	HERB DURANGO DMA	4	SL	32 oz/a	14 DBP	A					
	ADJ MSO CONCENTRATE		L	1 % v/v	14 DBP	A					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	14 DBP	A					
	HERB ENLIST DUO	3.33333325	SL	75 oz/a	V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	V2/V3	B					
7	HERB GLUFOSINATE	2.13266659	SL	29 oz/a	14 DBP	A	107	211	303	402	
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	14 DBP	A					
	HERB GLUFOSINATE	2.13266659	SL	29 oz/a	V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	V2/V3	B					
8	HERB GLUFOSINATE	2.13266659	SL	29 oz/a	14 DBP	A	108	204	305	410	
	HERB SURVEIL	48	WG	3 oz/a	14 DBP	A					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	14 DBP	A					
	HERB GLUFOSINATE	2.13266659	SL	29 oz/a	V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	V2/V3	B					
9	HERB SHARPEN	2.8499999	SC	1.5 oz/a	14 DBP	A	109	212	306	411	
	HERB DURANGO DMA	4	SL	32 oz/a	14 DBP	A					
	ADJ MSO CONCENTRATE		L	1 % v/v	14 DBP	A					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	14 DBP	A					
	HERB DURANGO DMA	4	SL	32 oz/a	V2/V3	B					
	HERB CLASSIC	25	WG	1.25 oz/a	V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	V2/V3	B					
10	HERB SHARPEN	2.8499999	SC	1.5 oz/a	14 DBP	A	110	203	311	414	
	HERB DURANGO DMA	4	SL	32 oz/a	14 DBP	A					
	HERB 2,4-D ESTER LV	5.6	EC	11.4 oz/a	14 DBP	A					
	ADJ MSO CONCENTRATE		L	1 % v/v	14 DBP	A					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	14 DBP	A					
	HERB DURANGO DMA	4	SL	32 oz/a	V2/V3	B					
	HERB CLASSIC	25	WG	1.25 oz/a	V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	V2/V3	B					
11	HERB ENLIST DUO	3.33333325	SL	75 oz/a	14 DBP	A	111	210	309	406	
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	14 DBP	A					
	HERB ENLIST DUO	3.33333325	SL	75 oz/a	V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v	V2/V3	B					

University of Tennessee

ARYLEX GLY-RES EFFICACY / BURNDOWN TIMING

Trial ID: NA16D2C015 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16D2C015 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

Trt No.	Treatment Type Name	Form Conc	Form Type	Rate	Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
12	HERB ENLIST DUO	3.33333325	SL	75 oz/a		14 DBP	A	112	202	314	412	
	HERB SURVEIL		48 WG	3 oz/a		14 DBP	A					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v		14 DBP	A					
	HERB ENLIST DUO	3.33333325	SL	75 oz/a		V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v		V2/V3	B					
13	HERB GLUFOSINATE	2.13266659	SL	29 oz/a		14 DBP	A	113	213	307	409	
	HERB VALOR		51 WG	1.75 oz/a		14 DBP	A					
	HERB CLASSIC		25 WG	1.25 oz/a		14 DBP	A					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v		14 DBP	A					
	HERB GLUFOSINATE	2.13266659	SL	29 oz/a		V2/V3	B					
	FERT N-PAK AMS LIQUID		L	2.5 % v/v		V2/V3	B					
14	CHK NONTREATED						AB	114	208	310	408	

Sort Order: Replicate 1

University of Tennessee

ARYLEX GLY-RES EFFICACY / BURNDOWN TIMING

Trial ID: NA16D2C015 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16D2C015 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Planned Completion Date: 8-1-16

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

What is the efficacy of Arylex applied to 5-8" Gly-Res ERICA alone and in conjunction with 2,4-D and glyphosate burndown in no-till soybean compared with current industry standards?

Contacts

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max	Crop Description: Soybean	
Variety: 43R15Y9	BBCH Scale: BSOY	
Description: AAD-12/GLU/GLY-TOL		
Planting Rate, Unit: 140000 S/A	Planting Date: 5-5-16	
Depth, Unit: 1 IN	Planting Method: PLANTD planted	
Row Spacing, Unit: 30 IN	Planting Equipment: PP Plot Planter	
Soil Temperature, Unit: 63 F		
Soil Moisture: SLIWET slightly wet, moist		

Pest Description

Pest 1 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Horseweed
Description: GLY-RES

Pest 2 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 3 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf

Pest 4 Type: W **Code:** ANNGR Annual Grasses

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 14 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Comment: NW CORNER
 N35.63100
 W088.85716

Field Prep./Maintenance:
 June 13 - Select Max 16 oz/A

University of Tennessee

ARYLEX GLY-RES EFFICACY / BURNDOWN TIMING

Trial ID: NA16D2C015 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16D2C015 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

Application Description

	A	B
Application Date:	4-18-16	5-26-16
Appl. Start Time:	9:43 AM	7:25 AM
Appl. Stop Time:	10:05 AM	7:40 AM
Application Method:	SPRAY	SPRAY
Application Timing:	14 DBP	V2-V3
Application Placement:	BROFOL	BROFOL
Applied By:	GM	GM
Air Temperature, Unit:	71 F	72 F
% Relative Humidity:	55	82
Wind Velocity, Unit:	1 MPH	2 MPH
Wind Direction:	SW	SE
Dew Presence (Y/N):	N no	Y yes
Soil Temperature, Unit:	60 F	68 F
Soil Moisture:	NORMAL	SLIWET
% Cloud Cover:	70	5

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	DESC
Stage Majority, Percent:		V1 100
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W 10+L	ERICA W 10+L
Diameter, Unit:	5 IN	7 IN
Height, Unit:	7 IN	6 7
Height Minimum, Maximum:	6 10	
Pest 2 Code, Type, Scale:	AMAPA W --	AMAPA W 10+L
Height, Unit:		4 IN
Height Minimum, Maximum:		4 5
Pest 3 Code, Type, Scale:	ABUTH W --	ABUTH W 5LF
Height, Unit:		5 IN
Height Minimum, Maximum:		5 6
Pest 4 Code, Type, Scale:	ANNGR W	ANNGR W 3-4L
Height, Unit:		3 IN
Height Minimum, Maximum:		2 3

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ARYLEX GLY-RES EFFICACY / BURNDOWN TIMING

Trial ID: NA16D2C015 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16D2C015 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

Application Equipment

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Equipment Type:	BACCAI	BACCAI
Operation Pressure, Unit:	36 PSI	36 PSI
Nozzle Type:	AIXR	AIXR
Nozzle Size:	110025	110025
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
Boom Length, Unit:	6.33 FT	6.33 FT
Boom Height, Unit:	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	0.528 gallons	0.528 gallons
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Tennessee

ENGENIA SOYBEAN WEED CONTROL - NOTILL_ZONE 1 MED-FINE SOIL

Trial ID: JSBBASFD06-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: MKD-H-2016-US-D06-B-01.1 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Greg Stapleton

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	PRE	B	101	205	309	406	
	HERB ROUNDUP POWERMAX	540	SL	32.0	fl oz/a	EPOST	C					
2	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	14 DBP	A	102	210	302	405	
	HERB 2,4-D 700 ESTER	660	EC	16.0	fl oz/a	14 DBP	A					
	HERB BOUNDARY	936	EC	32.0	fl oz/a	14 DBP	A					
	HERB PREFIX	634.8	ME	32.0	fl oz/a	MPOST	D					
	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	MPOST	D					
3	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	PRE	B	103	204	301	410	
	HERB ZIDUA	85	WG	2.0	oz wt/a	PRE	B					
	HERB VERDICT	668	EC	5.0	fl oz/a	PRE	B					
	ADJ MSO	100	EC	1.0	% v/v	PRE	B					
	PROD AMMONIUM SULFATE	21	SG	8.5	lb/100 gal	PRE	B					
	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	MPOST	D					
	HERB ENGENIA	600.0	SL	12.8	fl oz/a	MPOST	D					
	HERB OUTLOOK	720	EC	12.0	fl oz/a	MPOST	D					
4	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	PRE	B	104	207	310	402	
	HERB ZIDUA	85.0	WG	2.0	oz wt/a	PRE	B					
	HERB SHARPEN	342	SC	1.0	fl oz/a	PRE	B					
	ADJ MSO	100	EC	1.0	% v/v	PRE	B					
	FERT AMS		WG	8.5	lb/100 gal	PRE	B					
	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	MPOST	D					
	HERB ENGENIA	600.0	SL	12.8	fl oz/a	MPOST	D					
5	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	PRE	B	105	202	303	409	
	HERB ZIDUA	85.0	WG	2.0	oz wt/a	PRE	B					
	HERB SHARPEN	342	SC	1.0	fl oz/a	PRE	B					
	HERB SENCOR	75	WG	5.0	oz wt/a	PRE	B					
	ADJ MSO	100	EC	1.0	% v/v	PRE	B					
	FERT AMS		WG	8.5	lb/100 gal	PRE	B					
	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	MPOST	D					
	HERB ENGENIA	600.0	SL	12.8	fl oz/a	MPOST	D					
	HERB ZIDUA	85.0	WG	1.0	oz wt/a	MPOST	D					
6	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	14 DBP	A	106	208	307	408	
	HERB 2,4-D 700 ESTER	660.0	EC	16.0	fl oz/a	14 DBP	A					
	HERB PREFIX	634.8	ME	32.0	fl oz/a	MPOST	D					
	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	MPOST	D					
7	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	PRE	B	107	206	304	401	
	HERB ENGENIA	600.0	SL	12.8	fl oz/a	PRE	B					
	HERB ENGENIA	600.0	SL	12.8	fl oz/a	MPOST	D					
	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	MPOST	D					
	HERB OUTLOOK	720.0	EC	12.0	fl oz/a	MPOST	D					
8	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	PRE	B	108	203	306	404	
	HERB ENGENIA	600.0	SL	12.8	fl oz/a	PRE	B					
	HERB ZIDUA	85.0	WG	2.0	oz wt/a	PRE	B					
	HERB ENGENIA	600.0	SL	12.8	fl oz/a	MPOST	D					
	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	MPOST	D					
	HERB OUTLOOK	720.0	EC	12.0	fl oz/a	MPOST	D					
9	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	PRE	B	109	201	305	403	
	HERB ENGENIA	600.0	SL	12.8	fl oz/a	PRE	B					
	HERB SENCOR	75	WG	5.0	oz wt/a	PRE	B					
	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	MPOST	D					
	HERB ENGENIA	600.0	SL	12.8	fl oz/a	MPOST	D					
	HERB ZIDUA	85.0	WG	2.0	oz wt/a	MPOST	D					
10	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	PRE	B	110	209	308	407	
	HERB ROUNDUP POWERMAX	540.0	SL	32.0	fl oz/a	EPOST	C					
	HERB ENGENIA	600.0	SL	12.8	fl oz/a	EPOST	C					
	HERB OUTLOOK	720.0	EC	12.0	fl oz/a	EPOST	C					

Sort Order: Replicate 1

University of Tennessee

ENGENIA SOYBEAN WEED CONTROL - NOTILL_ZONE 1 MED-FINE SOIL

Trial ID: JSBBASFD06-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: MKD-H-2016-US-D06-B-01.1 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Greg Stapleton

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

Demonstrate Engenia weed control system(s) benefits in DT soybean vs. Non-DT competitor system.
 Collect weed control efficacy data, collect yield data, capture images of weed control.

Contacts

Study Director: Larry Steckel

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG47X6 **BBCH Scale:** BSOY
Description: DICAMBA TOLERANT
Planting Date: 5-4-16
Planting Rate, Unit: 140000 S/A **Planting Method:** PLANTD planted
Depth, Unit: 1 IN **Planting Equipment:** PP Plot Planter
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Pest 2 Type: W **Code:** SIDSP *Sida spinosa*
Common Name: Teaweed
Pest 3 Type: W **Code:** IPOLA *Ipomoea lacunosa*
Common Name: Pitted morningglory

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 10 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Field Prep./Maintenance:

MAR 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A - Burndown
 May 19 - Select Max 16 oz/A + COC 1qt/A

University of Tennessee

ENGENIA SOYBEAN WEED CONTROL - NOTILL_ZONE 1 MED-FINE SOIL

Trial ID: JSBBASFD06-16
 Protocol ID: MKD-H-2016-US-D06-B-01.1
 Project ID:

Location: Jackson, TN Trial Year: 2016
 Investigator: Dr. Larry Steckel
 Study Director: Larry Steckel
 Sponsor Contact: Greg Stapleton

Application Description

	A	B	C	D
Application Date:	4-18-16	5-5-16	5-16-16	5-24-16
Appl. Start Time:	9:04 AM	7:32 AM	2:13 PM	9:59 AM
Appl. Stop Time:	9:07 AM	7:44 AM	2:15 PM	10:10 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	14 DBP	PRE	EPOST	MPOST
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	GM	GM	GM	GM
Air Temperature, Unit:	68 F	52 F	68 F	80 F
% Relative Humidity:	65	75	46	65
Wind Velocity, Unit:	1.5 MPH	4 MPH	3 MPH	3 MPH
Wind Direction:	SW	SW	SE	SE
Dew Presence (Y/N):	Y yes	Y yes	N no	N no
Soil Temperature, Unit:	60 F	53 F	69 F	69 F
Soil Moisture:	NORMAL	SLIWET	NORMAL	EXCELL
% Cloud Cover:	75	0	100	40

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	--	BBCH	VC
Stage Majority, Percent:			11 100	
Stage Minimum, Percent:			VE	
Height, Unit:			2 IN	3 IN
Height Minimum, Maximum:			2 3	2 4

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	AMAPA W 2LF	AMAPA W 6LF	AMAPA W 10+L	AMAPA W 8LF
Stage Minimum, Percent:	AMARSP			
Height, Unit:		3 IN	4 IN	4 IN
Height Minimum, Maximum:		2 4	4 5	3 5
Pest 2 Code, Type, Scale:	SIDSP W --	SIDSP W 4LF	SIDSP W --	SIDSP W --
Height, Unit:		2 IN		
Height Minimum, Maximum:		1 3		
Pest 3 Code, Type, Scale:	IPOLA W --	IPOLA W --	IPOLA W --	IPOLA W COT
Height, Unit:				2 IN
Height Minimum, Maximum:				1 2

University of Tennessee

ENGENIA SOYBEAN WEED CONTROL - NOTILL_ZONE 1 MED-FINE SOIL

Trial ID: JSBBASFD06-16
 Protocol ID: MKD-H-2016-US-D06-B-01.1
 Project ID:

Location: Jackson, TN Trial Year: 2016
 Investigator: Dr. Larry Steckel
 Study Director: Larry Steckel
 Sponsor Contact: Greg Stapleton

	Application Equipment			
	A	B	C	D
Appl. Equipment:	BACKPACK	BACKPACK	BACKPACK	BACKPACK
Equipment Type:	BACCAI	BACCAI	BACCAI	BACCAI
Operation Pressure, Unit:	35 PSI	35 PSI	35 PSI	35 PSI
Nozzle Type:	TTI	TTI	TTI	TTI
Nozzle Size:	025	025	025	025
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN
Boom Length, Unit:	5 FT	5 FT	5 FT	5 FT
Boom Height, Unit:	16 IN	16 IN	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH	4 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac
Mix Size, Unit:	0.528 gallons	0.528 gallons	0.528 gallons	0.528 gallons
Propellant:	COMCO2	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes	Y yes

University of Tennessee

EVALUATE VALOR, FIERCE, AND ZIDUA ON XTEND SOYBEAN

Trial ID: JSBVAL6406 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 64.06 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: M. Everett/Valent

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1	CHK NONTREATED							101	206	301	402	
2	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	14	DBP A	102	203	303	401	
	HERB CLARITY	4	SL	1	pt/a	14	DBP A					
	ADJ NIS	100	SL	0.25	% v/v	14	DBP A					
	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B					
	HERB CLARITY	4	SL	1	pt/a	POST	B					
	ADJ NIS	100	SL	0.25	% v/v	POST	B					
3	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	14	DBP A	103	205	304	405	
	HERB CLARITY	4	SL	1	pt/a	14	DBP A					
	HERB VALOR SX	51	WG	2.5	oz/a	14	DBP A					
	ADJ NIS	100	SL	0.25	% v/v	14	DBP A					
	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B					
	HERB CLARITY	4	SL	1	pt/a	POST	B					
	ADJ NIS	100	SL	0.25	% v/v	POST	B					
4	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	14	DBP A	104	204	302	406	
	HERB CLARITY	4	SL	1	pt/a	14	DBP A					
	HERB FIERCE	76	WG	3	oz/a	14	DBP A					
	ADJ NIS	100	SL	0.25	% v/v	14	DBP A					
	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B					
	HERB CLARITY	4	SL	1	pt/a	POST	B					
	ADJ NIS	100	SL	0.25	% v/v	POST	B					
5	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	14	DBP A	105	201	306	403	
	HERB CLARITY	4	SL	1	pt/a	14	DBP A					
	HERB FIERCE	76	WG	3	oz/a	14	DBP A					
	ADJ NIS	100	SL	0.25	% v/v	14	DBP A					
	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B					
	HERB CLARITY	4	SL	1	pt/a	POST	B					
	HERB WARRANT	3	SL	3	pt/a	POST	B					
	ADJ NIS	100	SL	0.25	% v/v	POST	B					
6	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	14	DBP A	106	202	305	404	
	HERB CLARITY	4	SL	1	pt/a	14	DBP A					
	HERB ZIDUA	85	WG	2	oz/a	14	DBP A					
	ADJ NIS	100	SL	0.25	% v/v	14	DBP A					
	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B					
	HERB CLARITY	4	SL	1	pt/a	POST	B					

Sort Order: Replicate 1

University of Tennessee

EVALUATE VALOR, FIERCE, AND ZIDUA ON XTEND SOYBEAN

Trial ID: JSBVAL6406 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 64.06 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: M. Everett/Valent

General Trial Information

Investigator: Dr. Larry Steckel

Conducted Under GLP: No
 Conducted Under GEP: No

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: P40T26X **BBCH Scale:** BSOY
Description: DICAMBA TOLERANT
Planting Rate, Unit: 140000 S/A **Planting Date:** 5-4-16
Depth, Unit: 1 IN **Planting Method:** PLANTD planted
Row Spacing, Unit: 30 IN **Planting Equipment:** PP Plot Planter

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Pest 2 Type: W **Code:** IPOLA *Ipomoea lacunosa*
Common Name: Pitted morningglory

Site and Design

Treated Plot Width: 5 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 150 FT² **Treatments:** 6 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Field Prep./Maintenance:

MAR - 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A burndown / don't rate ERICA

Application Description

	A	B
Application Date:	4-18-16	5-31-16
Appl. Start Time:	8:58 AM	10:15 AM
Appl. Stop Time:	9:02 AM	10:23 AM
Application Method:	SPRAY	SPRAY
Application Timing:	14 DBP	POST
Application Placement:	BROFOL	BROFOL
Applied By:	GM	JR
Air Temperature, Unit:	68 F	81 F
% Relative Humidity:	65	66
Wind Velocity, Unit:	1.5 MPH	2 MPH
Wind Direction:	SW	N
Dew Presence (Y/N):	Y yes	N no
Soil Temperature, Unit:	60 F	77 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	75	100

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	2-3 TRIF
Height, Unit:		6 IN
Height Minimum, Maximum:		5 7

University of Tennessee

EVALUATE VALOR, FIERCE, AND ZIDUA ON XTEND SOYBEAN

Trial ID: JSBVAL6406 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 64.06 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: M. Everett/Valent

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMAPA W --	AMAPA W 6+L
Height, Unit:		4 IN
Height Minimum, Maximum:		3 4
Pest 2 Code, Type, Scale:	IPOLA W --	IPOLA W 4LF
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6

Application Equipment

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Equipment Type:	BACCAI	BACCAI
Operation Pressure, Unit:	35 PSI	35 PSI
Nozzle Type:	TTI	TTI
Nozzle Size:	025	025
Nozzle Spacing, Unit:	20 IN	20 IN
Boom Length, Unit:	5 FT	5 FT
Boom Height, Unit:	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac
Mix Size, Unit:	0.528 gallons	0.528 gallons
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Tennessee

DICAMBA IN NO-TILL 2-PASS DCP PROGRAMS FOR RR2X SOYBEAN

Trial ID: JSBDP130-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-130 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Dave Johnson/Smith/DuPont

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4	Notes
1	HERB TRIVENCE	61.3	DG	8 oz/a		14 DBP A		101	205	301	406	
	HERB FLUMIOXAZIN	51	WG	2 oz/a		14 DBP A						
	HERB CHLORIMURON	25	WG	1.28 oz/a		14 DBP A						
	HERB METRIBUZIN	75	WG	4.75 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		14 DBP A						
	HERB DICAMBA	4	SL	16 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		EPOST B						
	HERB DICAMBA	4	SL	16 oz/a		EPOST B						
2	HERB TRIVENCE	61.3	DG	8 oz/a		14 DBP A		102	206	310	401	
	HERB FLUMIOXAZIN	51	WG	2 oz/a		14 DBP A						
	HERB CHLORIMURON	25	WG	1.28 oz/a		14 DBP A						
	HERB METRIBUZIN	75	WG	4.75 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		14 DBP A						
	HERB DICAMBA	4	SL	16 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		EPOST B						
	HERB CINCH	7.64	EC	1.00 pt/a		EPOST B						
	HERB DICAMBA	4	SL	16 oz/a		EPOST B						
3	HERB ENVIVE	41.3	DF	3.5 oz/a		14 DBP A		103	204	307	405	
	HERB FLUMIOXAZIN	51	WG	2 oz/a		14 DBP A						
	HERB CHLORIMURON	25	WG	1.28 oz/a		14 DBP A						
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.2 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		14 DBP A						
	HERB DICAMBA	4	SL	16 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		EPOST B						
	HERB DICAMBA	4	SL	16 oz/a		EPOST B						
4	HERB ENVIVE	41.3	DF	3.5 oz/a		14 DBP A		104	207	308	409	
	HERB FLUMIOXAZIN	51	WG	2 oz/a		14 DBP A						
	HERB CHLORIMURON	25	WG	1.28 oz/a		14 DBP A						
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.2 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		14 DBP A						
	HERB DICAMBA	4	SL	16 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		EPOST B						
	HERB CINCH	7.64	EC	1.00 pt/a		EPOST B						
	HERB DICAMBA	4	SL	16 oz/a		EPOST B						
5	HERB ENVIVE	41.3	DF	3.5 oz/a		14 DBP A		105	210	306	408	
	HERB FLUMIOXAZIN	51	WG	2 oz/a		14 DBP A						
	HERB CHLORIMURON	25	WG	1.28 oz/a		14 DBP A						
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.2 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		14 DBP A						
	HERB DICAMBA	4	SL	16 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		EPOST B						
	HERB PREFIX	5.29	EC	2.00 pt/a		EPOST B						
6	HERB CANOPY BLEND	58.3	DF	7.5 oz/a		14 DBP A		106	203	302	404	
	HERB CHLORIMURON	25	WG	2.48 oz/a		14 DBP A						
	HERB METRIBUZIN	75	WG	5 oz/a		14 DBP A						
	HERB CINCH	7.64	EC	1.00 pt/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		14 DBP A						
	HERB DICAMBA	4	SL	16 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		EPOST B						
	HERB DICAMBA	4	SL	16 oz/a		EPOST B						
7	HERB CANOPY BLEND	58.3	DF	7.5 oz/a		14 DBP A		107	201	305	407	
	HERB CHLORIMURON	25	WG	2.48 oz/a		14 DBP A						
	HERB METRIBUZIN	75	WG	5 oz/a		14 DBP A						
	HERB CINCH	7.64	EC	1.00 pt/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		14 DBP A						
	HERB DICAMBA	4	SL	16 oz/a		14 DBP A						
	HERB ROUNDUP POWERMAX	5.5	SL	22.00 fl oz/a		EPOST B						
	HERB CINCH	7.64	EC	1.00 pt/a		EPOST B						
	HERB DICAMBA	4	SL	16 oz/a		EPOST B						

University of Tennessee

DICAMBA IN NO-TILL 2-PASS DCP PROGRAMS FOR RR2X SOYBEAN

Trial ID: JSBDP130-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-130 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Dave Johnson/Smith/DuPont

Trt No.	Treatment Type Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4	Notes
8	HERB TRIVENCE	61.3	DG	8	oz/a	14	DBP A	108	202	309	402	
	HERB FLUMIOXAZIN	51	WG	2	oz/a	14	DBP A					
	HERB CHLORIMURON	25	WG	1.28	oz/a	14	DBP A					
	HERB METRIBUZIN	75	WG	4.75	oz/a	14	DBP A					
	HERB ROUNDUP POWERMAX	5.5	SL	22.00	fl oz/a	14	DBP A					
	HERB 2,4-D ESTER	4	EC	1.00	pt/a	14	DBP A					
	HERB ROUNDUP POWERMAX	5.5	SL	22.00	fl oz/a		EPOST B					
	HERB PREFIX	5.29	EC	2.00	pt/a		EPOST B					
9	HERB VERDICT	5.57	EC	5.00	fl oz/a	14	DBP A	109	208	303	410	
	HERB ROUNDUP POWERMAX	5.5	SL	22.00	fl oz/a	14	DBP A					
	HERB 2,4-D ESTER	4	EC	1.00	pt/a	14	DBP A					
	ADJ MSO	100	EC	1.00	% v/v	14	DBP A					
	FERT AMS	100	SG	17.00	lb/100 gal	14	DBP A					
	HERB ROUNDUP POWERMAX	5.5	SL	22.00	fl oz/a		EPOST B					
	HERB PREFIX	5.29	EC	2.00	pt/a		EPOST B					
10	CHK NONTREATED						A	110	209	304	403	

Sort Order: Replicate 1

University of Tennessee

DICAMBA IN NO-TILL 2-PASS DCP PROGRAMS FOR RR2X SOYBEAN

Trial ID: JSBDP130-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-130 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Dave Johnson/Smith/DuPont

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Trial Location

Country: USA United States

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

Showcase DCP programs for no-till in RR2X soybeans.

Contacts

Study Director: Larry Steckel

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: P40T26X **BBCH Scale:** BSOY
Description: DICAMBA TOLERANT
Planting Rate, Unit: 140000 S/A **Planting Date:** 5-4-16
Depth, Unit: 1 IN **Planting Method:** PLANTD planted
Row Spacing, Unit: 30 IN **Planting Equipment:** PP Plot Planter

Pest Description

Pest 1 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Horseweed

Pest 2 Type: W **Code:** POAAN *Poa annua*
Common Name: Annual bluegrass

Pest 3 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Site and Design

Treated Plot Width: 5 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 150 FT² **Treatments:** 10 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Application Description

	A	B
Application Date:	4-18-16	5-31-16
Appl. Start Time:	8:35 AM	10:28 AM
Appl. Stop Time:	8:41 AM	10:41 AM
Application Method:	SPRAY	SPRAY
Application Timing:	14DBP	EPOST
Application Placement:	BROFOL	BROFOL
Applied By:	GM	JR
Air Temperature, Unit:	68 F	81 F
% Relative Humidity:	65	66
Wind Velocity, Unit:	1.5 MPH	2 MPH
Wind Direction:	SW	N
Dew Presence (Y/N):	Y yes	N no
Soil Temperature, Unit:	60 F	77 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	75	100

University of Tennessee

DICAMBA IN NO-TILL 2-PASS DCP PROGRAMS FOR RR2X SOYBEAN

Trial ID: JSBDP130-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-130 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Dave Johnson/Smith/DuPont

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	V2-V3
Height, Unit:		6 IN
Height Minimum, Maximum:		5 7

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W 10+L	ERICA W --
Diameter, Unit:	3 IN	
Height, Unit:	5 IN	
Height Minimum, Maximum:	4 6	
Pest 2 Code, Type, Scale:	POAAN W SEED	POAAN W --
Height, Unit:	3 IN	
Height Minimum, Maximum:	2 4	
Pest 3 Code, Type, Scale:	AMAPA W --	AMAPA W 6+L
Height, Unit:		4 IN
Height Minimum, Maximum:		3 4

Application Equipment

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Equipment Type:	BACCAI	BACCAI
Operation Pressure, Unit:	35 PSI	35 PSI
Nozzle Type:	TTI	TTI
Nozzle Size:	025	025
Nozzle Spacing, Unit:	20 IN	20 IN
Boom Length, Unit:	5 FT	5 FT
Boom Height, Unit:	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac
Mix Size, Unit:	0.528 gallons	0.528 gallons
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Tennessee

SU/Dicamba Blend (DPX-TEX26) Applied in the Fall or Spring for Burndown and Residual Control of Winter Annuals - Univ

Trial ID: USA-16-004 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-004 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Helen Flanigan
 Sponsor Contact: Helen Flanigan

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1	HERB VELATREX			4 oz/a	EPP	A		101	205	307	406	
	HERB RIMSULFURON (25% SG)	25	SG	0.75 oz/a	EPP	A						
	HERB TRIBENURON (SG 50 PC)	50	SG	0.25 oz/a	EPP	A						
	HERB DICAMBA (WG 70.00 PC)	70	WG	3 oz/a	EPP	A						
	HERB 2,4-D ESTE (EC 4.00 LG)	4	EC	1.50 pt/a	EPP	A						
	HERB ABUNDIT EXTRA (4LG/3AE)	3	SL	32.00 fl oz/a	EPP	A						
2	HERB VELATREX			4 oz/a	EPP	A		102	208	301	404	
	HERB RIMSULFURON (25% SG)	25	SG	0.75 oz/a	EPP	A						
	HERB TRIBENURON (SG 50 PC)	50	SG	0.25 oz/a	EPP	A						
	HERB DICAMBA (WG 70.00 PC)	70	WG	3 oz/a	EPP	A						
	HERB 2,4-D ESTE (EC 4.00 LG)	4	EC	2.00 pt/a	EPP	A						
	HERB ABUNDIT EXTRA (4LG/3AE)	3	SL	32.00 fl oz/a	EPP	A						
3	HERB VELATREX			5.25 oz/a	EPP	A		103	206	302	409	
	HERB RIMSULFURON (25% SG)	25	SG	1 oz/a	EPP	A						
	HERB TRIBENURON (SG 50 PC)	50	SG	0.33 oz/a	EPP	A						
	HERB DICAMBA (WG 70.00 PC)	70	WG	3.94 oz/a	EPP	A						
	HERB 2,4-D ESTE (EC 4.00 LG)	4	EC	1.50 pt/a	EPP	A						
	HERB ABUNDIT EXTRA (4LG/3AE)	3	SL	32.00 fl oz/a	EPP	A						
4	HERB VELATREX			5.25 oz/a	EPP	A		104	207	308	402	
	HERB RIMSULFURON (25% SG)	25	SG	1 oz/a	EPP	A						
	HERB TRIBENURON (SG 50 PC)	50	SG	0.33 oz/a	EPP	A						
	HERB DICAMBA (WG 70.00 PC)	70	WG	3.94 oz/a	EPP	A						
	HERB 2,4-D ESTE (EC 4.00 LG)	4	EC	2.00 pt/a	EPP	A						
	HERB ABUNDIT EXTRA (4LG/3AE)	3	SL	32.00 fl oz/a	EPP	A						
5	HERB LEADOFF	33.4	WG	1.5 oz/a	EPP	A		105	203	305	401	
	HERB RIMSULFURON (25% SG)	25	SG	1 oz/a	EPP	A						
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.5 oz/a	EPP	A						
	HERB 2,4-D ESTE (EC 4.00 LG)	4	EC	2.00 pt/a	EPP	A						
	HERB ABUNDIT EXTRA (4LG/3AE)	3	SL	32.00 fl oz/a	EPP	A						
6	HERB VELATREX			4 oz/a	EPP	A		106	202	303	405	
	HERB RIMSULFURON (25% SG)	25	SG	0.75 oz/a	EPP	A						
	HERB TRIBENURON (SG 50 PC)	50	SG	0.25 oz/a	EPP	A						
	HERB DICAMBA (WG 70.00 PC)	70	WG	3 oz/a	EPP	A						
	HERB 2,4-D ESTE (EC 4.00 LG)	4	EC	2.00 pt/a	EPP	A						
	HERB SHARPEN	2.85	SC	1.00 fl oz/a	EPP	A						
	ADJ MSO (EC 100.00 PC)	100	EC	1.00 % v/v	EPP	A						
	HERB ABUNDIT EXTRA (4LG/3AE)	3	SL	32.00 fl oz/a	EPP	A						
	FERT AMS	100	SG	2.00 lb/a	EPP	A						
7	HERB VELATREX			4 oz/a	EPP	A		107	209	304	410	
	HERB RIMSULFURON (25% SG)	25	SG	0.75 oz/a	EPP	A						
	HERB TRIBENURON (SG 50 PC)	50	SG	0.25 oz/a	EPP	A						
	HERB DICAMBA (WG 70.00 PC)	70	WG	3 oz/a	EPP	A						
	HERB SHARPEN	2.85	SC	1.00 fl oz/a	EPP	A						
	ADJ MSO	100	EC	1.00 % v/v	EPP	A						
	HERB ABUNDIT EXTRA (4LG/3AE)	3	SL	32.00 fl oz/a	EPP	A						
	FERT AMS	100	SG	2.00 lb/a	EPP	A						
8	HERB 2,4-D ESTE (EC 4.00 LG)	4	EC	2.00 pt/a	EPP	A		108	210	306	408	
	HERB ABUNDIT EXTRA (4LG/3AE)	3	SL	32.00 fl oz/a	EPP	A						
9	HERB SHARPEN	2.85	SC	1.00 fl oz/a	EPP	A		109	204	310	403	
	ADJ MSO	100	EC	1.00 % v/v	EPP	A						
	HERB ABUNDIT EXTRA (4LG/3AE)	3	SL	32.00 fl oz/a	EPP	A						
	FERT AMS	100	SG	2.00 lb/a	EPP	A						
10	CHK NONTREATED							110	201	309	407	

Sort Order: Replicate 1

University of Tennessee

SU/Dicamba Blend (DPX-TEX26) Applied in the Fall or Spring for Burndown and Residual Control of Winter Annuals - Univ

Trial ID: USA-16-004 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-004 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Helen Flanigan
 Sponsor Contact: Helen Flanigan

General Trial Information

Study Director: Helen Flanigan
Investigator: Dr. Larry Steckel

Trial Location

Country: USA United States

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

Evaluate DPX - TEX26 when applied in the fall after harvest or early preplant in the spring for burndown and residual control of winter annuals and early spring annual weeds. Emphasis is on 2 to 4 inch weeds especially marestail or henbit. Corn, cotton or soybeans may be planted. Evaluate crop response.

Contacts

Study Director: Helen Flanigan

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: P40T26X **BBCH Scale:** BSOY
Description: DICAMBA TOLERANT
Planting Rate, Unit: 140000 S/A **Planting Date:** 5-4-16
Depth, Unit: 1 IN **Planting Method:** PLANTD planted
Row Spacing, Unit: 30 IN **Planting Equipment:** FE Field Equipment

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis
Common Name: Horseweed
Pest 2 Type: W **Code:** LAMAM Lamium amplexicaule
Common Name: Henbit
Pest 3 Type: W **Code:** CERVU Cerastium fontanum vulgare
Common Name: Mouse-ear chickweed

Site and Design

Treated Plot Width: 7.5 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 225 FT² **Treatments:** 10 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB Randomized Complete Block (RCB)

Field Prep./Maintenance:

May 4 - Gramoxone SL 48 oz/A + COC 1% - blanket application
 May 31 - Blanket application of Roundup WeatherMax 22 oz/A + Prefix 32 oz/A

University of Tennessee

SU/Dicamba Blend (DPX-TEX26) Applied in the Fall or Spring for Burndown and Residual Control of Winter Annuals - Univ

Trial ID: USA-16-004 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-004 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Helen Flanigan
 Sponsor Contact: Helen Flanigan

Application Description

	A
Application Date:	3-15-16
Appl. Start Time:	7:30 AM
Appl. Stop Time:	7:41 AM
Application Method:	SPRAY
Application Timing:	EPP
Application Placement:	BROFOL
Applied By:	GM
Air Temperature, Unit:	61 F
% Relative Humidity:	73
Wind Velocity, Unit:	2 MPH
Wind Direction:	S
Dew Presence (Y/N):	Y yes
Soil Temperature, Unit:	56 F
Soil Moisture:	WET
% Cloud Cover:	0

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	--

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W 10+L
Height, Unit:	5 IN
Height Minimum, Maximum:	4 6
Pest 2 Code, Type, Scale:	LAMAM W FLOW
Height, Unit:	5 IN
Height Minimum, Maximum:	4 6
Pest 3 Code, Type, Scale:	CERVU W 6+L
Height, Unit:	2 IN
Height Minimum, Maximum:	2 3

University of Tennessee

SU/Dicamba Blend (DPX-TEX26) Applied in the Fall or Spring for Burndown and Residual Control of Winter Annuals - Univ

Trial ID: USA-16-004 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-004 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Helen Flanigan
 Sponsor Contact: Helen Flanigan

Application Equipment

	A
Appl. Equipment:	BACKPACK
Equipment Type:	BACCAI
Operation Pressure, Unit:	27 PSI
Nozzle Type:	AIXR
Nozzle Size:	11003
Nozzle Spacing, Unit:	20 IN
Boom ID:	5 FT @ 15GPA
Boom Length, Unit:	5 FT
Boom Height, Unit:	16 IN
Ground Speed, Unit:	4 MPH
Spray Volume, Unit:	15 GAL/AC
Mix Size, Unit:	0.528 gallons
Spray pH:	0.528
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Tennessee

EPP BURNDOWN AND PRE EFFICACY AND TOLERANCE IN SOYBEAN WITH SURVEIL AND SONIC

Trial ID: NA16R5K001 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16R5K001 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4	Notes
1	HERB SONIC	70	WG	4 oz/a		14 DBP A	A	101	209	313	406	
	HERB GRAMOXONE SL	2	SL	48 oz/a		14 DBP A	A					
	ADJ PREFERENCE	L		0.25 % v/v		14 DBP A	A					
2	HERB SURVEIL	48	WG	2.8 oz/a		14 DBP A	A	102	208	311	402	
	HERB GRAMOXONE SL	2	SL	48 oz/a		14 DBP A	A					
	ADJ PREFERENCE	L		0.25 % v/v		14 DBP A	A					
3	HERB VALOR	51	WG	1.76 oz/a		14 DBP A	A	103	203	305	409	
	HERB CLASSIC	25	WG	1.24 oz/a		14 DBP A	A					
	HERB GRAMOXONE SL	2	SL	48 oz/a		14 DBP A	A					
	ADJ PREFERENCE	L		0.25 % v/v		14 DBP A	A					
4	HERB GRAMOXONE SL	2	SL	48 oz/a		PRE	B	104	213	303	411	
	ADJ PREFERENCE	L		0.25 % v/v		PRE	B					
5	HERB SONIC	70	WG	4 oz/a		PRE	B	105	211	304	408	
	HERB GRAMOXONE SL	2	SL	48 oz/a		PRE	B					
	ADJ PREFERENCE	L		0.25 % v/v		PRE	B					
6	HERB SURVEIL	48	WG	2.8 oz/a		PRE	B	106	202	301	403	
	HERB GRAMOXONE SL	2	SL	48 oz/a		PRE	B					
	ADJ PREFERENCE	L		0.25 % v/v		PRE	B					
7	HERB VALOR	51	WG	1.76 oz/a		PRE	B	107	207	310	405	
	HERB CLASSIC	25	WG	1.24 oz/a		PRE	B					
	HERB GRAMOXONE SL	2	SL	48 oz/a		PRE	B					
	ADJ PREFERENCE	L		0.25 % v/v		PRE	B					
8	HERB SURVEIL	48	WG	1.4 oz/a		14 DBP A	A	108	204	312	407	
	HERB GRAMOXONE SL	2	SL	48 oz/a		14 DBP A	A					
	ADJ PREFERENCE	L		0.25 % v/v		14 DBP A	A					
	HERB SURVEIL	48	WG	1.4 oz/a		PRE	B					
9	HERB SONIC	70	WG	3 oz/a		14 DBP A	A	109	201	308	413	
	HERB GRAMOXONE SL	2	SL	48 oz/a		14 DBP A	A					
	ADJ PREFERENCE	L		0.25 % v/v		14 DBP A	A					
	HERB LIBERTY	2.34	SL	29 oz/a		POST	C					
10	HERB SONIC	70	WG	4 oz/a		14 DBP A	A	110	206	306	404	
	HERB GRAMOXONE SL	2	SL	48 oz/a		14 DBP A	A					
	HERB PREFERENCE	L		0.25 % v/v		14 DBP A	A					
	HERB LIBERTY	2.34	SC	29 oz/a		POST	C					
11	HERB SONIC	70	WG	5 oz/a		14 DBP A	A	111	212	307	401	
	HERB GRAMOXONE SL	2	SL	48 oz/a		14 DBP A	A					
	ADJ PREFERENCE	L		0.25 % v/v		14 DBP A	A					
	HERB LIBERTY	2.34	SC	29 oz/a		POST	C					
12	HERB SURVEIL	48	WG	2.8 oz/a		14 DBP A	A	112	210	302	412	
	HERB GRAMOXONE SL	2	SL	48 oz/a		14 DBP A	A					
	ADJ PREFERENCE	L		0.25 % v/v		14 DBP A	A					
	HERB LIBERTY	2.34	SC	29 oz/a		POST	C					
13	HERB SURVEIL	48	WG	3.5 oz/a		14 DBP A	A	113	205	309	410	
	HERB GRAMOXONE SL	2	SL	48 oz/a		14 DBP A	A					
	ADJ PREFERENCE	L		0.25 % v/v		14 DBP A	A					
	HERB LIBERTY	2.34	SL	29 oz/a		POST	C					

Sort Order: Replicate 1

University of Tennessee

EPP BURNDOWN AND PRE EFFICACY AND TOLERANCE IN SOYBEAN WITH SURVEIL AND SONIC

Trial ID: NA16R5K001 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16R5K001 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Planned Completion Date: 10-1-16

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

How does crop tolerance and efficacy compare between Surveil, Sonic, and key competitive products on key glyphosate-resistant broadleaf weeds in soybean when applied EPP and PRE?

Contacts

Study Director: Larry Steckel

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max
Variety: LL4653
Description: Liberty Link

BBCH Scale: BSOY

Planting Rate, Unit: 140000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN
Soil Temperature, Unit: 66 F
Soil Moisture: EXCELL excellent

Planting Date: 5-5-16
Planting Method: PLANTD planted
Planting Equipment: PP Plot Planter

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Horseweed

Pest 3 Type: W **Code:** POAAN *Poa annua*
Common Name: Annual bluegrass

Site and Design

Treated Plot Width: 5 FT
Treated Plot Length: 30 FT

Site Type: FIELD field

Treated Plot Area: 150 FT2 **Treatments:** 13
Replications: 4

Tillage Type: NOTILL no-till
Study Design: RACOBL Randomized Complete Block (RCB)

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University of Tennessee

EPP BURNDOWN AND PRE EFFICACY AND TOLERANCE IN SOYBEAN WITH SURVEIL AND SONIC

Trial ID: NA16R5K001 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16R5K001 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

Application Description

	A	B	C
Application Date:	4-18-16	5-6-16	5-31-16
Appl. Start Time:	9:24 AM	8:04 AM	10:59 AM
Appl. Stop Time:	9:35 AM	8:11 AM	11:10 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	14 DBP	PRE	POST
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	GM	JR	GM
Air Temperature, Unit:	71 F	54 F	84 F
% Relative Humidity:	54	73	62
Wind Velocity, Unit:	1 MPH	3 MPH	0.5 MPH
Wind Direction:	SW	N	S
Dew Presence (Y/N):	N no	Y yes	N no
Soil Temperature, Unit:	60 F	54 F	77 F
Soil Moisture:	NORMAL	EXCELL	NORMAL
% Cloud Cover:	70	0	85

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	--	2 TRIF
Height, Unit:			6 IN
Height Minimum, Maximum:			5 7

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMAPA W --	AMAPA W 2-4L	AMAPA W 6+L
Height, Unit:		2 IN	3 IN
Height Minimum, Maximum:			3 4
Pest 2 Code, Type, Scale:	ERICA W 10+L	ERICA W 20+L	ERICA W --
Height, Unit:	7 IN	14 IN	
Height Minimum, Maximum:	6 8	13 15	
Pest 3 Code, Type, Scale:	POAAN W SEED	POAAN W --	POAAN W --
Diameter, Unit:	4 IN		
Height, Unit:	3 IN		
Height Minimum, Maximum:	2 4		

University of Tennessee

EPP BURNDOWN AND PRE EFFICACY AND TOLERANCE IN SOYBEAN WITH SURVEIL AND SONIC

Trial ID: NA16R5K001 Location: Jackson, TN Trial Year: 2016
 Protocol ID: NA16R5K001 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Haygood/DOW

Application Equipment

	A	B	C
Appl. Equipment:	BACKPACK	BACKPACK	BACKPACK
Equipment Type:	BACCAI	BACCAI	BACCAI
Operation Pressure, Unit:	27 PSI	27 PSI	27 PSI
Nozzle Type:	AIXR	AIXR	AIXR
Nozzle Size:	11003	11003	11003
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Boom ID:	5 FT @ 15GPA	5 FT @ 15GPA	5 FT @ 15GPA
Boom Length, Unit:	5 FT	5 FT	5 FT
Boom Height, Unit:	16 IN	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	0.528 gallons	0.528 gallons	0.528 gallons
Spray pH:	0.528	0.528	0.528
Propellant:	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes

University of Tennessee

AUTHORITY MAXX / AUTHORITY MTZ - BURNDOWN IN SOYBEAN

Trial ID: JSBFMC16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: JSBFMC16 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: R. Mithcell/ FMC

Trt No. Type	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep				Notes
								1	2	3	4	
1	CHK NONTREATED							101	203	305	406	
2	HERB 2,4-D Ester	4	EC	16	oz/a	EPP	A	102	208	311	412	
	HERB ROUNDUP POWERMAX	5.5	SL	22	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					
3	HERB AUTHORITY MAXX	45	DF	3	oz/a	EPP	A	103	212	308	404	
	HERB 2,4-D Ester	4	EC	16	oz/a	EPP	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					
4	HERB AUTHORITY MTZ	45	DF	10	oz/a	EPP	A	104	207	310	407	
	HERB 2,4-D Ester	4	EC	16	oz/a	EPP	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					
5	HERB CRUSHER	50	DF	1	oz/a	EPP	A	105	206	309	401	
	HERB 2,4-D Ester	4	EC	16	oz/a	EPP	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					
6	HERB EDITION BROADSPEC	50	DF	0.5	oz/a	EPP	A	106	205	301	405	
	HERB 2,4-D Ester	4	EC	16	oz/a	EPP	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					
7	HERB VALOR SX	51	WG	2.0	oz/a	EPP	A	107	209	302	408	
	HERB 2,4-D Ester	4	EC	16	oz/a	EPP	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					
8	HERB VERDICT	5.57	EC	5	oz/a	EPP	A	108	204	312	410	
	HERB 2,4-D Ester	4	EC	16	oz/a	EPP	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					
9	HERB SHARPEN	2.85	EC	1	oz/a	EPP	A	109	201	304	411	
	HERB 2,4-D Ester	4	EC	16	oz/a	EPP	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					
10	HERB GRAMOXONE SL	2	SL	32	oz/a	EPP	A	110	210	303	402	
	HERB 2,4-D Ester	4	EC	16	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					
11	HERB AUTHORITY MTZ	45	DF	14	oz/a	EPP	A	111	211	307	409	
	HERB GRAMOXONE SL	2	SL	32	oz/a	EPP	A					
	HERB 2,4-D Ester	4	EC	16	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					
12	HERB AUTHORITY MTZ	45	DF	14	oz/a	EPP	A	112	202	306	403	
	HERB GRAMOXONE SL	2	SL	32	oz/a	EPP	A					
	ADJ MSO		L	1	% v/v	EPP	A					

Sort Order: Replicate 1

University of Tennessee

AUTHORITY MAXX / AUTHORITY MTZ - BURNDOWN IN SOYBEAN

Trial ID: JSBFMC16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: JSBFMC16 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: R. Mithcell/ FMC

General Trial Information

Investigator: Dr. Larry Steckel

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: LL4653 **BBCH Scale:** BSOY
Description: Liberty Link

Planting Rate, Unit: 140000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN
Soil Temperature, Unit: 66 F
Soil Moisture: EXCELL excellent

Planting Date: 5-5-16
Planting Method: PLANTD planted
Planting Equipment: PP Plot Planter

Pest Description

Pest 1 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Horseweed

Pest 2 Type: W **Code:** POAAN *Poa annua*
Common Name: Annual bluegrass

Pest 3 Type: W **Code:** STEME *Stellaria media*
Common Name: Common chickweed

Site and Design

Treated Plot Width: 5 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 150 FT² **Treatments:** 12 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Field Prep./Maintenance:

May 31 - Liberty 29 oz/A

Application Description

	A
Application Date:	4-1-16
Appl. Start Time:	7:49 AM
Appl. Stop Time:	8:06 AM
Application Method:	SPRAY
Application Timing:	EPP
Application Placement:	BROFOL
Applied By:	GM
Air Temperature, Unit:	54 F
% Relative Humidity:	78
Wind Velocity, Unit:	1 MPH
Wind Direction:	N
Dew Presence (Y/N):	Y yes
Soil Temperature, Unit:	55 F
Soil Moisture:	WET
% Cloud Cover:	10

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY

University of Tennessee

AUTHORITY MAXX / AUTHORITY MTZ - BURNDOWN IN SOYBEAN

Trial ID: JSBFMC16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: JSBFMC16 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: R. Mithcell/ FMC

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W 10+L
Diameter, Unit:	3 IN
Height, Unit:	4 IN
Height Minimum, Maximum:	3 5
Pest 2 Code, Type, Scale:	POAAN W
Height, Unit:	3 IN
Height Minimum, Maximum:	3 4
Pest 3 Code, Type, Scale:	STEME W
Height, Unit:	4 IN
Height Minimum, Maximum:	3 4

Application Equipment

	A
Appl. Equipment:	BACKPACK
Equipment Type:	BACCAI
Operation Pressure, Unit:	27 PSI
Nozzle Type:	AIXR
Nozzle Size:	11003
Nozzle Spacing, Unit:	20 IN
Boom ID:	5 FT @ 15GPA
Boom Length, Unit:	5 FT
Boom Height, Unit:	16 IN
Ground Speed, Unit:	4 MPH
Spray Volume, Unit:	15 GAL/AC
Mix Size, Unit:	0.528 gallons
Spray pH:	0.528
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Tennessee

COVER CROP SENSITIVITY TO SOYBEAN HERBICIDE TREATMENTS

Trial ID: JSB-SOYB CARRYOVER Location: Jackson, TN Trial Year: 2016
 Protocol ID: Investigator: Kevin W. Bradley
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: USB

Trt No. Type	Treatment Name	Form Form		Rate Unit	Growth Stage	Appl Code	Rep			Notes
		Conc	Type				1	2	3	
1	CHK	NONTREATED					101	205	308	
2	HERB	Flexstar	1.88 L	20 fl oz/a	21DAP	B	102	212	318	
	ADJ	NIS	100 SL	0.25 % v/v	21DAP	B				
	ADJ	N-PAK AMS LIQUID	3.4 L	0.6 lb ai/a	21DAP	B				
3	HERB	Flexstar	1.88 L	20 fl oz/a	42DAP	C	103	216	317	
	ADJ	NIS	100 SL	0.25 % v/v	42DAP	C				
	ADJ	N-PAK AMS LIQUID	3.4 L	0.6 lb ai/a	42DAP	C				
4	HERB	Pursuit	2 EC	4 fl oz/a	21DAP	B	104	220	305	
	ADJ	NIS	100 SL	1 qt/100 gal	21DAP	B				
	ADJ	N-PAK AMS LIQUID	3.4 L	2 lb ai/a	21DAP	B				
5	HERB	Pursuit	2 EC	4 fl oz/a	42DAP	C	105	214	304	
	ADJ	NIS	100 SL	1 qt/100 gal	42DAP	C				
	ADJ	N-PAK AMS LIQUID	3.4 L	2 lb ai/a	42DAP	C				
6	HERB	Synchrony XP	28.4 DG	0.375 oz/a	21DAP	B	106	211	301	
	ADJ	NIS	100 SL	1 qt/100 gal	21DAP	B				
	ADJ	N-PAK AMS LIQUID	3.4 L	2 lb ai/a	21DAP	B				
7	HERB	Synchrony XP	28.4 DG	0.375 oz/a	42DAP	C	107	202	312	
	ADJ	NIS	100 SL	1 qt/100 gal	42DAP	C				
	ADJ	N-PAK AMS LIQUID	3.4 L	2 lb ai/a	42DAP	C				
8	HERB	Dual II Magnum	7.64 EC	1.33 pt/a	21DAP	B	108	203	315	
9	HERB	Dual II Magnum	7.64 EC	1.33 pt/a	42DAP	C	109	208	302	
10	HERB	Warrant	3 L	1.5 qt/a	21DAP	B	110	213	311	
11	HERB	Warrant	3 L	1.5 qt/a	42DAP	C	111	206	316	
12	HERB	Zidua	85 WG	0.16 lb ai/a	21DAP	B	112	201	306	
13	HERB	Zidua	85 WG	0.16 lb ai/a	42DAP	C	113	215	320	
14	HERB	Warrant Ultra	3.45 EC	1.35 lb ai/a	21DAP	B	114	204	314	
	ADJ	NIS	100 SL	0.25 % v/v	21DAP	B				
15	HERB	Warrant Ultra	3.45 EC	1.35 lb ai/a	42DAP	C	115	219	313	
	ADJ	NIS	100 SL	0.25 % v/v	42DAP	C				
16	HERB	Prefix	5.92 EC	2 pt/a	21DAP	B	116	210	303	
	ADJ	NIS	100 SL	0.25 % v/v	21DAP	B				
17	HERB	Prefix	5.92 EC	2 pt/a	42DAP	C	117	207	319	
	ADJ	NIS	100 SL	0.25 % v/v	42DAP	C				
18	HERB	Authority Elite	7 EC	32 fl oz/a	PRE	A	118	209	310	
19	HERB	Authority Elite	7 EC	32 fl oz/a	PRE	A	119	218	307	
	HERB	Prefix	5.92 EC	2 pt/a	21DAP	B				
	ADJ	NIS	100 SL	0.25 % v/v	21DAP	B				
20	HERB	Authority Elite	7 EC	32 fl oz/a	PRE	A	120	217	309	
	HERB	Prefix	5.92 EC	2 pt/a	21DAP	B				
	ADJ	NIS	100 SL	0.25 % v/v	21DAP	B				
	HERB	Warrant	3 L	1.5 qt/a	42DAP	C				

Sort Order: Replicate 1

University of Tennessee

COVER CROP SENSITIVITY TO SOYBEAN HERBICIDE TREATMENTS

Trial ID: JSB-SOYB CARRYOVER Location: Jackson, TN Trial Year: 2016
 Protocol ID: Investigator: Kevin W. Bradley
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: USB

General Trial Information

Study Director: Alex Long and Mandy Bish
Investigator: Kevin W. Bradley

Trial Location

City: COLUMBIA **Country:** USA United States
State/Prov.: Missouri

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Alex Long and Mandy Bish

Investigator: Kevin W. Bradley

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: LL4222 **BBCH Scale:** BSOY
Description: Liberty Link

Planting Rate, Unit: 140000 S/A **Planting Date:** 5-5-16
Depth, Unit: 1 IN **Planting Method:** PLANTD planted
Row Spacing, Unit: 30 IN **Planting Equipment:** FE Field Equipment
Soil Temperature, Unit: 63 F
Soil Moisture: SLIWET slightly wet, moist

Site and Design

Treated Plot Width: 5 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 150 FT2 **Treatments:** 20 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOB� Randomized Complete Block (RCB)

Field Prep./Maintenance:

MAR 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A - Burndown
 APR 26 - Roundup PowerMax 32 oz/A
 May 4 - Gramoxone SL 48 oz/a + COC 1%
 May 24 - Liberty 29 oz/A
 June 13 - Liberty 29 oz/A + Select Max 16 oz/A

Application Description

	A	B	C
Application Date:	5-5-16	5-24-16	6-16-16
Appl. Start Time:	11:37 AM	9:32 AM	8:32 AM
Appl. Stop Time:	11:39 AM	9:40 AM	8:40 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	21 DAP	42 DAP
Application Placement:	SOIL	BROFOL	BROFOL
Applied By:	GM	GM	JR
Air Temperature, Unit:	65 F	77 F	87 F
% Relative Humidity:	35	58	73
Wind Velocity, Unit:	13 MPH	2 MPH	2 MPH
Wind Direction:	NW	SE	NW
Dew Presence (Y/N):	N no	N no	Y yes
Soil Temperature, Unit:	63 F	69 F	78 F
Soil Moisture:	SLIWET	EXCELL	GOOD
% Cloud Cover:	5	50	25

University of Tennessee

COVER CROP SENSITIVITY TO SOYBEAN HERBICIDE TREATMENTS

Trial ID: JSB-SOYB CARRYOVER Location: Jackson, TN Trial Year: 2016
 Protocol ID: Investigator: Kevin W. Bradley
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: USB

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	VE	
Height, Unit:		2 IN	

Pest Stage At Each Application

	B	C
Stage Majority, Percent:	VE	6 TRIF
Height, Unit:	3 IN	9 IN
Height Minimum, Maximum:	2 3	8 10

Application Equipment

	A	B	C
Appl. Equipment:	BACKPACK	BACKPACK	BACKPACK
Equipment Type:	BACCAI	BACCAI	BACCAI
Operation Pressure, Unit:	28 PSI	28 PSI	28 PSI
Nozzle Type:	AIXR	AIXR	AIXR
Nozzle Size:	11003	11003	11003
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Boom ID:	5 FT @ 15GPA	5 FT @ 15GPA	5 FT @ 15GPA
Boom Length, Unit:	5 FT	5 FT	5 FT
Boom Height, Unit:	16 IN	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	0.528 gallons	0.528 gallons	0.528 gallons
Spray pH:	0.528	0.528	0.528
Propellant:	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes

University of Tennessee

DOUBLE CROP XTEND SOYBEAN SYSTEM

Trial ID: 2016-01-B7-04 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 2016-01-B7-04 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Scott A Nolte

Trt No. Type	Treatment Name	Form Conc	Form Type	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1	PROD UNTREATED CHECK	0	ND				101	202	304	408	
2	HERB MON 76981	3	SL	64 oz/a	5 DAH	A	102	205	302	403	
	HERB MON 76981	3	SL	64 oz/a	POST	B					
	HERB WARRANT	3	CS	48 oz/a	POST	B					
3	HERB MON 76981	3	SL	64 oz/a	5 DAH	A	103	212	308	407	
	HERB ROWEL	51	WG	2 oz/a	5 DAH	A					
	HERB MON 76981	3	SL	64 oz/a	POST	B					
	HERB WARRANT	3	CS	48 oz/a	POST	B					
4	HERB MON 76981	3	SL	64 oz/a	5 DAH	A	104	207	310	405	
	HERB AUTHORITY MTZ	0.45	DF	14 oz/a	5 DAH	A					
	HERB MON 76981	3	SL	64 oz/a	POST	B					
	HERB WARRANT	3	CS	48 oz/a	POST	B					
5	HERB MON 76981	3	SL	64 oz/a	5 DAH	A	105	208	307	411	
	HERB ROWEL	51	WG	2 oz/a	5 DAH	A					
	HERB TRICOR DF	75	DF	5 oz/a	5 DAH	A					
	HERB MON 76981	3	SL	64 oz/a	POST	B					
	HERB WARRANT	3	CS	48 oz/a	POST	B					
6	HERB MON 76981	3	SL	64 oz/a	5 DAH	A	106	211	309	401	
	HERB WARRANT	3	CS	48 oz/a	5 DAH	A					
	HERB MON 76981	3	SL	64 oz/a	POST	B					
	HERB WARRANT	3	CS	48 oz/a	POST	B					
7	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a	5 DAH	A	107	201	312	410	
	HERB ROWEL	51	WG	2 oz/a	5 DAH	A					
	HERB MON 76981	3	SL	64 oz/a	POST	B					
	HERB WARRANT	3	CS	48 oz/a	POST	B					
8	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a	5 DAH	A	108	210	303	409	
	HERB AUTHORITY MTZ	0.45	DF	14 oz/a	5 DAH	A					
	HERB MON 76981	3	SL	64 oz/a	POST	B					
	HERB WARRANT	3	CS	48 oz/a	POST	B					
9	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a	5 DAH	A	109	204	305	406	
	HERB WARRANT	3	CS	48 oz/a	5 DAH	A					
	HERB MON 76981	3	SL	64 oz/a	POST	B					
	HERB WARRANT	3	CS	48 oz/a	POST	B					
10	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a	5 DAH	A	110	206	301	412	
	HERB ROWEL	51	WG	2 oz/a	5 DAH	A					
	HERB TRICOR DF	75	DF	5 oz/a	5 DAH	A					
	HERB MON 76981	3	SL	64 oz/a	POST	B					
	HERB WARRANT	3	CS	48 oz/a	POST	B					
11	HERB GRAMOXONE SL	2	SL	48 oz/a	5 DAH	A	111	203	306	404	
	HERB CANOPY	75	DF	4 oz/a	5 DAH	A					
	ADJ NIS	100	SL	0.25 % v/v	5 DAH	A					
	HERB ROUNDUP POWERMAX	5.5	SL	32 oz/a	POST	B					
	HERB PREFIX	5.264	EC	1 qt/a	POST	B					
12	HERB GRAMOXONE SL	2	SL	48 oz/a	5 DAH	A	112	209	311	402	
	ADJ NIS	100	SL	0.25 % v/v	5 DAH	A					
	HERB ROUNDUP POWERMAX	5.5	SL	32 oz/a	POST	B					
	HERB PREFIX	5.264	EC	1 qt/a	POST	B					

Sort Order: Replicate 1

University of Tennessee

DOUBLE CROP XTEND SOYBEAN SYSTEM

Trial ID: 2016-01-B7-04 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 2016-01-B7-04 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Scott A Nolte

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Trial Location

Country: USA United States

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Larry Steckel

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AGROW 46X6
Description: DICAMBA TOLERANT **BBCH Scale:** BSOY
Planting Rate, Unit: 140000 S/A
Depth, Unit: 1 IN **Planting Date:** 6-16-16
Row Spacing, Unit: 30 IN **Planting Method:** PLANTD planted
Soil Moisture: GOOD good **Planting Equipment:** FE Field Equipment
Seed Bed: ROUGH rough

Pest Description

Pest 1 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOLA Ipomoea lacunosa
Common Name: Pitted morningglory

Pest 3 Type: W **Code:** ANNGR Annual Grasses

Pest 4 Type: W **Code:** TRFRE Trifolium repens
Common Name: White clover

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 12 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
 14 & 21 DA-A, At B App

Application Description

	A
Application Date:	6-16-16
Appl. Start Time:	2:34 PM
Appl. Stop Time:	3:00 PM
Application Method:	SPRAY
Application Timing:	5DAH
Application Placement:	BROFOL
Applied By:	GM
Air Temperature, Unit:	94 F
% Relative Humidity:	52
Wind Velocity, Unit:	5 MPH
Wind Direction:	W
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	85 F
Soil Moisture:	GOOD
% Cloud Cover:	25

University of Tennessee

DOUBLE CROP XTEND SOYBEAN SYSTEM

Trial ID: 2016-01-B7-04 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 2016-01-B7-04 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Scott A Nolte

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	--

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMAPA W 10+L
Height, Unit:	10 IN
Height Minimum, Maximum:	8 12
Pest 2 Code, Type, Scale:	IPOLA W VINE
Height, Unit:	15 IN
Height Minimum, Maximum:	12 15
Pest 3 Code, Type, Scale:	ANNGR W 20+L
Height, Unit:	10 IN
Height Minimum, Maximum:	9 13
Pest 4 Code, Type, Scale:	TRFRE W FLOW
Height, Unit:	10 IN
Height Minimum, Maximum:	9 11

Application Equipment

	A
Appl. Equipment:	BACKPACK
Equipment Type:	BACCAI
Operation Pressure, Unit:	35 PSI
Nozzle Type:	TTI
Nozzle Size:	025
Nozzle Spacing, Unit:	20 IN
Boom Length, Unit:	10 FT
Boom Height, Unit:	16 IN
Ground Speed, Unit:	4 MPH
Carrier:	WATER
Spray Volume, Unit:	15 gal/ac
Mix Size, Unit:	0.528 gallons
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Tennessee

EVALUATION OF DICAMBA ONLY TREATMENTS IN XTEND SOYBEAN

Trial ID: SOY16-26
 Protocol ID: SOY16-26
 Project ID: SOYBEAN WEED MANAGEMENT

Location: Jackson, TN Trial Year: 2016
 Investigator: Dr. Larry Steckel
 Study Director: Larry Steckel
 Sponsor Contact: LSU AGCENTER

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Unit	Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4	Notes
1	CHK Nontreated							101	203	307	404	
2	HERB M1691	4	SL	16 oz/a		PRE	A	102	207	309	410	
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a		V3	B					
	HERB WARRANT ULTRA	3.45	L	50 oz/a		V3	B					
3	HERB M1691	4	SL	32 oz/a		PRE	A	103	208	305	401	
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a		V3	B					
	HERB WARRANT ULTRA	3.45	L	50 oz/a		V3	B					
4	HERB WARRANT ULTRA	3.45	L	50 oz/a		PRE	A	104	210	304	409	
	HERB M1691	4	SL	16 oz/a		V3	B					
5	HERB WARRANT ULTRA	3.45	L	50 oz/a		PRE	A	105	201	308	407	
	HERB M1691	4	SL	16 oz/a		V3	B					
	HERB M1691	4	SL	16 oz/a	14 da	V3	C					
6	HERB WARRANT ULTRA	3.45	L	50 oz/a		PRE	A	106	209	306	403	
	HERB M1691	4	SL	16 oz/a		V3	B					
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a	14 da	V3	C					
	HERB DUAL MAGNUM	7.62	EC	16 oz/a	14 da	V3	C					
7	HERB M1691	4	SL	16 oz/a		PRE	A	107	204	301	402	
	HERB WARRANT ULTRA	3.45	L	50 oz/a		PRE	A					
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a		V3	B					
	HERB M1691	4	SL	16 oz/a		V3	B					
8	HERB M1691	4	SL	16 oz/a		PRE	A	108	202	310	408	
	HERB WARRANT ULTRA	3.45	L	50 oz/a		PRE	A					
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a		V3	B					
	HERB M1691	4	SL	16 oz/a		V3	B					
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a	14 da	V3	C					
	HERB M1691	4	SL	16 oz/a	14 da	V3	C					
9	HERB M1691	4	SL	16 oz/a		PRE	A	109	205	303	405	
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a		V3	B					
	HERB M1691	4	SL	16 oz/a		V3	B					
	HERB WARRANT	3	ME	48 oz/a		V3	B					
10	HERB WARRANT ULTRA	3.45	L	50 oz/a		PRE	A	110	206	302	406	
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a		V3	B					
	HERB DUAL MAGNUM	7.62	EC	16 oz/a		V3	B					
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a	14 da	V3	C					

Sort Order: Replicate 1

University of Tennessee

EVALUATION OF DICAMBA ONLY TREATMENTS IN XTEND SOYBEAN

Trial ID: SOY16-26
 Protocol ID: SOY16-26
 Project ID: SOYBEAN WEED MANAGEMENT

Location: Jackson, TN Trial Year: 2016
 Investigator: Dr. Larry Steckel
 Study Director: Larry Steckel
 Sponsor Contact: LSU AGCENTER

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Trial Location

Country: USA United States

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Larry Steckel

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max
Variety: AG46X6
Description: DICAMBA

BBCH Scale: BSOY

Planting Date: 5-11-16
Planting Method: PLANTD planted
Planting Equipment: FE Field Equipment

Planting Rate, Unit: 140000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN
Soil Temperature, Unit: 84 F
Soil Moisture: SLIWET slightly wet, moist

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** ELEIN *Eleusine indica*
Common Name: Goosegrass

Pest 3 Type: W **Code:** LEFFI *Leptochloa mucronata*
Common Name: Red sprangletop

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 10 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Field Prep./Maintenance:

MAR 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A - Burndown
 May 11 - Gramoxone SL 48 oz/A + COC 1%

University of Tennessee

EVALUATION OF DICAMBA ONLY TREATMENTS IN XTEND SOYBEAN

Trial ID: SOY16-26
 Protocol ID: SOY16-26
 Project ID: SOYBEAN WEED MANAGEMENT

Location: Jackson, TN Trial Year: 2016
 Investigator: Dr. Larry Steckel
 Study Director: Larry Steckel
 Sponsor Contact: LSU AGCENTER

Application Description

	A	B
Application Date:	5-11-16	6-6-16
Appl. Start Time:	1:46 PM	9:18 AM
Appl. Stop Time:	1:58 PM	9:30 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	V3
Application Placement:	BROSOI	BROFOL
Applied By:	GM	JR
Air Temperature, Unit:	87 F	81 F
% Relative Humidity:	52	59
Wind Velocity, Unit:	4 MPH	2 MPH
Wind Direction:	SW	E
Dew Presence (Y/N):	N no	Y yes
Soil Temperature, Unit:	85 F	72 F
Soil Moisture:	SLIWET	SLIWET
% Cloud Cover:	5	0

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	V3
Height, Unit:		7 IN
Height Minimum, Maximum:		6 8

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMAPA W --	AMAPA W 4-6L
Height, Unit:		3 IN
Height Minimum, Maximum:		2 4
Pest 2 Code, Type, Scale:	ELEIN W --	ELEIN W 2TLR
Height, Unit:		2 IN
Height Minimum, Maximum:		1 3
Pest 3 Code, Type, Scale:	LEFFI W --	LEFFI W 3TLR
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6

University of Tennessee

EVALUATION OF DICAMBA ONLY TREATMENTS IN XTEND SOYBEAN

Trial ID: SOY16-26
 Protocol ID: SOY16-26
 Project ID: SOYBEAN WEED MANAGEMENT

Location: Jackson, TN Trial Year: 2016
 Investigator: Dr. Larry Steckel
 Study Director: Larry Steckel
 Sponsor Contact: LSU AGCENTER

Application Equipment

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Equipment Type:	BACCAI	BACCAI
Operation Pressure, Unit:	35 PSI	35 PSI
Nozzle Type:	TTI	TTI
Nozzle Size:	025	025
Nozzle Spacing, Unit:	20 IN	20 IN
Boom Length, Unit:	5 FT	5 FT
Boom Height, Unit:	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac
Mix Size, Unit:	0.528 gallons	0.528 gallons
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Tennessee

SCEPTER TANK MIXTURES FOR PRE APPLICATIONS IN SOYBEANS

Trial ID: JSBLLH063-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 16C05H063 Investigator: Dr. Larry Steckel
 Project ID: 16C05H063 Study Director: Larry Steckel
 Sponsor Contact: Ned French, Ph.D.

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Unit	Stage	Appl Code	Rep 1	2	3	4	Notes
1	CHK	UNTREATED CONTROL										
2	HERB SCEPTER	70	DF	2.8	oz/a	PRE	A	102	205	304	402	
3	HERB BOUNDARY	6.5	EC	1.5	pt/a	PRE	A	103	209	310	403	
4	HERB DUAL MAGNUM HERB SCEPTER	7.62 70	EC DF	1 2.1	pt/a oz/a	PRE PRE	A A	104	208	311	401	
5	HERB DUAL MAGNUM HERB SCEPTER	7.62 70	EC DF	1 2.8	pt/a oz/a	PRE PRE	A A	105	210	303	404	
6	HERB CANOPY DF	75	DF	6	oz/a	PRE	A	106	211	301	407	
7	HERB METRIBUZIN HERB SCEPTER	75 70	DF DF	0.5 2.1	lb/a oz/a	PRE PRE	A A	107	204	309	411	
8	HERB METRIBUZIN HERB SCEPTER	75 70	DF DF	0.5 2.8	lb/a oz/a	PRE PRE	A A	108	203	306	408	
9	HERB DUAL MAGNUM HERB CANOPY DF	7.62 75	EC DF	1 6	pt/a oz/a	PRE PRE	A A	109	201	305	406	
10	HERB DUAL MAGNUM HERB SCEPTER HERB METRIBUZIN	7.62 70 75	EC DF DF	1 2.1 0.5	pt/a oz/a lb/a	PRE PRE PRE	A A A	110	206	308	409	
11	HERB DUAL MAGNUM HERB SCEPTER HERB METRIBUZIN	7.62 70 75	EC DF DF	1 2.8 0.5	pt/a oz/a lb/a	PRE PRE PRE	A A A	111	207	302	405	

Sort Order: Replicate 1

University of Tennessee

SCEPTER TANK MIXTURES FOR PRE APPLICATIONS IN SOYBEANS

Trial ID: JSBLLH063-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 16C05H063 Investigator: Dr. Larry Steckel
 Project ID: 16C05H063 Study Director: Larry Steckel
 Sponsor Contact: Ned French, Ph.D.

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Planned Completion Date: 8-31-16

Trial Location

Country: USA United States

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

EVALUATE FIT AND PERFORMANCE OF SCEPTER IN AT-PLANT PRE PROGRAMS.

Contacts

Study Director: Larry Steckel

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: LL4653 **BBCH Scale:** BSOY
Description: Liberty Link

Planting Rate, Unit: 140000 S/A **Planting Date:** 5-11-16
Depth, Unit: 1 IN **Planting Method:** PLANTD planted
Row Spacing, Unit: 30 IN **Planting Equipment:** FE Field Equipment
Soil Temperature, Unit: 84 F
Soil Moisture: SLIWET slightly wet, moist

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT **Experimental Unit:** 1 PLOT plot
Treated Plot Area: 300 FT2 **Treatments:** 11 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Field Prep./Maintenance:

MAR 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A - Burndown
 May 11 - Gramoxone SL 48 oz/A + COC 1%

University of Tennessee

SCEPTER TANK MIXTURES FOR PRE APPLICATIONS IN SOYBEANS

Trial ID: JSBLLH063-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 16C05H063 Investigator: Dr. Larry Steckel
 Project ID: 16C05H063 Study Director: Larry Steckel
 Sponsor Contact: Ned French, Ph.D.

Application Description

	A
Application Date:	5-11-16
Appl. Start Time:	2:04 PM
Appl. Stop Time:	2:15 PM
Application Method:	SPRAY
Application Timing:	PREPLA
Application Placement:	BROSOL
Applied By:	GM
Air Temperature, Unit:	87 F
% Relative Humidity:	52
Wind Velocity, Unit:	4 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	85 F
Soil Moisture:	SLIWET
% Cloud Cover:	5

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	--

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMAPA W
Pest 2 Code, Type, Scale:	IPOSS W

Application Equipment

	A
Appl. Equipment:	BACKPACK
Equipment Type:	BACCAI
Operation Pressure, Unit:	36 PSI
Nozzle Type:	AIXR
Nozzle Size:	110025
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
Boom Length, Unit:	6.33 FT
Boom Height, Unit:	16 IN
Ground Speed, Unit:	4 MPH
Carrier:	WATER
Spray Volume, Unit:	15 GAL/AC
Mix Size, Unit:	0.528 gallons
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Tennessee

EVALUATE PREEMERGENCE HERBICIDES FOR PALMER AMARANTH CONTROL IN LIBERTY LINK SOYBEAN

Trial ID: JSBLLPRE16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: JSBLLPRE16 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: SMITH

Trt No.	Treatment Type Name	Form Conc	Form Type	Rate	Growth Unit	Stage	Appl Code	Rep 1	2	3	4	Notes
1	CHK NONTREATED							101	204	303	401	
2	HERB CANOPY HERB CHEETAH	75 2.34	DF SL	5 29	oz/a oz/a	PRE POST	A B	102	201	306	405	
3	HERB ENVIVE HERB CHEETAH	41.3 2.34	DF SL	3 29	oz/a oz/a	PRE POST	A B	103	206	305	403	
4	HERB TRIVENCE HERB CHEETAH	61.3 2.34	DG SL	10 29	oz/a oz/a	PRE POST	A B	104	202	302	406	
5	HERB BOUNDARY HERB CHEETAH	6.5 2.34	EC SL	2 29	pt/a oz/a	PRE POST	A B	105	205	301	402	
6	HERB FIERCE HERB CHEETAH	76 2.34	WG SL	3 29	oz/a oz/a	PRE POST	A B	106	203	304	404	

Sort Order: Replicate 1

University of Tennessee

EVALUATE PREEMERGENCE HERBICIDES FOR PALMER AMARANTH CONTROL IN LIBERTY LINK SOYBEAN

Trial ID: JSBLLPRE16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: JSBLLPRE16 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: SMITH

General Trial Information

Investigator: Dr. Larry Steckel

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Dr. Larry Steckel

<p>Crop 1: GLXMA Glycine max Variety: LL4653 Description: Liberty Link</p>	<p>Crop Description Soybean BBCH Scale: BSOY</p>	<p>Planting Date: 5-11-16 Planting Method: PLANTD planted Planting Equipment: FE Field Equipment</p>
<p>Planting Rate, Unit: 140000 S/A Depth, Unit: 1 IN Row Spacing, Unit: 30 IN Soil Temperature, Unit: 84 F Soil Moisture: SLIWET slightly wet, moist Seed Bed: MEDIUM medium</p>		

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 6 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB Randomized Complete Block (RCB)

Field Prep./Maintenance:

MAR 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A - Burndown
 May 11 - Gramoxone SL 48 oz/A + COC 1%
 May 19 - Select Max 16 oz/A + COC 1qt/A

Application Description

	A	B
Application Date:	5-11-16	6-14-16
Appl. Start Time:	2:21 PM	10:30 AM
Appl. Stop Time:	2:29 PM	10:43 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROSOL	BROFOL
Applied By:	GM	LS
Air Temperature, Unit:	88 F	90 F
% Relative Humidity:	55	50
Wind Velocity, Unit:	4 MPH	4 MPH
Wind Direction:	SW	SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	85 F	87 F
Soil Moisture:	SLIWET	DRY
% Cloud Cover:	5	80

University of Tennessee

EVALUATE PREEMERGENCE HERBICIDES FOR PALMER AMARANTH CONTROL IN LIBERTY LINK SOYBEAN

Trial ID: JSBLLPRE16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: JSBLLPRE16 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: SMITH

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	4 TRIF
Height, Unit:		8 IN
Height Minimum, Maximum:		7 9

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMAPA W --	AMAPA W 10+L
Height, Unit:		7 IN
Height Minimum, Maximum:		6 8

Application Equipment

	A	B
Appl. Equipment:	BACKPACK	Tractor
Equipment Type:	BACCAI	TRACTO
Operation Pressure, Unit:	36 PSI	40 PSI
Nozzle Type:	AIXR	AIR INDUC
Nozzle Size:	110025	AI110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
Boom Length, Unit:	6.33 FT	6.33 FT
Boom Height, Unit:	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 GAL/AC	11.5 GPA
Mix Size, Unit:	0.528 gallons	3 gallons
Propellant:	COMCO2	PUMP
Tank Mix (Y/N):	Y yes	Y

University of Tennessee

EVALUATE DIFFERENT GLUFOSINATE PRODUCTS IN LIBERTY LINK SOYBEAN FOR PALMER AMARANTH CONTROL

Trial ID: JSBLL016 Location: Jackson, TN Trial Year: 2016
 Protocol ID: JSBLL016 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact:

Trt No.	Treatment Type Name	Form Conc	Form Type	Rate	Growth Unit	Appl Stage	Code	Rep 1	Rep 2	Rep 3	Rep 4	Notes
1	HERB GLUFOSINATE 280 SL OT	2.34	SL	29	oz/a	EPOST	A	101	203	302	402	
2	HERB LIBERTY 280	2.34	SL	29	oz/a	EPOST	A	102	204	301	403	
3	HERB INTERLINE	2.34	SL	29	oz/a	EPOST	A	103	201	303	404	
4	HERB CHEETAH	2.34	SL	29	oz/a	EPOST	A	104	202	304	401	

Sort Order: Replicate 1

University of Tennessee

EVALUATE DIFFERENT GLUFOSINATE PRODUCTS IN LIBERTY LINK SOYBEAN FOR PALMER AMARANTH CONTROL

Trial ID: JSBLL016 Location: Jackson, TN Trial Year: 2016
 Protocol ID: JSBLL016 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact:

General Trial Information

Investigator: Dr. Larry Steckel

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Dr. Larry Steckel

Crop 1: GLXMA	Glycine max	Crop Description
Variety: LL4653		Soybean
Description: Liberty Link		BBCH Scale: BSOY
		Planting Date: 5-11-16
Planting Rate, Unit: 140000 S/A		Planting Method: PLANTD planted
Depth, Unit: 1 IN		Planting Equipment: FE Field Equipment
Row Spacing, Unit: 30 IN		
Soil Temperature, Unit: 84 F		
Soil Moisture: SLIWET	slightly wet, moist	
Seed Bed: MEDIUM	medium	

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOLA *Ipomoea lacunosa*
Common Name: Pitted morningglory

Site and Design

Treated Plot Width: 7.5 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 225 FT² **Treatments:** 4 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB Randomized Complete Block (RCB)

Field Prep./Maintenance:

MAR 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A - Burndown
 May 11 - Gramoxone SL 48 oz/A + COC 1%
 May 19 - Select Max 16 oz/A + COC 1qt/A

Application Description

	A
Application Date:	5-31-16
Appl. Start Time:	11:15 AM
Appl. Stop Time:	11:22 AM
Application Method:	SPRAY
Application Timing:	EPOST
Application Placement:	BROFOL
Applied By:	GM
Air Temperature, Unit:	84 F
% Relative Humidity:	62
Wind Velocity, Unit:	0.5 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	77 F
Soil Moisture:	NORMAL
% Cloud Cover:	95

University of Tennessee

EVALUATE DIFFERENT GLUFOSINATE PRODUCTS IN LIBERTY LINK SOYBEAN FOR PALMER AMARANTH CONTROL

Trial ID: JSBLL016 Location: Jackson, TN Trial Year: 2016
 Protocol ID: JSBLL016 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact:

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	1 TRIF
Height, Unit:	4 IN
Height Minimum, Maximum:	3 5

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMAPA W 6+L
Height, Unit:	3 IN
Height Minimum, Maximum:	3 4
Pest 2 Code, Type, Scale:	IPOLA W 3+L
Height, Unit:	3 IN
Height Minimum, Maximum:	2 4

Application Equipment

	A
Appl. Equipment:	BACKPACK
Equipment Type:	BACCAI
Operation Pressure, Unit:	27 PSI
Nozzle Type:	AIXR
Nozzle Size:	11003
Nozzle Spacing, Unit:	20 IN
Boom ID:	5 FT @ 15GPA
Boom Length, Unit:	5 FT
Boom Height, Unit:	16 IN
Ground Speed, Unit:	4 MPH
Spray Volume, Unit:	15 GAL/AC
Mix Size, Unit:	0.528 gallons
Spray pH:	0.528
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Tennessee

XTEND SOYBEAN SYSTEM COMPARED TO COMPETITOR-SOUTH

Trial ID: 2016-01-B7-02 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 2016-01-B7-02 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Scott A Nolte/Monsanto/Bob

Trt No. Type	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1 VAR	RR2X SOY AG46X6		RR2X	140000	seeds/a			101	211	305	411	
CHK	UNTREATED CHECK	0	ND									
2 VAR	RR2X SOY		RR2X	140000	seeds/a			102	209	307	412	
HERB	ROWEL FX	40.3	WDG		3 oz/a	PRE	A					
HERB	MON 76981		L		64 oz/a	POST	B					
3 VAR	RR2X SOY		RR2X	140000	seeds/a			103	212	306	410	
HERB	WARRANT ULTRA		CS		50 oz/a	PRE	A					
HERB	MON 76980		SL		22 oz/a	PRE	A					
HERB	MON 76981		L		64 oz/a	POST	B					
4 VAR	RR2X SOY		RR2X	140000	seeds/a			104	210	308	409	
HERB	TRICOR	75	DF		5 oz/a	PRE	A					
HERB	WARRANT	3	SL		48 oz/a	PRE	A					
HERB	MON 76980		SL		22 oz/a	PRE	A					
HERB	MON 76981		L		64 oz/a	POST	B					
HERB	WARRANT ULTRA		CS		50 oz/a	POST	B					
5 VAR	RR2Y SOY AG4633		RR2Y	140000	seeds/a			105	204	312	404	
CHK	UNTREATED CHECK	0	ND									
6 VAR	RR2Y SOY		RR2Y	140000	seeds/a			106	203	310	401	
HERB	ROWEL FX	40.3	WDG		3 oz/a	PRE	A					
HERB	WARRANT	3	SL		48 oz/a	PRE	A					
HERB	ROUNDUP POWERMAX	5.5	SL		32 oz/a	POST	B					
HERB	WARRANT	3	SL		48 oz/a	POST	B					
7 VAR	RR2Y SOY		RR2Y	140000	seeds/a			107	202	309	402	
HERB	ROWEL FX	40.3	WDG		3 oz/a	PRE	A					
HERB	TRICOR	75	DF		5 oz/a	PRE	A					
HERB	ROUNDUP POWERMAX	5.5	SL		32 oz/a	POST	B					
PROD	WARRANT ULTRA		CS		50 oz/a	POST	B					
8 VAR	RR2Y SOY		RR2Y	140000	seeds/a			108	201	311	403	
HERB	WARRANT	3	SL		48 oz/a	PRE	A					
HERB	ROWEL FX	40.3	WDG		3 oz/a	PRE	A					
HERB	TRICOR	75	DF		5 oz/a	PRE	A					
HERB	ROUNDUP POWERMAX	5.5	SL		32 oz/a	POST	B					
HERB	WARRANT ULTRA		CS		50 oz/a	POST	B					
9 VAR	LIBERTY LINK SOY		LL	140000	seeds/a			109	207	303	408	
CHK	UNTREATED CHECK	0	ND									
10 VAR	LIBERTY LINK SOY LL4653		LL	140000	seeds/a			110	208	301	407	
HERB	PREFIX	5.264	EC		32 oz/a	PRE	A					
HERB	LIBERTY	2.34	SL		29 oz/a	POST	B					
11 VAR	LIBERTY LINK SOY		LL	140000	seeds/a			111	206	304	406	
HERB	PREFIX	5.264	EC		32 oz/a	PRE	A					
HERB	TRICOR	75	DF		5 oz/a	PRE	A					
HERB	LIBERTY	2.34	SL		29 oz/a	POST	B					
12 VAR	LIBERTY LINK SOY		LL	140000	seeds/a			112	205	302	405	
HERB	FIERCE	76	WG		3 oz/a	PRE	A					
HERB	LIBERTY	2.34	SL		29 oz/a	POST	B					
HERB	DUAL MAGNUM	7.62	EC		6 oz/a	POST	B					

Sort Order: Replicate 1

University of Tennessee

XTEND SOYBEAN SYSTEM COMPARED TO COMPETITOR-SOUTH

Trial ID: 2016-01-B7-02 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 2016-01-B7-02 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Scott A Nolte/Monsanto/Bob

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Trial Location

Country: USA United States

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Larry Steckel

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: XTEND/RR/LL **BBCH Scale:** BSOY
Description: 46X6/4633/4653
Planting Rate, Unit: 140000 S/A
Depth, Unit: 1 IN **Planting Date:** 5-9-16
Row Spacing, Unit: 30 IN **Planting Method:** PLANTD planted
Soil Temperature, Unit: 68 F **Planting Equipment:** FE Field Equipment
Soil Moisture: EXCELL excellent

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Pest 2 Type: W **Code:** ANNGR Annual Grasses
Pest 3 Type: W **Code:** IPOHG *Ipomoea hederacea integriscul*
Common Name: Entireleaf morningglory

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 12 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** SPLPLO Split-Plot
 7 & 14 DA-A, 14 DA-B, At Crop Canopy

Comment: NE N35.63238 W088.85734
 NW N35.63256 W088.8585767
 SE N35.63197 W088.85768
 SW N35.63216 W088.85800

Field Prep./Maintenance:

Mar 7 - Roundup 32 oz/A + Clarity 8 oz/A
 May 9 - Gramoxone 40 oz/A + NIS 0.25%
 June 14 - AIXR 003 nozzles- 28 PSI, 15 gpa, 4 MPH were used for LL and RR Varieties

University of Tennessee

XTEND SOYBEAN SYSTEM COMPARED TO COMPETITOR-SOUTH

Trial ID: 2016-01-B7-02 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 2016-01-B7-02 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Scott A Nolte/Monsanto/Bob

Application Description

	A	B
Application Date:	5-9-16	6-14-16
Appl. Start Time:	9:42 AM	7:17 AM
Appl. Stop Time:	9:52 AM	7:31 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFOL
Applied By:	GM	GM
Air Temperature, Unit:	69 F	82 F
% Relative Humidity:	64	70
Wind Velocity, Unit:	3 MPH	0 MPH
Wind Direction:	SW	
Dew Presence (Y/N):		Y yes
Soil Temperature, Unit:	68 F	80 F
Soil Moisture:	EXCELL	DRY
% Cloud Cover:	100	5

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	4 TRIF
Height, Unit:		8 IN
Height Minimum, Maximum:		7 9

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMAPA W --	AMAPA W 10+L
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6
Pest 2 Code, Type, Scale:	ANNGR W --	ANNGR W 2TL
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6
Pest 3 Code, Type, Scale:	IPOHG W --	IPOHG W 10+L
Height, Unit:		4 IN
Height Minimum, Maximum:		4 5

University of Tennessee

XTEND SOYBEAN SYSTEM COMPARED TO COMPETITOR-SOUTH

Trial ID: 2016-01-B7-02
 Protocol ID: 2016-01-B7-02
 Project ID:

Location: Jackson, TN Trial Year: 2016
 Investigator: Dr. Larry Steckel
 Study Director: Larry Steckel
 Sponsor Contact: Scott A Nolte/Monsanto/Bob

Application Equipment

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Equipment Type:	BACCAI	BACCAI
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	TTI	TTI
Nozzle Size:	003	003
Nozzle Spacing, Unit:	19 IN	19 IN
Boom Length, Unit:	6.33 FT	6.33 FT
Boom Height, Unit:	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH
Incorporation Equip.:	4	4
Hours to Incorp.:	0	0
Carrier:	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac
Mix Size, Unit:	0.528 gallons	0.528 gallons
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Tennessee

EVALUATE FIERCE AND FIERCE XLT FOR WEED CONTROL IN A DICAMBA SYSTEM / XTEND SOYBEAN

Trial ID: JSBVAL6401 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 64.01 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: M. Everett/Valent

Trt No.	Treatment Type Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1	CHK NONTREATED							101	205	306	401	
2	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B	102	204	307	404	
	HERB CLARITY	4	SL	1	pt/a	POST	B					
	ADJ NIS	100	SL	0.25	% v/v	POST	B					
3	HERB FIERCE	76	WG	3	oz/a	PRE	A	103	201	304	407	
	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B					
	HERB CLARITY	4	SL	1	pt/a	POST	B					
	ADJ NIS	100	SL	0.25	% v/v	POST	B					
4	HERB AUTHORITY ELITE	7	SL	25	oz/a	PRE	A	104	206	303	402	
	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B					
	HERB CLARITY	4	SL	1	pt/a	POST	B					
	ADJ NIS	100	SL	0.25	% v/v	POST	B					
5	HERB BOUNDARY	6.5	EC	2	pt/a	PRE	A	105	202	301	403	
	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B					
	HERB CLARITY	4	SL	1	pt/a	POST	B					
	ADJ NIS	100	SL	0.25	% v/v	POST	B					
6	HERB PREFIX	5.264	EC	1	qt/a	POST	B	106	207	302	405	
	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B					
	HERB CLARITY	4	SL	1	pt/a	POST	B					
	ADJ NIS	100	SL	0.25	% v/v	POST	B					
7	HERB ROWEL	51	WDG	2	oz/a	PRE	A	107	203	305	406	
	HERB WARRANT	3	SL	2	qt/a	PRE	A					
	HERB ROUNDUP POWERMAX	5.5	SL	32	oz/a	POST	B					
	HERB CLARITY	4	SL	1	pt/a	POST	B					
	ADJ NIS	100	SL	0.25	% v/v	POST	B					

Sort Order: Replicate 1

University of Tennessee

EVALUATE FIERCE AND FIERCE XLT FOR WEED CONTROL IN A DICAMBA SYSTEM / XTEND SOYBEAN

Trial ID: JSBVAL6401 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 64.01 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: M. Everett/Valent

General Trial Information

Investigator: Dr. Larry Steckel

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG46X6 **BBCH Scale:** BSOY
Description: XTEND
Planting Rate, Unit: 140000 S/A
Depth, Unit: 1 IN **Planting Date:** 5-11-16
Row Spacing, Unit: 30 IN **Planting Method:** PLANTD planted
Soil Temperature, Unit: 84 F **Planting Equipment:** FE Field Equipment
Soil Moisture: SLIWET slightly wet, moist

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 7 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Field Prep./Maintenance:

MAR 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A - Burndown
 May 9 - Gramoxone SL 48 oz/A + COC 1%

Application Description

	A	B
Application Date:	5-11-16	5-31-16
Appl. Start Time:	1:32 PM	10:50 AM
Appl. Stop Time:	1:35 PM	10:58 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROSOL	BROFOL
Applied By:	GM	JR
Air Temperature, Unit:	86 F	81 F
% Relative Humidity:	49	66
Wind Velocity, Unit:	4 MPH	0 MPH
Wind Direction:	SW	
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	84 F	77 F
Soil Moisture:	SLIWET	NORMAL
% Cloud Cover:	3	100

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	2 TRIF
Height, Unit:		5 IN
Height Minimum, Maximum:		5 6

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EVALUATE FIERCE AND FIERCE XLT FOR WEED CONTROL IN A DICAMBA SYSTEM / XTEND SOYBEAN

Trial ID: JSBVAL6401 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 64.01 Investigator: Dr. Larry Steckel
 Project ID: Study Director:
 Sponsor Contact: M. Everett/Valent

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMAPA W	AMAPA W

Application Equipment

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Equipment Type:	BACCAI	BACCAI
Operation Pressure, Unit:	27 PSI	35 PSI
Nozzle Type:	AIXR	TTI
Nozzle Size:	11003	025
Nozzle Spacing, Unit:	20 IN	20 IN
Boom ID:	5 FT @ 15GPA	
Boom Length, Unit:	5 FT	5 FT
Boom Height, Unit:	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH
Carrier:		WATER
Spray Volume, Unit:	15 GAL/AC	15 gal/ac
Mix Size, Unit:	0.528 gallons	0.528 gallons
Spray pH:	0.528	
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Tennessee

PHOTOPERIOD EFFECT OF XTEND ON EFFICACY

Trial ID: 2016-01-B7-25 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 2016-01-B7-25 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Ryan J Rector/Monsanto/Bob

Trt No. Type	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1	HERB ROWEL HERB ROUNDUP POWERMAX FERT N-PAK AMS LIQUID	51 4.5 34	WG SL SL	2 32 2	oz/a oz/a % v/v	PRE 4" SUNRISE 4" SUNRISE	A B B	101	219	302	405	
2	HERB ROWEL HERB MON 76980 HERB ROUNDUP POWERMAX ADJ CLASS ACT RIDION	51 350 4.5 100	WG SL SL AD	2 22 28.4 1	oz/a oz/a oz/a % v/v	PRE 4" SUNRISE 4" SUNRISE 4" SUNRISE	A B B B	102	221	322	404	
3	HERB ROWEL HERB MON 76980 HERB ROUNDUP POWERMAX ADJ CLASS ACT RIDION HERB WARRANT ULTRA	51 350 4.5 100 3.49	WG SL SL AD CS	2 22 28.4 1 50	oz/a oz/a oz/a % v/v oz/a	PRE 4" SUNRISE 4" SUNRISE 4" SUNRISE 4" SUNRISE	A B B B B	103	204	315	401	
4	HERB ROWEL HERB MON 76980 HERB ROUNDUP POWERMAX ADJ CLASS ACT RIDION HERB COBRA	51 350 4.5 100 2	WG SL SL AD EC	2 22 28.4 1 10	oz/a oz/a oz/a % v/v oz/a	PRE 4" SUNRISE 4" SUNRISE 4" SUNRISE 4" SUNRISE	A B B B B	104	206	304	402	
5	HERB ROWEL HERB ROUNDUP POWERMAX FERT N-PAK AMS LIQUID	51 4.5 34	WG SL SL	2 32 2	oz/a oz/a % v/v	PRE 4" NOON 4" NOON	A C NOON C	105	211	316	422	
6	HERB ROWEL HERB MON 76980 HERB ROUNDUP POWERMAX ADJ CLASS ACT RIDION	51 350 4.5 100	WG SL SL AD	2 22 28.4 1	oz/a oz/a oz/a % v/v	PRE 4" NOON 4" NOON 4" NOON	A C C C	106	213	324	408	
7	HERB ROWEL HERB MON 76980 HERB ROUNDUP POWERMAX ADJ CLASS ACT RIDION HERB WARRANT ULTRA	51 350 4.5 100 3.49	WG SL SL AD CS	2 22 28.4 1 50	oz/a oz/a oz/a % v/v oz/a	PRE 4" NOON 4" NOON 4" NOON 4" NOON	A C C C C	107	203	319	415	
8	HERB ROWEL HERB MON 76980 HERB ROUNDUP POWERMAX ADJ CLASS ACT RIDION HERB COBRA	51 350 4.5 100 2	WG SL SL AD EC	2 22 28.4 1 10	oz/a oz/a oz/a % v/v oz/a	PRE 4" NOON 4" NOON 4" NOON 4" NOON	A C C C C	108	218	307	424	
9	HERB ROWEL HERB ROUNDUP POWERMAX FERT N-PAK AMS LIQUID	51 4.5 34	WG SL SL	2 32 2	oz/a oz/a % v/v	PRE 4" DARK 4"DARK	A D DARK D	109	216	323	419	
10	HERB ROWEL HERB MON 76980 HERB ROUNDUP POWERMAX ADJ CLASS ACT RIDION	51 350 4.5 100	WG SL SL AD	2 22 28.4 1	oz/a oz/a oz/a % v/v	PRE 4"DARK 4"DARK 4"DARK	A D D D	110	217	310	414	
11	HERB ROWEL HERB MON 76980 HERB ROUNDUP POWERMAX ADJ CLASS ACT RIDION HERB WARRANT ULTRA	51 350 4.5 100 3.49	WG SL SL AD CS	2 22 28.4 1 50	oz/a oz/a oz/a % v/v oz/a	PRE 4"DARK 4"DARK 4"DARK 4"DARK	A D D D D	111	201	308	407	
12	HERB ROWEL HERB MON 76980 HERB ROUNDUP POWERMAX ADJ CLASS ACT RIDION HERB COBRA	51 350 4.5 100 2	WG SL SL AD EC	2 22 28.4 1 10	oz/a oz/a oz/a % v/v oz/a	PRE 4"DARK 4"DARK 4"DARK 4"DARK	A D D D D	112	215	306	421	
13	HERB ROWEL HERB ROUNDUP POWERMAX FERT N-PAK AMS LIQUID	51 4.5 34	WG SL SL	2 32 2	oz/a oz/a % v/v	PRE 8" SUNRISE 8"SUNRISE	A E SUNRISE E	113	214	312	406	
14	HERB ROWEL HERB MON 76980 HERB ROUNDUP POWERMAX ADJ CLASS ACT RIDION	51 350 4.5 100	WG SL SL AD	2 22 28.4 1	oz/a oz/a oz/a % v/v	PRE 8"SUNRISE 8"SUNRISE 8"SUNRISE	A E E E	114	205	305	411	

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PHOTOPERIOD EFFECT OF XTEND ON EFFICACY

Trial ID: 2016-01-B7-25 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 2016-01-B7-25 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Ryan J Rector/Monsanto/Bob

Trt No. Type	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
15	HERB ROWEL	51	WG	2 oz/a		PRE	A	115	209	301	409	
	HERB MON 76980	350	SL	22 oz/a		8"SUNRISE	E					
	HERB ROUNDUP POWERMAX	4.5	SL	28.4 oz/a		8"SUNRISE	E					
	ADJ CLASS ACT RIDION	100	AD	1 % v/v		8"SUNRISE	E					
	HERB WARRANT ULTRA	3.49	CS	50 oz/a		8"SUNRISE	E					
16	HERB ROWEL	51	WG	2 oz/a		PRE	A	116	222	320	410	
	HERB MON 76980	350	SL	22 oz/a		8"SUNRISE	E					
	HERB ROUNDUP POWERMAX	4.5	SL	28.4 oz/a		8"SUNRISE	E					
	ADJ CLASS ACT RIDION	100	AD	1 % v/v		8"SUNRISE	E					
	HERB COBRA	2	EC	10 oz/a		8"SUNRISE	E					
17	HERB ROWEL	51	WG	2 oz/a		PRE	A	117	224	317	412	
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a		8" NOON	F NOON					
	FERT N-PAK AMS LIQUID	34	SL	2 % v/v		8"NOON	F					
18	HERB ROWEL	51	WG	2 oz/a		PRE	A	118	220	311	403	
	HERB MON 76980	350	SL	22 oz/a		8"NOON	F					
	HERB ROUNDUP POWERMAX	4.5	SL	28.4 oz/a		8"NOON	F					
	ADJ CLASS ACT RIDION	100	AD	1 % v/v		8"NOON	F					
19	HERB ROWEL	51	WG	2 oz/a		PRE	A	119	208	321	417	
	HERB MON 76980	350	SL	22 oz/a		8"NOON	F					
	HERB ROUNDUP POWERMAX	4.5	SL	28.4 oz/a		8"NOON	F					
	ADJ CLASS ACT RIDION	100	AD	1 % v/v		8"NOON	F					
	HERB WARRANT ULTRA	3.49	CS	50 oz/a		8"NOON	F					
20	HERB ROWEL	51	WG	2 oz/a		PRE	A	120	202	303	416	
	HERB MON 76980	350	SL	22 oz/a		8"NOON	F					
	HERB ROUNDUP POWERMAX	4.5	SL	28.4 oz/a		8"NOON	F					
	ADJ CLASS ACT RIDION	100	AD	1 % v/v		8"NOON	F					
	HERB COBRA	2	EC	10 oz/a		8"NOON	F					
21	HERB ROWEL	51	WG	2 oz/a		PRE	A	121	212	318	413	
	HERB ROUNDUP POWERMAX	4.5	SL	32 oz/a		8" DARK	G					
	FERT N-PAK AMS LIQUID	34	SL	2 % v/v		8"DARK	G					
22	HERB ROWEL	51	WG	2 oz/a		PRE	A	122	223	314	423	
	HERB MON 76980	350	SL	22 oz/a		8"DARK	G					
	HERB ROUNDUP POWERMAX	4.5	SL	28.4 oz/a		8"DARK	G					
	ADJ CLASS ACT RIDION	100	AD	1 % v/v		8"DARK	G					
23	HERB ROWEL	51	WG	2 oz/a		PRE	A	123	210	309	420	
	HERB MON 76980	350	SL	22 oz/a		8"DARK	G					
	HERB ROUNDUP POWERMAX	4.5	SL	28.4 oz/a		8"DARK	G					
	ADJ CLASS ACT RIDION	100	AD	1 % v/v		8"DARK	G					
	HERB WARRANT ULTRA	3.49	CS	50 oz/a		8"DARK	G					
24	HERB ROWEL	51	WG	2 oz/a		PRE	A	124	207	313	418	
	HERB MON 76980	350	SL	22 oz/a		8"DARK	G					
	HERB ROUNDUP POWERMAX	4.5	SL	28.4 oz/a		8"DARK	G					
	ADJ CLASS ACT RIDION	100	AD	1 % v/v		8"DARK	G					
	HERB COBRA	2	EC	10 oz/a		8"DARK	G					

Sort Order: Replicate 1

University of Tennessee

PHOTOPERIOD EFFECT OF XTEND ON EFFICACY

Trial ID: 2016-01-B7-25 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 2016-01-B7-25 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Ryan J Rector/Monsanto/Bob

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Trial Location

Country: USA United States

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Larry Steckel

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG46X6 **BBCH Scale:** BSOY
Description: XTEND
Planting Rate, Unit: 140000 S/A **Planting Date:** 5-5-16
Depth, Unit: 1 IN **Planting Method:** PLANTD planted
Row Spacing, Unit: 30 IN **Planting Equipment:** FE Field Equipment
Soil Temperature, Unit: 66 F
Soil Moisture: EXCELL excellent

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 24 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
 7, 14, 21 and 28 DAT

Comment: GPS

NE N35.63269
 W088.85661
 SE N35.63226
 W088.85696

SW N35.63265
 W088.85762

NW N35.63304
 W088.85726

June 17 - Plot 201 was sprayed twice. Once with trt 11 and again with trt 14.

Field Prep./Maintenance:

MAR 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A - Burndown
 May 4 - Gramoxone SL 48 oz/A + COC 1%
 May 19 - Select Max 16 oz/A + COC 1qt/A

University of Tennessee

PHOTOPERIOD EFFECT OF XTEND ON EFFICACY

Trial ID: 2016-01-B7-25 Location: Jackson, TN Trial Year: 2016
 Protocol ID: 2016-01-B7-25 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Ryan J Rector/Monsanto/Bob

Application Description

	A	B	C	D	E	F	G
Application Date:	5-6-16	6-14-16	6-14-16	6-14-16	6-17-16	6-16-16	6-16-16
Appl. Start Time:	8:47 AM	5:40 AM	11:58 AM	7:29 PM	6:10 AM	2:17 PM	7:02 PM
Appl. Stop Time:	9:02 AM	5:55 AM	12:06 PM	7:36 PM	6:17 AM	2:22 PM	7:10 PM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	SUNRISE	NOON	DARK	SUNRISE	NOON	DARK
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	GM	JR	HH	GM	GM	JR	JR
Air Temperature, Unit:	58 F	78 F	94 F	87 F	80 F	94 F	97 F
% Relative Humidity:	60	77	50	70	78	54	58
Wind Velocity, Unit:	4 MPH	0 MPH	4 MPH	4 MPH	0 MPH	5 MPH	1.6 MPH
Wind Direction:	N		NE	S		W	SW
Dew Presence (Y/N):	N no	Y yes	N no	N no	Y yes	N no	N no
Soil Temperature, Unit:	55 F	78 F	92 F	89 F	79 F	91 F	91 F
Soil Moisture:	EXCELL	DRY	DRY	DRY	NORMAL	NORMAL	NORMAL
% Cloud Cover:	0	5	60	35	85	25	5

Crop Stage At Each Application

	A	B	C	D	E	F	G
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	5 TRIF	5 TRIF	5 TRIF	6 TRIF	6 TRIF	6 TRIF
Height, Unit:		10 IN	10 IN	10 IN	13 IN	13 IN	13 IN
Height Minimum, Maximum:		9 11	9 11	9 11	12 15	12 15	12 15

Pest Stage At Each Application

	A	B	C	D	E	F
Pest 1 Code, Type, Scale:	AMAPA W --	AMAPA W 4LF	AMAPA W 4LF	AMAPA W 4LF	AMAPA W 10+L	AMAPA W 10+L
Height, Unit:		3 IN	3 IN	3 IN	9 IN	9 IN
Height Minimum, Maximum:		2 4	2 4	2 4	8 12	8 12

G

Pest 1 Code, Type, Scale:	AMAPA W 10+L
Height, Unit:	9 IN
Height Minimum, Maximum:	8 12

University of Tennessee

BOLT TECHNOLOGY HERBICIDE PROGRAMS

Trial ID: JSBBOLT155-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-155 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Dave Johnson/DuPont

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1	HERB LEADOFF	33.4	WG	1.5	oz/a	PRE	A	101	202	303	404	
	HERB RIMSULFURON (25% SG)	25	SG	0.25	oz ai/a	PRE	A					
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.25	oz ai/a	PRE	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22.00	fl oz/a	EPOST	B					
	HERB SYNCHRONY XP	28.4	DF	1.13	oz/a	EPOST	B					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.24	oz ai/a	EPOST	B					
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.08	oz ai/a	EPOST	B					
	FERT AMS	100	SG	17.00	lb/100 gal	EPOST	B					
2	HERB LEADOFF	33.4	WG	1.5	oz/a	PRE	A	102	201	305	406	
	HERB RIMSULFURON (25% SG)	25	SG	0.25	oz ai/a	PRE	A					
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.25	oz ai/a	PRE	A					
	HERB VALOR SX	51	WG	2	oz/a	PRE	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22.00	fl oz/a	EPOST	B					
	HERB SYNCHRONY XP	28.4	DF	1.13	oz/a	EPOST	B					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.24	oz ai/a	EPOST	B					
	FERT AMS	100	SG	17.00	lb/100 gal	EPOST	B					
3	HERB LEADOFF	33.4	WG	1.5	oz/a	PRE	A	103	204	306	402	
	HERB RIMSULFURON (25% SG)	25	SG	0.25	oz ai/a	PRE	A					
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.25	oz ai/a	PRE	A					
	HERB ENVIVE	41.3	DF	3.5	oz/a	PRE	A					
	HERB FLUMIOXAZIN (WG 51 PC)	51	WG	1.02	oz ai/a	PRE	A					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.32	oz ai/a	PRE	A					
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.1	oz ai/a	PRE	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22.00	fl oz/a	EPOST	B					
	HERB SYNCHRONY XP	28.4	DF	1.13	oz/a	EPOST	B					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.24	oz ai/a	EPOST	B					
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.08	oz ai/a	EPOST	B					
	FERT AMS	100	SG	17.00	lb/100 gal	EPOST	B					
4	HERB LEADOFF	33.4	WG	1.5	oz/a	PRE	A	104	203	308	401	
	HERB RIMSULFURON (25% SG)	25	SG	0.25	oz ai/a	PRE	A					
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.25	oz ai/a	PRE	A					
	HERB CANOPY BLEND	58.3	DF	4.37	oz ai/a	PRE	A					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.62	oz ai/a	PRE	A					
	HERB METRIBUZIN 75DF (DF 75PC)	75	WG	3.75	oz ai/a	PRE	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22.00	fl oz/a	EPOST	B					
	HERB SYNCHRONY XP	28.4	DF	1.13	oz/a	EPOST	B					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.24	oz ai/a	EPOST	B					
	FERT AMS	100	SG	17.00	lb/100 gal	EPOST	B					
5	HERB DILIGENT	37.87	WP	4	oz/a	PRE	A	105	207	301	409	
	HERB FLUMIOXAZIN (WG 51 PC)	51	WG	1.01	oz ai/a	PRE	A					
	HERB RIMSULFURON (25% SG)	25	SG	0.25	oz ai/a	PRE	A					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.25	oz ai/a	PRE	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22.00	fl oz/a	EPOST	B					
	HERB SYNCHRONY XP	28.4	DF	1.13	oz/a	EPOST	B					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.24	oz ai/a	EPOST	B					
	FERT AMS	100	SG	17.00	lb/100 gal	EPOST	B					
6	HERB ENVIVE	41.3	DF	3.5	oz/a	PRE	A	106	205	309	403	
	HERB FLUMIOXAZIN (WG 51 PC)	51	WG	1.02	oz ai/a	PRE	A					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.32	oz ai/a	PRE	A					
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.10	oz ai/a	PRE	A					
	HERB ROUNDUP POWERMAX	5.5	SL	22.00	fl oz/a	EPOST	B					
	HERB SYNCHRONY XP	28.4	DF	1.13	oz/a	EPOST	B					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.24	oz ai/a	EPOST	B					
	FERT AMS	100	SG	17.00	lb/100 gal	EPOST	B					
7	HERB VALOR SX	51	WG	2	oz/a	PRE	A	107	209	304	405	
	HERB ROUNDUP POWERMAX)	5.5	SL	22.00	fl oz/a	EPOST	B					
	HERB SYNCHRONY XP	28.4	DF	1.13	oz/a	EPOST	B					
	HERB CHLORIMURON (WG 25 PC)	25	WG	0.24	oz ai/a	EPOST	B					
	HERB THIFENSULFURON (SG 50 PC)	50	SG	0.08	oz ai/a	EPOST	B					
	FERT AMS	100	SG	17.00	lb/100 gal	EPOST	B					

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BOLT TECHNOLOGY HERBICIDE PROGRAMS

Trial ID: JSBBOLT155-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-155 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Dave Johnson/DuPont

Trt No.	Treatment Type Name	Form Conc	Form Type	Rate Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4	Notes
8	HERB BOUNDARY HERB PREFIX	6.5	EC	1	qt/a	PRE	A	108	206	307	408	
9	CHK NONTREATED						A	109	208	302	407	

Sort Order: Replicate 1

University of Tennessee

BOLT TECHNOLOGY HERBICIDE PROGRAMS

Trial ID: JSBBOLT155-16 Location: Jackson, TN Trial Year: 2016
 Protocol ID: USA-16-155 Investigator: Dr. Larry Steckel
 Project ID: Study Director: Larry Steckel
 Sponsor Contact: Dave Johnson/DuPont

General Trial Information

Study Director: Larry Steckel
Investigator: Dr. Larry Steckel

Trial Location

Country: USA United States

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

Introduce BOLT(TM) technology herbicide programs

Contacts

Study Director: Larry Steckel

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GLXMA	Glycine max	Crop Description	Soybean
Variety: P50T15BR		BBCH Scale:	BSOY
Description: BOLT			
Planting Rate, Unit: 140000 S/A		Planting Date: 5-5-16	
Depth, Unit: 1 IN		Planting Method: PLANTD	planted
Row Spacing, Unit: 30 IN		Planting Equipment: FE	Field Equipment
Soil Temperature, Unit: 63 F			
Soil Moisture: NORMAL normal, adequate			

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** SIDSP *Sida spinosa*
Common Name: Teaweed

Pest 3 Type: W **Code:** DIGSA *Digitaria sanguinalis*
Common Name: Large crabgrass

Site and Design

Treated Plot Width: 7.5 FT	Site Type: FIELD	field
Treated Plot Length: 30 FT		
Treated Plot Area: 225 FT ²	Treatments: 9	Tillage Type: CONTIL conventional-till
Replications: 4		Study Design: RACOBL Randomized Complete Block (RCB)

Field Prep./Maintenance:

MAR 7 - Roundup PowerMax 32 oz/A + Clarity 8 oz/A - Burndown
 MAY 4 - Gramoxone SL 48 oz/A + COC 1%

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Trial ID: JSBBOLT155-16 Location: Jackson, TN Trial Year: 2016
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Application Description

	A	B
Application Date:	5-5-16	6-6-16
Appl. Start Time:	10:44 AM	8:25 AM
Appl. Stop Time:	10:54 AM	8:34 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	EPOST
Application Placement:	BROSOI	BROFOL
Applied By:	GM	JR
Air Temperature, Unit:	62 F	74 F
% Relative Humidity:	38	73
Wind Velocity, Unit:	13 MPH	1 MPH
Wind Direction:	NW	E
Dew Presence (Y/N):	N no	Y yes
Soil Temperature, Unit:	63 F	75 F
Soil Moisture:	NORMAL	SLIWET
% Cloud Cover:	3	0

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	--	3 TRIF
Height, Unit:		7 IN
Height Minimum, Maximum:		6 8

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMAPA W --	AMAPA W 10+L
Height, Unit:		4 IN
Height Minimum, Maximum:		3 4
Pest 2 Code, Type, Scale:	SIDSP W --	SIDSP W 4-8L
Height, Unit:		3 IN
Height Minimum, Maximum:		3 4
Pest 3 Code, Type, Scale:	DIGSA W --	DIGSA W 5TLR
Height, Unit:		4 IN
Height Minimum, Maximum:		3 5

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BOLT TECHNOLOGY HERBICIDE PROGRAMS

Trial ID: JSBBOLT155-16
 Protocol ID: USA-16-155
 Project ID:

Location: Jackson, TN Trial Year: 2016
 Investigator: Dr. Larry Steckel
 Study Director: Larry Steckel
 Sponsor Contact: Dave Johnson/DuPont

Application Equipment

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Equipment Type:	BACCAI	BACCAI
Operation Pressure, Unit:	27 PSI	27 PSI
Nozzle Type:	AIXR	AIXR
Nozzle Size:	11003	11003
Nozzle Spacing, Unit:	20 IN	20 IN
Boom ID:	5 FT @ 15GPA	5 FT @ 15GPA
Boom Length, Unit:	5 FT	5 FT
Boom Height, Unit:	16 IN	16 IN
Ground Speed, Unit:	4 MPH	4 MPH
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	0.528 gallons	0.528 gallons
Spray pH:	0.528	0.528
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes